

# FINAL ENVIRONMENTAL IMPACT STATEMENT ON MASTER PLANNED REDEVELOPMENT AT CAMP PARKS



## VOLUME TWO

JULY 2009



U.S. Army Garrison Camp Parks  
Camp Parks Environmental Office  
791 Fifth Street  
Dublin, California 94568-5201



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## **APPENDIX A: SUPPORTING TABLES**

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**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>91ST DIVISION (Training Support (TS))</b>				
<b>91st DIV (TS) Headquarters and Headquarters Company (HHC)</b>	Plans, conducts, and evaluates training exercises for Army National Guard (ARNG), Army Reserve Combat Support (CS), and Combat Service Support (CSS) units at the squad, platoon/section, and company/battery levels and above.	510	36,608	Administrative space, administrative support storage space, and special purpose space
<b>1st Brigade (BDE) 91st DIV HHC</b>	Conducts battle command and staff training (BCST) exercises for reserve brigade and battalion headquarters elements to improve Reserve component combat readiness.	500	21,431	Houses command, personnel, intelligence, operations, supply, communications, and other specialized functions of a regimental, group or brigade headquarters to include brigade and/or consolidated aid stations
<b>1st Brigade SEG 1 91st Division</b>	Conducts battle command and staff training exercises, including battle simulation exercises, for Reserve component units.	513	10,804	Individual administrative space, team administrative space, administrative support storage space, and special purpose space
<b>1st Brigade SEG 2 91st Division</b>	Conducts battle command and staff training exercises, including battle simulation exercises, for Reserve component units.	500	8,975	Individual administrative space, team administrative space, administrative support storage space, and special purpose space
<b>1st Brigade SEG 3 91st Division</b>	Conducts battle command and staff training exercises, including battle simulation exercises, for Reserve component units.	350	9,523	Individual administrative space, team administrative space, administrative support storage space, and special purpose space
<b>1st Battalion 363rd Regiment 3rd Brigade 91st Division</b>	Conducts training evaluation through observers/controllers (O/C) or combat evaluators who plan and conduct pre-mobilization training support for USAR and ARNG units located in Northern California and Nevada. Also are prepared to establish a Defense Coordination Element to coordinate all military support to civilian authorities during disasters and incidents involving weapons of mass destruction (WMD).	141, 321, and 323	21,177	Battalion headquarters, individual administrative space, administrative support storage space, special purpose space, and classroom

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Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>Battle Projection Center, 1st Brigade 91st Division</b>	Utilized by the 1st BDE 91st DIV to conduct battle simulation exercises.	370	26,927	Battle Projection Center
<b>91st Division Band</b>	Provides music that promotes troop morale, unit esprit de corps, and civil/military relations in support of military operations. Augments local security forces when combat intensity reaches the point that the use of the band in its music mission is impractical.	510	1,170	Band Training Facility
<b>6399th Reinforced Training Unit</b>	Primarily directed toward administration and mission training support for the 91st DIV. Provides training scenarios that are utilized at the BPC.	323	2,014	Individual administrative space, administrative support storage space, and special purpose space
<b>Regional Training Site-Medical (RTS-MED)</b>				
<b>Regional Training Site-Medical</b>	Provides military medical personnel with training and training support. Assists evaluators of training, provides medical maintenance training support, and tests and evaluates new equipment produced at government research and development labs. The RTS-MED unit at Camp Parks is a government owned, contractor operated facility (ITS-Medical Systems, LLC).	860, TS08A, TS08B, 880 and 881	11,680	Administrative space
		860 and 861	29,322	Main Warehouse
		162	0	Mannequin Storage and Moulage Building
		N/a	0	Bio-Medical Maintenance Facility
		N/a	N/a	Bio-Medical Maintenance Yard
		862	4,034	Vehicle Maintenance Facility
		N/a	N/a	Non-Medical Maintenance Yard
320	8,781	Clinical Skills Lab		

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Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>Equipment Concentration Site (ECS) 30 and Area Maintenance Support Activity (AMSA)</b>				
<b>ECS 30 and AMSA</b>	Direct reporting units to the 63rd Regional Support Command (RSC) in Los Alamitos, California. They have three separate missions: organization maintenance, direct support maintenance, and equipment storage for USAR units in Camp Parks and northern California. A simplified mission statement is “To control/maintain pre-positioned USAR equipment and to provide organizational/direct support maintenance of equipment that cannot be maintained at home stations”.	730	21,122	Vehicle Maintenance Shop
		131, 731, and 792	31,480	Storage Warehouse
<b>Camp Parks Training School (4th BDE 104th DIV [Institutional Training] and its support units)</b>				
<b>HHC 4th Brigade 104th Division (IT)</b>	<p>Operates the Camp Parks Training School, also known as the Military Occupational Specialty (MOS) School, which teaches several different types of military classes to Army Active component, Army Reserve, and ARNG soldiers. The school teaches the following MOS classes:</p> <ul style="list-style-type: none"> <li>• Health services</li> <li>• Personnel</li> <li>• Finance</li> <li>• Postal</li> <li>• Cooking</li> <li>• Automated supply</li> <li>• Nonautomated supply</li> <li>• Noncommissioned Officer Education System (NCOES) classes</li> </ul>	331, 332, and 340	48,837	Brigade headquarters, general purpose administration, classroom space, storage (the unit has a school supply storage mission), and auditorium

**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>6th Battalion (PS) 4th Brigade 104th Division</b>	Teaches a variety of personnel service MOS courses including: <ul style="list-style-type: none"> <li>• Personnel</li> <li>• Finance</li> <li>• Postal</li> <li>• Cooking</li> <li>• Automated supply</li> <li>• Nonautomated supply</li> </ul>	340	7,893	Individual administrative space, administrative support space, classroom space, and storage space
<b>8th Battalion (QM) 4th Brigade 104th Division</b>	Operates and teaches a MOS cooking school in building 332. They also teach other miscellaneous MOS classes for the school.	331, 332, and 340	9,518	General Instruction Building
<b>9th Battalion (PH / HS) 5th Brigade 104th Division</b>	Teaches health services (medical) MOS classes.	331 and 340	4,485	Individual, administrative space, administrative support space, classroom space, and storage space
<b>Federal Correctional Institute (FCI)</b>				
<b>Federal Correctional Institute (FCI)</b>	Leases several facilities encompassing approximately 22 acres from Camp Parks to house a contingent of female prisoners (included in total Camp Parks acreage).	973	1,538	FCI Visitor Center
		974	9,977	FCI Maintenance and Storage
		984	6,664	FCI Women's Barracks
		985	7,948	FCI Support and Recreation
		986	6,364	FCI Women's Barracks
		987	8,862	FCI Women's Barracks and Dining

**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>Western Army Intelligence Reserve Support Center (WARISC)</b>				
<b>WARISC Detachment (comprised of Army, the Air Force, and the Navy units)</b>	Provides and conducts intelligence training and support by leveraging resources to enable designated joint service elements to accomplish their readiness and operational missions in the military intelligence arena. Provides facilitators for the enhancement and refresher training of Military Intelligence (MI), hard skilled USARC, and other services units.	610	21,465	Administration, administrative support, classroom/training space, special purpose space, and Sensitive Compartmented Information Facility (SCIF) area
<b>Office of Naval Intelligence (ONI) 0194</b>	Support to Office of Naval Intelligence via Providing Trained Personnel and Analytical Expertise in Direct Support of: Submarine Warfare Operations Research (SWORD), Navy Specific HUMINT (NSH), and Naval Activities Special Project (NASP)	610	0	Administrative space, administrative support space, classroom/training space, and special purpose space
<b>Joint Intelligence Center Pacific (JICPAC) Det San Francisco</b>	Produce and disseminate accurate and timely all-source intelligence that is disseminated to the Commander in Chief, United States CINPAC staff, Service Components, Joint Task Force Commanders, their assigned forces, and component commands in accordance with the support of USCINPAC Theater Strategy and the Department of Defense (DoD) Intelligence Production Plan.	610	0	Individual administrative space, administrative support space, classroom / training space, and special purpose space
<b>National Security Agency (NSA) 694</b>	National Security Agency Air Force unit.	610	0	Administrative space, administrative support space, classroom / training space, and special purpose space
<b>Naval Reserve Security Group (NRSBG)</b>	Provides support to national cryptologic tasking.	610	182	Administrative space, administrative support space, classroom / training space, and special purpose space

**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>418th Military Intelligence Detachment (SIAD)</b>	Space Imagery Analysis Detachment (SIAD) unit that prepares soft copy imagery exploitation for the 368th MI BN and the 501st MI Brigade (BDE).	610	778	Administrative space, administrative support space, classroom / training space, special purpose space, arms room
	Vehicle maintenance	610/730	0	Vehicle Maintenance Facility
<b>Camp Parks Garrison Functions</b>				
<b>Commander Administration</b>	Supports the installation operations.	790	5,009	Administrative
<b>Installation Chapel</b>	-	501	5,851	Chapel
<b>Community Club</b>	-	521	12,372	Community Club
<b>Community Conference Center &amp; Camp Parks Training Site (operations)</b>	-	620	4,890	Community Conference Center
<b>Directorate of Plans and Training (DPT)</b>	Provides oversight for plans and training operations.	311/range facilities	912 <sup>1</sup>	Administrative space, classroom space, conference room, training room, central file area, break room, supply / storage area, computer / server room space and some sensitive compartmentalized information (SCIF) space Warehouse/storage/maintenance space to perform routine maintenance on their range related equipment
<b>Directorate of Support Services (formerly the Directorate of Logistics)</b>	Provides oversight for logistic operations.	311	2,113	Administration
		None	0	Maintenance Facility
		162 and 170	34,007	Warehouse Storage

<sup>1</sup> The range facilities used by DPT provide approximately 20,000 additional square feet of classrooms, range control, and maintenance facilities.

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Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
		210, 301, 302, 303, 304 310, 360, 361, 362, 363, 364, 390, 391, 392, 393, and 394	120,260	AT Billets
		212 and 306	14,638	Unaccompanied Personnel Housing
		None	0	Guest House
		332	11,926	Dining Facility
<b>Directorate of Public Works (DPW)</b>	Provides oversight for public works.	791	22,343	Facility Maintenance
		None	9,225	Warehouse / Storage
<b>Safety Office</b>	Provides oversight for safety.	791	0	Admin space, central file storage area, text and video library, storage/supply space, classroom/training space, break area, conference room, a separate storage/utility shed
<b>Environmental Office</b>		791	509	Administrative spaces, classroom/ training space, break room, conference room, tool / equipment storage space, standard storage/ supply space, computer/ server space
<b>Fire and Emergency Services</b>		634, 635 and 636	5,462	Fire Station

**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>Installation Police</b>	Provides police for the installation.	692	3,520	Police Station
<b>Other Miscellaneous Camp Parks Units<sup>2</sup></b>				
<b>B Co 1st Battalion 184th Infantry (CAARNG)</b>	An air assault and an airmobile infantry company of the CAARNG's 40th Infantry Division (ID) (Mechanized [M]).	330	8,610	Perform daily administrative and supply activities including unit supply, nuclear, biological, and chemical (NBC) storage, communications storage, and weapons storage.
<b>B Co 319th Signal Battalion</b>	Provides theater wide communications and emergency communications equipment in a near battlefield or peacetime environment. The mission is to install, operate, and maintain communication nodes within the theater Army area of operations.	180	7,275	Perform daily administrative and supply activities, including unit supply, NBC storage, Communications storage, and weapons storage
		None	-	Two-bay vehicle maintenance facility for vehicle and electronics maintenance
		171	4,608	Signal equipment and miscellaneous storage facility
<b>CAARNG Recruiter</b>	Area recruiter administration.	200	763	Administration
<b>Construction Maintenance Battalion Unit 30 Det 1</b>	Provide the U.S. Navy and U.S. Marine Corps with technically trained personnel and specialized equipment to perform public works functions of a contingency construction nature at advanced bases and to backfill public works organization of existing bases or civilian facilities in imminent danger or other emergency situations.	611	1,520	Some personnel require administrative space. The majority of the remaining personnel are the facility/ construction maintenance staff.
		None	0	Facility maintenance shop with various maintenance shops: electrical, plumbing, buildings and grounds, etc

<sup>2</sup> On the NASA-owned 8.5-acre property there is one 120,000 square foot facility (Building 121) used by NASA Ames Research Center for storage of research equipment, office furniture, aeronautical parts, and interpretive displays.



**Table 1-1. Organizations and Facility Uses at Camp Parks**

Unit Name	Mission	Existing Building Number(s)	Existing Occupied Space (NSF)	Facility Use
<b>The Department of Homeland Defense Border Patrol</b>	A civilian tenant function that leases a building on Camp Parks. Its mission is to locate, identify, and remove illegal aliens from the local Northern California area	312	7,138	Administrative space and holding cells
<b>Naval Reserve Recruiting Office</b>	The supervisor for 12 other recruiters assigned to the Alameda, San Jose, and Daly City areas	311	138	Administrative space, a storage area, and a small conference room
<b>RCI office (formerly the Program Executive Office, Soldier)</b>	Housing office for the RCI	284	1,024	Administrative
<b>The Distributive Learning Center</b>	The defense initiative to provide individual, collective, and self-development training for soldiers, reservists, Department of the Army (DA) civilians, and approved contractors anywhere and at any time delivered via multiple methods and technologies	514	2,114	Administrative and classroom facilities that provide Video Tele-Training (VTT), Web Based Training (WBT), CD-RO, Computer Based Training (CBT), or classroom equipped with 12 to 16 workstations connected by a secure network
<b>Training Aids Support Center (TASC)</b>	Support (in the area of training aids) active, reserve, National Guard, senior, and junior Reserve Officer Training Course (ROTC) U.S. Army functions from San Jose, California, Oregon, and northern Nevada	300	9,153	Performs a variety of activities including computer graphics, developing posters, laminating, digital photography (DA photos), etc. It also stores medical training aids, Multiple Integrated Laser Engagement System (MILES) equipment, dummy M16 rifles, and many other training aids and equipment.
<b>Western Information Operations Center (WIOC)</b>	Provides general support and network information assurance and computer network defense (CND) capabilities to the Army. It also provides information operations (IO) augmentation to designated Army commands	331	4,549	Administrative

Source: Nakata Planning Group. *Parks Reserve Forces Training Area Unit Facility Space Requirements Analysis Report, July 2003*. Further revised and updated with data obtained through the Camp Parks Environmental Office.

**Table 1-2. Existing Buildings and Uses in the Camp Parks Cantonment Area<sup>3</sup>**

<b>Bldg No.</b>	<b>Year Built</b>	<b>Bldg Size (SF)</b>	<b>Bldg Height</b>	<b>General Property Use</b>	<b>Occupant/Tenant</b>	<b>Location<sup>1</sup></b>
00130	1944	13,449	1	Warehouse, general storage	Camp Parks Garrison DOL	DC
00131	1952	13,481	1	Equipment storage	ECS-30 & AMSA Storage	DC
00133	1994	1498 SY	none	Open storage area	Camp Parks Garrison_ ISD DRMO(issd)	DC
00140	1944	218	1	Associated with historic sign	Historic site is no longer occupied.	CA
00141	1953	9,435	1	Administration, classroom	91st Div (TS) _ 3 Bde, 363rd Rgt, 1 Btn	DC
00150	1944	11,320	2	Warehouse, general storage	Navy Reserve DET 1 CONSTR MAINT BN UNIT 303 (SeaBees)	DC
00162	1951	14,460	1	Equipment storage	RTS-Med / Camp Parks Garrison DOL	DC
00170	1944	11,284	1	Warehouse, general storage	Camp Parks Garrison DOL	DC
00171	1951	14,505	1	Equipment storage	319 Signal Corps Company B	DC
00180	1957	10,678	1	Administration, storage	319 Signal Corps Company B	DC
00200	1944	870	1	Administration	CAARNG RECRUITING	DC

<sup>3</sup> On the NASA-owned 8.5-acre property located in Dublin Crossing, there is one existing building (Building 121). This 2-story facility was built in 1952, is 120,000 square feet, and is used by NASA as a warehouse for general storage.

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<b>Bldg No.</b>	<b>Year Built</b>	<b>Bldg Size (SF)</b>	<b>Bldg Height</b>	<b>General Property Use</b>	<b>Occupant/Tenant</b>	<b>Location<sup>1</sup></b>
00284	1954	1,914	1	Health Clinic	Camp Parks Garrison Troop Med Clinic	CA
00300	1951	11,284	2	Enlisted Barracks, Equipment storage, administration	Camp Parks Garrison Housing Training Aids Support Center (TASC)	CA
00301	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00302	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00303	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00304	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00306	1951	11,791	2	Unaccompanied Personnel Housing	Camp Parks Garrison Housing	CA
00309	1996	80	2	Housing Furniture Storage	Camp Parks Garrison DOL	CA
00310	1951	11,791	2	Unaccompanied Personnel Housing	Camp Parks Garrison Housing	CA
00311	1952	11,284	2	Administration, general purpose	Camp Parks Garrison DOL / Navy Reserve Recruit Office	CA
00312	1952	11,284	2	Administration	INS Border Patrol	CA
00313	1995	975	1	Storage	INS Border Patrol	CA
00320	1951	11,284	2	Clinical Skills Lab, administration	RTS-MED / 91st Div (TS) _3Bde	CA

**Table 1-2. Existing Buildings and Uses in the Camp Parks Cantonment Area<sup>3</sup>**

<b>Bldg No.</b>	<b>Year Built</b>	<b>Bldg Size (SF)</b>	<b>Bldg Height</b>	<b>General Property Use</b>	<b>Occupant/Tenant</b>	<b>Location<sup>1</sup></b>
00321	1951	11,284	2	Enlisted Barracks	91st Div (TS) _1 BN 363 REG	CA
00323	1951	11,284	2	Administration	91st Div (TS) _2 BN 363 REG / 6399th	CA
00330	1951	11,284	2	Administration, NBC storage	184th Infantry / 104th DIV_CSS 4(css)Bde	CA
00331	1952	31,669	2	Administration, general storage	104th DIV_CSS 4(css)Bde / WIOC	CA
00332	1952	31,699	2	Dining facility, administration, general storage	Camp Parks Garrison DOL / 319 Signal Corps Company B / 104th DIV CSS 4(css)Bde	CA
00334	1967	2,400	1	General storage	104th DIV_CSS 4(css)Bde	CA
00340	1952	41,508	2	Administration, classroom	104th Div _CSS 4(css)Bde	CA
00350	1980	14,260	1	Administration	91st Div BPG Bat Proj GP	CA
00360	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00361	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00362	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00363	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00364	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00370	1997	39,632	2	Battle Projection Center Simulator Bldg	91st Div HHC 1 BDE - Battle Projection Center	CA

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00390	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00391	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00392	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00393	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00394	1951	11,284	2	Enlisted Barracks, Open Bay	Camp Parks Garrison Housing	CA
00495	1989	80	1	General storage	Camp Parks Garrison DOL Bldgs	CA
00500	1952	39,361	3	Administration	91st Div HHC 1 BDE - Battle Projection Group/WVUK9T	CA
00501	1954	7,288	2	Post Chapel	Camp Parks Garrison Chapel	CA
00510	1999	54,000	2	Administration	91st Div_ Headquarters / Band	CA
00511	1999	8,005	1	General storage	91st Div_ storage	CA
00513	1944	19,952	1	Administration	91st Div Bat Proj Grp/91D	CA
00514	1952	4,488	1	Distance learning center (TRADOC), General Instruction Building	91st Div Distance learning center	CA
00521	1944	12,044	1	Dining facility	Camp Parks Garrison Community Club	CA

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00610	1995	33,422	1	Administration, classroom	WARISC Western Army Reserve Intelligence Detachment	CA
00611	1952	2,304	1	Administration	Navy Reserve DET 1 CONSTR MAINT BN UNIT 303 (SeaBees)	CA
00620	1953	13,364	1	Administration, conference center, museum	Camp Parks Garrison DOL / PAO / 91st Div_3 Bde	CA
00670	unknown; after 1980	2782	1	Post Exchange Trailer	Camp Parks Garrison Post Exchange Building	CA
00691	unknown	1455	1	General open storage in fenced asphalted yard	Camp Parks Garrison Police department	CA
00692	1953	2,048	1	Police/MP Station	Camp Parks Garrison Police department	CA
00730	1952	24,160	2	Vehicle Maintenance Shop	ECS-30 & AMSA	DC
00731	1952	1,661	1	Vehicle Maintenance Shop	ECS-30 & AMSA	DC
00790	1952	7,285	1	Administration	Camp Parks Garrison Command Group	DC
00791	1953	22,450	1	Administration, DPW maintenance area	Camp Parks Garrison DPW	DC
00792	1953	20,064	1	General storage	ECS-30 & AMSA	DC

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<b>Bldg No.</b>	<b>Year Built</b>	<b>Bldg Size (SF)</b>	<b>Bldg Height</b>	<b>General Property Use</b>	<b>Occupant/Tenant</b>	<b>Location<sup>1</sup></b>
00793	1975; canopy replaced in 2001	6,000	1	Open Storage Area with canopy	Camp Parks Garrison DPW	DC
00796	1953	15,072	1	Storage warehouse, administration	RTS-Med	DC
00797	1998	434	1	Flammable Materials Storage	RTS-Med	DC
00798	1998	434	1	General storage	RTS-Med	DC
00801	2001	129	1	Sentry Station	Camp Parks Garrison Sentry	DC
00860	1993	30,975	2	Administration, warehouse	RTS-Med	DC
00861	1998	8,400	1	Medical Warehouse	RTS-Med	DC
00862	1998	5,875	2	Vehicle Maintenance Shop/Storage	RTS-Med	DC
00880	1997	4,800	1	Medical Facility Classroom	RTS-Med	DC
00881	1997	4,000	1	Medical Facility Classroom, administration	RTS-Med	DC
00973	1954	1,913	1	Visitor Center	FCI Workcamp	CA
00974	1952	11,284	2	Maintenance, storage	FCI Workcamp	CA

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<b>Bldg No.</b>	<b>Year Built</b>	<b>Bldg Size (SF)</b>	<b>Bldg Height</b>	<b>General Property Use</b>	<b>Occupant/Tenant</b>	<b>Location<sup>1</sup></b>
00984	1952	11,284	2	FCI Barracks	FCI Workcamp	CA
00985	1952	11,284	2	Support, recreation	FCI Workcamp	CA
00986	1952	11,284	2	FCI Barracks	FCI Workcamp	CA
00987	1952	11,284	2	FCI Barracks, dining facility	FCI Workcamp	CA
01100	1944	2,665	1	Family Housing, Commander's Quarters	Camp Parks Garrison Housing	CA
01101	1944	564	1	Garage	Camp Parks Garrison Housing	CA
01104	1944	464	1	Family Housing, Storage	Camp Parks Garrison Housing	CA
01105	1944	2,280	1	Family Housing, LTC/MAJ	Camp Parks Garrison Housing	CA
01106	1944	625	1	Garage	Camp Parks Garrison Housing	CA
01108	1944	2,016	2	Family Housing, SR NCO	Camp Parks Garrison Housing	CA
01109	1944	600	1	Garage	Camp Parks Garrison Housing	CA
01150	1952	24,044	2	Guest House	Camp Parks Garrison Housing	CA
01151	1952	24,044	2	Family Housing, LTC/MAJ and Parks Lodging Office, Perm Party Billets	Camp Parks Garrison Housing	CA



**Table 1-2. Existing Buildings and Uses in the Camp Parks Cantonment Area<sup>3</sup>**

Bldg No.	Year Built	Bldg Size (SF)	Bldg Height	General Property Use	Occupant/Tenant	Location <sup>1</sup>
01152	1953	24,044	2	Family Housing LTC/MAJ, Perm Party Billets	Camp Parks Garrison Housing	CA
494	2005	9,600	1	COES Warehouse—Regional Support Facility (recently constructed)	63 RSC	CA
520	2004	8,200	1	Fire Station—2-Company Facility (recently constructed)	Camp Parks Garrison	CA
920	2005	28,528	1	Organizational Maintenance Shop	CA Army National Guard	CA
----	2005	varies	1-2	Family Housing	Residential Community Initiative	CA
n/a	n/a	2,222	Wash Rack	Vehicle cleaning facility	Camp Parks	CA

\*Training Area facilities and small outbuildings in the Cantonment Area are not included in this list.

Notes:

1. Location Acronyms:

CA = northern Cantonment Area

DC = southern Cantonment Area (Dublin Crossing)

Buildings Not Listed:

Building 341 (demolished (11/04/2003)); Buildings 1110, 1111, 1112, 1113, 1114, 1117, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1130, 1131, 1132, 1134, 1137, 1138, 1139, and 1140 (demolished as part of RCI development (2005)); Buildings 1888, 1889, and 1890 (ownership transferred to DSRSD); Building 121 (NASA warehouse)

2. Other Acronyms:

Y = Yes

n/a = Information not available

**Table 1-3. Guidance, Regulations, and Statutes Key to Complying with NEPA**

<p><b>DoD and U.S. Army Guidance:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Department of Defense Instruction 4715.9: Environmental Planning and Analysis</li> <li><input type="checkbox"/> Department of Defense Direction 6050.1: Environmental Effects in the United States of DoD Actions</li> <li><input type="checkbox"/> 32 CFR Part 651: Environmental Analysis of Army Actions (Updated Guidelines, 29 Mar 02)</li> <li><input type="checkbox"/> AR 200-1: Environmental Protection and Enhancement (21 Feb 97)</li> <li><input type="checkbox"/> AR 200-3: Natural Resources – Land, Forest, and Wildlife Management (Feb 28 95)</li> <li><input type="checkbox"/> AR 200-4: Cultural Resources Management (30 Oct 97)</li> <li><input type="checkbox"/> AR 200-5: Environmental Quality - Pest Management (29 Oct 99)</li> <li><input type="checkbox"/> AR 210-20: Real Property Master Planning for Army Installations (16 May 05)</li> </ul>
<p><b>Federal NEPA Regulations and Guidance:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The National Environmental Policy Act of 1969 (as amended), 42 U.S.C. 4321</li> <li><input type="checkbox"/> Council on Environmental Quality Regulations Implementing NEPA, 40 CFR 1500-1508</li> <li><input type="checkbox"/> Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations (1981, as modified in 1986), 46 FR 18026</li> <li><input type="checkbox"/> Guidance Regarding NEPA Regulations (1983), 48 FR 34263</li> <li><input type="checkbox"/> Executive Order 11514 – Protection and Enhancement of Environmental Quality (3/1970) as amended by Executive Order 11991 (24 May 77)</li> </ul>
<p><b>Air Quality Regulations and Guidance:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Clean Air Act of 1990, as amended, 42 U.S.C. 7418</li> <li><input type="checkbox"/> U.S. Environmental Protection Agency Regulations for Determining Conformity Of Federal Actions To State Or Federal Implementation Plans, 40 CFR 93</li> </ul>
<p><b>Cultural Resources Regulations and Guidance:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> National Historic Preservation Act, as amended, 16 U.S.C. 470</li> <li><input type="checkbox"/> Archaeological and Historic Preservation Act of 1980, as amended</li> <li><input type="checkbox"/> Antiquities Act of 1906, 16 U.S.C. 431-433</li> </ul>

**Table 1-3. Guidance, Regulations, and Statutes Key to Complying with NEPA**

<ul style="list-style-type: none"> <li><input type="checkbox"/> Advisory Council on Historic Preservation Protection of Historic and Cultural Properties, 36 CFR 800</li> <li><input type="checkbox"/> Archaeological Resources Protection Act of 1979, 16 U.S.C. 470</li> <li><input type="checkbox"/> Native American Graves Protection and Repatriation Act of 1990, 25 U.S.C. 3001</li> <li><input type="checkbox"/> American Indian Religious Freedom Act of 1978, 42 U.S.C. 1996</li> <li><input type="checkbox"/> Executive Order 11593 – Protection and Enhancement of the Cultural Environment (6 May 71)</li> <li><input type="checkbox"/> Executive Order 13007 – Indian Sacred Sites (24 May 96)</li> <li><input type="checkbox"/> Executive Order 13175 – Consultation and Coordination With Indian Tribal Governments (6 Nov 00)</li> </ul>
<b>Fish, Wildlife, and Vegetation Regulations and Guidance:</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Endangered Species Act of 1973, as amended, 16 U.S.C. 1531 et seq.</li> <li><input type="checkbox"/> The Fish and Wildlife Coordination Act of 1958, as amended, 16 U.S.C. 661-666</li> <li><input type="checkbox"/> Migratory Bird Conservation Act of 1928, as amended, 16 U.S.C. 715 et seq.</li> <li><input type="checkbox"/> Migratory Bird Treaty Act of 1918, as amended, 16 U.S.C. 703-712</li> <li><input type="checkbox"/> Executive Order 13186 – Responsibilities of Federal Agencies To Protect Migratory Birds (10 Jan 01)</li> <li><input type="checkbox"/> Executive Order 13112 – Invasive Species (3 Feb 99)</li> </ul>
<b>Water Regulations and Guidance:</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Federal Water Pollution Control Act of 1972 (Clean Water Act), as amended, 33 U.S.C. 1251 - 1376</li> <li><input type="checkbox"/> Safe Drinking Water Act of 1974, as amended, 42 U.S.C. 201</li> <li><input type="checkbox"/> Watershed Protection and Flood Control Act of 1954, as amended, 16 U.S.C. 1001-1008)</li> <li><input type="checkbox"/> Executive Order 11990 – Protection of Wetlands (24 May 77)</li> <li><input type="checkbox"/> Executive Order 11988 – Floodplain Management (24 May 77)</li> </ul>
<b>Hazardous Materials Regulations and Guidance:</b>
<ul style="list-style-type: none"> <li><input type="checkbox"/> Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601 et seq.</li> <li><input type="checkbox"/> Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.</li> </ul>

**Table 1-3. Guidance, Regulations, and Statutes Key to Complying with NEPA**

<b>Noise Regulations and Guidance:</b>
<input type="checkbox"/> Noise Control Act of 1972, 42 U.S.C. 4901
<b>Socioeconomic Regulations and Guidance:</b>
<input type="checkbox"/> Executive Order 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (11 Feb 94)

**Table 2-1. Projected Population Growth at Camp Parks**

<b>Population Summary—Baseline (FY02) and at Full Master Plan Build-out (FY12)</b>						
	<b>Baseline Daily Planning</b>	<b>Baseline Total Assigned</b>	<b>w/Master Plan Daily Planning</b>	<b>w/Master Plan Total Assigned</b>	<b>Baseline FTS*</b>	<b>w/Master Plan FTS</b>
Officers	231	684	278	1081	55	102
Warrant Officers	4	29	2	96	4	4
Enlisted	500	1399	564	2889	54	118
Civilians	185	185	176	176	185	176
<b>Total</b>	<b>920</b>	<b>2297</b>	<b>1020</b>	<b>4242</b>	<b>298</b>	<b>400</b>

\*FTS=full time staff

<b>Effective Planning Populations</b>	
<b>Group</b>	<b>Totals</b>
Total Unaccompanied Military	64
Total Accompanied Military*	160
Total Number of Children	339
Total Family Members	499
Preschool Children (40% of total)	200**
School Age Children (60% of total)	299**
Total Military + 10% Family Members	896
Total Military + 20% Family Members	946
Total Military + 30% Family Members	996
Total Military + 40% Family Members	1,045
Total Military + 50% Family Members	1,095
Total Military + 60% Family Members	1,145
Total Military + 70% Family Members	1,195
Total Military + 75% Family Members	1,220
Total Military + 100% Family Members	1,345
Number of Retirees (estimated)	5,000
Total Military + 100% Family Members + Retirees	6,345

Source: Nakata 2002

\*Based on estimated percentages of accompaniment for various enlisted and officer grade levels. \*\*These numbers were taken from the Nakata 2002, however, using the percentages provided, correct values appear to be 136 and 203 for preschool and school age children, respectively.

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
<b>Facilities / Buildings</b>							
<b>Existing Buildings (to be retained)</b>							
00140	Guard Shack Supporting Historic Sign	218	SF	Camp Parks	1	Provides support for NRHP eligible Camp Parks front gate sign designed by architect Bruce Goff in 1944.	CA-OS
00370	Battle Projection Center	39,400	SF	91st Div	2		CA-OP
00510	91st Training Support Division HQs	53,700	SF	91st Div	1		CA-OP
00610	WARISC	33,600	SF	WARISC	1		CA-OP
494	COES Warehouse	9,600	SF	63 RSC	1	Regional Support Facility (recently constructed)	CA-IN
520	Fire Station	8,200	SF	Camp Parks Garrison	1	2- Company Facility (recently constructed)	CA-OP
920	CA Army National Guard	28,528	SF	CA Army National Guard	1	Organizational Maintenance Shop	CA-OP
----	RCI Family Housing	varies	---	RCI	1-2	Family Housing (Residences & Garages)	CA-HS
NA	Wash Rack	2,222	SF	Camp Parks	-	Calculated from perimeter	CA-IN
<b>Existing Buildings (to be demolished)*</b>							
00130	Warehouse, general storage	13,449	SF	Camp Parks	1	Inst Support	DC
00131	Equipment storage	13,481	SF	Camp Parks	1	Equipment storage	DC

<sup>4</sup> Training Area facilities (except for the RTS-MED Open Storage) are not included in this table because their ongoing refurbishment and replacement is considered part of ongoing installation operations rather than a part of Master Plan implementation. The facility sizes used in this table are approximations used for planning purposes and do not reflect actual measurements of structures as depicted in GIS.

<sup>5</sup> As part of this action, Bldg 121, located on the 8.5-acre NASA-owned property within the Dublin Crossing area, would be demolished. It is a 2-story 120,000 square foot warehouse used for NASA Ames Research Center storage.

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
00133	Open storage area	13,482	SF	Camp Parks	-	Open storage area	DC
00141	Administration, classroom	9,435	SF	Camp Parks	1	Administration, classroom	DC
00150	Warehouse, general storage	11,320	SF	Camp Parks	2	Inst Support	DC
00162	Equipment storage	14,460	SF	Camp Parks	1	Inst Support	DC
00170	Warehouse, general storage	11,284	SF	Camp Parks	1	Inst Support	DC
00171	Equipment storage	14,505	SF	Camp Parks	1	Equipment storage	DC
00180	Administration, storage	10,678	SF	Camp Parks	1	Administration, storage	DC
00200	Administration	870	SF	Camp Parks	1	Administration	DC
00210	Unaccompanied Personnel Housing (Perm Party Billets)	11,791	SF	Camp Parks	2	Inst Support (demolition complete)	DC
00212	Unaccompanied Personnel Housing (Perm Party Billets)	11,791	SF	Camp Parks	2	Inst Support (demolition complete)	DC
00284	Health Clinic	1,914	SF	Camp Parks	1	Inst Support	CA
00300	Enlisted Barracks, Equipment storage, administration	11,284	SF	Camp Parks	2	Enlisted Barracks, Equipment storage, administration	CA
00301	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	Inst Support	CA
00302	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	Inst Support	CA
00303	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	Inst Support	CA
00304	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	Inst Support	CA
00306	Unaccompanied Personnel Housing	11,791	SF	Camp Parks	2	Inst Support	CA
00309	Housing Furniture Storage	80	SF	Camp Parks	2	Inst Support	CA
00310	Unaccompanied Personnel Housing	11,791	SF	Camp Parks	2	AT Support	CA
00311	Administration, general purpose	11,284	SF	Camp Parks	2	AT Support	CA
00312	Administration	11,284	SF	Camp Parks	2	AT Support	CA
00313	Storage	975	SF	Camp Parks	1	Storage	CA

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
00320	Clinical Skills Lab, administration	11,284	SF	Camp Parks	2	Clinical Skills Lab, administration	CA
00321	Enlisted Barracks	11,284	SF	Camp Parks	2	Enlisted Barracks	CA
00323	Administration	11,284	SF	Camp Parks	2	Administration	CA
00330	Administration, NBC storage	11,284	SF	Camp Parks	2	Administration, NBC storage	CA
00331	Administration, general storage	31,669	SF	Camp Parks	2	104 DIV TRNG	CA
00332	Dining facility, administration, general storage	31,699	SF	Camp Parks	2	Installation Support	CA
00334	General storage	2,400	SF	Camp Parks	1	104 DIV TRNG	CA
00340	Administration, classroom	41,508	SF	Camp Parks	2	104 DIV TRNG (School House)	CA
00341	General storage	156	SF	Camp Parks		General storage	CA
00350	Administration	14,260	SF	Camp Parks	1	91 DIV TNG	CA
00360	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00361	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00362	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00363	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00364	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00390	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00391	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00392	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00393	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00394	Enlisted Barracks, Open Bay	11,284	SF	Camp Parks	2	AT Support	CA
00495	General storage	80	SF	Camp Parks	1	General storage	CA
00500	Administration	39,361	SF	Camp Parks	3	Administration	CA
00501	Post Chapel	7,288	SF	Camp Parks	2	Post Chapel	CA
00511	General storage	8,005	SF	Camp Parks	1	General storage	CA
00513	Administration	19,952	SF	Camp Parks	1	Administration	CA



**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
00514	Distance learning center (TRADOC), General Instruction Building	4,488	SF	Camp Parks	1	Distance learning center (TRADOC), General Instruction Building	CA
00521	Dining facility	12,044	SF	Camp Parks	1	Inst Support	CA
00611	Administration	2,304	SF	Camp Parks	1	Administration	CA
00620	Administration, conference center, museum	13,364	SF	Camp Parks	1	Inst Support	CA
00634	Compressor Building	140	SF	Camp Parks	1	Inst Support (demolition complete)	DC
00635	Fire Department Storage	1,100	SF	Camp Parks	1	Inst Support (demolition complete)	DC
00636	Fire Station	5,041	SF	Camp Parks	1	Inst Support (demolition complete)	DC
00670	Post Exchange Trailer	2782	SF	Camp Parks	1	Inst Support	CA
00691	General storage	1,455	SF	Camp Parks	1	Inst Support	CA
00692	Police/MP Station	2,048	SF	Camp Parks	1	Inst Support	CA
00730	Vehicle Maintenance Shop	24,160	SF	Camp Parks	2	Inst Support	DC
00731	Vehicle Maintenance Shop	1,661	SF	Camp Parks	1	Inst Support	DC
00790	Administration	7,285	SF	Camp Parks	1	Inst Support	DC
00791	Administration, DPW maintenance area	22,450	SF	Camp Parks	1	DPW	DC
00792	General storage	20,064	SF	Camp Parks	1	Inst Support	DC
00793	Open Storage Area with canopy	6000	SF	Camp Parks	-	Inst Support	DC
00796	Storage warehouse, administration	15,072	SF	Camp Parks	1	Inst Support	DC
00797	Flammable Materials Storage	434	SF	Camp Parks	1	Inst Support	DC
00798	General storage	434	SF	Camp Parks	1	Inst Support	DC
00801	Sentry Station	129	SF	Camp Parks	1	Inst Support	DC
00860	Administration, warehouse	30,975	SF	Camp Parks	2	Inst Support	DC
00861	Medical Warehouse	8,400	SF	Camp Parks	1	RMS-Medical	DC

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
00862	Vehicle Maintenance Shop/Storage	5,875	SF	Camp Parks	2	RMS-Medical	DC
00880	Medical Facility Classroom	4,800	SF	Camp Parks	1	RMS-Medical	DC
00881	Medical Facility Classroom, administration	4,000	SF	Camp Parks	1	RMS-Medical	DC
00973	Visitor Center	1,913	SF	Camp Parks	1	Inst Support	CA
00974	Maintenance, storage	11,284	SF	Camp Parks	2	Inst Support	CA
00984	FCI Barracks	11,284	SF	Camp Parks	2	Housing	CA
00985	Support, recreation	11,284	SF	Camp Parks	2	Housing	CA
00986	FCI Barracks	11,284	SF	Camp Parks	2	Housing	CA
00987	FCI Barracks, dining facility	11,284	SF	Camp Parks	2	Housing	CA
01100	Family Housing, Commander's Quarters	2,665	SF	Camp Parks	1	Housing	CA
01101	Garage	564	SF	Camp Parks	1	Housing	CA
01104	Family Housing, Storage	464	SF	Camp Parks	1	Housing	CA
01105	Family Housing, LTC/MAJ	2,280	SF	Camp Parks	1	Housing	CA
01106	Garage	625	SF	Camp Parks	1	Housing	CA
01108	Family Housing, SR NCO	2,016	SF	Camp Parks	2	Housing	CA
01109	Garage	600	SF	Camp Parks	1	Housing	CA
01150	Guest House	24,044	SF	Camp Parks	2	Inst Support	CA
01151	Family Housing, LTC/MAJ and Parks Lodging Office, Perm Party Billets	24,044	SF	Camp Parks	2	Inst Support	CA
01152	Family Housing LTC/MAJ, Perm Party Billets	24,044	SF	Camp Parks	2	Inst Support	CA
<b>Proposed Replacement Buildings</b>							
P001	Reserve Center/Assembly/ Classroom Building	55,300	SF	63d RSC	2	Oakland RC	CA-OP

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
P002	Unit Storage & Arms Room Bldg	36,355	SF	63d RSC	1	20 admin offices, heated warehousing area	CA-OP
P003	Reserve Center	44,600	SF	63d RSC	2	104 DIV TRNG	CA-OP
P004	Reserve Center	50,000	SF	63d RSC	2	Installation organizations	CA-OP
P005	Reserve Center	50,000	SF	63d RSC	2	Installation organizations	CA-OP
P006	Reserve Center	50,000	SF	63d RSC	2	Installation organizations	CA-OP
P007	Dining Hall	19,800	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P008	Guest House Billeting (50 SP)	15,000	SF	Camp Parks Garrison	3	Approximately 50 PN	CA-HS
P009	Perm Party Billeting (65 SP)	23,790	SF	Camp Parks Garrison	2	Approximately 65 PN	CA-HS
P010	AT Billet - 300 man	109,800	SF	Camp Parks Garrison	5	Based on 366 GSF per person	CA-HS
P011	AT Billet - 300 man	109,800	SF	Camp Parks Garrison	5	Based on 366 GSF per person	CA-HS
P012	AT Billet - 300 man	109,800	SF	Camp Parks Garrison	5	Based on 366 GSF per person	CA-HS
P013	AT Billet - 300 man	109,800	SF	Camp Parks Garrison	5	Based on 366 GSF per person	CA-HS
P014	RTS-Med Admin / Training	42,500	SF	RTS-MED	2	Joint-use facility with RTS-MED Admin/TNG	CA-OP
P015	RTS-Med Bio-Medical Maintenance Facility	28,400	SF	RTS-MED	1	Joint-use facility with RTS-MED Admin/TNG	CA-IN
P016	RTS-Med Warehouse	48,000	SF	RTS-MED	1	Joint-use facility	CA-IN
P017	DOL/DPW - Warehouse	35,000	SF	Camp Parks Garrison	1	Joint DPW / DOL facility	CA-IN
P018	DOL/DPW - Maintenance Facility	62,800	SF	Camp Parks Garrison	1	Joint DPW / DOL facility	CA-IN

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
P019	AMSA / OMS Maintenance / Storage	32,600	SF	63d RSC	1	Joint AMSA / OMS facility	CA-IN
P021	Access Control Building	100	SF	Camp Parks Garrison	1	To include vehicle pass station	CA-OP
P022	PMO / Security Office	11,800	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P023	Welcome / Resource Center - ACS	33,200	SF	Camp Parks Garrison	1	Multi-function Facility, Training Aids Center (TASC), Museum, Recreation Center	CA-OP
P024	Post Headquarters	16,880	SF	Camp Parks Garrison	1	Includes auditorium / teleconference center, communications center	CA-OP
P025	Medical Clinic	6,000	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P026	Community Club	10,200	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P027	Chapel	4,500	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P028	AAFES PX / Bank / Retail	15,000	SF	AAFES	1	To be combined with Bank / Retail	CA-OP
P029	Physical Fitness Center	35,500	SF	Camp Parks Garrison	1	Installation support facility	CA-OP
P031	General Purpose Bulk Unit / Installation Storage	8,000	SF	Camp Parks	1	Supply Storage unheated (medical dummies, computers, other; no vehicles, petroleum products)	CA-OP
P032	General Purpose Bulk Unit / Installation Storage	8,000	SF	Camp Parks	1	Supply Storage (medical dummies, computers, other; no vehicles, petroleum products)	CA-OP
<b>Parking / Open Storage / Recreation</b>							
<b>Existing Parking To Be Retained</b>							
PK610	Parking - WARISC (partial)	7,000	SY	WARISC	-	145 SP	CA-OP

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
PK370A	POV Parking - BPC	1,800	SY	91st Div	-	40 SP	CA-OP
PK370B	POV Parking - BPC	2,500	SY	91st Div	-	55 SP	CA-OP
PK510	Parking - 91 DIV HQ (partial)	2,100	SY	91st Div	-	45 SP	CA-OP
PK30A	POV - Fire Station North Lot	370	SY	Camp Parks	-	10 SP	CA-OP
PK30B	POV - Fire Station South Lot	200	SY	Camp Parks	-	6 SP	CA-OP
MPK20	Hardstand / Open Storage - COES Warehouse	3,375	SY	63 RSC	-	North of AMSA / OMS Facility - 110 SP (recently constructed)	CA-IN
<b>Existing Parking / Open Storage / Recreation in Cantonment Area (to be demolished)</b>							
	Concrete Slabs	1,012	SY				
	Parking	259,589	SY				
	Recreation Areas	37,481	SY				
	Sidewalks	21,930	SY				
	Helipad	852	SY				
	TOTAL	320,863	SY				
			SY				
	NASA (total property-- building, parking, open space)	40,782	SY				
<b>Proposed Parking / Open Storage / Recreation</b>							
Field 1	Soccer Field	1	EA	Camp Parks	n/a		CA-OP
Field 2	Baseball Field	1	EA	Camp Parks	n/a		CA-OP
Court 1	Tennis Courts	2	EA	Camp Parks	n/a		CA-OP
PK01	Parking - Campus Area	10,500	SY	Camp Parks Garrison	-	South of P001, 240 SP	CA-OP
PK02	Parking - Campus Area	11,000	SY	Camp Parks Garrison	-	North of P002, 250 SP	CA-OP

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
PK03	Parking - Campus Area	10,500	SY	63d RSC	-	North of P003, 240 SP	CA-OP
PK04	Parking - Campus Area	10,500	SY	Camp Parks Garrison	-	North of P004, 240 SP	CA-OP
PK06	Parking - Campus Area	10,500	SY	Camp Parks Garrison	-	South of P006, 240 SP	CA-HS
PK07	Parking - Dining Facility	900	SY	Camp Parks Garrison	-	South of P007, 20 SP	CA-HS
PK09	Parking - Permanent Party Billets & Guest House	4,900	SY	Camp Parks Garrison	-	South of Guest House / PP Billets, 110 SP	CA-OP
PK10	Parking Area - AT Billets	8,300	SY	Camp Parks Garrison	-	Central to AT Billets, 190 SP	CA-IN
PK14A	Parking Area - RTS-MED	3,000	SY	RTS-MED	-	East of RTS-Med Admin Facility, 70 SP	CA-IN
PK14B	Parking Area - RTS-MED	5,300	SY	RTS-MED	-	South of RTS-Med Veh/Equip Fac, 120 SP	CA-IN
PK18	Parking Area - DOL / DPW Complex	2,700	SY	Camp Parks Garrison	-	East of DOL / DPW facilities - 60 SP	CA-OP
PK19	Parking Area - AMSA / OMS	3,300	SY	63 RSC	-	East of AMSA / OMS Facility - 75 SP	CA-OP
PK24	Parking Area - Post Headquarters	3,800	SY	Camp Parks Garrison	-	East of Post Headquarters, 85 SP	CA-OP
PK26	Parking - Community Club Area	4,250	SY	Camp Parks Garrison	-	95 SP	CA-OP
PK27	Parking - Chapel / Community Club Area	3,800	SY	Camp Parks Garrison	-	West / South of Chapel, 84 SP	CA-OP
PK28	Parking Area - AAFES / Bank / Retail	1,060	SY	AAFES	-	North of AAFES Retail Center, 23 SP	CA-OP
PK29	Parking Area - Physical Fitness Center	2,900	SY	Camp Parks Garrison	-	North of Physical Fitness Center, 65 SP	CA-OP
PK510A	Parking Area - 91 DIV Headquarters	2,400	SY	63d RSC	-	East of 91 DIV Headquarters, 55 SP	CA-OP

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
PK510B	Parking Area - 91 DIV Headquarters	2,100	SY	63d RSC	-	South of 91 DIV Headquarters, 45 SP	CA-OP
PK610A	Additional Parking - WARISC, Bldg 610	5,400	SY	Camp Parks Garrison	-	South of WARISC Bldg 610, 120 SP	CA-OP
MPK02	Parking / Hardstand Area for Unit Storage Bldg	3,600	SY	Camp Parks Garrison	-	West of Maintenance Facility 20 SP	CA-IN
MPK15A	Parking Area - RTS-MED	6,600	SY	RTS-MED	-	Central Maintenance Complex - 132 SP	CA-IN
MPK15B	Open Storage - RTS-MED	6,300	SY	Camp Parks Garrison	-	North RTS-MED Complex Area - 70 SP	TA
MPK17	Parking / Open Storage - DOL / DPW Area	4,400	SY	RTS-MED	-	East of Maintenance Facility (P015)	CA-IN
MPK19	Parking / Hardstand Area - AMSA / OMS	18,000	SY	63 RSC	-	North of AMSA / OMS Facility – 360 SP	CA-IN
MPK31	Hardstand / Open Storage - Bulk Storage Bldg	tbd	SY	63 RSC	-		
TA01	Open Storage / Training Area - DEPMED	19,359	SY	63d RSC	-	For 352nd CSH - 4 Acres	
<b>Roadways</b>							
<b>Existing Roadways (76 percent to be upgraded; remainder demolished)</b>							
	Roads (most paved but many in disrepair)	178,983	SY	Camp Parks Garrison	-	Based on acreage calculated for roads in northern Cantonment Area	
<b>Proposed Roadways (upgrades of existing or new)</b>							
n/a	5th Street	3,500	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		17,111	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	6th Street	1,355	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		6,624	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	

**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
n/a	7th Street	1,100	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		5,378	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	8th Street	4,050	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		19,800	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	9th Street	1,625	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		7,944	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	10th Street	2,000	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		9,778	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	Campus Avenue (new)	2,000	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		9,778	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	Cromwell Avenue	4,275	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		20,900	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	Davis Avenue	3,800	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		18,578	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	Goodfellow Avenue	2,000	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		9,778	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	



**Table 2-2. Camp Parks Changes Associated with Implementation of the Proposed Action<sup>45</sup>**

Facility ID	Facility Description	Size	UM	Proponent	No. Floors	Comments	Location <sup>1</sup>
n/a	Hutchins Avenue	1,125	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		5,500	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	12th Street	3,000	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		14,667	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	
n/a	Mitchell Avenue (new)	1,150	LF	Camp Parks Garrison	-	Roadway - Curb & Gutter	
		5,622	SY	Camp Parks Garrison	-	Roadway - 44 ft wide paving	

\*Training Area facilities (except for RTS-MED Open Storage) and small outbuildings are not included in this list.

Notes:

1. Location Acronyms:

- CA = northern Cantonment Area
- TA = Training Area
- DC = southern Cantonment Area (Dublin Crossing)
- OP = Operations
- HS = Housing
- IN = Industrial

2. Other Acronyms:

- Y = Yes
- Unk = Unknown
- n/a = Information not available
- SF = square feet
- TBD = To be decided
- OS=Open Space

Buildings Not Listed:

Building 341 (demolished 11/04/2003); Buildings 1110, 1111, 1112, 1113, 1114, 1117, 1119, 1120, 1121, 1122, 1123, 1124, 1125, 1130, 1131, 1132, 1134, 1137, 1138, 1139, and 1140 (demolished as part of RCI development (2005)); Buildings 1888, 1889, and 1890 (ownership transferred to DSRSD); Building 121 (NASA warehouse)

**Table 2-3. Unit Relocations Under the Proposed Action<sup>6</sup>**

Unit Group	Unit Name	Current Camp Parks Bldg	Parks - Future Location (Bldg)
<b>Oakland Units Relocating to Parks</b>			
	WESTERN ELEMENT (RIOCC)	610	Existing Bldg 610
	491 QM CO (PL and TRML)	off-site	Campus RC Bldg P001
	380 MP DET	off-site	Campus RC Bldg P001
	352 HSP CBT SPT (HUB)	off-site	Campus RC Bldg P001
	363 AUG BN (LANES)	321, 323	Campus RC Bldg P001
	1980 MED TM	off-site	Campus RC Bldg P001
	1895 MED TM	off-site	Campus RC Bldg P001
	1488 MED TM	off-site	Campus RC Bldg P001
	368 MI BN (-)	off-site	Campus RC Bldg P001
<b>RTS-Medical</b>			
	REGIONAL TRAINING SITE - MEDICAL	860, 861, 862, 880, 881, 162	RTS-Med Complex
<b>104th DIV</b>			
1st BDE	2 BN (BCT) 415 REG 1 BDE (BCT) 104 DIV (IT)	340	Campus School House Bldg P003
3rd BDE	3 BN (CM) 104 REG 3 BDE (CS) 104 DIV (IT)	331	Campus School House Bldg P003
4th BDE	HHD HQ 4 BDE (CSS) 104 DIV (IT)	340	Campus School House Bldg P003
	1042 TRNG DET (OD) 4 BDE (CSS) 104 DIV (IT)	331	Campus School House Bldg P003
	6 BN (PS) 104 REG 4 BDE (CSS) 104 DIV (IT)	340	Campus School House Bldg P003
	7 BN (TC) 104 REG 4 BDE (CSS) 104 DIV (IT)	340	Campus School House Bldg P003
	8 BN (QM) 104 REG 4 BDE (CSS) 104 DIV (IT)	340, 331, 332	Unit not stationed at Parks

<sup>6</sup> As part of this action, NASA would be relocated from Building 121 on the 8.5-acre NASA-owned property.

**Table 2-3. Unit Relocations Under the Proposed Action<sup>6</sup>**

Unit Group	Unit Name	Current Camp Parks Bldg	Parks - Future Location (Bldg)
5th BDE	9 BN (PN) 104 REG 5 BDE (HS) 104 DIV (IT)	340	Campus School House Bldg P003
6th BDE	10 & 11 BN 6 BDE 104 DIV (IT)	331	Unit not stationed at Parks
<b>91st DIV (Undetermined at this time which 91st DIV elements would be included in the 91st DIV HQs (Bldg 510) vs. RC buildings)</b>			
HQs	91 DIV HEADQUARTERS	510	Existing Bldg 510
	91 DIV HHC	510	Existing Bldg 510
	91 DIV BAND	510	Existing Bldg 510
1st BDE	HHC 1 BDE 91 DIV	350, 500, 513	Campus RC Bldg
	HHC 1 BDE 91 DIV - BPC	370	Existing Bldg 370
	HHC 1 BDE 91 DIV - SIM GRP 1	513	Campus RC Bldg
	HHC 1 BDE 91 DIV - SIM GRP 2	500	Campus RC Bldg
	HHC 1 BDE 91 DIV - SIM GRP 3	350	Campus RC Bldg
Other 91 DIV	6399 REINFORCED TRAINING UNIT	323	Campus RC Bldg
	1 BN 363 REG 91 DIV (aka WVX599 - 363 Aug BN)	321, 323	Campus RC Bldg
	3 BN 356 LOG SPT	321	Campus RC Bldg
<b>WARISC Bldg</b>			
	WARISC	610	Existing Bldg 610
	NSA INTEL FLT / PCAF 694	610	Existing Bldg 610
	WESTERN INF OPNS CNTR	610	Existing Bldg 610
	JICPAC (SAN FRANCISCO DET)	610	Existing Bldg 610
	418 MI DET (SAID)	610	Existing Bldg 610
	NAVAL RES SECURITY GRP	610	Existing Bldg 610
<b>Other Tenants</b>			
	63 REG SPT CMD - Retention Office	340	Campus RC Bldg
	CO B 319 SIG BN	171, 180	Campus RC Bldg
	NAVAL RES RECRUIT OFFICE	311	Campus RC Bldg

**Table 2-3. Unit Relocations Under the Proposed Action<sup>6</sup>**

Unit Group	Unit Name	Current Camp Parks Bldg	Parks - Future Location (Bldg)
	DET 1 CONSTR MAINT BN UNIT 303 (SeaBees)	611, 150	Campus RC Bldg
	US NAVY RESERVES - unknown unit / mission	340	Campus RC Bldg
	PROGRAM EXEC OFFICE - SOLDIER	284	Campus RC Bldg
	CAARNG RECRUITING	200	N/A - CA Armory site
	CO B 1-184 IN BN	330	N/A - CA Armory site
	DHS BORDER PATROL	312	
	FCI Work Camp	973, 974, 984, 985, 986, 987	
<b>Parks Garrison / Installation Support</b>			
	CAMP PARKS GARRISON	790	Parks HQs bldg P025
	COMMANDER	620, 790, 801	Parks HQs bldg P025
	DIR OF PLANS & TRAINING	620	Parks HQs bldg P025
	ENVIRONMENTAL	791	Parks HQs bldg P025
	INFORMATION MANAGEMENT	790	Parks HQs bldg P025
	PUBLIC AFFAIRS OFFICE	790, 620	Parks HQs bldg P025
	DIR OF LOGISTICS	790 and multiple storage and maintenance areas	Parks HQs / Maintenance Compound bldgs P025, P021, P022
	DIR OF PUBLIC WORKS	791	Parks HQs / Maintenance Compound bldgs P025, P021, P022
	COMMUNITY CLUB	521	Club P030
	CHAPEL	501	Chapel P027
	FIRE & EMERGENCY DEPT	634, 635, 636	New Fire Station (Bldg 520)
	POLICE DEPARTMENT	332, 691, 692	Police Station P024
	TRAINING AIDS SUPPORT CENTER	300	Welcome / Resource Center P026
	AAFES	332	Retail Bldg P028

**Table 2-3. Unit Relocations Under the Proposed Action<sup>6</sup>**

<b>Unit Group</b>	<b>Unit Name</b>	<b>Current Camp Parks Bldg</b>	<b>Parks - Future Location (Bldg)</b>
	DISTRIBUTIVE LEARNING CTR	514	Welcome / Resource Center P026
	EQUIP CONCEPT SITE 30 & AMSA	31, 730, 731, 792	OMS / AMSA P018 (possibly P019 for Storage)
	114 CH TM CHAPLAIN SPT GS	501	Chapel Center

**Table 3-1. 2006 Air Emissions Inventory Criteria Pollutants – Actual Emissions**

<b>Camp Parks 2006 Air Emissions Inventory</b>					
<b>Actual Emissions</b>					
<b>(Tons Per Year)</b>					
<b>Source Category</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>CO</b>	<b>VOC</b>	<b>PM<sub>10</sub></b>
Boilers and Furnaces (Natural Gas)	1.47	0.01	1.24	0.08	0.11
Degreasing	N/A	N/A	N/A	0	N/A
Fuel Storage/Dispensing	N/A	N/A	N/A	<0.01	N/A
Generators	0.41	0.01	0.09	0.04	0.03
Miscellaneous Chemicals	N/A	N/A	N/A	0.28	N/A
Pesticides	N/A	N/A	N/A	0.03	N/A
Surface Coating	N/A	N/A	N/A	0.81	N/A
Woodworking	N/A	N/A	N/A	N/A	0.02
<b>Total</b>	<b>1.88</b>	<b>0.02</b>	<b>1.33</b>	<b>1.24</b>	<b>0.16</b>

Source: Camp Parks 2006.

**Table 3-2. 2006 Air Emission Inventory Criteria Pollutants – Potential Emissions**

<b>Camp Parks 2006 Air Emissions Inventory</b>					
<b>Potential Emissions</b>					
<b>(Tons Per Year)</b>					
<b>Source Category</b>	<b>NO<sub>x</sub></b>	<b>SO<sub>2</sub></b>	<b>CO</b>	<b>VOC</b>	<b>PM<sub>10</sub></b>
Boilers and Furnaces (Natural Gas)	10.93	0.07	9.18	0.60	0.83
Degreasing	N/A	N/A	N/A	0	N/A
Fuel Storage/Dispensing	N/A	N/A	N/A	<0.01	N/A
Generators	7.13	0.05	0.26	0.13	0.06
Miscellaneous Chemicals	N/A	N/A	N/A	1.19	N/A
Pesticides	N/A	N/A	N/A	0.12	N/A
Surface Coating	N/A	N/A	N/A	3.21	N/A
Woodworking	N/A	N/A	N/A	N/A	0.09
<b>Total</b>	<b>18.06</b>	<b>0.12</b>	<b>9.44</b>	<b>5.25</b>	<b>0.98</b>

Source: Camp Parks 2006.

**Table 3-3. 2006 Hazardous Air Pollutant (HAP) Emissions—Actual and Potential**

HAP Species	Actual Emissions	Potential Emissions
1,3-Butadiene	<0.01	<0.01
Acetaldehyde	<0.01	<0.01
Acrolein	<0.01	<0.01
Arsenic	<0.01	<0.01
Benzene	<0.01	<0.01
Beryllium	<0.01	<0.01
Cadmium	<0.01	<0.01
Chromium	<0.01	<0.01
Diazinon	N/A	N/A
Dichlorobenzene	<0.01	<0.01
Diethanolamine	<0.01	<0.01
Ethylbenzene	N/A	0.00
Ethylene Glycol	<0.01	0.04
Formaldehyde	<0.01	0.01
Hexane	0.03	0.20
Lead	<0.01	<0.01
Manganese	<0.01	<0.01
Mercury	<0.01	<0.01
Methanol	0.05	0.20
Methyl Chloroform	N/A	N/A
Methyl Ethyl Ketone	0.05	0.19
Methyl Isobutyl Ketone	0.01	0.06
Naphthalene	<0.01	<0.01
Napthene	<0.01	<0.01
Nickel	<0.01	<0.01
Perchloroethylene	N/A	N/A
POM	<0.01	<0.01
Selenium	<0.01	<0.01
Styrene	<0.01	<0.01



**Table 3-3. 2006 Hazardous Air Pollutant (HAP) Emissions—Actual and Potential**

HAP Species	Actual Emissions	Potential Emissions
Toluene	0.15	0.66
Xylene	0.08	0.33
<b>Total</b>	<b>0.36</b>	<b>1.70</b>

Source: Camp Parks 2006.

**Table 3-4. Characteristics of Camp Parks Soil Mapping Units**

Soil Map Symbol	Soil Map Unit Name	Topography / Landscape Position	Drainage Class	Parent Material	Depth (inches)/ Texture	Depth to Bedrock (inches)	Permeability	Runoff	Erosion Hazard	Limitations for Local Roads and Streets	Limitations for Dwellings
<b>Contra Costa County</b>											
Cc	Clear Lake clay	Valleys	poor	alluvium	0-36/clay	>43	slow	very slow to slow	slight	severe: low strength; high shrink-swell potential	severe; high shrink-swell potential; low strength
CkB	Cropley clay, 2-5% slopes	upland valleys	moderately well	fine textured alluvium from sedimentary rock	0-34/clay 34-44/clay loam	>60	slow	slow	slight	severe: high shrink-swell potential, low strength	severe: high shrink-swell potential
DdD	Diablo clay, 9-15% slopes	uplands	well	sandstone and shale	0-38/clay 38-42/silty clay 42+/shale	42	slow	slow to medium	slight to moderate	severe: low strength, high shrink-swell potential	severe: high shrink-swell potential
DdE	Diablo clay, 5-30% slopes	uplands	well	sandstone and shale	0-38/clay 38-42/silty clay 42+/shale	42	slow	medium	moderate	severe: low strength, high shrink-swell potential, slope	severe: high shrink-swell potential, slope
DdF	Diablo clay, 30-50% slopes	uplands	well	sandstone and shale	0-38 / clay 38-42 / silty clay 42+/shale	42	slow	medium to rapid	moderate to high	severe: low strength, high shrink-swell potential, slope	severe: high shrink-swell potential, slope
Pb	Pescadero clay loam	inland valleys and rims of basins	poor	alluvium from sedimentary rocks	0-5/clay loam 5-28/clay 28-66/ sandy clay loam	>66	slow	very slow	none	severe: poorly drained, high shrink-swell potential, low strength	severe: high shrink-swell potential

**Table 3-4. Characteristics of Camp Parks Soil Mapping Units**

Soil Map Symbol	Soil Map Unit Name	Topography / Landscape Position	Drainage Class	Parent Material	Depth (inches)/ Texture	Depth to Bedrock (inches)	Permeability	Runoff	Erosion Hazard	Limitations for Local Roads and Streets	Limitations for Dwellings
<b>Alameda County</b>											
CdA	Clear Lake clay, drained, 0–3 % slopes	Basins	moderately well	fine textured alluvium from sedimentary rocks	0–48/clay 48–65/silty clay	>48	slow	slow	slight	few	Severe: shrink-swell potential
CdB	Clear Lake clay, drained, 3–7 % slopes	Basins	moderately well	fine textured alluvium from sedimentary rocks	48–65/silty clay	>48	slow	slow	slight	moderate: shrink-swell potential	severe: high shrink-swell potential
DbC	Diablo clay, 7–15% slopes	rolling to very steep uplands	well	soft, calcareous interbedded shale and fine grained sandstone	0–15/clay 15–32/silty clay 32–50/silty clay loam	36 to 60	slow	slow to medium	slight to moderate	moderate: shrink-swell potential	severe: high shrink-swell potential
DbD	Diablo clay, 15–30% slopes	rolling to very steep uplands	well	soft, calcareous interbedded shale and fine grained sandstone	0–15/clay 15–32/silty clay 32–50+/ silty clay loam 50+shattered shale	18 to 60	slow	medium	moderate	moderate: slope; shrink-swell potential	severe: high shrink
DbE2	Diablo clay, 30–45% slopes	rolling to very steep uplands	well	soft, calcareous interbedded shale and fine grained sandstone	0–15/clay 15–32/ silty clay 32–50+/ silty clay loam	18 to 36	slow	medium to rapid	severe	moderate: slope; shrink-swell potential	severe: high shrink
DvC	Diablo clay, very deep, 3–15%	rolling to very steep uplands	well	soft, calcareous interbedded	0–13/clay 13–27/ silty clay	18 to 60	slow	slow to medium	slight to moderate	moderate: slope; shrink-swell	severe: high shrink-swell potential

**Table 3-4. Characteristics of Camp Parks Soil Mapping Units**

Soil Map Symbol	Soil Map Unit Name	Topography / Landscape Position	Drainage Class	Parent Material	Depth (inches)/ Texture	Depth to Bedrock (inches)	Permeability	Runoff	Erosion Hazard	Limitations for Local Roads and Streets	Limitations for Dwellings
	slopes,			shale and fine grained sandstone	27–60+/ silty clay loam					potential	
Pd	Pescadero clay	nearly level basin rims, along lower edges of terraces	moderately well	alluvium from sandstone and shale	0–2/clay loam 2–72/clay	>72	very slow	slow	slight	low to moderate: shrink-swell potential	severe: high shrink-swell potential
Rh	Riverwash	valleys	variable	variable	variable	variable	variable	variable	variable	variable	variable

Sources: US Department of Agriculture 1966, 1977.

**Table 3-5. Characteristics of Camp Parks Soil Mapping Units — Engineering**

Soil Map Symbol	Soil Map Unit Name	Depth from surface (typical profile)	% Passing Sieve				Atterberg Limits		Available Water Capacity	Permeability (in/hr)	Reaction (pH)	Shrink-Swell Potential	Corrosivity to Uncoated Steel	USDA	Classification	
			No.4 (4.7mm)	No.10 (2.0mm)	No.40 (0.42mm)	No.200 (0.074mm)	Liquid Limit (%)	Plasticity index (%)							Unified	AASHTO <sup>a</sup>
<b>Contra Costa County</b>																
Cc	Clear Lake clay	0–60	100	100	90–100	85–95	40–50	25–30	0.14–0.17	0.06–0.2	6.1–8.4	high	very high	Clay	CL	A–7
CkB	Cropley clay, 2–5% slopes	0–60	100	100	90–100	85–95	40–50	25–30	0.14–0.17	0.06–0.2	5.6–8.4	high	high	Clay and heavy clay loam	CL	A–7
DdD	Diablo clay, 9–15% slopes	0–42	100	100	90–100	85–95	40–50	25–30	0.14–0.15	0.06–0.2	6.6–8.4	high	high	Clay Shale	CL	A–7
DdE	Diablo clay, 5–30% slopes	0–42	100	100	90–100	85–95	40–50	25–30	0.14–0.15	0.06–0.2	6.6–8.4	high	high	Clay Shale	CL	A–7
DdF	Diablo clay, 30–50% slopes	0–42	100	100	90–100	85–95	40–50	25–30	0.14–0.15	0.06–0.2	6.6–8.4	high	high	Clay Shale	CL	A–7
Pb	Pescadero clay loam	0–43	100	100	95–100	80–90	35–45	20–30	0.11–0.15	0.06–0.2	6.1–9.0	high	very high	Clay	CL	A–6 or A–7
		43–66	95–100	90–100	85–95	50–60	25–35	10–15	0.09–0.13	0.2–0.6	7.9–9.0	moderate	very high	Sandy clay loam	CL	A–6

**Table 3-5. Characteristics of Camp Parks Soil Mapping Units — Engineering**

Soil Map Symbol	Soil Map Unit Name	Depth from surface (typical profile)	% Passing Sieve				Atterberg Limits		Available Water Capacity	Permeability (in/hr)	Reaction (pH)	Shrink-Swell Potential	Corrosivity to Uncoated Steel	USDA	Classification	
			No.4 (4.7mm)	No.10 (2.0mm)	No.40 (0.42mm)	No.200 (0.074mm)	Liquid Limit (%)	Plasticity index (%)							Unified	AASHTO <sup>a</sup>
<b>Alameda County</b>																
CdA	Clear Lake clay, drained 0–3% slope	0–36	98–100	98–100	N/A	90–100	40–50 <sup>b</sup>	25–30 <sup>b</sup>	0.183	0.05–0.2	6.5–7.8	high	low	Clay	CH	A–7
		36–48	90–100	80–90	N/A	70–80	40–50 <sup>b</sup>	25–30 <sup>b</sup>	0.167	0.05–0.2	7.8–8.2			Clay	CH	A–7
		48–65+	95–100	95–100	N/A	60–80	40–50 <sup>b</sup>	25–30 <sup>b</sup>	0.15	0.05–0.2	7.8–8.2			Silty clay	CH	A–7
CdB	Clear Lake clay, drained, 3–7% slopes	0–36	98–100	98–100	N/A	90–100	N/A	N/A	0.183	0.05–0.2	6.5–7.8	high	low	Clay	CH	A–7
		36–48	90–100	80–90	N/A	70–80	N/A	N/A	0.167	0.05–0.2	7.8–8.2			Clay	CH	A–7
		48–65+	95–100	95–100	N/A	60–80	N/A	N/A	0.15	0.05–0.2	7.8–8.2			Silty clay	CH	A–7
DbC	Diablo clay, 7–15% slopes	0–6	100	100	N/A	90–100	40–50 <sup>c</sup>	25–30 <sup>c</sup>	0.167	0.05–0.2	6.1–7.4	high	low	Clay	CH	A–7
		6–32	100	100	N/A	90–100	40–50 <sup>c</sup>	25–30 <sup>c</sup>	0.167	0.05–0.2	7.4–7.8	high	low	Silty clay	CH	A–7
		32–50	100	100	N/A	90–100	40–50 <sup>c</sup>	25–30 <sup>c</sup>	0.15	0.2–0.8	7.8–8.2	moderate	low	Silty clay loam	CL	A–7
		50+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sandstone and shale	N/A

**Table 3-5. Characteristics of Camp Parks Soil Mapping Units — Engineering**

Soil Map Symbol	Soil Map Unit Name	Depth from surface (typical profile)	% Passing Sieve				Atterberg Limits		Available Water Capacity	Permeability (in/hr)	Reaction (pH)	Shrink-Swell Potential	Corrosivity to Uncoated Steel	USDA	Classification	
			No.4 (4.7mm)	No.10 (2.0mm)	No.40 (0.42mm)	No.200 (0.074mm)	Liquid Limit (%)	Plasticity index (%)							Unified	AASHTO <sup>a</sup>
DbD	Diablo clay, 15–30% slopes	0–6	100	100	N/A	90–100	40–50 <sup>d</sup>	25–30 <sup>d</sup>	0.167	0.05–0.2	6.1–7.4	high	low	Clay	CH	A–7
		6–32	100	100	N/A	90–100	40–50 <sup>d</sup>	25–30 <sup>d</sup>	0.167	0.05–0.2	7.4–7.8	high	low	Silty clay	CH	A–7
		32–50	100	100	N/A	90–100	40–50 <sup>d</sup>	25–30 <sup>d</sup>	0.15	0.2–0.8	7.8–8.2	moderate	low	Silty clay loam	CL	A–7
		50+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sandstone and shale	N/A	N/A
DbE2	Diablo clay, 30–45% slopes	0–6	100	100	N/A	90–100	40–50 <sup>e</sup>	25–30 <sup>e</sup>	0.167	0.05–0.2	6.1–7.4	high	low	Clay	CH	A–7
		6–32	100	100	N/A	90–100	40–50 <sup>e</sup>	25–30 <sup>e</sup>	0.167	0.05–0.2	7.4–7.8	high	low	Silty clay	CH	A–7
		32–50	100	100	N/A	90–100	40–50 <sup>e</sup>	25–30 <sup>e</sup>	0.15	0.2–0.8	7.8–8.2	moderate	low	Silty clay loam	CL	A–7
		50+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sandstone and shale	N/A	N/A
DvC	Diablo clay, very deep, 3–15% slopes, eroded	0–6	100	100	N/A	90–100	N/A	N/A	0.167	0.05–0.2	6.1–7.4	high	low	Clay	CH	A–7
		6–32	100	100	N/A	90–100	N/A	N/A	0.167	0.05–0.2	7.4–7.8	high	low	Silty clay	CH	A–7
		32–50	100	100	N/A	90–100	N/A	N/A	0.15	0.2–0.8	7.8–8.2	moderate	low	Silty clay loam	CL	A–7
		50+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Sandstone and shale	N/A	N/A

**Table 3-5. Characteristics of Camp Parks Soil Mapping Units — Engineering**

Soil Map Symbol	Soil Map Unit Name	Depth from surface (typical profile)	% Passing Sieve				Atterberg Limits		Available Water Capacity	Permeability (in/hr)	Reaction (pH)	Shrink-Swell Potential	Corrosivity to Uncoated Steel	USDA	Classification	
			No.4 (4.7mm)	No.10 (2.0mm)	No.40 (0.42mm)	No.200 (0.074mm)	Liquid Limit (%)	Plasticity index (%)							Unified	AASHTO <sup>a</sup>
Pd	Pescadero clay	0–30	95–100	95–100	N/A	80–95	N/A	N/A	0.15			high	low	clay	CL	A–7
		30–72	98–100	95–100	N/A	70–80	N/A	N/A	0.15			moderate	low	clayey loam	CL	A–4
Rh	Riverwash	N/A	10–25	0–5	N/A	0–2	25–35	5–10	<0.042	10	6.6–7.3	low	low	sand and gravel	GP	A–1

Sources: US Department of Agriculture, 1966; 1977.

Notes:

- a. AASHTO: American Association of State Highway Transportation Officers
- b. Data presented in Contra Costa County Soil Survey as soil mapping unit Cc.
- c. Data presented in Contra Costa County Soil Survey as soil mapping unit DdD.
- d. Data presented in Contra Costa County Soil Survey as soil mapping unit DdE.
- e. Data presented in Contra Costa County Soil Survey as soil mapping unit DdF.



**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
<b>Amaranth family (Amaranthaceae)</b>	
California amaranth <sup>1,3</sup>	<i>Amaranthus californicus</i>
Largefruit amaranth <sup>3,4</sup>	<i>Amaranthus deflexus</i>
Powell's amaranth <sup>3,4</sup>	<i>Amaranthus powellii</i>
Redroot amaranth <sup>3,4</sup>	<i>Amaranthus retroflexus</i>
Tumbleweed <sup>1,3,4</sup>	<i>Amaranthus albus</i>
<b>Arrow-grass family (Juncaginaceae)</b>	
Flowering quillwort <sup>1,3</sup>	<i>Lilaea scilloides</i>
<b>Birch family (Betulaceae)</b>	
Hazelnut	<i>Corylus cornuta californica</i>
<b>Bluebell family (Campanulaceae)</b>	
Harlequin calicoflower	<i>Downingia insignis</i>
<b>Buckwheat family (Polygonaceae)</b>	
Buckwheat	<i>Eriogonum sp.</i>
Clustered dock <sup>1,3,4</sup>	<i>Rumex conglomeratus</i>
Common knotweed, Doorweed <sup>1,2,3,4</sup>	<i>Polygonum arenasatrum</i>
Curly dock <sup>1,2,3,4</sup>	<i>Rumex crispus</i>
Fiddle dock <sup>1,2,3,4</sup>	<i>Rumex pulcher</i>
Mt. Diablo buckwheat	<i>Eriogonum truneatum</i>
Sheep sorrel <sup>2,4</sup>	<i>Rumex acetosella</i>
Tiberon buckwheat	<i>Eriogonum lutelum caninum</i>
willow weed <sup>1,3</sup>	<i>Polygonum lapathifolium</i>
willow dock <sup>1,2</sup>	<i>Rumex salicifolius transitorius</i>
<b>Buttercup family (Ranunculaceae)</b>	
California buttercup <sup>1,3</sup>	<i>Ranunculus californicus</i>
Cursed crowfoot <sup>1,3</sup>	<i>Ranunculus sceleratus</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Lobb's aquatic buttercup	<i>Ranunculus lobbii</i>
Spinyfruit buttercup <sup>1,3,4</sup>	<i>Ranunculus muricatus</i>
<b>Carrot family (Apiaceae)</b>	
California coyote thistle <sup>1,2,3</sup>	<i>Eryngium aristulatum aristulatum</i>
Cutleaf water-parsnip <sup>1,2,3</sup>	<i>Berula erecta</i>
Cow parsnip	<i>Heracleum lanatum</i>
Hog fennel	<i>Lomatium utriculatum</i>
Knotted hedgeparsley <sup>1,3,4</sup>	<i>Torilis nodosa</i>
Pacific blacksnakeroot	<i>Sanicula crassicaulis</i>
Poison hemlock <sup>1,3,4</sup>	<i>Conium maculatum</i>
Poison sanicle	<i>Sanicula bipinnata</i>
Purple sanicle, shoe buttons <sup>1,3</sup>	<i>Sanicula bipinnatifida</i>
Rattlesnake weed	<i>Daucus pusillus</i>
Sweet fennel <sup>1,2,3,4</sup>	<i>Foeniculum vulgare</i>
Wollyfruit desert parsley	<i>Lomatium dasycarpum</i>
<b>Cattail family (Typhaceae)</b>	
Broad-leaved cattail <sup>1,2,3</sup>	<i>Typha latifolia</i>
Narrow-leaved cattail <sup>1,3</sup>	<i>Typha angustifolia</i>
<b>Caltrop family (Zygophyllaceae)</b>	
Puncture vine, Caltrop <sup>1,3,4</sup>	<i>Tribulus terrestris</i>
<b>Daphne family (Thymelaeaceae)</b>	
Western leatherwood	<i>Dirca occidentalis</i>
<b>Dodder family (Cuscutaceae)</b>	
Bigseed alfalfa dodder <sup>3</sup>	<i>Cuscuta indecora indecora</i>
Dodder <sup>2,4</sup>	<i>Cuscuta sp.</i>
<b>Duckweed family (Lemnaceae)</b>	

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Common duckweed <sup>2,3</sup>	<i>Lemna minor</i>
Flowering flax <sup>3,4</sup>	<i>Linum grandiflorum</i>
Least duckweed <sup>1,3</sup>	<i>Lemna minuscula</i>
<b>Elm family (Ulmaceae)</b>	
Chinese elm <sup>1,4</sup>	<i>Ulmus parvifolia</i>
Elm <sup>2,4</sup>	<i>Ulmus sp.</i>
Siberian elm <sup>3,4</sup>	<i>Ulmus pumila</i>
<b>Evening-primrose family (Onagraceae)</b>	
American willowherb <sup>1,2</sup>	<i>Epilobium ciliatum ciliatum</i>
Annaul fireweed <sup>1,2,3</sup>	<i>Epilobium brachycarpum</i>
Elegant clarkia <sup>3</sup>	<i>Clarkia unguiculata</i>
Presidio clarkia	<i>Clarkia franciscana</i>
Primrose willow <sup>2</sup>	<i>Ludwigia sp.</i>
Smooth spike primrose <sup>1,3</sup>	<i>Epilobium pygmaeum</i>
Winecup clarkia <sup>3</sup>	<i>Clarkia purpurea quadrivulnera</i>
1	<i>Clarkia purpurea</i>
<b>Fig family (Moraceae)</b>	
Edible fig <sup>1,3,4</sup>	<i>Ficus carica</i>
<b>Figwort family (Scrophulariaceae)</b>	
Bellardia <sup>1,4</sup>	<i>Bellardia trixago</i>
Birdeye speedwell <sup>4</sup>	<i>Veronica persica</i>
Chinese houses	<i>Collinsia heterophylla</i>
Crimson monkey flower	<i>Mimulus cardinalis</i>
Indian paintbrush	<i>Castilleja attenuata</i>
Kickxia <sup>2,4</sup>	<i>Kickxia spuria</i>
Owl's clover	<i>Castilleja exserta</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Palmate-bracted bird's beak	<i>Cordylanthus palmatus</i>
Purslane speedwell <sup>1, 4</sup>	<i>Veronica peregrina</i>
Spinster's blue-eyed Mary	<i>Collinsia sparsiflora</i>
Texas paintbrush	<i>Castilleja foliolosa</i>
<b>Flax family (Linaceae)</b>	
----- <sup>1, 4</sup>	<i>Linum grandiflorum rubrum</i>
<b>Forget-me-not family (Boraginaceae)</b>	
Adobe allocarya <sup>2</sup>	<i>Plagiobothrys acanthocarpus</i>
Bent-flowered fiddleneck	<i>Amsinckia lunaris</i>
Bristly fiddleneck	<i>Amsinckia tessellata</i>
Grey popcorn flower	<i>Plagiobothrys canescens</i>
Large-flowered fiddleneck	<i>Amsinckia grandiflora</i>
Popcorn flower	<i>Plagiobothrys nothofulvus</i>
Purslane speedwell*	<i>Veronica peregrina xalapensis</i>
Rancher's fireweed*	<i>Amsinckia menziesii</i>
Rancher's fireweed <sup>1, 2, 3</sup>	<i>Amsinckia menziesii intermedia</i>
Rough fruit popcorn flower <sup>1, 3</sup>	<i>Plagiobothrys trachycarpus</i>
Salt heliotrope <sup>1, 3</sup>	<i>Heliotropium curassavicum</i>
Vernal Pool allocarya <sup>1, 2, 3</sup>	<i>Plagiobothrys stipitatus micrantha</i>
1	<i>Plagiobothrys leptocladus</i>
1	<i>Plagiobothrys stipitatus</i>
1	<i>Plagiobothrys stipitatus stipitatus</i>
<b>Frankenia family (Frankeniaceae)</b>	
Alkali heath <sup>1, 3</sup>	<i>Frankenia salina</i>
<b>Geranium family (Geraniaceae)</b>	
Cutleaf geranium <sup>1, 2, 3, 4</sup>	<i>Geranium dissectum</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Dove-foot geranium <sup>2,4</sup>	<i>Geranium molle</i>
Red-stemmed filaree <sup>1,2,3,4</sup>	<i>Erodium cicutarium</i>
Round-leaved filaree	<i>Erodium macrophyllum</i>
Stork's-bill <sup>1,2,3,4</sup>	<i>Erodium botrys</i>
White-stemmed filaree <sup>1,2,3,4</sup>	<i>Erodium moschatum</i>
<b>Goosefoot family (Chenopodiaceae)</b>	
Bractscale <sup>1,3</sup>	<i>Atriplex serenana serenana</i>
Brittlescale	<i>Atriplex depressa</i>
California goosefoot	<i>Chenopodium californicum</i>
Crownscale	<i>Atriplex coronata var. coronata</i>
Heartscale	<i>Atriplex cordulata</i>
Mexican tea, epazote <sup>1,3,4</sup>	<i>Chenopodium ambrosioides</i>
Pitseed goosefoot <sup>1,3</sup>	<i>Chenopodium berlandieri</i>
Red goosefoot <sup>3</sup>	<i>Chenopodium rubrum</i>
Russian thistle, tumbleweed <sup>3,4</sup>	<i>Salsola tragus</i>
San Joaquin spearscale	<i>Atriplex joaquiniana</i>
<b>Gourd family (Cucurbitaceae)</b>	
California man-root <sup>1,3</sup>	<i>Marah fabaceus</i>
<b>Grass family (Poaceae)</b>	
Annual rabbit's-foot grass <sup>1,2,3,4</sup>	<i>Polypogon monspeliensis</i>
Annual bluegrass <sup>1,2,3,4</sup>	<i>Poa annua</i>
Annual hairgrass <sup>1,2,3</sup>	<i>Deschampsia danthonioides</i>
Annual semaphoregrass <sup>2,3</sup>	<i>Pleuropogon californicus</i>
Barb goatgrass <sup>1,3,4</sup>	<i>Aegilops triuncialis</i>
Barnyard grass <sup>2,4</sup>	<i>Echinochloa crus-galli</i>
Beardless rabbit's-foot grass <sup>3</sup>	<i>Agrostis viridis</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Bermuda grass <sup>1, 2, 3, 4</sup>	<i>Cynodon dactylon</i>
Bulbous bluegrass <sup>1, 2, 3, 4</sup>	<i>Poa bulbosa</i>
California brome <sup>3</sup>	<i>Bromus carinatus carinatus</i>
Confusing fescue <sup>1, 3</sup>	<i>Vulpia microstachys confusa</i>
Creeping ryegrass <sup>1, 2, 3</sup>	<i>Leymus triticoides</i>
Dallis grass <sup>1, 2, 3, 4</sup>	<i>Paspalum dilatatum</i>
Ditch beard grass <sup>1, 3, 4</sup>	<i>Polypogon interruptus</i>
European silvergrass <sup>2, 4</sup>	<i>Aira caryophyllea</i>
Foxtail chess <sup>1, 3, 4</sup>	<i>Bromus madritensis madritensis</i>
Foxtail chess <sup>1, 3, 4</sup>	<i>Bromus madritensis rubens</i>
Harding grass <sup>1, 2, 3, 4</sup>	<i>Phalaris aquatica</i>
Hare barley <sup>1, 2, 3, 4</sup>	<i>Hordeum murinum leporinum</i>
Hood canarygrass <sup>1, 3, 4</sup>	<i>Phalaris paradoxa</i>
Idaho fescue, blue bunchgrass <sup>1, 3</sup>	<i>Festuca idahoensis</i>
Italian ryegrass <sup>1, 2, 3, 4</sup>	<i>Lolium multiflorum</i>
Jungle rice <sup>3, 4</sup>	<i>Echinochloa colona</i>
Little quaking grass <sup>1, 2, 3, 4</sup>	<i>Briza minor</i>
Meadow barley <sup>1, 2, 3</sup>	<i>Hordeum brachyantherum brachyantherum</i>
Mediterranean barley <sup>1, 2, 3, 4</sup>	<i>Hordeum marinum gussoneanum</i>
Medusahead <sup>1, 3, 4</sup>	<i>Taeniatherum caput-medusae</i>
Nitgrass <sup>3, 4</sup>	<i>Gastridium ventricosum</i>
Pricklegrass <sup>1, 3, 4</sup>	<i>Crypsis vaginiflora</i>
Purple false brome <sup>3, 4</sup>	<i>Brachypodium distachyon</i>
Purple needlegrass <sup>1, 2, 3</sup>	<i>Nassella pulchra</i>
Rat-tail fescue <sup>1, 2, 3, 4</sup>	<i>Vulpia myuros myuros</i>
Ripgut <sup>1, 2, 3, 4</sup>	<i>Bromus diandrus</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Saltgrass <sup>1, 2, 3</sup>	<i>Distichlis spicata</i>
Slender wild oat <sup>2, 4</sup>	<i>Avena barbata</i>
Smooth barley <sup>1, 3, 4</sup>	<i>Hordeum murinum glaucum</i>
Soft chess <sup>1, 2, 3, 4</sup>	<i>Bromus hordaceus</i>
Swamp grass <sup>1, 3, 4</sup>	<i>Crypsis schoenoides</i>
Tall fescue <sup>2, 4</sup>	<i>Festuca arundinacea</i>
Wild oat <sup>1, 2, 3, 4</sup>	<i>Avena fatua</i>
----- <sup>1, 4</sup>	<i>Echinochloa muricata</i>
----- <sup>1, 4</sup>	<i>Hordeum murinum murinum</i>
----- <sup>1, 4</sup>	<i>Vulpia bromoides</i>
<b>Honeysuckle family (Caprifoliaceae)</b>	
Blue elderberry <sup>1, 2, 3</sup>	<i>Sambucus mexicana</i>
<b>Hornwort family (Ceratophyllaceae)</b>	
Raccoon tail <sup>1</sup>	<i>Ceratophyllum demersum</i>
<b>Horsetail family (Equisetaceae)</b>	
Giant horsetail	<i>Equisetum telmateia braunii</i>
<b>Iris family (Iridaceae)</b>	
Blue-eyed grass <sup>1, 2, 3</sup>	<i>Sisyrinchium bellum</i>
Non-native iris <sup>2, 4</sup>	<i>Iris sp.</i>
<b>Lily family (Liliaceae)</b>	
Blue dicks <sup>1, 3</sup>	<i>Dichelostemma capitatum capitatum</i>
Brewer's dwarf flax	<i>Hesperolinon breweri</i>
Butterfly mariposa lily <sup>1, 3</sup>	<i>Calochortus venustus</i>
Fragrant fritillary	<i>Fritillaria liliacea</i>
Harvest brodiaea <sup>1, 3</sup>	<i>Brodiaea elegans elegans</i>
Ithuriel's spear <sup>1, 3</sup>	<i>Tritelia laxa</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Jeweled onion	<i>Allium serra</i>
Mt. Diablo fairy lantern	<i>Calochortus pulchellus</i>
Oakland star-tulip	<i>Calochortus umbellatus</i>
Soap plant <sup>1, 3</sup>	<i>Chlorogalum pomeridianum pomeridianum</i>
Starlily	<i>Zigadenus fremontii</i>
Stink bells	<i>Fritillaria agrestis</i>
Yellow mariposa lily	<i>Calochortus luteus</i>
<b>Loosestrife family (Lythraceae)</b>	
Purslane loosestrife <sup>1, 2, 3, 4</sup>	<i>Lythrum hyssopifolium</i>
Treebract loosestrife <sup>1, 3, 4</sup>	<i>Lythrum tribracteatum</i>
<b>Mahogany family (Meliaceae)</b>	
Texas umbrella tree, bead tree 1, 33, 4	<i>Melia azedarach</i>
<b>Mallow family (Malvaceae)</b>	
Alkali mallow, whiteweed 1, 2, 3, 4	<i>Malvella leprosa</i>
Bull mallow <sup>1, 3, 4</sup>	<i>Malva nicaeensis</i>
<b>Maple family (Aceraceae)</b>	
Big leaf maple	<i>Acer macrophyllum</i>
Box-elder <sup>1, 3</sup>	<i>Acer negundo californicum</i>
<b>Madder family (Rubiaceae)</b>	
Field madder <sup>1, 3, 4</sup>	<i>Sherardia arvensis</i>
<b>Meadowfoam family (Limnathaceae)</b>	
Meadowfoam	<i>Limnathes douglasii</i>
<b>Milkweed family (Asclepiadaceae)</b>	
Narrow-leaf milkweed <sup>1, 3</sup>	<i>Asclepias fascicularis</i>
<b>Mint family (Lamiaceae)</b>	
Apple mint <sup>1, 3, 4</sup>	<i>Mentha suaveolens</i>



**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Bugle hedgenettle <sup>1,3</sup>	<i>Stachys ajugoides ajugoides</i>
Henbit <sup>1,3,4</sup>	<i>Lamium amplexicaule</i>
Horehound <sup>1,2,3,4</sup>	<i>Marrubium vulgare</i>
Short-spiked hedgenettle <sup>1,2,3</sup>	<i>Stachys pycnantha</i>
Spearmint <sup>1,2,3,4</sup>	<i>Mentha spicata spicata</i>
<b>Morning glory family (Convolvulaceae)</b>	
Alkali weed <sup>1,3</sup>	<i>Cressa truxillensis</i>
Field bindweed <sup>1,3,4</sup>	<i>Convolvulus arvensis</i>
Small-flowered morning-glory	<i>Convolvulus simulans</i>
Stemless morning-glory <sup>2</sup>	<i>Calystegia acaulis</i>
_____ <sup>1</sup>	<i>Calystegia subacaulis subacaulis</i>
<b>Mustard family (Brassicaceae)</b>	
Black mustard <sup>1,2,3</sup>	<i>Brassica nigra</i>
California mustard	<i>Guillenia lasiophylla</i>
Caper-fruited tropidocarpum	<i>Tripidocarpum capparideum</i>
Charlock <sup>1,3,4</sup>	<i>Sinapis arvensis</i>
Dwarf peppergrass <sup>1,3</sup>	<i>Lepidium latipes latipes</i>
Field mustard <sup>1,4</sup>	<i>Brassica rapa</i>
Forked pepperweed <sup>1,3</sup>	<i>Lepidium oxycarpum</i>
Heart-podded hoary cress <sup>1,2,3,4</sup>	<i>Cardaria draba</i>
Most beautiful jewel-flower	<i>Streptanthus albidus peramoenus</i>
Mustard <sup>4</sup>	<i>Brassica sp.</i>
Sand fringe-pod	<i>Thysanocarpus curvipes</i>
Shepherd's purse <sup>1,3</sup>	<i>Capsella bursa-pastoris</i>
Shinning peppergrass <sup>1,2,3</sup>	<i>Lepidium nitidum</i>
Shortpod mustard <sup>1,2,3,4</sup>	<i>Hirschfeldia incana</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Swine cress <sup>1, 3, 4</sup>	<i>Coronopus didymus</i>
Watercress <sup>1, 2, 3</sup>	<i>Rorippa nasturtium-aquaticum</i>
----- <sup>1, 4</sup>	<i>Hirschfeldia incana</i>
-----	<i>Guillenia flavescens</i>
<b>Myrtaceae family (Myrtaceae)</b>	
Blue gum, eucalyptus <sup>1, 2, 3, 4</sup>	<i>Eucalyptus globulus</i>
<b>Nettle family (Urticaceae)</b>	
Dwarf nettle <sup>1, 3, 4</sup>	<i>Urtica urens</i>
<b>Nightshade family (Solanaceae)</b>	
Jimson weed <sup>4</sup>	<i>Datura stramonium</i>
Nightshade	<i>Solanum umbelliferum</i>
Sacred thorn apple <sup>3</sup>	<i>Datura wrightii</i>
White horse-nettle <sup>1, 3, 4</sup>	<i>Solanum eleagnifolium</i>
<b>Oak family (Fagaceae)</b>	
Coast live oak <sup>2</sup>	<i>Quercus agrifolia</i>
Valley oak <sup>1, 3</sup>	<i>Quercus lobata</i>
<b>Olive family (Oleaceae)</b>	
Ash <sup>1, 2, 3, 4</sup>	<i>Fraxinus sp.</i>
Olive <sup>3, 4</sup>	<i>Olea europaea</i>
<b>Pea family (Fabaceae)</b>	
Alfalfa <sup>1, 3, 4</sup>	<i>Medicago sativa</i>
Alkali milk-vetch	<i>Astragalus tener tener</i>
Arroyo lupine <sup>1, 3</sup>	<i>Lupinus microcarpus microcarpus</i>
Birdfoot trefoil <sup>1, 2, 3, 4</sup>	<i>Lotus corniculatus</i>
Black locust <sup>1, 2, 3, 4</sup>	<i>Robinia pseudoacacia</i>
Bull clover <sup>2</sup>	<i>Trifolium fucatum</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Burclover <sup>1, 2, 3, 4</sup>	<i>Medicago polymorpha</i>
Chick lupine <sup>1, 3</sup>	<i>Lupinus microcarpus</i>
Chilean bird's-foot trefoil <sup>1, 3</sup>	<i>Lotus wrangelianus</i>
Clover <sup>2</sup>	<i>Trifolium sp.</i>
Common vetch, spring vetch <sup>1, 4</sup>	<i>Vicia sativa sativa</i>
Crimson clover <sup>1, 3, 4</sup>	<i>Trifolium incarnatum</i>
Foothill pea <sup>1, 3</sup>	<i>Lathyrus vestitus vestitus</i>
Foothill deervetch	<i>Lotus humistratus</i>
Hairy vetch <sup>1, 2, 3, 4</sup>	<i>Vicia villosa villosa</i>
Jepson's pea <sup>1, 3</sup>	<i>Lathyrus jepsonii californicus</i>
Little hop clover <sup>1, 2, 3, 4</sup>	<i>Trifolium dubium</i>
Miniature lupine <sup>1, 2, 3</sup>	<i>Lupinus bicolor</i>
Narrowleaf annual lupine <sup>1, 3</sup>	<i>Lupinus succulentus</i>
Notchleaf clover <sup>3</sup>	<i>Trifolium bifidum</i>
Pinpoint clover <sup>1, 3</sup>	<i>Trifolium gracilentum gracilentum</i>
Purple vetch <sup>4</sup>	<i>Vicia benghalensis</i>
Rose clover <sup>1, 2, 3, 4</sup>	<i>Trifolium hirtum</i>
Showy Indian clover	<i>Trifolium amoenum</i>
Sourclover <sup>1, 2, 3, 4</sup>	<i>Melilotus indica</i>
Spanish clover <sup>3</sup>	<i>Lotus purshianus purshianus</i>
Strawberry clover <sup>1, 3, 4</sup>	<i>Trifolium fragiferum</i>
Subterranean clover <sup>1, 3, 4</sup>	<i>Trifolium subterraneum</i>
Summer lupine <sup>1, 3</sup>	<i>Lupinus formosus formosus</i>
Tomcat clover <sup>1, 3</sup>	<i>Trifolium willdenovii</i>
Tomentose clover <sup>2</sup>	<i>Trifolium tomentosum</i>
White clover <sup>2, 4</sup>	<i>Trifolium repens</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
White sweetclover <sup>1,3,4</sup>	<i>Melilotus alba</i>
Winter vetch <sup>2,4</sup>	<i>Vicia villosa varia</i>
_____ <sup>1</sup>	<i>Trifolium ciliolatum</i>
<b>Phlox family (Polemoniaceae)</b>	
Annual phlox	<i>Phlox gracilis</i>
Bird's eyes	<i>Gilia tricolor</i>
Bluehead gilia <sup>3</sup>	<i>Gilia capitata capitata</i>
Large-flowered linanthus	<i>Linanthus grandiflorus</i>
Serpentine linanthus	<i>Linanthus ambiguus</i>
<b>Pine family (Pinaeae)</b>	
<b>Monterey pine<sup>1,3</sup></b>	<i>Pinus radiata</i>
<b>Poppy family (Papaveraceae)</b>	
California creamcups	<i>Platystemon californicus</i>
California poppy <sup>1,2,4</sup>	<i>Eschschoizia californica</i>
Diamond-petaled California poppy	<i>Eschscholzia rombipetala</i>
Windpoppy	<i>Stylomecon heterophylla</i>
<b>Pink family (Caryophyllaceae)</b>	
Annual baby's breath <sup>1,3,4</sup>	<i>Gypsophila elegans elegans</i>
Baccones sandspurry <sup>1,3,4</sup>	<i>Spergularia bocconii</i>
Common chickweed <sup>1,2,3,4</sup>	<i>Stellaria media</i>
Four-leaved allseed <sup>1,3,4</sup>	<i>Polycarpon tetraphyllum</i>
Hairy sandspurry <sup>1,3,4</sup>	<i>Spergularia villosa</i>
Mouse-eared chickweed <sup>1,2,3,4</sup>	<i>Cerastium glomeratum</i>
Red sandspurry <sup>1,3,4</sup>	<i>Spergularia rubra</i>
Salt sandspurry <sup>1,3</sup>	<i>Spergularia marina</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
<b>Plantain family (Plantaginaceae)</b>	
Buckhorn plantain <sup>1,3,4</sup>	<i>Plantago coronopus</i>
Common plantain <sup>1,3</sup>	<i>Plantago major</i>
Chilean plantain <sup>1,3,4</sup>	<i>Plantago truncata firma</i>
Dotseed plantain <sup>1,3</sup>	<i>Plantago erecta</i>
English plantain <sup>1,2,3,4</sup>	<i>Plantago lanceolata</i>
<b>Pondweed family (Potamogetonaceae)</b>	
Long-leaved pondweed <sup>1,3</sup>	<i>Potamogeton nodosus</i>
Fennel-leaf pondweed <sup>1,3</sup>	<i>Potamogeton pectinatus</i>
Small pondweed <sup>1,2,3</sup>	<i>Potamogeton pusillus pusillus</i>
<b>Primrose family (Primulaceae)</b>	
Padre's shootingstar	<i>Dodecatheon clevelandii</i>
Scarlet pimpernel <sup>1,3,4</sup>	<i>Anagallis arvensis</i>
<b>Purslane family (Portulacaceae)</b>	
Redmaids <sup>1,3</sup>	<i>Calandrinia ciliata</i>
Miner's lettuce <sup>1,3</sup>	<i>Claytonia perfoliata perfoliata</i>
<b>Rose family (Rosaceae)</b>	
Almond <sup>1,3,4</sup>	<i>Prunus dulcis</i>
California wild rose <sup>3</sup>	<i>Rosa californica</i>
Cherry plum <sup>1,3,4</sup>	<i>Prunus cerasifera</i>
Crabapple <sup>1,4</sup>	<i>Prunus sp.</i>
<b>Rush family (Juncaceae)</b>	
Baltic rush <sup>1,2,3</sup>	<i>Juncus balticus</i>
Common rush <sup>1,2,3</sup>	<i>Juncus patens</i>
Iris-leaved juncos <sup>1,2,3</sup>	<i>Juncus xiphioides</i>
Mexican rush <sup>2</sup>	<i>Juncus mexicanus</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Toad rush <sup>1, 2, 3</sup>	<i>Juncus bufonius</i>
Twelfth rush <sup>2</sup>	<i>Juncus uncialis</i>
<b>Salvinia family (Salviniaceae)</b>	
Mosquito fern <sup>1</sup>	<i>Azolla sp.</i>
<b>Saxifrage family (Saxifragaceae)</b>	
Woodland star	<i>Lithophragma aftine</i>
Bolander's woodland star <sup>1, 3</sup>	<i>Lithophragma bolanderi</i>
<b>Sedge family (Cyperaceae)</b>	
Bulrush, common tule <sup>1, 2, 3</sup>	<i>Scirpus acutus occidentalis</i>
Clustered field sedge <sup>2</sup>	<i>Carex praegracilis</i>
Common spikerush <sup>1, 2, 3</sup>	<i>Eleocharis macrostachya</i>
Common three-square <sup>2</sup>	<i>Scirpus pungens</i>
Cosmopolitan bulrush <sup>1, 3</sup>	<i>Scirpus maritimus</i>
Olney's three-square <sup>2, 3</sup>	<i>Scirpus americanus</i>
Santa Barbara sedge <sup>1, 3</sup>	<i>Carex barbarae</i>
Tall nutsedge <sup>1, 2, 3</sup>	<i>Cyperus eragrostis</i>
<b>She-oaks family (Casuarinaceae)</b>	
She-oak <sup>3, 4</sup>	<i>Casuarina sp.</i>
<b>Snapdragon family (Scrophulariaceae)</b>	
American speedwell <sup>1, 2, 3</sup>	<i>Veronica americana</i>
Bellardia <sup>1, 2, 3, 4</sup>	<i>Bellardia trixago</i>
Birdeye speedwell <sup>1, 3, 4</sup>	<i>Veronica persica</i>
Butter-and-eggs <sup>1, 3</sup>	<i>Triphysaria eriantha eriantha</i>
Dwarf owl's clover <sup>1, 3</sup>	<i>Triphysaria pusilla</i>
Fluellin <sup>1, 3, 4</sup>	<i>Kickxia elatine</i>
Hispid bird's-beak	<i>Cordylanthus mollis ssp.</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Moroccan toadflax <sup>1, 3, 4</sup>	<i>Linaria maroccana</i>
Purple owl's clover <sup>1, 2, 3</sup>	<i>Castilleja exserta exserta</i>
Purslane speedwell <sup>1, 3</sup>	<i>Veronica peregrina xalapensis</i>
Seep-spring monkeyflower <sup>1, 2, 3</sup>	<i>Mimulus guttatus</i>
Valley tassels <sup>1, 2, 3</sup>	<i>Castilleja attenuata</i>
<b>Spleenwort family (Azollaceae)</b>	
Mosquito fern <sup>3</sup>	<i>Azolla sp.</i>
Pacific mosquito fern <sup>2</sup>	<i>Azolla filiculoides</i>
<b>Spurge family (Euphorbiaceae)</b>	
Spotted spurge <sup>1, 4</sup>	<i>Chamaesyce maculata</i>
Turkey mullein, dove weed <sup>1, 2</sup>	<i>Eremocarpus setigerus</i>
Thymeleaf sandmat <sup>3</sup>	<i>Chamaesyce serpyllifolia serpyllifolia</i>
Warty spurge <sup>1, 3</sup>	<i>Euphorbia spathulata</i>
3	<i>Croton setigerus</i>
<b>Stonecrop family (Crassulaceae)</b>	
Pygmy weed <sup>1, 2, 3</sup>	<i>Crassula connata</i>
----- <sup>2, 4</sup>	<i>Crassula tillaea</i>
<b>Sumac family (Anacardiaceae)</b>	
Pacific poison oak <sup>1, 3</sup>	<i>Toxicodendron diversilobum</i>
Peruvian Peppertree <sup>1, 3, 4</sup>	<i>Schinus molle</i>
<b>Sunflower family (Asteraceae)</b>	
Annual water aster <sup>3</sup>	<i>Aster subulantus</i>
Arrowleaf balsamroot <sup>1</sup>	<i>Balsamorhiza sagittata</i>
Artichoke thistle <sup>1, 2, 3, 4</sup>	<i>Cynara cardunculus</i>
Asthmaweed <sup>3</sup>	<i>Conyza bonariensis</i>
Batchelor's button, cornflower <sup>1, 2, 3, 4</sup>	<i>Centaurea cyanus</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Blessed milk thistle <sup>1, 2, 3, 4</sup>	<i>Silybum marianum</i>
Blow-wives <sup>1, 2, 3</sup>	<i>Achyrachaena mollis</i>
Bristly ox-tongue <sup>1, 2, 3, 4</sup>	<i>Picris echioides</i>
Bull thistle <sup>1, 2, 3, 4</sup>	<i>Cirsium vulgare</i>
Burweed <sup>1, 2, 3, 4</sup>	<i>Soliva sessillus</i>
Big-scale balsamroot	<i>Balsamorhiza macrolepis macrolepis</i>
Big tarplant	<i>Blepharizonia plumosa plumosa</i>
California goldenrod <sup>1, 3</sup>	<i>Solidago californica</i>
Common dandelion	<i>Taraxacum officinale</i>
Common groundsel <sup>1, 2, 3, 4</sup>	<i>Senecio vulgaris</i>
Common hareleaf <sup>1, 2, 3</sup>	<i>Lagophylla remosissima ramosissima</i>
Common sow thistle <sup>1, 2, 3, 4</sup>	<i>Sonchus oleraceus</i>
Canadian horseweed <sup>1, 2, 3</sup>	<i>Conyza canadensis</i>
Congdon's tarplant <sup>1, 2, 3</sup>	<i>Centromadia parryi congdonii</i>
Coyote brush <sup>1, 2, 3</sup>	<i>Baccharis pilularis</i>
Delta wooly-marbles	<i>Psilocarphus brevissimus multiflorus</i>
Diablo helianthella	<i>Helianthella castanea</i>
Dog-fennel <sup>1, 3, 4</sup>	<i>Anthemis cotula</i>
Douglas' silver puffs <sup>1, 3</sup>	<i>Microseris douglasii douglasii</i>
Dwarf cudweed <sup>1, 2, 3</sup>	<i>Hesperevax sparsiflora sparsiflora</i>
Dwarf woolly-heads <sup>1, 3</sup>	<i>Psilocarphus brevissimus brevissimus</i>
Filago	<i>Filago californica</i>
Goldfields	<i>Lasthenia californica</i>
Grass-leaved goldenrod <sup>2</sup>	<i>Euthamia occidentalis</i>
Great Valley gumplant <sup>1, 2, 3</sup>	<i>Grindelia camporum camporum</i>
Hayfield tarplant <sup>1, 2, 3</sup>	<i>Hemizonia congesta luzulifolia</i>



**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Heermann's tarweed	<i>Holocarpha heermannii</i>
Italian thistle <sup>1, 2, 3, 4</sup>	<i>Carduus pycnocephalus</i>
Jersey cudweed <sup>1, 3, 4</sup>	<i>Gnaphalium luteo-album</i>
Large-flowered linanthus	<i>Linanthus grandiflorus</i>
Livermore tarplant	<i>Dienandra bacigalupii</i>
Lowland cudweed <sup>2</sup>	<i>Gnaphalium palustre</i>
Maltese star thistle <sup>3, 4</sup>	<i>Centaurea melitensis</i>
Marsh baccharis <sup>3</sup>	<i>Baccharis douglasii</i>
Mt. Diablo cottonweed	<i>Micropus amphibolus</i>
Mt. Hamilton thistle	<i>Cirsium fontinale campylon</i>
Mule-fat	<i>Baccharis salicifolia</i>
Mule's ear <sup>3</sup>	<i>Wyethia helenioides</i>
Narrow-leaf cottonrose <sup>1, 3, 4</sup>	<i>Filago gallica</i>
Oregon woolly-heads <sup>1, 3</sup>	<i>Psilocarphus oregonus</i>
Pacific Aster <sup>3</sup>	<i>Symphyotrichum chilense chilense</i>
Purple star-thistle <sup>1, 3, 4</sup>	<i>Centaurea calcitrapa</i>
Pineapple weed <sup>1, 2, 3, 4</sup>	<i>Chamomilla suaveolens</i>
Prickly lettuce <sup>2, 3, 4</sup>	<i>Lactuca serriola</i>
Prickly sow thistle <sup>1, 2, 3, 4</sup>	<i>Sonchus asper asper</i>
Rough cat's ear <sup>4</sup>	<i>Hypochoeris radicata</i>
Rough cocklebur <sup>2, 3</sup>	<i>Xanthium strumarium</i>
Salsify, oyster plant <sup>1, 2, 3, 4</sup>	<i>Tragopogon porrifolius</i>
Santa Cruz tarplant	<i>Holocarpha macradenia</i>
Serpentine linanthus	<i>Linanthus ambiguus</i>
Showy madia	<i>Madia radiata</i>
Silver puffs <sup>2</sup>	<i>Uropappus lindleyi</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
Slender cottonweed	<i>Micropus californicus</i>
Slender mule's ear <sup>1, 2, 3</sup>	<i>Wyethia angustifolia</i>
Smooth beggar tick	<i>Bidens laevis</i>
Smooth cat's-ear <sup>1, 2, 3, 4</sup>	<i>Hypochaeris glabra</i>
Smooth tidy-tips <sup>1, 2, 3</sup>	<i>Layia chrysanthemoides</i>
Sow thistle <sup>4</sup>	<i>Sonchus oleraceus</i>
Spiny cocklebur <sup>1, 3</sup>	<i>Xanthium spinosum</i>
Stinkwort, stink aster <sup>1, 2, 3, 4</sup>	<i>Dittrichia graveolens</i>
Tidy-tips	<i>Layia platyglossa</i>
Threeray tarweed	<i>Hemizonia lobbii</i>
Venus thistle	<i>Cirsium occidentale venustum</i>
Western goldenrod <sup>1, 3</sup>	<i>Euthamia occidentalis</i>
Wild dandelion	<i>Agoseris heterophylla</i>
Winged thistle <sup>4</sup>	<i>Carduus tenuiflorus</i>
Wooly-headed lessingia	<i>Lessingia hololeuca</i>
Yarrow <sup>1, 2, 3</sup>	<i>Achillea millefolium</i>
Yellow star-thistle <sup>1, 2, 3, 4</sup>	<i>Centaurea solstitialis</i>
-----*	<i>Aster chilensis</i>
<b>Sycamore family (Platanaceae)</b>	
California sycamore	<i>Platanus racemosa</i>
<b>Unicorn-plant family (Martyniaceae)</b>	
Unicorn plant <sup>2, 3, 4</sup>	<i>Proboscidea lutea</i>
<b>Valerian family (Valerianaceae)</b>	
Longspur seablush	<i>Plectritis ciliosa</i>
<b>Verbena family (Verbenaceae)</b>	
Turkey tangle fog fruit <sup>1, 3</sup>	<i>Phyla nodiflora nodiflora</i>

**Table 3-6. Common and Scientific Names of Plants Known to or with the Potential to Occur at Camp Parks**

Common Name	Scientific Name
<b>Walnut family (Juglandaceae)</b>	
English walnut <sup>1, 3, 4</sup>	<i>Juglans regia</i>
Northern California black walnut <sup>1, 2, 3</sup>	<i>Juglans californica hindsii</i>
<b>Waterleaf family (Hydrophyllaceae)</b>	
Divaricate scorpionweed	<i>Phacelia divaricata</i>
Fivespot <sup>1, 3</sup>	<i>Nemophila maculata</i>
Lacy scorpionweed	<i>Phacelia tanacetifolia</i>
Meadow nemophila	<i>Nemophila pedunculata</i>
Menzie's baby blue eyes	<i>Nemophila menziesii</i>
<b>Water-platain family (Alismataceae)</b>	
Water plantain <sup>1, 2, 3</sup>	<i>Alisma plantago-aquatica</i>
<b>Water-starwort family (Callitrichaceae)</b>	
Water starwort <sup>1, 3</sup>	<i>Callitriche marginata</i>
<b>Willow family (Salicaceae)</b>	
Arroyo willow <sup>1, 2, 3</sup>	<i>Salix lasiolepis</i>
Fremont cottonwood <sup>1, 3</sup>	<i>Populus fremontii fremontii</i>
Gooding's black willow <sup>1, 2, 3</sup>	<i>Salix goodingii</i>
Lombardy poplar <sup>2, 3, 4</sup>	<i>Populus nigra italica</i>
Narrow-leaved willow <sup>1, 3</sup>	<i>Salix exigua</i>
Red willow <sup>1, 2, 3</sup>	<i>Salix laevigata</i>
Scouler's willow	<i>Salix scouleriana</i>
Weeping willow <sup>1, 3, 4</sup>	<i>Salix babylonica</i>

- Notes: 1. Observed at Camp Parks (USACE 2003b. Final Integrated Natural Resources Management Plan, Parks Reserve Forces Training Area, Dublin, California, 2003–2007. December 2002.)
2. Observed at Camp Parks (Garcia and Associates 2003 and 2004. Draft Report Special Status Plant Surveys)
3. Observed at Camp Parks Steele and Petersen 2005)
4. Non-native (exotic) species

**Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)**

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
1	II	See Pond A								
2	II	37 44 37	-121 53 31	A/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.508	0.004	Yes
3	II	37 42 32	-121 54 03	G/S	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.104	---	Yes
						Seep/Spring Wetland	---	0.131	---	
4	II	37 44 19	-121 53 34	G/S	Diablo Clay	Seep/Spring Wetland	Freshwater Marsh **	0.691	---	Yes
5	III	37 44 20	-121 52 59	G/S	Diablo Clay	Seasonal Pond	Freshwater Seasonal Wetland	0.832	---	Yes
6	III	37 44 02	-121 53 08	G/S	Diablo Clay	Seasonal Pond	Freshwater Seasonal Wetland	0.288	---	Yes
7	II	See Pond B								
8	II	37 44 10	-121 54 11	G/S	Diablo Clay	Seasonal Pond	---	0.914	---	No
						Seep/Spring Wetland	Freshwater Seasonal Wetland	3.47	---	
9	II	37 44 02	-121 54 31	G/S	Clear Lake Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.193	---	Yes
10	II	37 43 55	-121 54 21	A/S	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	2.89	---	Yes

Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
11	II	37 43 47	-121 54 27	A/S	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.393	---	Yes
12	II	37 43 43	-121 54 33	G/S	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.524	---	Yes
13	II	37 43 59	-121 53 44	G/S	Diablo Clay	Seasonal Pond	Freshwater Marsh **	0.096	---	Yes
						Seasonal Stream	Freshwater Seasonal Wetland	1.101	---	Yes
14	II	This location was not deemed a wetland (April 2003)								
15	III	37 43 48	-121 53 38	G/S	Diablo Clay	Seasonal Pond	Freshwater Seasonal Wetland	0.263	---	No
16	II	37 43 44	-121 53 51	G/S & A/S	Diablo Clay	Seep/Spring Wetland	Freshwater Marsh **	5.803	---	Yes
17	III	37 43 42	-121 53 49	G/S	Diablo Clay	Seep/Spring Wetland	Freshwater Marsh **	0.616	---	Yes
18	III	37 43 44	-121 53 28	G/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.249	---	Yes
19	III	37 43 43	-121 53 14	G/S & A/S	Pescadero Clay	Seasonal Stream	---	3.291	0.099	Yes
						Seep/Spring Wetland	Freshwater Marsh **	0.259	---	Yes
20	III	37 43 39	-121 52 41	G/S	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.881	---	Yes

**Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)**

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
21	III	37 43 37	-121 52 29	G/S	Clear Lake Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.682	---	Yes
22	III	37 43 26	-121 52 39	G/S	Clear Lake Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.995	---	No
23	I	37 43 27	-121 54 26	G/S	Diablo Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.067	---	No
24	I	37 43 28	-121 54 07	A	Diablo Clay	Seasonal Pond	---	0.226	---	Yes
						Seep/Spring Wetland	Freshwater Seasonal Wetland	1.013	---	
25	I	37 43 26	-121 53 53	G/S & A/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	4.168	0.196	Yes
26	I	37 43 19	-121 53 39	G/S	Diablo Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.034	---	Yes
27	I	37 43 08	-121 54 06	G/S	Diablo Clay	Seasonal Pond	---	0.03	---	Yes
						Seep/Spring Wetland	Freshwater Seasonal Wetland	0.459	---	
28	I	37 42 32	-121 54 03	G/S	Clear Lake Clay	Vernal Pool	Freshwater Seasonal Wetland	0.46	---	Yes
29	I	This location was not deemed a wetland (April 2003)								

Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
30	II	37 44 18	-121 54 40	---	Diablo Clay	Seasonal Stream Wetland	Freshwater Seasonal Wetland	0.012	---	Yes
31	II	This wetland is the same as wetland No. 4								
32	I	37 42 36	-121 53 54	G/S	Clear Lake Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.064	---	Yes
33	I	37 42 35	-121 53 55	G/S	Clear Lake Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.155	---	Yes
34	I	37 42 29	-121 53 55	G/S	Clear Lake Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.09	---	Yes
35	I	37 42 29	-121 53 45	G/S	Clear Lake Clay	Ditch Wetland	Freshwater Seasonal Wetland	0.129	---	Yes
36	II	37 43 50	-121 53 59	G/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.071	---	Yes
37	III	37 43 41	-121 53 16	G/S	Diablo Clay	Vernal Pool	Northern Hardpan Vernal Pool **	0.013	---	Yes
38	III	37 43 29	-121 52 30	G/S	Clear Lake Clay	Vernal Pool	Northern Hardpan Vernal Pool **	0.013	---	No
39	III	37 43 28	-121 52 29	G/S	Diablo Clay	Vernal Pool	Northern Hardpan Vernal Pool **	0.05	---	No
40	I	37 42 55	-121 53 54	A	Clear	Ditch	---	0.619	---	Yes

**Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)**

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
					Lake Clay	Ditch Wetland	Freshwater Seasonal Wetland	1.465	0.003	
41	III	37 43 42	-121 53 16	G/S	Pescadero Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.063	---	Yes
42	III	37 43 40	-121 53 16	G	Pescadero Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.583	---	Yes
43	II	37 44 27	-121 54 27	A/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	5.429	---	Yes
44	III	37 43 32	-121 52 27	G	Clear Lake Clay	Seasonal Pond	Freshwater Seasonal Wetland	0.007	---	No
45	III	37 43 38	-121 52 30	A/S	Clear Lake Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.239	---	No
46	III	37 44 32	-121 52 57	A/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.974	0.12	No
47	I	37 43 08	-121 54 25	A/S	Diablo Clay	Ditch	---	0.208	---	Yes
						Ditch Wetland	Freshwater Seasonal Wetland	0.345	---	
48	I	37 43 38	-121 54 34	G/S	Diablo Clay	Seep/Spring Wetland	Freshwater Seasonal Wetland	0.139	---	Yes
49	II	37 44 13	-121 54 22	A/S	Diablo	Seep/Spring	Freshwater	0.145	---	Yes



Table 3-7. Summary of Wetland Data (Revised After Field Verification with ACOE on February 18-19, 2004)

Wetland Number	Area Number	Latitude N (deg., min., sec.)	Longitude W (deg., min., sec.)	Delineation Protocol <sup>A</sup>	Soil Type	Wetland Type	Plant Association <sup>B</sup>	Acreage within Camp Parks Boundary	Additional Acreage Beyond Camp Parks Boundary	Jurisdictional Status
					Clay	Wetland	Seasonal Wetland			
50	III	---	---	A	---	Stream	---	3.354	2.008	Yes
51	III	---	---	H	---	Seasonal Stream	---	0.58	---	Yes
1 (Pond A)	II	37 44 13	-121 54 22	A/S	Diablo Clay	Pond	---	0.831	---	Yes
						Pond Fringe Marsh	Freshwater Marsh **	3.541	---	Yes
						Seep/Spring Wetland	Freshwater Marsh **	0.802	---	
7 (Pond B)	II	37 44 09	-121 53 39	G/S	Diablo Clay	Pond	---	0.155	---	Yes
						Pond Fringe Marsh	Freshwater Marsh **	0.229	---	
Pond C	II	37 43 58	-121 53 45	G/S	Diablo Clay	Pond	---	0.847	---	Yes
						Pond Fringe Marsh	Freshwater Marsh **	2.22	---	
Pond D	I	37 43 29	-121 53 54	G	Diablo Clay	Pond	---	2.043	---	Yes
						Pond Fringe Marsh	Freshwater Marsh **	1.058	---	
<b>Total Wetlands Acreage</b>								<b>58.104</b>	<b>2.43</b>	---
<b>Total Combined Acreage Within and Outside Camp Parks Boundaries</b>								<b>60.534</b>		---

Source: Booz Allen 2004c

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
<b>Special Status Plant Species Known or With Moderate to High Potential of Occurring on Camp Parks</b>						
<b>Federally Listed Threatened, Endangered, Proposed Species</b>						
Palmate-bracted bird's beak	1B	FE	SE	May-Oct	Chenopod scrub, grassland, usually on alkaline pescadero silty clay. 5-155m	Moderate. Known to occur from Springtown area near Livermore, within 6 mi of Camp Parks.
<i>Cordylanthus palmatus</i>						
<b>State Listed and Federal Candidate Species, Species of Concern, and Sensitive Species</b>						
Big-scale balsamroot	1B	SLC	--	Mar-Jun	Valley and foothill grassland, cismontane woodland, sometimes serpentine. 35-1000m	Moderate. Nearest known location within 5 mi of Camp Parks.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>						
Brittlescale	1B	SC	--	May-Oct	Usually in alkali scalds, clay meadows or annual grassland; rarely in riparian, marsh or vernal pool areas. 1-320m	High. Known locations within 10 mi of Camp Parks.
<i>Atriplex depressa</i>						
Congdon's tarplant <sup>1</sup>	1B	SC	--	Jun-Nov	Valley and foothill grassland, alkaline soils, sometimes described as heavy white clay. 1-230m	Numerous known locations at Camp Parks.
<i>Centromadia parryi</i> ssp. <i>congdonii</i>						
Crownscale	4	--	--	Mar-Oct	Chenopod scrub, valley and foothill grassland, alkaline vernal pools. 1-590m	Moderate. Known locations within 10 mi of Camp Parks. Tolerant of disturbance.
<i>Atriplex coronata</i> var. <i>coronata</i>						

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
Heartscale <i>Atriplex cordulata</i>	1B	SC	--	Apr-Oct	Alkaline flats and scalds, sandy soil. 1-150(600)m.	High. Known locations within 10 mi of Camp Parks.
Hispid bird's-beak <i>Cordylanthus mollis ssp. hispidus</i>	1B	SC	--	Jun-Sep	Damp alkaline soils, especially in alkaline grasslands and alkali sinks. 10-155m	Moderate. Known from Springtown area near Livermore, within 6 mi of Camp Parks.
Livermore tarplant <i>Deinandra bacigalupii</i>	1B	SC	--	Jun-Oct	Alkaline grasslands. 150-185m	Moderate. Known locations near Livermore, within 6 mi of Camp Parks.
Northern California black walnut <sup>1</sup> <i>Juglans californica var. hindsii</i>	1B	SC	--	Apr-May	Riparian forest and woodland, deep alluvial soils near creeks or streams. 0-395m	Native stand near project area. Known locations within Camp Parks.
Mt Diablo cottonweed <i>Micropus amphibolus</i>	3	--	--	Mar-May	Mixed evergreen forest, oak woodland, chaparral, valley and foothill grassland. 45-825m	Moderate. Nearest location > 10 mi from Camp Parks. Intolerant of disturbance.
Round-leaved filaree <i>Erodium macrophyllum</i>	1B	--	--	Mar-May	Cismontane woodland, valley and foothill grassland, clay soils. 15-1200m	Moderate. Known location within 6 miles of Camp Parks.
San Joaquin spearscale <i>Atriplex joaquiniana</i>	1B	SC	--	Apr-Oct	In seasonal alkaline wetlands or alkali sink scrub. 1-320m	High. Known locations within 10 mi of Camp Parks.

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
Common/ Scientific <sup>2</sup>	CNPS	Federal	State			
<b>Special Status Plant Species With Low to Very Low Potential to Occur on Camp Parks</b>						
Alkali milk-vetch	1B	SC	--	Mar-Jun	Low ground, alkali flats and flooded lands; in annual grassland or in playas or vernal pools. 1-170m	Very low. Possibly extirpated. Last collected in 1938 within 10 mi of Camp Parks.
<i>Astragalus tener var. tener</i>						
Bent-flowered fiddleneck	1B	SLC	--	Mar-Jun	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. 3-500m	Low. Few known occurrences are widely scattered; nearest is >10 mi from Camp Parks.
<i>Amsinckia lunaris</i>						
Big tarplant	1B	SC	--	Jul-Oct	Valley and foothill grassland. 30-505m	Low. Nearest known location within 10 mi of Camp Parks. Intolerant of disturbance.
<i>Blepharizonia plumosa ssp. plumosa</i>						
Caper-fruited tropidocarpum	1B	SC	--	Mar-Apr	Valley and foothill grassland, alkaline hills. 0-455m	Low. Last collected in 1897 east of Livermore, within 6 mi of Camp Parks.
<i>Tropidocarpum capparideum</i>						
Delta woolly-marbles	4	--	--	May-Jun	Vernal pools. 10-500m	Low. Nearest location > 10 mi from Camp Parks.
<i>Psilocarphus brevissimus var. multiflorus</i>						
Diamond-petaled California poppy	1B	SC	--	Mar-Apr	Alkaline grassland, clay slopes and flats. 0-975m	Very low. Very rare. Rediscovered in hills southeast of Livermore in 1997.
<i>Eschscholzia rombigpetala</i>						

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
Fragrant fritillary	1B	SC	--	Feb-Mar	Grassland, sometimes serpentine, usually in moist clay soil. 3-410m	Low. Known locations > 10 mi from Camp Parks. Intolerant of disturbance.
<i>Fritillaria liliacea</i>						
Hairless popcorn-flower	1A	SC	--	Mar-May	Coastal salt marshes and interior alkaline grasslands. 5-180m	Very low. Presumed extinct. Last collected in 1942 east of Livermore, within 6 mi of Camp Parks.
<i>Plagiobothrys glaber</i>						
Hoover's cryptantha	1B	SLC	--	Apr-May	Valley and foothill grassland, sandy soil. 3-150m	Low. Nearest location > 10 mi from Camp Parks.
<i>Cryptantha hooveri</i>						
Large-flowered fiddleneck	1B	FE	SE	Mar-May	Historically found on deep loamy soils of sedimentary origin on mesic, north-facing slopes in the hills	Low. Once found near Antioch and in scattered locations south through the Diablo Range to northern San Joaquin County and including both Contra Costa and Alameda Counties. Now known only from three locations—on and near Lawrence Livermore Laboratory, which is about 13 miles east of Camp Parks.
<i>Amsinckia grandiflora</i>						
Little mousetail	3	SC	--	Mar-Jun	Valley and foothill grassland, vernal pools. 20-640m	Low. Most local occurrences historic. Recently documented from Byron, > 10 mi from Camp Parks.
<i>Myosurus minimus ssp. apus</i>						

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
Presidio clarkia	1B	FE	SE	May-Jul	Occurs only in grasslands on serpentine substrates	Low. Found only in Alameda and San Francisco Counties, California. Three of the five remaining populations are on public lands (two in the Presidio, one in a regional park), but two, in Alameda County, are on private lands. The largest population, located about 17 miles east of San Francisco in Alameda County and in Chabot Regional Park, is about 10 miles west of Camp Parks.
<i>Clarkia franciscana</i>						
Santa Cruz tarplant	1B	FT	SE	Jun-Oct	Coastal prairie, valley and foothill grassland, light, sandy soil or sandy clay. 10-260m	Low. Possibly extirpated from nearest site, which is > 10 mi from Camp Parks.
<i>Holocarpha macradenia</i>						
Showy Indian clover	1B	FE	--	Apr-Jun	Coastal bluff scrub, valley and foothill grassland, sometimes on serpentine soils. 5-415m	Very low. Presumed extinct until rediscovered in 1993. Only known occurrence in Marin County. Poor competitor in annual grassland.
<i>Trifolium amoenum</i>						
Showy madia	1B	SC	--	Mar-May	Cismontane woodland, valley and foothill grassland. 25-900m	Low. Local occurrences historic; > 10 mi from Camp Parks.
<i>Madia radiata</i>						
Woolly-headed lessingia	3	--	--	Jun-Oct	Forests, coastal scrub, valley and foothill grassland, usually serpentine clay. 15-305m	Low. Preferred habitat unlikely to be found at Camp Parks. Taxonomic status uncertain.
<i>Lessingia hololeuca</i>						

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
<b>Special Status Plant Species With Unlikely Potential to Occur on Camp Parks</b>						
Antioch Dunes evening-primrose <sup>6</sup>	1B	FE	SE	Mar-Sep	Like the Contra Costa wallflower, occurs in loose sand and stabilized dunes.	Unlikely. Known from seven sites (four of which are reintroduced) in the 70 acres along the San Joaquin River near Antioch, Contra Costa Co. Habitat for this species is absent at Camp Parks.
<i>Oenothera deltooides ssp. howellii</i>						
California sea blite	1B	FE	SE	Jul-Oct	Restricted to the upper intertidal zone within coastal marsh habitat	Unlikely. Occurs along the perimeter of Morro Bay, in San Luis Obispo County, California.
<i>Suaeda californica</i>						
Contra Costa goldfields	1B	FE	--	Mar-Jun	Requires high quality vernal pool habitat	Unlikely. Its habitat is not found within the Camp Parks.
<i>Lasthenia conjugens</i>						
Contra Costa wallflower <sup>6</sup>	1B	FE	SE	Mar-Jul	A desert relic type that, along with a small group of other plant species, forms the base of the unique plant community found at Antioch Dunes	Unlikely. Found at two dune sites along the San Joaquin River east of Antioch in Contra Costa County. In 1977, only 28 individuals were known to exist, and in 1984 the species was badly trampled by a huge crowd at the dunes.
<i>Erysimum capitatum ssp. angustatum</i>						

**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
Common/ Scientific <sup>2</sup>	CNPS	Federal	State			
Pallid manzanita (=Alameda or Oakland Hills manzanita)	1B	FT	SE	Dec-Mar	Grows on north and east facing slopes where bare, siliceous, mesic soils with low fertility exist. Requires the maritime climatic influence found where summer fog supplies moisture, lowers evapotranspiration rates, and reduces solar energy, thereby reducing the stress on plants during otherwise dry summer months. Grows on rocky ridges and outcrops where there is no little or no topsoil and the nutrient supply is low.	Unlikely. Occurs in Alameda County in the Contra Costa Hills section of the Diablo Range near Oakland, growing in limited locations of the East Bay Hills
<i>Arctostaphylos pallida</i>						
Robust spineflower	1B	FE	--	Apr-Jun	Restricted to sandy soils along the coast and near-coastal areas	Unlikely. Found only in central California, primarily in Santa Cruz and Marin Counties. Historically, also occurred in San Francisco, Alameda, Santa Clara, San Mateo, and Monterey Counties, California.
<i>Chorizanthe robusta</i> var. <i>robusta</i>						
Soft bird's-beak	1B	FE	SR	Jul-Sep	Restricted to salt and brackish tidal marshes	Unlikely. Known from Contra Costa County, within the San Francisco Bay area in northern California.
<i>Cordylanthus mollis</i> ssp. <i>mollis</i>						
Rock rose	1B	SC	--	Apr-Jun	Prefers high quality forest and woodland habitat.	Unlikely. Its habitat is not found within Camp Parks.
<i>Helianthella castanea</i>						



**Table 3-8. Summary List of the Special-Status Plant Species Known or with the Potential to Occur on Camp Parks**

Name <sup>2</sup>	Listing Status <sup>3</sup>			Flowering Period	Habitat Preferences	Potential for Occurrence <sup>4</sup>
	Common/ Scientific <sup>2</sup>	CNPS	Federal			
Water sack clover	1B	SC	--	Apr-Jun	Requires high quality alkaline wetland habitat	Unlikely. Its habitat is not found within Camp Parks.
<i>Trifolium depauperatum</i> var. <i>hydrophilum</i>						

Notes: \*Within major taxonomic groups, species are sorted alphabetically by common name for ease of reference.

1. Observed at Camp Parks

2. Scientific names and common names from Hickman (1993), Tibor (2001) and California Natural Diversity Data Base (CNDDB) (2003).

3. Status definitions are as follows:

California Native Plant Society (CNPS) designations:

1A Presumed extinct in California

1B Rare, threatened, or endangered in California and elsewhere

3 More information on taxonomy or distribution

4 Limited distribution; regular monitoring needed

Federal—U.S. Fish and Wildlife Service designations:

FE Endangered

FT Threatened

FC Candidate

FSC Species of Concern

FSLC Species of local concern

State—California Department of Fish and Game designations:

SE State Endangered

ST State Threatened

SSC Special Species of Concern

4. Potential for occurrence derived as documented in:

Booz Allen Hamilton (Booz Allen). 2004a. Parks Reserve Forces Training Area, Biological Field Surveys. Prepared for Parks Reserve Forces Training Area, Directorate of Public Works. 98 pp + Appendices.

Garcia and Associates. 2003. Special Status Plant Surveys. Part I: Fall Survey Results for the Parks Reserve Forces Training Area in Contra Costa and Alameda Counties, California.

Note that determination of probability of occurrence is a subjective, interpretive process based on professional judgment and experience.

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>INVERTEBRATES</b>	
<b>Fairy Shrimp (Branchinectidae)</b>	
California linderiella*	<i>Linderiella occidentalis</i>
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>
Vernal pool tadpole shrimp	<i>Lepidurus packardi</i>
Other fairy shrimp species	<i>Branchinecta lindahli, Branchinecta mackini</i>
<b>Narrow-Winged Damselflies (Coenagrionidae)</b>	
San Francisco forktail damselfly	<i>Ischnura gemina</i>
<b>Predaceous Diving Beetles (Dytiscidae)</b>	
Curve-footed hygrotus diving beetle	<i>Hygrotus curvipes</i>
<b>Water Scavenger Beetles (Hydrophilidae)</b>	
Ricksecker's water scavenger beetle	<i>Hydrochara rickseckeri</i>
<b>FISH</b>	
<b>Bullhead catfish family (Ictaluridae)</b>	
Black bullhead†	<i>Ameiurus melas</i>
<b>Livebearer family (Poeciliidae)</b>	
Mosquitofish†*	<i>Gambusia affinis</i>
<b>Minnow and carp family (Cyprinidae)</b>	
Common carp†	<i>Cyprinus carpio</i>
Golder shiner†	<i>Notemigonus crysoleucas</i>
<b>Sucker family (Catostomidae)</b>	
Sacramento sucker†	<i>Catostomus occidentalis</i>
<b>Sunfish family (Centrarachidae)</b>	
Large-mouth bass†*	<i>Micropterus salmoides</i>
Bluegill†*	<i>Lepomis macrochirus</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>AMPHIBIANS</b>	
<b>Lungless Salamanders (Plethodontidae)</b>	
California slender salamander	<i>Batrachoseps attenuatus</i>
<b>Mole Salamanders and Relatives (Ambystomidae)</b>	
California tiger salamander*	<i>Ambystoma tigrinum californiense</i>
<b>Newts (Salamandridae)</b>	
California newt	<i>Taricha tarosa</i>
Rough-skinned newt	<i>Taricha granulosa</i>
<b>Spadefoot Toads (Pelobatidae)</b>	
Western spadefoot	<i>Scaphoipus hammondii</i>
<b>Treefrogs and Allies (Hylidae)</b>	
Pacific chorus frog*	<i>Pseudacris (Hyla) regilla</i>
<b>True Frogs and Allies (Ranidae)</b>	
Bullfrog†*	<i>Rana catesbeiana</i>
California red-legged frog*	<i>Rana aurora draytonii</i>
Foothill yellow-legged frog	<i>Rana boylei</i>
<b>True Toads (Bufonidae)</b>	
Western toad*	<i>Bufo boreas</i>
<b>REPTILES</b>	
<b>Alligator Lizards and Allies (Anguidae)</b>	
Northern alligator lizard*	<i>Elgaria coeruleus</i>
Southern alligator lizard*	<i>Elgaria multicaerinata</i>
<b>Boas (Boidae)</b>	
Rubber boa	<i>Charina bottae</i>
<b>Colubrids (Colubridae)</b>	
Alameda whipsnake	<i>Masticophis lateralis euryxanthus</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
California red-sided garter snake*	<i>Thamnophis sirtalis infernalis</i>
Common kingsnake	<i>Lampropeltis getulus</i>
Gopher snake*	<i>Pituophis melanoleucus</i>
Night snake	<i>Hypsiglena torquata</i>
Racer*	<i>Coluber constrictor</i>
Ringneck snake	<i>Diadophis punctatus</i>
Sharp-tailed snake	<i>Contia tenuis</i>
Western aquatic garter snake	<i>Thamnophis couchii</i>
Western terrestrial garter snake	<i>Thamnophis elegans</i>
<b>Iguanids (Iguanidae)</b>	
California horned lizard	<i>Phrynosoma coronatum frontale</i>
Western fence lizard*	<i>Sceloporus occidentalis</i>
<b>Pit Vipers (Viperidae)</b>	
Western rattlesnake	<i>Crotalus viridis</i>
<b>Skinks (Scincidae)</b>	
Western skink	<i>Eumeces skiltanianus</i>
<b>Water and Box Turtles, Tortoises and Allies (Testudinidae)</b>	
Northwestern pond turtle	<i>Clemmys marmorata marmorata</i>
Southwestern pond turtle*	<i>Clemmys marmorata pallida</i>
<b>Whiptails and Allies (Teiidae)</b>	
California whiptail	<i>Cnemidophorus tigris</i>
<b>BIRDS</b>	
<b>American Vultures (Cathartidae)</b>	
Turkey Vulture*	<i>Cathartes aura</i>
<b>Cormorants (Phalacrocoracidae)</b>	
Double-crested Cormorant*	<i>Phalacrocorax auritus</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>Eagles, Kites, Harriers, Hawks (Accipitridae)</b>	
Cooper's Hawk	<i>Accipiter cooperii</i>
Ferruginous Hawk*	<i>Buteo regalis</i>
Golden Eagle*	<i>Aquila chrysaetos</i>
Northern Harrier*	<i>Circus cyaneus</i>
Red-tailed Hawk*	<i>Buteo jamaicensis</i>
Rough-legged Hawk	<i>Buteo lagopus</i>
Swainson's Hawk	<i>Buteo swainsoni</i>
White-tailed Kite*	<i>Elanus leucurus</i>
<b>Falcons (Falconidae)</b>	
American Kestrel*	<i>Falco sparverius</i>
Merlin	<i>Falco columbarius</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Prairie Falcon*	<i>Falco mexicanus</i>
<b>Finches (Fringillidae)</b>	
American Goldfinch*	<i>Carduelis tristis</i>
House finch*	<i>Carpodacus mexicanus</i>
Lesser Goldfinch	<i>Carduelis psaltria</i>
Pine Siskin	<i>Carduelis pinus</i>
<b>Grebes (Podicipedidae)</b>	
Clark's Grebe	<i>Aechmophorus clarkii</i>
Western Grebe	<i>Aechmophorus occidentalis</i>
<b>Grouse, Ptarmigan, Turkeys, Quail (Phasianidae)</b>	
California Quail*	<i>Callipepla californica</i>
Ring-necked Pheasant†*	<i>Phasianus colchicus</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>Herons, Egrets, Bitterns (Ardeidae)</b>	
American bittern	<i>Botarus lentiginosus</i>
Black-crowned night heron*	<i>Nycticotax nycticorax</i>
Great blue heron*	<i>Ardea herodias</i>
Great egret*	<i>Casmerodius albus</i>
Green-backed heron	<i>Butorides striatus</i>
Snowy egret	<i>Egretta thula</i>
<b>Hummingbirds (Trochilidae)</b>	
Black-chinned hummingbird	<i>Archilochus alexandri</i>
<b>Jays, Crows, Magpies (Corvidae)</b>	
American crow*	<i>Corvus brachyrhynchos</i>
Scrub jay*	<i>Aphelocoma coerulescens</i>
<b>Kingfishers (Alcedinidae)</b>	
Belted kingfisher	<i>Ceryle alcyon</i>
<b>Larks (Alaudidae)</b>	
California horned lark	<i>Eremophila alpestris actia</i>
<b>Mimic Thrushes (Mimidae)</b>	
Northern mockingbird*	<i>Mimus polyglottos</i>
<b>Owls (Tytonidae and Strigidae)</b>	
Barn owl*	<i>Tyto alba</i>
Western burrowing owl*	<i>Athene cunicularia hypugaea</i>
Great horned owl*	<i>Bubo virginianus</i>
Short-eared owl	<i>Asio flammeus</i>
<b>Pigeons and Doves (Columbidae)</b>	
Mourning dove*	<i>Zenaida macroura</i>
Rock dove†*	<i>Columba livia</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>Pipits and Wagtails (Motacillidae)</b>	
American pipit	<i>Anthus rubescens</i>
<b>Plovers (Charadriidae)</b>	
Killdeer*	<i>Charadrius vociferus</i>
Mountain plover	<i>Charadrius montanus</i>
<b>Rails, Gallinules, Coots (Rallidae)</b>	
American Coot*	<i>Fulica americana</i>
Common Moorhen	<i>Gallinula chloropus</i>
Marbled Godwit	<i>Limosa fedoa</i>
Sora	<i>Porzana carolina</i>
Virginia Rail	<i>Rallus limicola</i>
<b>Sandpipers (Scolopacidae)</b>	
Common Snipe	<i>Gallinago gallinago</i>
Long-billed Curlew*	<i>Numenius americanus</i>
Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>
Spotted Sandpiper	<i>Actitis macularia</i>
<b>Shrikes (Laniidae)</b>	
Loggerhead Shrike*	<i>Lanius ludovicianus</i>
<b>Skuas, Jaegers, Gulls, Terns (Laridae)</b>	
Black Tern	<i>Sterna caspia</i>
<b>Starlings (Sturnidae)</b>	
European Starling†*	<i>Sturnus vulgaris</i>
<b>Stilts, Avocets (Recurvinrostridae)</b>	
American Avocet	<i>Recurvirostra americana</i>
<b>Swallows (Hirundinidae)</b>	
Barn Swallow*	<i>Hirundo rustica</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
Cliff Swallow	<i>Hirundo pyrrhonota</i>
Tree Swallow	<i>Tachycineta bicolor</i>
<b>Swans, Geese, Ducks (Anatidae)</b>	
American Wigeon*	<i>Anas americana</i>
Blue-winged Teal	<i>Anas discors</i>
Bufflehead*	<i>Bucephala albeola</i>
Canada Goose*	<i>Branta canadensis</i>
Canvasback*	<i>Aythya valisineria</i>
Cinnamon Teal	<i>Anas cyanoptera</i>
Common Merganser	<i>Mergus merganser</i>
Domestic Goose†*	<i>Anser "domesticus"</i>
Eurasian Wigeon	<i>Anas penelope</i>
Gadwall	<i>Anas strepera</i>
Green-winged Teal	<i>Anas crecca</i>
Greater Scaup*	<i>Aythya marila</i>
Greater White-fronted Goose	<i>Anser albifrons</i>
Lesser Scaup	<i>Aythya affinis</i>
Mallard*	<i>Anas platyrhynchos</i>
Northern Pintail	<i>Anas acuta</i>
Northern Shoveler*	<i>Anas clypeata</i>
Redhead	<i>Aythya americana</i>
Ring-necked Duck	<i>Aythya collaris</i>
Ross's Goose	<i>Chen rossii</i>
Ruddy Duck*	<i>Oxyura jamaicensis</i>
Snow Goose	<i>Chen caerulescens</i>
Tundra Swan	<i>Cygnus columbianus</i>



**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
Wood Duck	<i>Aix sponsa</i>
<b>Tyrant Flycatchers (Tyrannidae)</b>	
Ash-throated Flycatcher	<i>Myiarchus cinerascens</i>
Say's Phoebe	<i>Sayornis saya</i>
Western Kingbird	<i>Tyrannus verticalis</i>
<b>Warblers, Sparrows, and Relatives (Emberizidae)</b>	
Brewer's Blackbird*	<i>Euphagus cyanocephalus</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Chipping Sparrow	<i>Spizella passerina</i>
Common Yellowthroat	<i>Geothlypis trichas</i>
Grasshopper Sparrow	<i>Ammodramas savannarum</i>
Lapland Longspur	<i>Calcarius lapponicus</i>
Lark Sparrow	<i>Chondestes grammacus</i>
Red-winged Blackbird*	<i>Agelaius phoeniceus</i>
Rufous-crowned Sparrow	<i>Aimophila ruficeps</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Song Sparrow*	<i>Melospiza melodia</i>
Tricolored Blackbird*	<i>Agelaius tricolor</i>
Western Meadowlark*	<i>Sturnella neglecta</i>
Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>
<b>Weavers (Passeridae)</b>	
House Sparrow†	<i>Passer domesticus</i>
<b>Woodpeckers (Picidae)</b>	
Northern Flicker	<i>Colaptes auratus</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>MAMMALS</b>	
<b>Bats, Free-tailed (Molossidae)</b>	
Brazilian free-tailed bat*	<i>Tadarida brasiliensis</i>
Greater western mastiff bat	<i>Eumops perotis</i>
<b>Bats, Mouse-eared (Vespertilionidae)</b>	
Big brown bat	<i>Eptesicus fuscus</i>
California myotis*	<i>Myotis californicus</i>
Fringed myotis	<i>Myotis thysanodes</i>
Hairy-winged myotis	<i>Myotis volans</i>
Hoary bat	<i>Lasiurus cinereus</i>
Long-eared myotis	<i>Myotis evotis</i>
Pallid bat*	<i>Antrozous pallidus</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Pacific western big-eared bat	<i>Corynorhinus townsendii townsendii</i>
Western red bat	<i>Lasiurus blossevillii</i>
Western pipstrelle	<i>Pipistrellus hesperus</i>
Yuma myotis*	<i>Myotis yumanensis</i>
<b>Cats (Felidae)</b>	
Bobcat	<i>Felis rufus</i>
Feral cat*	<i>Felis catus</i>
<b>Deer (Cervidae)</b>	
Mule deer*	<i>Odocoileus hemionus columbianus</i>
<b>Foxes, Wolves, Coyotes (Canidae)</b>	
Coyote*	<i>Canis latrans</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Red fox†*	<i>Vulpes vulpes</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>
<b>Hares and Rabbits (Leporidae)</b>	
Black-tailed jackrabbit*	<i>Lepus californicus</i>
Brush rabbit	<i>Sylvilagus bachmani</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
<b>Marsupials (Marsupialia)</b>	
Virginia opossum*	<i>Didelphis virginiana</i>
<b>Mice, Rats, Lemmings, Voles (Cricidae)</b>	
Brush mouse	<i>Peromyscus boylii</i>
California mouse	<i>Peromyscus californicus</i>
California vole*	<i>Microtus californicus</i>
Deer mouse*	<i>Peromyscus maniculatus</i>
Dusky-footed woodrat	<i>Neotoma fuscipes</i>
Western harvest mouse	<i>Reithrodontomys megalotis</i>
<b>Moles (Talpidae)</b>	
Broad-footed mole	<i>Scapanus latimanus</i>
<b>Old World Rats and Mice (Muridae)</b>	
Black rat†*	<i>Rattus rattus</i>
House mouse*	<i>Mus musculus</i>
Norway rat†	<i>Rattus norvegicus</i>
<b>Pocket Gophers (Geomyidae)</b>	
Botta's pocket gopher*	<i>Thomomys bottae</i>
<b>Raccoons and Coatis (Procyonidae)</b>	
Raccoon*	<i>Procyon lotor</i>
<b>Squirrels and relatives (Sciuridae)</b>	
California ground squirrel*	<i>Spermophilus beecheyi</i>

**Table 3-9. Common and Scientific Names of Animal Species Known to Occur or with the Potential to Occur on Camp Parks**

COMMON NAME	SCIENTIFIC NAME
<b>Weasels and relatives (Mustelidae)</b>	
American badger*	<i>Taxidea taxus</i>
Long-tailed weasel	<i>Mustela frenata</i>
Striped skunk*	<i>Mephitis mephitis</i>
Western spotted skunk	<i>Spilogale gracilis</i>

\* observed at Camp Parks.

† exotic species.

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
<b>Special Status Animal Species Known or With Moderate to High Potential of Occurring on Camp Parks</b>				
<b>Federally Listed Threatened, Endangered, Proposed Species</b>				
<i>Invertebrates</i>				
Longhorn fairy shrimp <i>Branchinecta longiantenna</i>		FE	--	High. Require vernal pool habitats that exist on Camp Parks. Not observed.
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>		FT	--	High. Require vernal pool habitats that exist on Camp Parks. Not observed.
Vernal pool tadpole shrimp <i>Lepidurus packardi</i>		FE	--	High. Require vernal pool habitats that exist on Camp Parks. Not observed.
<i>Amphibians and Reptiles</i>				
California red-legged frog <sup>1</sup> <i>Rana aurora draytonii</i>		FT	SSC	Observed at Camp Parks.
California tiger salamander <sup>1</sup> <i>Ambystoma californiense</i>		FT	SSC	Observed at Camp Parks.
<i>Mammals</i>				
San Joaquin kit fox <sup>2</sup> <i>Vulpes macrotis mutica</i>		FE	ST	Moderate. Sufficient habitat and prey base on Camp Parks to support population. Documented adjacent to Camp Parks by CNDDDB, but not for over ten years.
<b>State Listed and Federal Candidate Species, Sensitive species and Species of Concern</b>				
<i>Invertebrates</i>				
California linderiella fairy shrimp <sup>1</sup> <i>Linderiella occidentalis</i>		SC	--	Observed at Camp Parks.
Ricksecker's water scavenger beetle <i>Hydrochara rickseckeri</i>		SC	--	High. Require vernal pool habitats that exist on Camp Parks. Not observed.
<i>Amphibians and Reptiles</i>				
Western pond turtle <sup>1,5</sup> <i>Clemmys marmorata</i>		SC	SSC	Observed at Camp Parks. The boundary between the northwestern ( <i>C.m. marmorata</i> ) and southwestern ( <i>C.m.pallida</i> ) subspecies is near Camp Parks.
<i>Birds</i>				
California horned lark <i>Eremophila alpestris actia</i>		--	SSC	Documented near Camp Parks by CNDDDB

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ Scientific Name <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
Cooper's hawk <sup>1</sup> <i>Accipiter cooperi</i>		--	SSC	Observed at Camp Parks.
Ferruginous hawk <sup>1</sup> <i>Buteo lagopus</i>		SC	SSC	Observed at Camp Parks.
Golden eagle <sup>1</sup> <i>Aquila chrysaetos</i>		--	SSC	Observed at Camp Parks.
Loggerhead shrike <sup>1</sup> <i>Lanius ludovicianus</i>		SC	SSC	Observed at Camp Parks.
Mountain plover <i>Charadrius montanus</i>		SC	SCC	Prefers dry areas of short grass and sparse vegetation such as are found in colonies of mammals like ground squirrels and prairie dogs.
Northern harrier <sup>1</sup> <i>Circus cyaneus</i>		--	SSC	Observed at Camp Parks.
Prairie falcon <sup>1</sup> <i>Falco mexicanus</i>		--	SSC	Observed at Camp Parks. Wide ranging CNDDDB records in CA, the closest of which is 38 miles southeast of Camp Parks.
Short-eared owl <i>Asio flammeus</i>		BCC	SSC	Moderate. Occurs in grasslands and meadows where nests in denser vegetation and hunts primarily small mammals.
Swainson's hawk <i>Buteo swainsoni</i>		SC	ST	Moderate. Occurs in grasslands and favors agricultural fields for hunting small mammals. Requires trees for nesting and is found in riparian areas and farmlands.
Tricolored blackbird <sup>1</sup> <i>Agelaius tricolor</i>		SC	SSC	Observed at Camp Parks.
Western burrowing owl <sup>1</sup> <i>Athene cunicularia hypugaea</i>		SC	SSC	Observed at Camp Parks.
White-tailed kite <sup>1</sup> <i>Elanus leucurus</i>		SC	Fully Protected	Observed at Camp Parks.
<b>Mammals</b>				
Pallid bat <sup>1</sup> <i>Antrozous pallidus</i>		--	SSC	Observed at Camp Parks.

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
Yuma myotis bat <i>Myotis yumanensis</i>		SC	--	Moderate. Prefers locations near open water/riparian areas which exist in limited quantities on Camp Parks.
<b>Special Status Animal Species With Low Potential to Occur on Camp Parks</b>				
<b><i>Invertebrates</i></b>				
Conservancy fairy shrimp <i>Branchinecta conservatio</i>		FE	--	Low. Requires vernal pool habitats but is not known to occur in Contra Costa County and has restricted range outside the county.
Curve-footed hygrotus diving beetle <i>Hygrotus curvipes</i>		SC	--	Low. Inhabits vernal pools and other wetlands in the Sacramento River Delta.
<b><i>Amphibians and Reptiles</i></b>				
Alameda whipsnake <i>Masticophis lateralis euryxanthus</i>		FT	ST	Low. Critical habitat adjacent to Camp Parks; however habitat contains shrubland preferred by species. Shrublands are generally absent on Camp Parks.
California horned lizard <i>Phrynosoma coronatum frontale</i>		SC	SSC	Low. Prefers scattered shrubland with gravelly-sandy substrate. These habitats are absent on Camp Parks.
Foothill yellow-legged frog <i>Rana boylei</i>		SC	SSC	Low. Valley-foothill riparian and wet meadow; require permanent streams. Prefers gravelly or sandy streams with sunny banks and open woodlands nearby. These habitats are absent on Camp Parks.
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>		SC	SSC	Low. Prefers San Joaquin Valley grassland/salt bush scrub associations that are absent on Camp Parks
Silvery legless lizard <i>Anniella pulchra pulchra</i>		SC	SSC	Low. Prefer sandy or loamy soils under sparse vegetation of cottonwood that grow on stream terraces. These habitats are absent on Camp Parks.
<b><i>Birds</i></b>				
Bald eagle <i>Haliaeetus leucocephalus</i>		FT	SE	Low. Prefer forested habitats associated with bodies of water. These habitats are absent on Camp Parks.
Bank swallow <i>Riparia riparis</i>		SC	ST	Low. Prefers established river banks. These habitats are absent on Camp Parks.

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
Bell's sage sparrow		SC	SSC	Low. Prefers dry chaparral and coastal sage scrub. These habitats are absent on Camp Parks. Most sightings located in vicinity of Mt. Diablo, 10 miles north of Camp Parks.
<i>Amphispiza belli belli</i>				
Lawrence's goldfinch		SC	--	Low. Prefers chaparral and open woodlands. These habitats are absent on Camp Parks.
<i>Carduelis lawrencei</i>				
Lewis' woodpecker		SC	--	Low. Prefers open Ponderosa pine forest or open riparian woodland dominated by cottonwood. May be found throughout California where these habitats occur. These habitats are absent on Camp Parks.
<i>Melanerpes lewis</i>				
Oak titmouse		SC	--	Low. Prefers oak but has some affinity to streamside cottonwoods. These habitats are absent on Camp Parks.
<i>Baeolophus inornatus</i>				
Red-breasted sapsucker		SC	--	Low. Prefers established woodland of riparian alder or willow, eucalyptus, coast live oak, and cedar. These habitats are absent on Camp Parks.
<i>Sphyrapicus ruber</i>				
Saltmarsh common yellowthroat		SC	SSC	Low. Prefer marshes of San Francisco and San Pablo Bays. Camp Parks is a minimum of 15 miles from these habitats.
<i>Geothlypis trichas sinuosa</i>				
White-faced ibis		SC	SSC	Low. Prefers well-established freshwater marshes, swamps, ponds, and rivers. These habitats are absent on Camp Parks.
<i>Plegadis chihi</i>				
<b>Mammals</b>				
SF dusky-footed woodrat		SC	SSC	Low. Prefers brushy habitat or woodland that has an oak component. These habitats are absent on Camp Parks.
<i>Neotoma fuscipes annectens</i>				
<b>Special Status Animal Species With Unlikely Potential to Occur on Camp Parks</b>				
<b>Fish</b>				
Central California Coastal steelhead		FT	--	Unlikely. Require estuarine areas and connecting river reaches. These habitats are absent on Camp Parks.
<i>Oncorhynchus mykiss</i>				
Central Valley fall/late fall-run chinook salmon		FC	SSC	Unlikely. Require estuarine areas and connecting river reaches. These habitats are absent on Camp Parks.
<i>Oncorhynchus tshawytscha</i>				
Central Valley spring-run chinook salmon		FT	ST	Unlikely. Require estuarine areas and connecting river reaches. These habitats are absent on Camp Parks.
<i>Oncorhynchus tshawytscha</i>				



**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
Central Valley steelhead <i>Oncorhynchus mykiss</i>		FT	--	Unlikely. Require estuarine areas and connecting river reaches. These habitats are absent on Camp Parks.
Delta smelt <i>Hypomesus transpacificus</i>		FT	ST	Unlikely. Require coastal brackish water habitat associated with river channels and tidally influenced backwater sloughs. These habitats are absent on Camp Parks.
Longfin smelt <i>Spirinchus thaleichthys</i>		SC	--	Unlikely. Inhabits lower reaches of Sacramento and San Joaquin rivers.
Sacramento splittail <i>Pogonichthys macrolepidotus</i>		FT	--	Unlikely. Restricted to Sacramento-San Joaquin Delta, Suisun Bay, and Napa marshes. These habitats are absent on Camp Parks.
Winter-run chinook salmon <i>Oncorhynchus tshawytscha</i>		FE	SE	Unlikely. Require estuarine areas and connecting river reaches. These habitats are absent on Camp Parks.
<b>Birds</b>				
Alameda (South Bay) song sparrow <i>Melospiza melodia pusillula</i>		SC	SSC	Unlikely. Prefers coastal estuaries and marshes. These habitats are absent on Camp Parks.
Allen's hummingbird <i>Selasphorus sasin</i>		SC	--	Unlikely. Prefers coastal chaparral, brushland, and edges of redwood forest. These habitats are absent on Camp Parks.
American bittern <i>Botaurus lentiginosus</i>		SC	--	Unlikely. Prefers permanent freshwater and brackish marshes and marshy lake shores. These habitats are absent on Camp Parks.
American peregrine falcon <i>Falco peregrinus anatum</i>		Delisted	SE	Unlikely. Prefer cliff habitat overlooking river/water systems. These habitats are absent on Camp Parks.
Black swift <i>Cypseloides niger</i>		SC	SSC	Unlikely. Prefers coastal or high altitude cliff environments or closed canopy forest. Its range thus circumvents the Central Valley.
California black rail <i>Laterallus jamaicensis coturniculus</i>		--	ST	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.
California brown pelican <i>Pelecanus occidentalis californicus</i>		FE	SE	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.
California clapper rail <i>Rallus longirostris obsoletus</i>		FE	SE	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
California least tern <i>Sterna antillarum browni</i>		FE	SE	Unlikely. Prefers coastal estuaries and marshes. These habitats are absent on Camp Parks.
California thrasher <i>Toxostoma redivivum</i>		SC	--	Unlikely. Prefers coastal chaparral habitats. These habitats are absent on Camp Parks.
Costa's hummingbird <i>Calypte costae</i>		SC	--	Unlikely. Prefers desert bushes, coastal sage, and chaparral. These habitats are absent on Camp Parks.
Little willow flycatcher <i>Empidonax traillii brewsteri</i>		--	SE	Unlikely. Prefers montane and north coastal estuaries and marshes. Occurs in a narrow strip along eastern and western flanks of the Sierra Nevada during breeding season; widespread during migration.
Long-billed curlew <i>Numenius americanus</i>		SC	SSC	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.
Marbled godwit <i>Limosa fedoa</i>		SC	--	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.
Olive-sided flycatcher <i>Contopus cooperi</i>		SC	--	Unlikely. Prefer coniferous forest habitat. These habitats are absent on Camp Parks.
Red knot <i>Calidris canutus</i>		SC	--	Unlikely. Prefer tidal flats, rocky shores, and beaches. These habitats are absent on Camp Parks.
Rufous hummingbird <i>Selasphorus rufus</i>		SC	--	Unlikely. Prefer mountain meadows and forest edges. These habitats are absent on Camp Parks.
San Pablo song sparrow <i>Melospiza melodia samuelis</i>		SC	SSC	Unlikely. Prefers coastal estuaries and marshes. These habitats are absent on Camp Parks.
Suisin song sparrow <i>Melospiza melodia maxillaries</i>		SC	SSC	Unlikely. Prefers coastal estuaries and marshes. These habitats are absent on Camp Parks.
Vaux's swift <i>Chaetura vauxi</i>		SC	--	Unlikely. Prefer forested habitat. These habitats are absent on Camp Parks.
Western snowy plover <i>Charadrius alexandrinus nivosus</i>		FT	SSC	Unlikely. Prefer coastal estuaries and marshes. These habitats are absent on Camp Parks.
Whimbrel <i>Numenius phaeopus</i>		SC	--	Unlikely. Prefer tidal flats, rocky shores, and beaches. These habitats are absent on Camp Parks.

**Table 3-10. Summary List of the Special-Status Wildlife Species Known to Occur or with the Potential to Occur on Camp Parks**

Common Name/ <i>Scientific Name</i> <sup>3</sup>	Listing Status <sup>4</sup>			Potential for Occurrence <sup>5</sup>
	CNPS	Federal	State	
<b>Mammals</b>				
Berkeley kangaroo rat <i>Dipodomys heermanni berkeleyensis</i>		SC	--	Unlikely. Presumed extinct.
Fringed myotis bat <i>Myotis thysanodes</i>		SC	--	Unlikely. Prefers oak and juniper forests and desert scrub. These habitats are absent on Camp Parks.
Greater western mastiff bat <i>Eumops perotis californicus</i>		SC	SSC	Unlikely. Prefer scrub habitats near cliffs. These habitats are absent on Camp Parks.
Long-eared myotis bat <i>Myotis evotis</i>		SC	--	Unlikely. Prefer coniferous forests. These habitats are absent on Camp Parks.
Long-legged myotis bat <i>Myotis volans</i>		SC	--	Unlikely. Prefers wooded habitats from piñon- juniper to coniferous forests. These habitats are absent on Camp Parks.
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>		SC	SSC	Unlikely. Prefer scrub habitats near cliffs. These habitats are absent on Camp Parks.
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>		FE, Extirpated	SE	Unlikely. Known only to exist in Caswell Memorial State Park on the Stanislaus River. This is roughly 35 miles from Camp Parks and supports a remnant of a largely extirpated population.
Salt marsh harvest mouse <i>Reithrodontomys raviventris</i>		FE	SE	Unlikely. Found only around the San Francisco, San Pablo and Suisun Bays. Camp Parks is a minimum of 15 miles from these habitats.
San Joaquin Valley woodrat <i>Neotoma fuscipes riparia</i>		FE, Extirpated	SSC	Unlikely. Restricted to small remnant patches of riparian forest along the Stanislaus River. This is a minimum of 35 miles from Camp Parks.
Small-footed myotis bat <i>Myotis ciliolabrum</i>		SC	--	Unlikely. Prefer rock outcrops, cliffs, and mines. These habitats are absent on Camp Parks.

\*Within major taxonomic groups, species are sorted alphabetically by common name for ease of reference.

<sup>1</sup> Observed at Camp Parks

<sup>2</sup> Documented on or immediately adjacent to Camp Parks by CNDDDB

<sup>3</sup> Scientific names and common names from Hickman (1993), Tibor (2001) and California Natural Diversity Data Base (CNDDDB) (2003).

<sup>4</sup> Status definitions are as follows:

California Native Plant Society (CNPS) designations:

- 1A Presumed extinct in California
- 1B Rare, threatened, or endangered in California and elsewhere
- 3 More information on taxonomy or distribution
- 4 Limited distribution; regular monitoring needed

Federal—U.S. Fish and Wildlife Service designations:

- FE Endangered
- FT Threatened
- FC Candidate
- SC Species of Concern
- SLC Species of Local Concern
- BCC Bird Species of Special Concern

State—California Department of Fish and Game designations:

- SE State Endangered
- ST State Threatened
- SSC Special Species of Concern

<sup>5</sup> Potential for occurrence derived from: Booz Allen 2004a.

**Table 3-11. Camp Parks Area Prehistory Taxonomic System**

<b>Period</b>	<b>Time Frame</b>	<b>Pattern Present</b>
PaleoIndian	8000 to 6000 B.C.	-
Archaic	6000 B.C. to 1000 A.D.	-
Lower Archaic	6000 to 3000 B.C.	-
Middle Archaic	3000 to 500 B.C.	Lower Berkeley pattern
		Windmiller pattern
Upper Archaic	500 B.C. to 1000 A.D.	Lower Berkeley pattern
		Meganos aspect (300 to 700 A.D.)
Emergent	100 to 1800 A.D.	Augustine pattern
Lower Emergent	100 to 1500 A.D.	-
Upper Emergent	1500 to 1800 A.D.	-

Source: Camp Parks ICRMP (Parsons 2001).

**Table 3-12. Oakland Metropolitan Statistical Area (MSA) Labor Force and Employment by Industry**

	1990	2000	2001	2002	2003	2004
<b>Labor Force</b>	1,117,300	1,243,100	1,264,700	1,290,967	1,310,308	1,272,142
Employment	1,072,300	1,207,500	1,214,100	1,215,350	1,229,800	1,203,708
Unemployment	44,900	35,500	50,600	75,617	80,542	68,425
Unemployment Rate	4.00%	2.90%	4.00%	5.90%	6.10%	5.40%
<b>Industry (number of jobs)</b>						
Agriculture	2,800	3,000	3,200	3,733	3,633	2,692
Mining	3,000	2,000	2,000	1,975	1,400	1,075
Construction	44,600	65,400	69,700	68,925	67,042	70,517
Manufacturing	111,000	123,200	121,400	115,950	98,508	96,408
Transportation & Public Utilities	58,200	63,900	64,100	61,967	39,042	36,950
Communications & Public Utilities	27,800	24,800	25,200	24,342	33,258	30,400
Wholesale Trade	52,400	67,200	67,800	66,600	51,675	50,367
Retail Trade	165,100	168,500	170,400	170,075	110,858	108,675
Finance, Insurance & Real Estate	55,700	57,800	59,100	60,983	61,250	69,100
Services	221,100	320,000	325,500	323,500	396,633	382,200
Government	168,000	176,600	178,800	184,433	182,283	178,708
<b>Total All Industries</b>	<b>882,000</b>	<b>1,047,600</b>	<b>1,062,000</b>	<b>1,058,142</b>	<b>1,045,583</b>	<b>1,027,092</b>

Source: California Employment Development Department 2005.

**Table 3-13. Oakland Metropolitan Statistical Area (MSA)<sup>1</sup> Income By Industry (nominal dollars)**

<b>Industry Income</b>	<b>1990</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>(thousands of dollars)</b>					
Agriculture	\$50,437	\$72,139	\$66,574	\$74,979	\$70,460
Mining	\$292,941 <sup>2</sup>	\$399,162	\$462,666	\$489,489	\$214,056
Construction	\$2,797,313	\$4,355,094	\$4,900,560	\$5,594,523	\$5,532,646
Manufacturing	\$4,938,993	\$8,663,061	\$10,295,180	\$8,916,753	\$8,608,302
Transportation & Public Utilities	\$2,915,661 <sup>3</sup>	\$2,670,683	\$2,833,898	\$1,646,654 <sup>4</sup>	\$1,633,187 <sup>4</sup>
Communications	N/A <sup>5</sup>	\$2,129,720	\$1,589,841	\$2,743,419	\$2,658,309
Wholesale Trade	\$2,107,768	\$4,147,046	\$4,647,842	\$4,084,991	\$3,962,249
Retail Trade	\$3,749,713	\$5,368,639	\$5,700,347	\$6,202,149	\$6,307,001
Finance, Insurance & Real Estate	\$2,013,921	\$4,248,089	\$4,735,946	\$5,267,232	\$5,794,624
Services	\$9,222,770	\$17,846,561	\$21,244,735	\$22,864,036	\$23,414,403
Government	\$6,967,925	\$8,581,345	\$9,105,249	\$9,512,726	\$10,207,247
<b>Total All Industries</b>	<b>\$35,057,442</b>	<b>\$58,481,539</b>	<b>\$65,582,838</b>	<b>\$67,396,951</b>	<b>\$68,402,484</b>

Source: BEA 2005, Regional Economic Accounts.

Notes:

1. The Bureau of Economic Analysis reclassifies the Oakland MSA as the Oakland-Fremont-Hayward Metropolitan Division (BEA 2004).
2. Mining data was suppressed to protect information and individual businesses.
3. Transportation and Public Utilities for 1990 is overstated because communications earnings, which was suppressed to protect information and individual businesses, could not be removed from Transportation and Public Utilities earnings.
4. Transportation and Utility data was suppressed to protect information and individual businesses.
5. Communications data was suppressed to protect information and individual businesses.

**Table 3-14. Personal Income Trends in the Socioeconomic Study Area (Residence Adjusted, not Adjusted for Inflation)**

Area	1990 Per Capita Income	2000 Per Capita Income	% Change from 1990 to 2000
California	\$21,882	\$32,149	47%
Alameda County	\$22,926	\$38,624	68%
Contra Costa County	\$26,899	\$41,110	53%
Oakland MSA	\$24,446	\$39,611	62%

Source: California Employment Development Department 2005.



**Table 3-15. Population Trends in the Socioeconomic Study Area**

Area	1990 Population	2000 Population	2004 Population	% Change 1990 to 2004
California	29,760,021	33,871,648	36,144,267	21.50%
Alameda County	1,279,182	1,443,741	1,498,020	17.10%
City of Dublin <sup>1</sup>	23,229	29,973	38,330	65.00%
City of Pleasanton <sup>1</sup>	50,553	63,654	67,153	32.80%
Contra Costa County	803,732	948,816	1,003,909	24.90%
City of San Ramon <sup>1</sup>	35,303	44,722	48,609	37.70%
Study Area Total <sup>2</sup>	2,082,914	2,392,557	2,501,929	20.10%

Source: California Department of Finance 2005; Census Bureau 2005a.

Notes:

1. Population for these cities is included in the county totals.
2. Total includes Alameda and Contra Costa Counties.

**Table 3-16. Housing Characteristics for the Socioeconomic Study Area**

Area	1990	2000	% Change
<b>California</b>			
Total Housing Units	11,182,882	12,214,549	9.2
Median Home Value <sup>1</sup>	\$195,500	\$198,900	1.7
Percent Vacant	7.2	5.8	-19.4
Persons Per Household	2.79	2.87	2.9
<b>Alameda County</b>			
Total Housing Units	504,109	540,183	7.2
Median Home Value <sup>1</sup>	\$227,200	\$291,900	28.5
Percent Vacant	4.9	3.1	-36.7
Persons Per Household	2.59	2.71	4.6
<b>City of Dublin <sup>2</sup></b>			
Total Housing Units	6,992	9,872	41.2
Median Home Value <sup>1</sup>	\$240,900	\$327,300	35.9
Percent Vacant	2.7	5.5	103.7
Persons Per Household	2.86	2.65	-7.3
<b>City of Pleasanton <sup>2</sup></b>			
Total Housing Units	19,356	23,968	23.8
Median Home Value <sup>1</sup>	\$297,200	\$428,200	44.1
Percent Vacant	4.5	2.7	-40
Persons Per Household	2.73	2.72	-0.4
<b>Contra Costa County</b>			
Total Housing Units	316,170	354,577	12.1
Median Home Value <sup>1</sup>	\$219,400	\$253,800	15.7
Percent Vacant	5.0	2.9	-42
Persons Per Household	2.64	2.72	3

**Table 3-16. Housing Characteristics for the Socioeconomic Study Area**

<b>City of San Ramon <sup>2</sup></b>			
Total Housing Units	13,531	17,552	29.7
Median Home Value <sup>1</sup>	\$316,500	\$421,000	33
Percent Vacant	5.1	3.5	-31.4
Persons Per Household	2.75	2.63	-4.4
<b>Study Area Total <sup>3</sup></b>			
<b>Total Housing Units</b>	820,279	894,760	9.1
<b>Median Home Value <sup>1</sup></b>	\$223,300	\$272,850	22.2
<b>Percent Vacant</b>	5.0	3.0	-40
<b>Persons Per Household</b>	2.62	2.72	3.8

Source: Census Bureau 2005a.

Notes:

1. Median Home Values are not adjusted for inflation.
2. Housing characteristics for these cities are included in the county totals.
3. Total includes Alameda and Contra Costa Counties.

**Table 3-17. Housing Units by Type for the Socioeconomic Study Area, 2004**

Area	Single Units		Multiple Units		Mobile Homes	Total
	Detached	Attached	2 to 4	5 plus		
California	7,276,652	940,079	1,039,348	2,925,858	577,648	12,759,585
Alameda County	298,452	38,903	61,454	148,175	7,630	554,614
City of Dublin <sup>1</sup>	7,348	1,304	444	3,774	28	12,898
City of Pleasanton <sup>1</sup>	16,349	2,718	1,163	4,356	456	25,042
Contra Costa County	245,687	31,226	25,323	61,906	7,589	371,731
City of San Ramon <sup>1</sup>	11,887	2,077	1,039	3,936	11	18,950
<b>Study Area Total<sup>2</sup></b>	<b>544,139</b>	<b>70,129</b>	<b>86,777</b>	<b>210,081</b>	<b>15,219</b>	<b>926,345</b>

Source: California Department of Finance 2005.

Notes:

1. Population for these cities is included in the county totals.
2. Total includes Alameda and Contra Costa Counties.

**Table 3-18. Camp Parks Housing**

Description	Existing	Proposed	Net Change
Family Housing Units	13* units	114 units (construction completed)	+101 units
Unaccompanied Personnel Housing (permanent party)	111 spaces (2 barracks = 1x55 and 1x56)	65 spaces	-46 spaces
Annual Training Barracks	952 spaces (14x60 open bay barracks and 2x56 room barracks)	1,200 spaces	+248 spaces

Source: Camp Parks Electronic Master Plan (Nakata 2002); USACE w/Tetra Tech 2002; Chen, pers. comm. 2003 (reporting information provided by SSG Joseph Gula, Billeting NCO).

Notes: \*An additional housing unit exists, but is no longer occupied.

**Table 3-19. Population by Race**

Area	White	African-American	American Indian/Alaska Native	Asian	Native Hawaiian/Pacific Islander	Some other race	Two or more races	Hispanic or Latino <sup>1</sup>
California	59.5	6.7	1.0	10.9	0.3	16.8	4.7	32.4
Alameda County	48.8	14.9	0.6	20.4	0.6	8.9	5.6	19.0
City of Dublin <sup>2</sup>	69.4	10.1	0.7	10.3	0.3	5.3	3.9	13.5
CT 4501	47.7	31.7	0.8	8.5	0.3	9.9	1.1	20.8
CT 4502	73.7	4.2	0.7	11.8	0.1	4.5	5.0	11.5
CT 4503	78.3	2.9	0.4	9.7	0.4	3.1	5.1	11.5
CT 4507.21	75.5	2.6	0.9	12.3	0.0	4.1	4.7	7.7
City of Pleasanton <sup>2</sup>	80.4	1.4	0.3	11.7	0.1	2.3	3.7	7.9
Contra Costa County	65.5	9.4	0.6	11.0	0.4	8.1	5.1	17.7
City of San Ramon <sup>2</sup>	76.8	1.9	0.4	14.9	0.2	2.2	3.6	7.2
CT 3451.03	78.9	1.7	0.4	13.3	0.2	1.5	4.1	6.8
CT 3451.09	69.8	2.2	0.3	21.7	0.1	2.6	3.3	6.6
CT 3551.04	75.7	2.5	0.2	17.5	0.1	1.1	2.8	4.5
<b>Study Area Average <sup>3</sup></b>	<b>57.15</b>	<b>12.15</b>	<b>0.6</b>	<b>15.7</b>	<b>0.5</b>	<b>8.5</b>	<b>5.35</b>	<b>18.35</b>

Source: Census Bureau 2005a.

Notes:

1. Hispanic is a separate data category from race and is not included in the base numbers that make up the race percentages.
2. Ethnicity for these cities is included in the county estimates.
3. Average includes Alameda and Contra Costa Counties.

**Table 3-20. Income Status in the Socioeconomic Study Area  
(in 2000 real dollars)**

Area	1990 Median Household Income	2000 Median Household Income	2000 Poverty Status
California	\$27,317	\$46,296	10.6%
Alameda County	\$28,650	\$54,536	7.7%
City of Dublin	\$40,986	\$75,335	1.9%
CT 4501 <sup>1</sup>	X	\$92,516	1.8%
CT 4502 <sup>1</sup>	X	\$68,560	2.7%
CT 4503 <sup>1</sup>	X	\$74,301	2.8%
CT 4507.21 <sup>1</sup>	X	\$97,804	0.8%
City of Pleasanton	\$45,372	\$88,569	1.6%
Contra Costa County	\$34,406	\$62,070	5.4%
City of San Ramon	\$48,539	\$93,440	1.4%
CT 3451.03 <sup>1</sup>	X	\$93,215	2.2%
CT 3451.09 <sup>1</sup>	X	\$97,610	2.1%
CT 3551.04 <sup>1</sup>	X	\$146,500	1.4%
<b>Study Area Average <sup>2</sup></b>	<b>\$31,528</b>	<b>\$58,303</b>	<b>6.6%</b>

Source: Census Bureau 2005b.

Notes:

1. Census Tract immediately adjacent to Camp Parks. Census Tract 1990 Median Household incomes are not necessary for the Environmental Justice analysis. Therefore, the data is not included.
2. Average includes Alameda and Contra Costa Counties.

**Table 3-21. Use of the Camp Parks Training Area—FY1997 to FY2003**

<b>Fiscal Year</b>	<b>Component</b>	<b># of people</b>	<b># of man-days</b>
FY 97	Army Reserve	16,703	---
	Non-Army Reserve	12,957	---
	Total	29,660	95,155
FY 98	Army Reserve	19,996	---
	Non-Army Reserve	18,243	---
	Total	38,239	145,500
FY 99	Army Reserve	20,881	---
	Non-Army Reserve	15,255	---
	Total	36,136	142,243
FY 00	Army Reserve	23,317	---
	Non-Army Reserve	21,089	---
	Total	44,406	140,894
FY 01	Army Reserve	25,622	---
	Non-Army Reserve	19,745	---
	Total	45,367	126,986
FY 02	Army Reserve	24,994	---
	Non-Army Reserve	23,273	---
	Total	48,267	130,123
FY 03	Army Reserve	30,947	---
	Non-Army Reserve	24,247	---
	Total	55,194	284,799

Source: Camp Parks 2002-2005 (Directorate of Plans and Training).



Table 3-22. Use of the Camp Parks Training Area—FY2004

Data for FY2004 as of 1/9/2004				Estimated Annual Values for FY2004		
Military Status	# of People <sup>1</sup>	# of Mandays <sup>2</sup>		# of People <sup>1</sup>	# of Mandays <sup>2</sup>	
Army Reserve	30,180	114,432		40,441	153,339	
Non-Army Reserve	36,606	103,818		49,052	139,116	
Total	66,786	218,250		89,493	292,455	
Data for FY2004 as of 1/9/2004 <sup>3</sup>				Estimated Annual Values for FY2004 <sup>3</sup>		
Training Area	# of Uses	# of People	# of Mandays	# of Uses	# of People	# of Mandays
A Sum	755	21,476	53,437	1,012	28,778	71,606
B Sum	276	9,025	25,188	370	12,094	33,752
C1	33	853	2,311	44	1,143	3,097
D1	35	1,281	3,388	47	1,717	4,540
E Sum	104	7,503	24,791	139	10,054	33,220
F Sum	72	3,444	10,383	96	4,615	13,913
G Sum	49	2,936	6,922	66	3,934	9,275
J Sum	356	11,556	38,032	477	15,485	50,963
K Sum	330	12,018	33,925	442	16,104	45,460
L Sum	74	4,121	8,062	99	5,522	10,803
M Sum	387	7,944	24,214	519	10,645	32,447
<b>Overall Total</b>	<b>2,471</b>	<b>82,157</b>	<b>230,653</b>	<b>3,311</b>	<b>110,090</b>	<b>309,075</b>

Source: Camp Parks 2002-2005 (Directorate of Plans and Training)

- Notes:
1. Data for full 12 months of FY2004 extrapolated from data for first 9 months.
  2. # People=number of people coming to Camp Parks to train; people moving from one Camp Parks location to another are not counted again
  3. # Mandays=total number of mandays spent training on Camp Parks, recorded irrespective of the area or areas where time is spent.  
Example: 4 soldiers come to Camp Parks for a 5-day event 3 times a year.  
#People=12 (number of people per event times number of events)  
#Mandays=60 (number of people per event times number of events times number of days in each event)
  4. Time spent in various portions of the Training Area  
If people train at two different locations, they are counted twice  
If people spend part of a day at each of two locations, they are recorded as spending a manday at each.

**Table 3-23. Intersection Level of Service – Existing Conditions (2003)**

ID	Signalized Intersections	AM Peak Hour		PM Peak Hour	
		v/c	LOS	v/c	LOS
1	Dougherty Road/Dublin Boulevard	0.66	B	0.76	C
2	Dougherty Road/I-580 WB Ramps	0.62	B	0.41	A
3	Hopyard Road Road/I-580 EB Ramps	0.65	B	0.51	A
4	Dougherty Road/Amador Valley Boulevard	0.58	A	0.60	A
5	Scarlett Dr/Dublin Boulevard	0.20	A	0.32	A
6	DeMarcus Boulevard/Dublin Boulevard	0.35	A	0.60	A
7	Iron Horse Parkway/Dublin Boulevard	0.20	A	0.32	A
8	Arnold Road/Dublin Boulevard	0.28	A	0.30	A
9	Hacienda Dr/Dublin Boulevard	0.28	A	0.38	A
10	Arnold Road/Central Parkway	0.14	A	0.16	A
11	Hacienda Dr/Gleason	0.11	A	0.08	A
12	Hacienda Dr/I-580 WB Ramps	0.42	A	0.42	A
13	Hacienda Dr/I-580 EB Ramps	0.48	A	0.51	A
14	Tassajara Road/Gleason Dr	0.33	A	0.36	A
15	Tassajara Road/Central Parkway	0.29	A	0.23	A
16	Tassajara Road/I-580 WB Ramps	0.36	A	0.39	A

Source: Phase I Traffic Study for the Proposed Parks Reserve Forces Training Area (RFTA) Development, October 17, 2003.

<b>Table 3-24. Existing Camp Parks Trip Generation</b>					
<b>AM Peak Hour</b>			<b>PM Peak Hour</b>		
<b>In</b>	<b>Out</b>	<b>Total</b>	<b>In</b>	<b>Out</b>	<b>Total</b>
225	55	280	119	585	704

Source: Technical Memorandum Parks RFTA Traffic Analysis, February 4, 2004.

**Table 3-25. Visual Resource Evaluation Ratings and Criteria**

Viewer Group	Visual Quality	Visual Sensitivity
<b>M:</b> Motorists <b>R:</b> Residents <b>C:</b> Commercial/Office Tenants <b>I:</b> Installation Occupants	<b>High:</b> Assessment unit, or portions thereof, is of significant visual and/or aesthetic quality to the viewer groups. Landscape is distinct (unique or special).	<b>High:</b> Introduction of new elements into the assessment unit could significantly impact the quality of the visual aesthetic resources observed by viewer groups.
	<b>Moderate:</b> Assessment of unit, or portions thereof, is of average (common or not unique), to the viewer groups.	<b>Moderate:</b> Introduction of new elements into the assessment unit may have an impact on the quality of the visual/aesthetic resource as observed by viewer groups, or a portion thereof.
	<b>Low:</b> Assessment unit, or portions thereof, possess little or no visual and/or aesthetic quality to the viewer groups, and landscape is indistinctive, low quality, and/or disturbed.	<b>Low:</b> Introduction of new elements into the assessment unit is not likely to have an impact on any visual/aesthetic resource as observed by viewer groups.

**Table 3-26. General Rating of Camp Parks Visual Assessment Areas**

<b>Geographic Area</b>	<b>Viewer Groups</b>	<b>Visual Quality</b>	<b>Visual Sensitivity</b>	<b>Visual Receptors Sensitive to Development</b>
Site-wide	M,R,C,I	Moderate	High	The overall balance between undeveloped and developed areas of the Camp Parks landscape. The character, quality and distinctiveness of development and blending with the existing landscape and adjacent community.
Northern Cantonment Area	M,R,I	Low	Moderate	The character, quality and distinctiveness of development and blending with the existing landscape and adjacent community.
Southern Cantonment Area	M,R,C,I	Low	Moderate	Conversion of a previously disturbed, but now undeveloped area to higher density development adjacent to areas well traveled by the general public. Blending with the existing landscape and adjacent community.
Training Area	M,R,I	High	High	The open undeveloped landscape.

**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

Building/ Site	Construction Date	Demolition Date	Former Use	Current Use	Environmental Concern	EBS Recommendations
341	1952	NA	Generator Shed		Possible UST	Use Geophysical or other methods to determine if UST is adjacent to 341, emphasis on south side. If UST is present, remove in accordance with applicable regulations.
514	1952	NA	Communications	Classroom	UST removed	Collect shallow subsurface soil samples in parking area between 513, 514, and 500. Analyze surface samples for SVOCs, metals and PCBs. Analyze shallow samples from parking area for VOCs and SVOCs. Seek closure of 514 UST from CALEPA.
515	1944	NA	Incinerator	NA	Ash, UST, POLs	Collect surface and shallow subsurface soil samples at former incinerator location. Analyze for VOCs, SVOCs, PCBs and metals.
691	1952	1992	Dining Hall	NA	UST	Determine if tank was removed, soil sampled and closure granted. If tank present, remove per regulations. If soil was not sampled previously, collect samples at former tank location, analyze for BTEX, TPH-DRO and MTBE. If closure has not been approved; obtain closure from CALEPA.
692	1953	NA	Photo Lab	MP HQ	Metals, solvents	Collect soil samples near drainage pipe at northeast corner. Collect samples at depth of 2–3 feet depending on pipe depth; analyze for metals and VOCs.
694	1955	1992	Dental Clinic	NA	Metals, solvents	Determine former building and sewer line locations. Collect soil samples near drainage pipe at northeast corner at depth of 2–3 feet, depending on pipe depth. Analyze for metals and VOCs.
1100	1944	NA	Single family residence	Single family residence	UST removed	Locate missing reports, determine if Alameda County granted closure, and obtain evidence (if granted). Seek closure from CALEPA.
1105	1944	NA	Single family residence	Single family residence	UST removed	Determine if Alameda County granted closure, and obtain evidence (if granted). If not granted, collect at least three soil samples from tank location at depths of 4–5 feet, analyze for TPH-DRO. Seek closure from CALEPA.

**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

Building/ Site	Construction Date	Demolition Date	Former Use	Current Use	Environmental Concern	EBS Recommendations
1108	1944	NA	Single family residence	Single family residence	UST removed	Determine if Alameda County granted closure, and obtain evidence (if granted). If not granted, collect at least three soil samples from tank location at depths of 4–5 feet, analyze for TPH-DRO. Seek closure from CALEPA.
1110	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1112	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1115	1944	NA	Residence	NA	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1117	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.

**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

Building/ Site	Construction Date	Demolition Date	Former Use	Current Use	Environmental Concern	EBS Recommendations
1118	1944	NA	Residence	NA	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1120	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1121	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1123	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.



**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

Building/ Site	Construction Date	Demolition Date	Former Use	Current Use	Environmental Concern	EBS Recommendations
1125	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1130	1944	NA	Single family residence	Single family residence	Possible UST	Verify if tank was removed, find sampling results, determine if local or State agency granted closure. If tank is present, remove according to regulations. If previous analyses are not found or are inadequate, collect samples at depth below bottom of tank; analyze for BTEX and TPH-DRO. If tank location cannot be verified, additional samples may be required to determine if soil or groundwater were impacted.
1132	1944	NA	Single family residence	Single family residence	Possible UST	Determine if tank has been removed and soil or groundwater sampled, and if local or State agency granted closure. If not, seek closure from CALEPA. Sampling not recommended, but may be required by CALEPA.
1135	1944	1994	Single family residence	NA	UST removed	Determine if Alameda County granted closure and obtain evidence, seek closure from CALEPA. Sampling not recommended, but may be required by CALEPA.
1136	1944	1994	Single family residence	NA	UST Removed	Determine if Alameda County granted closure and obtain evidence, seek closure from CALEPA. Sampling not recommended, but may be required by CALEPA.
1138	1944	NA	Single family residence	Single family residence	UST	Determine if tank has been removed and soil or groundwater sampled, and if local or State agency granted closure. If not, seek closure from CALEPA. No sampling currently recommended, but may be required by CALEPA.
1139	1944	NA	Single family residence	Single family residence	UST removed	Determine if Alameda County granted closure and obtain evidence, seek closure from CALEPA. Sampling not recommended, but may be required by CALEPA.

**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

Building/ Site	Construction Date	Demolition Date	Former Use	Current Use	Environmental Concern	EBS Recommendations
490 (ID# 1160 in Final EBS)	1950s?	NA	Vehicle wash pad	Vehicle wash pad	Solvents, metals, POLs	Determine exact leach field location, determine if previous samples were located nearby. If exact location can be determined, collect shallow subsurface soil and/or soil-gas samples, analyze for VOCs, SVOCs, TPH-DRO and metals. If location cannot be determined, collect shallow subsurface soil and/or soil-gas samples near wash pad and oil/water separator, and analyze. Defer groundwater sampling pending results from soil sample analyses.
1180	1944	1994	Residence	NA	AST removed	Soil staining observed during 1994 PS. Although area was regarded after demolition of building, soil contamination may be present. Identify former building and AST locations, collect soil samples, analyze for TPH and SVOCs. If tank location cannot be determined, perform broader investigation using direct push equipment and field screening tools to identify contaminated soil. Collect soil samples from any areas identified as contaminated through field screening, analyze for TPH and/or SVOCs.
Parade Grounds --AOC	Building/Site		Former Use	Current Use	Environmental Concern	EBS Recommendations
A	Bldg F691		Dining Hall	NA	Suspected UST	Phase II investigation is recommended for entire 31 acre area due to the long history of use and lack of records of hazardous substances used or disposed within this area. Phase II should include a minimum of four upgradient and four to six downgradient monitoring wells and 20 initial soil borings located based on magnetometry survey data and known subsurface structures (septic tanks and sewer lines). Additional soil and groundwater investigation may be necessary based on initial field analyses. Analyze for RCRA metals, VOCs,
B	Bldg F694		Medical or dental facility	NA	Sewer lines and septic tank?	
C	Approx 15 small structures or trailers		Unknown	NA	Sewer lines and septic tank?	
D	Bldg F636		Unknown	NA	Sewer lines and septic tank?	

**Table 3-27. Locations in Northern Cantonment Area Identified in EBS as Requiring Additional Investigation/Cleanup**

<b>Building/ Site</b>	<b>Construction Date</b>	<b>Demolition Date</b>	<b>Former Use</b>	<b>Current Use</b>	<b>Environmental Concern</b>	<b>EBS Recommendations</b>
E	Bldgs F631, F632, F633 and F634		Unknown	NA	Septic tank (60 x 100 ft), swimming pool, skating rink	SVOCs, PCBs, pesticides and herbicides, and TPH.
F	North to south drainage		NA	NA	Potential impacts from contributing drainage areas	

Sources: USACHPPM 2004 (except Parade Grounds) and USAR 2003a (Parade Grounds only)

**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

Building/ Site	Constructi on Date	Demolition Date	Former Use	Current Use	Environmental Concern <sup>a,b</sup>	EBS Phase II Recommendations <sup>a</sup> or EBS Phase III Sampling Results <sup>c</sup>
F109	Unknown	1994	Incinerator	NA	Contamination from approx. 500 gallon fuel release in 1994; buried wastes and ash. Ph II EBS found metals in soil above CALEPA screening levels. <sup>a</sup>	<b>Recommendation (Ph II):</b> Continue groundwater monitoring of fuel oil leak from UST, close site per CALEPA. Excavate and dispose incinerator ash off site, test soil for lead. Perform geophysical survey of ash pit. Test soils in former scrap area for hazardous organics/metals. <sup>a</sup> Further site characterization is planned for 2005.
F112	1953	1993	Former flammable storage	NA	Ph II EBS did not identify any contaminants above CALEPA screening levels. <sup>a</sup>	<b>Recommendation (Ph II):</b> No further action.
F115	1942	1994	Sewage pump house	NA	Ph II EBS did not identify any contaminants above CALEPA screening levels. <sup>a</sup>	<b>Recommendation (Ph II):</b> No further action.
F132	1944	Burned in 1993	Warehouse; currently used as recycling center	Concrete platform w/corrugated metal building/storage area	ACM and hazardous waste may be present in building remains and soil; possible UST location. Ph II EBS found chromium and lead found in soil above CALEPA screening levels. <sup>a</sup>	Ph III EBS found chromium above the RWQCB screening level at four locations sampled east of Building F132 and north of the railroad tracks. <b>Recommendation:</b> collect additional samples to determine extent of chromium contamination; perform a risk assessment to determine if there is a threat to human health or environment.
F151	1944	Unknown	Commissary, dry cleaning facility	NA	Phase II EBS found PCE in soil below CALEPA screening levels. <sup>a</sup>	Additional sampling conducted during Ph III EBS, but no VOCs detected above RWQCB screening levels. <b>Recommendation:</b> No further action.
F761	1944	1998	AST fuel storage	NA	Diesel plume found 300 feet SE in 2001.	Remediation of site is planned for 2005.

**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

<b>Building/ Site</b>	<b>Constructi on Date</b>	<b>Demolition Date</b>	<b>Former Use</b>	<b>Current Use</b>	<b>Environmental Concern<sup>a,b</sup></b>	<b>EBS Phase II Recommendations<sup>a</sup> or EBS Phase III Sampling Results<sup>c</sup></b>
F770	1959	1994	Underground personnel shelter	NA	UST removed 1994, “firestorm” experiment in 1960 may have used accelerants around shelter. Ph II EBS did not identify any contaminants above CALEPA levels. <sup>a</sup>	<b>Recommendation (Ph II):</b> No further action.
F781- F784	1959	Unknown	Self-help complex	NA	Abandoned oil/water separator and 1955 washrack; 1993 transformer storage. Ph II EBS detected chromium and lead above the CALEPA screening level in drainage ditch adjacent to buildings. TPH-D above CALEPA levels was detected in three soil samples. <sup>a</sup>	Additional soil samples were planned for the Ph III EBS, but could not be collected due to heavy rain. <b>Recommendation:</b> Collect surface and subsurface samples as described in Ph III EBS plan.
F888	1952	1998	Gas station	NA	3 USTs removed in 1996; no documentation for oil/water separator and 2 hydraulic lifts. Ph II EBS found metals, TPH-D, BTEX, and DEHP above CALEPA screening levels in groundwater. <sup>a</sup>	Results of Ph III groundwater sampling conflicted with Ph II results. <b>Recommendation:</b> Collect three additional sets of groundwater samples over the next two years. Identify all subsurface infrastructure using a geophysical survey; then remove infrastructure from the site.
F794	1944	1994	Small parts storage	NA	Vehicle maintenance, oil storage, stained soil.	If former Conex location can be determined, collect surface and shallow subsurface soil samples there, analyze for TPH.

**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

Building/ Site	Constructi on Date	Demolition Date	Former Use	Current Use	Environmental Concern <sup>a,b</sup>	EBS Phase II Recommendations <sup>a</sup> or EBS Phase III Sampling Results <sup>c</sup>
130, 170, 790, 792	various	NA	various	various	One soil sample from each building contained lead above the CALEPA screening level. <sup>a</sup>	During the Ph III EBS, lead was detected in soil samples at concentrations above the RWQCB screening levels at Buildings 130, 170 and 792 and pose an environmental threat. Lead was detected above the RWQCB level at Building 790 during Ph II EBS sampling. <b>Recommendation:</b> Perform risk assessment to determine if lead concentrations in surface soil pose human health or environmental threat.
180	1952	NA	Admin./supply	Admin./signal equipment	Vehicle fueling station, stained soil and elevated HNu reading in 1994; Ph II EBS identified lead above CALEPA screening levels in one soil sample. <sup>a</sup>	Lead was not detected in soil above the RWQCB screening level during Ph III sampling. <b>Recommendation:</b> No further action.
635	1953	NA	Fire Dept. storage	Fire Dept. storage	Staining on cracked asphalt floor; Ph II EBS did not identify any contaminants above CALEPA screening levels. <sup>a</sup>	<b>Recommendation (Ph II):</b> No further action.
636	1953	NA	Fire station	Fire station	Former washrack west of building; oil/water separator not decommissioned	Decommission oil/water separator and perforated pipe. Excavate/remove dry well and pipe. Conduct soil sampling if contamination is observed. Analyze for VOCs, TPH-D, SVOCs and metals.
730	1952	NA	Vehicle maintenance (Washracks)	Vehicle maintenance	Oil/water separators and drainage pits for two washracks, two hydraulic lifts not decommissioned.	Sample subsurface soil near o/w separator and Washracks 2 and 3 oil pits, depths 3-4 ft and 6-7 ft, analyze for VOCs, SVOCs, TPH and metals.

**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

Building/ Site	Constructi on Date	Demolition Date	Former Use	Current Use	Environmental Concern <sup>a,b</sup>	EBS Phase II Recommendations <sup>a</sup> or EBS Phase III Sampling Results <sup>c</sup>
730C	Unknown	Unknown	Vehicle washrack	Vehicle washrack	Ditch adjacent to rack received drainage; high HNu readings from soil in 1994. Ph II EBS found arsenic and TPH-D detected above CALEPA levels in 2 soil samples collected from drainage ditch adjacent to Washrack 1. <sup>a</sup>	Ph III EBS planned to sample soil for arsenic, TPH-D, and VOCs, but sampling was not conducted due to heavy rain. <b>Recommendation:</b> Conduct Ph III sampling when possible.
791/792 319 <sup>th</sup> Signal Battalion Motor Pool	Unknown	Unknown	Former fuel storage area	NA	TPH-D was detected in soil samples collected from a vehicle parking lot between Buildings 791 and 792 during the Ph II EBS. One sample exceeded the CALEPA screening level for TPH-D.	Diesel range petroleum products were detected in all surface and subsurface soil samples collected during the Ph III EBS. TPH-D exceeded the RWQCB screening level at three locations. It is likely that a significant spill or leak occurred from the aboveground storage tank. <b>Recommendation:</b> Perform additional subsurface soil sampling for TPH-D, SVOCs, VOCs, and lead to determine extent of contamination. Collect groundwater samples to determine the extent and concentrations in groundwater.
793	1998	NA	Hazardous waste storage	Hazardous waste storage	Historical vehicle fueling and washing; waste drums stored on stained asphalt.	Collect surface soil samples in grass-covered area where water collects and asphalt is deteriorated. Analyze for TPH, VOCs, SVOCs, PCBs, pesticides and metals.
926	Unknown	Unknown	PG&E substation	PG&E substation	Transformer fluid spill cleaned up in 1980s; Ph II EBS did not identify any contaminants above CALEPA screening levels. <sup>a</sup>	<b>Recommendation:</b> No further action.

**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

Building/ Site	Constructi on Date	Demolition Date	Former Use	Current Use	Environmental Concern <sup>a,b</sup>	EBS Phase II Recommendations <sup>a</sup> or EBS Phase III Sampling Results <sup>c</sup>
Former Hazardous Waste Accum. Site	Unknown	Unknown	Hazardous waste accumulation	Scrap metal storage	Southeast of Bldg 790: former storage of petroleum and solvent drums on deteriorated asphalt without containment. Ph II EBS found barium and zinc above CALEPA screening levels in soil and pesticides above CALEPA levels in soil of drainage ditch on east side of area. <sup>a</sup>	Soil samples collected during Ph III EBS were analyzed for barium, zinc and organopesticides. No samples exceeded the RWQCB screening levels for barium or zinc. Several organopesticides were detected in soil samples above RWQCB screening levels. Endrin was detected above the RWQCB screening level in one subsurface sample. <b>Recommendation:</b> Perform a risk assessment to determine if organochlorine pesticide concentrations in surface soil pose a threat to human health or the environment.
Potential constructi on debris dump sites	Unknown	NA	Unknown	Unknown	Soil mounds containing variety of unknown materials deposited over a long time period.	Excavate and dispose of waste in accordance with applicable regulations. Identify potential hazardous substances and ensure proper disposal. Sample soil/waste as appropriate. ACM should be handled by licensed professional.
Former Railroad Spurs	Unknown	NA	Loading and unloading rail cars	None	Soil may contain herbicides and creosote. Ph II EBS found benzo(a)pyrene above CALEPA screening levels in soil adjacent to Buildings 130–132. <sup>a</sup>	No herbicides were detected in Ph III soil samples. All SVOCs were below CALEPA screening levels. <b>Recommendation:</b> No further action.
Former Lumber Yards	Unknown	Unknown	Lumber yard	None	Lumber yards shown on 1945 map.	Collect surface and shallow subsurface soil or soil-gas samples, analyze for SVOCs, metals and VOCs.



**Table 3-28. Locations in Southern Cantonment Area Identified in Phase II as Requiring Additional Investigation/Cleanup and Phase III EBS Results**

Building/ Site	Constructi on Date	Demolition Date	Former Use	Current Use	Environmental Concern <sup>a,b</sup>	EBS Phase II Recommendations <sup>a</sup> or EBS Phase III Sampling Results <sup>c</sup>
South- eastern Quadrant of southern Cantonme nt Area	NA	NA	various	Various	Ph II EBS sampling identified TPH-D and metals above CALEPA screening level in groundwater. <sup>a</sup>	TPH-D and metals were detected in groundwater samples collected during the Ph III EBS. <b>Recommendation:</b> Conduct three additional sampling events over the next two years; analyze samples for metals and petroleum hydrocarbons.
Stockpiled soil on east side of Fernandez Avenue	2001	NA	Staging area for contaminated soils	Staging area for soils	TPH-contaminated soils from sewer line excavations in 2001. <sup>a</sup>	When mound is removed, collect surface soil samples around perimeter of mound, analyze for TPH.

## Notes:

<sup>a</sup> See USACHPPM 2004b for sample locations, analytical results, and detailed recommendations.

<sup>b</sup> Source: USACHPPM 2002a

ACM: Asbestos-containing material

AST: Aboveground storage tank

BTEX: benzene, toluene, ethylbenzene, xylenes

CALEPA: California Environmental Protection Agency

DEHP: bis 2-ethylhexyl phthalate

EBS: Environmental Baseline Study

NA: Not applicable

PCBs: polychlorinated biphenyls

RWQCB: Regional Water Quality Control Board

SVOCs: Semivolatile organic compounds

TPH: Total petroleum hydrocarbons

TPH-D: Total petroleum hydrocarbons-diesel range

UST: Underground storage tank

VOCs: Volatile organic compounds

**Table 4-1. Air Quality Emission Threshold Levels**

Pollutant	NEPA Significance Threshold Levels			Conformity <i>de minimis</i> Levels
	BAAQMD		USEPA	
	ton/year	lb/day	ton/year	ton/year
<b>ROG</b>	15	80	40 <sup>a</sup>	100 <sup>b</sup>
<b>NO<sub>x</sub></b>	15	80	40	100
<b>PM<sub>10</sub></b>	15	80	15	100
<b>PM<sub>2.5</sub></b>	NA	NA	15	100 <sup>c</sup>
<b>SO<sub>2</sub></b>	NA	NA	40	100 <sup>b</sup>
<b>CO</b>	NA	550	100	100

<sup>a</sup> – As volatile organic compounds.

<sup>b</sup> – As precursor for PM<sub>2.5</sub>.

<sup>c</sup> – Conformity does not apply until 1 year after effective date of the nonattainment designation.

NA – Not applicable. No threshold levels.

Table 4-2. Maximum Daily Emissions Increases from Proposed Action and Slow Growth Alternative (pounds/day)

Pollutant	Proposed Action			Slow Growth Alternative		
	Maximum Increase	Year		Maximum Increase	Year	
ROG	69	2014	ROG	69	2014	ROG
NO <sub>x</sub>	70	2009	NO <sub>x</sub>	70	2009	NO <sub>x</sub>
PM <sub>10</sub>	69	2012	PM <sub>10</sub>	69	2012	PM <sub>10</sub>
PM <sub>2.5</sub>	16	2012	PM <sub>2.5</sub>	16	2012	PM <sub>2.5</sub>
SO <sub>2</sub>	< 1	2015	SO <sub>2</sub>	< 1	2015	SO <sub>2</sub>
CO	304	2015	CO	304	2015	CO

Table 4-3. Maximum Annual Emissions Increases from Proposed Action and Slow Growth Alternative (tons/year)

Pollutant	Proposed Action			Slow Growth Alternative		
	Maximum Increase	Year		Maximum Increase	Year	
ROG	11	2014	ROG	11	2014	ROG
NO <sub>x</sub>	8	2013	NO <sub>x</sub>	8	2013	NO <sub>x</sub>
PM <sub>10</sub>	9	2014	PM <sub>10</sub>	9	2014	PM <sub>10</sub>
PM <sub>2.5</sub>	2	2014	PM <sub>2.5</sub>	2	2014	PM <sub>2.5</sub>
SO <sub>2</sub>	< 1	2015	SO <sub>2</sub>	< 1	2015	SO <sub>2</sub>
CO	53	2014	CO	53	2014	CO

Table 4-4 and Table 4-5 were deleted from the document during draft revisions.

**Table 4-6. Areas of Sensitivity Monitoring Recommendations**

<b>Level of Sensitivity</b>	<b>Areas of Sensitivity</b>	<b>Monitoring Recommendation</b>
Very Low	All areas not otherwise identified	Monitoring is not necessary, standard operating procedures should be followed if archaeological material is unearthed
Low	ASA 2	Monitoring of excavations up to 3.3 or 4.9 feet depending on area
Moderate	ASA 1, ASA 4, ASA 5, ASA 6,	Monitoring of excavations up to 4.9 feet deep
High	ASA 3, ASA 7	Monitoring of excavations up to 16.4 feet deep

Source: Geoarchaeological Investigations in the Park Reserve Forces Training Area Alameda and Contra Costa Counties, California, Anthropological Studies Center, April 2004.

**Table 4-7. Schedule and Buildout Projections for Major Camp Parks Master Plan Construction (Square Feet)**

	Facility	CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
		CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
<b>Proposed Action</b>	Open Storage	70,955	40,580	40,580	40,580	40,580	233,273	22,544	22,544	22,544	-	-	-	-	300,906
	Warehouses & Closed Storage	34,793	25,193	25,193	25,193	25,193	135,566	13,996	13,996	13,996	-	-	-	-	177,555
	Administration & Classrooms	127,432	54,432	54,432	54,432	54,432	345,160	30,240	30,240	30,240	-	-	-	-	435,880
	Retail	-	15,000	-	-	-	15,000	-	-	-	-	-	-	-	15,000
	Barracks	125,399	71,699	71,699	71,699	71,699	412,193	39,833	39,833	39,833	-	-	-	-	531,690
	Community Support Facilities	34,445	23,805	23,805	23,805	23,805	129,665	13,225	13,225	13,225	-	-	-	-	169,340
	Parking	308,399	182,669	182,669	82,669	82,669	1,039,073	101,483	101,483	101,483	-	-	-	-	1,343,520
	Roads**	423,021	423,021	423,021	423,021	423,021	2,115,106	235,012	235,012	235,012	-	-	-	-	2,820,142
	Recreation	1 SF & 2 TC	-	-	-	-	1 SF & 2 TC	-	-	-	-	-	-	-	1 SF & 2 TC
<b>Slow Growth Alternative</b>	Open Storage	30,375	-	-	-	-	-	38,647	38,647	38,647	38,647	38,647	38,647	38,647	300,906
	Warehouses & Closed Storage	9,600	-	-	-	-	-	23,994	23,994	23,994	23,994	23,994	23,994	23,994	177,555
	Administration & Classrooms	73,000	-	-	-	-	-	51,840	51,840	51,840	51,840	51,840	51,840	51,840	435,880
	Retail	-	-	-	-	-	-	-	15,000	-	-	-	-	-	15,000
	Barracks	53,700	-	-	-	-	-	68,284	68,284	68,284	68,284	68,284	68,284	68,284	531,690
	Community Support Facilities	10,640	-	-	-	-	-	22,671	22,671	22,671	22,671	22,671	22,671	22,671	169,340
	Parking	125,730	-	-	-	-	-	173,970	173,970	173,970	173,970	173,970	173,970	173,970	1,343,520
	Roads**	-	-	-	-	-	-	402,877	402,877	402,877	402,877	402,877	402,877	402,877	2,820,142
	Recreation	-	-	-	-	-	-	1 SF & 2 TC	-	-	-	-	-	-	1 SF & 2 TC

**Table 4-7. Schedule and Buildout Projections for Major Camp Parks Master Plan Construction (Square Feet)**

	Facility	CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
<b>No Action Alternative</b>	Open Storage	No comprehensive plan or vision for overall Camp Parks development. Development would occur when a facility outlives its economic value and funding is available.													
	Warehouses & Closed Storage														
	Administration & Classrooms														
	Retail														
	Barracks														
	Community Support Facilities														
	Parking														
	Roads**														
	Recreation														

CSY = Construction Start Year

\* Includes square feet from retained buildings and parking lots

\*\* Includes the 76% of existing roads (1,368,846 square feet) to be upgraded

Category Assumptions:

- Open Storage includes existing bldg MPK20 (Hardstand/Open Storage-COES Warehouse)

- Warehouses & Closed Storage includes existing bldg P002 (Unit Storage & Arms Room)

- Administration & Classrooms includes existing bldgs 370 (Battle Projection Center) and 610 (WARISC) along with proposed bldgs P018 (DOL/DPW-Maintenance Facility) and P023 (Welcome/Resource Center-ACS)

- Barracks includes existing bldg 510 (91st Training Support Division HQs)

SF=soccer field; TC=tennis court

- Community Support Facilities includes existing blgs 140 (Guard Shack Supporting Historic Sign), 520 (Fire Station), NA (Wash Rack), the three medical facilities P014, P015, and P025, P022 (PMO/Security Office), and P029 (Physical Fitness Center)

- Source: Booz Allen Hamilton 2005, Environmental Impact Statement of May 2004 Master Plan for Parks Reserve Forces Training Area, Table 2-2 and growth assumptions for Northern Cantonment Area, Proposed Action, in Chapter 2

- Although pre-construction activities could start in 2006, substantive construction is not assumed to start until 2007 under the Proposed Action and 2017 under the Slow Growth Alternative.

**Table 4-8. Southern Cantonment Area (Dublin Crossing) Construction Schedule and Buildout Projections in Dwelling Units (DUs), Square Feet (SF), or Acres**

	Type	CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
	Proposed Action	Total Residential DUs	299	299	299	299	299	1,497	166	166	166	-	-	-	-
Single Family DUs		32	32	32	32	32	162	18	18	18	-	-	-	-	216
Townhomes DUs		177	177	177	177	177	885	98	98	98	-	-	-	-	1,180
Multi-Family DUs		90	90	90	90	90	450	50	50	50	-	-	-	-	600
Retail SF		29,400	29,400	29,400	29,400	29,400	147,000	16,333	16,333	16,333	-	-	-	-	196,000
Office/Hotel SF		29,400	29,400	29,400	29,400	29,400	147,000	16,333	16,333	16,333	-	-	-	-	196,000
Civic SF		17,550	17,550	17,550	17,550	17,550	87,750	9,750	9,750	9,750	-	-	-	-	117,000
Open Space Acres		8	8	8	8	8	38	4	4	4	-	-	-	-	50
School Acres		Unable to determine													
Slow Growth Alternative	Type	CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
	Total Residential DUs	No comprehensive plan or vision for overall Southern Cantonment development. Land would be retained in Federal ownership. As new buildings in the Northern Cantonment Area would be constructed according to the Master Plan, previously occupied buildings would be demolished wherever they occur (northern or southern Cantonment Area).													
	Single Family DUs														
	Townhomes DUs														
	Multi-Family DUs														
	Retail SF														
	Office/Hotel SF														
	Civic SF														
	Open Space Acres														
School Acres															
No Action Alternative	Type	CSY*	CSY+1	CSY+2	CSY+3	CSY+4	5 Year Total	CSY+10	CSY+15	CSY+20	CSY+25	CSY+30	CSY+35	CSY+40	40 Year Total
	Total Residential DUs	No comprehensive plan or vision for overall Southern Cantonment development. Land would be retained in Federal ownership.													
	Single Family DUs														
	Townhomes DUs														
	Multi-Family DUs														
	Retail SF														
	Office/Hotel SF														
	Civic SF														
	Open Space Acres														
School Acres															

CSY = Construction Start Year

Source: Booz Allen Hamilton 2005, Environmental Impact Statement of May 2004 Master Plan for Parks Reserve Forces Training Area, growth assumptions for Southern Cantonment Area, Proposed Action, in Chapter 2; and "Dublin Crossing Alternative Concepts Presentation and Evaluation," Alternative 5 (Dense Villages) Yield



**Table 4-9. Land Use Assumptions for Proposed Dublin Crossing Master Plan**

<b>LAND USE DESIGNATION</b>	<b>Reduced Residential Yield</b>
Total Number of Residential Units	1,600
SF Residential	260
MF Residential	944
MF Residential (40 du/acre)	397
MF Residential (60du/acre)	--
Retail (sf)	300,000
General Office (sf)	248,000
Public/Semi Public Uses (sf)	100,000
Useable Park Space (acres)	43 acres
Elementary School (sf)	105,000 (8 acres)
CCTA Volume to Capacity (V/C) ratio for PM Peak hour at Dublin/Dougherty	.98 ** (LOS E)

**Table 4-10. Trip Generation for Future Camp Parks Master Plan**

Land Use	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Single Family	7	20	27	20	11	31
National Guard	67	7	74	7	67	74
<b>Total</b>	<b>74</b>	<b>27</b>	<b>101</b>	<b>27</b>	<b>78</b>	<b>105</b>

**Table 4-11. Intersection Levels of Service – Buildout + Project Conditions (Cumulative)**

ID	Signalized Intersections	AM Peak Hour		PM Peak Hour	
		v/C	LOS	v/C	LOS
1	Dougherty Rd/Amador Valley Blvd	0.52	A	0.71	C
2	Dougherty Rd/Central Parkway	0.63	B	0.68	B
3	Dougherty Rd/Scarlett Drive	0.49	A	0.61	B
4	Dougherty Rd/Dublin Blvd	0.91	E	0.93	E
5	Dougherty Rd/I-580 WB ramp	0.86	D	0.78	C
6	Hopyard Rd/I-580 EB ramp	0.74	C	0.88	D
7	Dublin Blvd/Scarlett Drive	0.69	B	0.79	C
8	Dublin Blvd/Iron Horse Parkway	0.78	C	0.6	B
9	Arnold Rd/Gleason Dr	0.02	A	0	A
10	Hacienda Dr/Gleason Dr	0.13	A	0.39	A
11	Arnold Road/Central Parkway	0.03	A	0.05	A
12	Hacienda Dr/Central Parkway	0.77	C	0.35	A
13	Dublin Blvd/Arnold Rd	0.45	A	0.44	A
14	Dublin Blvd/Hacienda Dr	0.82	D	0.81	D
15	Hacienda Dr/I-580 WB ramp	0.89	D	0.84	D
16	Hacienda Dr/I-580 EB ramp	0.78	C	0.76	C

Table 4-12 was deleted from the document during draft revisions.

Table 4-13. Summary of Impacts

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
Air Quality	Site-Wide	Increases of all pollutant emissions due to construction and operational activities at Camp Parks are less than their respective BAAQMD and USEPA thresholds and therefore not considered significant. Increases in emissions due to construction and operational activities at Camp Parks resulting from the Proposed Action fall well below the <i>de minimis</i> threshold for each applicable pollutant. The Proposed Action complies with the General Conformity regulations, and resulting emissions conform to plans to bring the area into attainment and/or maintain the area in attainment with the CAAQS and NAAQS. Increase in air emissions are a small portion (1%) of the cumulative total from existing and planned developments in the surrounding area.	Impacts anticipated to be similar but slightly less the same as Proposed Action.	No significant change in emissions anticipated. Vehicular emissions anticipated to decrease over time as older vehicles are replaced with more efficient models.
	Training Area	Increases in pollutant emission due to operational activities and vehicular emissions would occur.	Impacts anticipated to be similar but slightly less the same as Proposed Action.	No significant change in emissions anticipated.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Northern Cantonment	Increases of all pollutant emissions due to construction and operational activities at Camp Parks are less than their respective BAAQMD and USEPA thresholds and therefore not considered significant. Increases in emissions due to construction and operational activities at Camp Parks resulting from the Proposed Action fall well below the <i>de minimis</i> threshold for each applicable pollutant. The Proposed Action complies with the General Conformity regulations, and resulting emissions conform to plans to bring the area into attainment and/or maintain the area in attainment with the CAAQS and NAAQS.	Impacts anticipated to be similar but slightly less the same as Proposed Action.	No significant change in emissions anticipated. Vehicular emissions anticipated to decrease over time as older vehicles are replaced with more efficient models.

Table 4-13. Summary of Impacts

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	<p>Increases of all pollutant emissions due to construction and operational activities at Camp Parks are less than their respective BAAQMD and USEPA thresholds and therefore not considered significant. Increases in emissions due to construction and operational activities at Camp Parks resulting from the Proposed Action fall well below the <i>de minimis</i> threshold for each applicable pollutant. The Proposed Action complies with the General Conformity regulations, and resulting emissions conform to plans to bring the area into attainment and/or maintain the area in attainment with the CAAQS and NAAQS.</p> <p>The maximum increase in CO emissions from the Proposed Action is 304 pounds/day. Because this increase in CO emissions resulting from the Proposed Action is anticipated to be below BAAQMD threshold, a CO hot spot (CALINE4) analysis was not performed for either the Proposed Action or Slow Growth Alternative.</p>	Impacts anticipated to be similar but slightly less the same as Proposed Action.	No significant change in emissions anticipated. Vehicular emissions anticipated to decrease over time as older vehicles are replaced with more efficient models.
Topography, Geology, Mineralogy, and Paleontology	Site Wide	Structures or roads built in areas of medium liquefaction susceptibility or active fault traces may move and/or sustain damage. Significant impacts would be prevented by mitigation (geotechnical investigation and site design changes as needed).	Impacts anticipated to be the same as Proposed Action.	No impacts anticipated, unless structures or roads are proposed in similar locations in the future.

**Table 4-13. Summary of Impacts**

<b>Resource Area</b>	<b>Location</b>	<b>Impacts under the Proposed Action</b>	<b>Impacts under the Slow Growth Alternative</b>	<b>Impacts under the No Action Alternative</b>
	Training Area	Placement and design of the modular buildings and open storage areas may be impacted by the liquefaction susceptibility of the soils.	Impacts anticipated to be the same as Proposed Action.	No impacts anticipated, unless structures or roads are proposed in similar locations in the future.
	Northern Cantonment	Placement and design of 32 structures and portions of new roads may be impacted by the presence of the Calaveras Fault EFZ. No impacts anticipated from soil conditions.	Impacts anticipated to be the same as Proposed Action.	The placement and design of structures and roads could be affected by the Calaveras Fault EFZ, but there will be more flexibility in siting individual buildings. No impacts anticipated from soil conditions.
	Southern Cantonment	Buildings must be set back 50 feet from active fault traces. Building techniques may need to be altered to account for medium liquefaction susceptibility.	No impacts anticipated, unless structures are proposed in similar locations in the future.	Impacts anticipated to be the same as the Slow Growth Alternative.
Hydrology	Site Wide	Surface and ground water may be impacted by construction site storm water runoff; mitigation through SWPPP implementation would prevent significant impacts. Potential impacts from flooding are not significant.	Impacts anticipated to be the same as Proposed Action.	Impacts anticipated to be the same as Proposed Action if construction is proposed in the future.
	Training Area	The potential for impacts to groundwater from construction-site and urban storm water or chemical/fuel spills and leaks is limited in the Training Area, as the only new development under the Proposed Action would be new facilities in the DSRSD area and replacement of existing facilities at their current locations.	Impacts anticipated to be the same as Proposed Action.	Impacts anticipated to be the same as Proposed Action.



Table 4-13. Summary of Impacts

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Northern Cantonment	Surface and ground water may be impacted by construction-site and urban storm water runoff or chemical/fuel spills and leaks associated with construction of 12 buildings and associated road and parking areas located in or adjacent to surface water drainages.	Impacts anticipated to be the same as the Proposed Action. However, the impact would be reduced from less intense development.	Surface and ground water may be impacted by construction-site and urban storm water runoff or chemical/fuel spills and leaks anticipated if similar construction is proposed in the future that is located in or adjacent to surface water drainages.
	Southern Cantonment	Potential for short-term impacts to drainages by storm water runoff during construction. Impacts from decreased water quality and increased volume and the potential for flooding associated with increased urban storm water runoff after development is complete.	Flooding and water quality impacts are less likely unless similar development is proposed in the future.	Impacts anticipated to be the same as the Slow Growth Alternative.
Soils	Site Wide	Impacts anticipated from erosion, shrink/swell, and pollutant spills would not be significant. Impacts are reduced by appropriate construction practices, such as phased construction, storm water BMPs, and considering soil shrink/swell potential during design and construction.	Impacts anticipated to be the same as Proposed Action.	Impacts anticipated to be the same as Proposed Action if construction is proposed in the future.
	Training Area	Design and construction of structures, roads, and parking areas may be impacted by the shrink/swell potential of soil in this area.	Impacts anticipated to be the same as Proposed Action.	No impacts anticipated, unless construction is proposed in the future.
	Northern Cantonment	Potential impacts from erosion, shrink/swell potential, and pollutant spills are anticipated during construction.	Impacts anticipated to be the same as Proposed Action. However, the impact would be reduced from less intense development.	No impacts anticipated, unless construction is proposed in the future.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	Potential impacts from erosion, shrink/swell potential, and pollutant spills are anticipated during construction. A limitation for construction of dwellings anticipated due to the shrink/swell potential of soil in this area.	No impacts anticipated, unless construction is proposed in the future.	No impacts anticipated, unless construction is proposed in the future.
Vegetation, Including Special Status Plants, and Wetlands	Site Wide	Habitat loss of grasslands (298 acres) and wetlands (3.6 acres) would not result in a significant impact. Loss of occupied Congdon’s tarplant habitat could be a significant cumulative impact.	In the northern Cantonment, impacts are anticipated to be the same as for the Proposed Action, but spread over a longer period of time, thus providing a better opportunity for revegetation and recolonization. However, because the southern Cantonment Area would be retained, 125 acres of ruderal grasslands and 2.5 acres of wetlands would be retained.	No impacts anticipated, unless construction is proposed in the future.
	Training Area	Grassland habitat would be reduced by 63 acres. Military training could temporarily affect Congdon’s tarplant.	Impacts anticipated to be the same as Proposed Action, but spread over a longer period of time, thus providing a better opportunity for revegetation and recolonization.	No impacts anticipated, unless construction is proposed in the future
	Northern Cantonment	Ruderal grasslands would be reduced by 110 acres, and 1.1 acres of wetlands would be modified. Occupied and potential Congdon’s tarplant sites would be modified or lost.	Same as the Proposed Action.	No impacts anticipated, unless construction is proposed in the future

Table 4-13. Summary of Impacts

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	Ruderal grasslands would be reduced by 125 acres and 2.5 acres of wetlands would be modified. Occupied and potential Congdon's tarplant sites would be developed.	Because the southern Cantonment Area would be retained, 125 acres of ruderal grasslands, 2.5 acres of wetlands, and Congdon's tarplant sites would be retained.	No impacts anticipated, unless construction is proposed in the future
Fish and Wildlife, Including Special Status Species	Site Wide	Loss of marginal habitat for California tiger salamander and California red-legged frog would not result in a significant impact. Overall loss of grassland and wetland habitat used for foraging and nesting for wildlife would not be significant. Loss of burrowing owl nesting habitat could be a significant cumulative impact.	Same as the Proposed Action except that the habitat in the southern Cantonment Area would be retained (see above)	No impacts anticipated, unless construction is proposed in the future
	Training Area	The increase in indirect effects on wildlife species due to increased use of Training Area would not be significant. Buffer zones around wetland and riparian areas reduce the potential for adverse impacts.	Impacts anticipated to be the same as Proposed Action, but spread over a longer period of time, thus providing a better opportunity for relocation of displaced animals.	No impacts anticipated, unless construction is proposed in the future
	Northern Cantonment	There would be direct and indirect impacts to burrowing owl burrows, and potential disturbance of red-tailed hawk and white-tailed kite nest sites, and of loggerhead shrike habitat.	Same as the Proposed Action but spread over a longer period of time, thus providing a better opportunity for relocation of displaced animals.	No impacts anticipated, unless construction is proposed in the future.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	There would be direct and indirect impacts to burrowing owl burrows, and potential disturbance of red-tailed hawk and white-tailed kite nest sites, and of loggerhead shrike habitat.	No impacts anticipated, unless construction is proposed in the future.	No impacts anticipated, unless construction is proposed in the future.
Cultural	Site Wide	Potential direct impacts to previously undetected buried cultural resources or human remains from construction and demolition are not significant.	Possibility for impacts to previously undetected buried cultural resources or human remains would be reduced since development would be less extensive.	No impacts anticipated, unless construction is proposed in the future.
	Training Area	Potential direct and indirect impacts to previously undetected buried cultural resources from increases in intensity and duration of training activities associated with the redevelopment.	Potential direct and indirect impacts to previously undetected buried cultural resources from an increase in intensity and duration of training as normal population increases occur; new facilities are constructed as money becomes available; and existing projects are implemented.	Impacts anticipated to be the same as the Slow Growth Alternative. However, population increases would be lower and occur over a longer timeframe.
	Northern Cantonment	Potential direct and indirect impacts to previously undetected buried cultural resources. Potential indirect impacts to the NRHP-eligible sign as a result of development and human activity are unlikely.	Impacts anticipated to be the same as Proposed Action. However, impacts would be reduced since any development would be less extensive and staged over a longer timeframe.	Impacts anticipated to be the same as the Slow Growth Alternative. However, population increases would be lower and occur over a longer timeframe.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	Potential impacts to previously undetected buried cultural resources or human remains could occur during ground disturbance associated with the modification or demolition of existing buildings and excavations associated with the installation of new buildings.	No impacts anticipated, unless construction is proposed in the future.	Impacts anticipated to be the same as the Slow Growth Alternative. However, development would be less likely.
Socioeconomics	Site Wide	Though beneficial, socio-economic impacts would not be significant. The revitalized installation, increased staff levels, and additional training associated with redevelopment would generate increased benefits for the local economy and surrounding communities. Indirect benefits anticipated from the creation of additional jobs and income supported by the expenditures of increased military and civilian personnel assigned to Camp Parks, as well as increased expenditures by Camp Parks itself for various goods and services. Socioeconomic changes could, however, be a significant cumulative impact.	More gradual development would result in less cumulative beneficial economic activity over the study period and because the Dublin Crossing land exchange and development would not occur.	Very limited economic benefits anticipated. Some short-term benefits would occur with the occasional construction of new and replacement buildings.
		Population increases anticipated from expansion of full-time staff, personnel on temporary assignments, and Dublin Crossing development. Additional population could be easily accommodated by existing and proposed on-post and off-post infrastructure and services. The City of Dublin would be responsible for providing infrastructure and services to Dublin Crossing.	Population increases would occur more gradually. Minimal population change anticipated beyond the Camp Parks boundary, particularly because the retail and office jobs contemplated at Dublin Crossing would not be created.	Population increases on-post would be minimal, and increases off-post are not anticipated.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
		<p>Increased demand for housing on post anticipated. Only a small portion of the new population would generate increased housing demand outside of Camp Parks. Dublin Crossing would absorb some of the residual housing demand.</p>	<p>Housing changes would be associated with more gradual population increase in response to increased service demands from Camp Parks and thus are not expected to cause significant impacts on housing demands at Camp Parks or the surrounding area.</p>	<p>Impacts anticipated to be the same as the Slow Growth Alternative. However, population increases and associated housing demand would be minimal.</p>
		<p>Local retail merchants and other commercial enterprises would benefit from the expenditures of increased populations and from Camp Parks administrative purchases in the local area. No significant impact on the local market for commercial and industrial space would be anticipated.</p>	<p>Some benefits to Camp Parks in terms of fulfilling needs for on-post retail and administrative space, but benefits would be realized over a longer timeframe. No significant impacts, positive or negative, on retail and commercial sectors of the local economy anticipated.</p>	<p>No significant impacts, positive or negative, on retail and commercial sectors of the local economy anticipated.</p>

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
		<p>An increase in the demand for infrastructure and public services would be anticipated. Requirements of local public services to support the redeveloped community would be minimal except for schools, where up to 12 additional teachers and classrooms would be needed from the population increases anticipated from expansion of full-time staff, personnel on temporary assignments, and Dublin Crossing development. However, military funds may be available to at least partially mitigate these impacts.</p>	<p>Impacts to public infrastructure and services would occur more gradually. Any requirements for off-site infrastructure and services should be easily met. The slower pace of redevelopment should enable the schools to accommodate any increase in the number of students by planning ahead.</p>	<p>Minor impacts to public infrastructure and services anticipated over time. Any requirements for off-site infrastructure and services should be easily met. The slower pace of redevelopment should enable the schools to accommodate any increase in the number of students by planning ahead</p>
		<p>Revitalization would bring overall benefits to Camp Parks' relationship with local communities.</p>	<p>Benefits of the revitalization to the surrounding communities would be anticipated, at a later date. Since high-density development of Dublin Crossing would not occur, some residents might consider this alternative more beneficial.</p>	<p>Failure to revitalize Camp Parks in any meaningful way would be more incompatible with local community desires in the long-term.</p>
		<p>No disproportionate impacts to minority or low-income populations anticipated.</p>	<p>No disproportionate impacts to minority or low-income populations anticipated.</p>	<p>No disproportionate impacts to minority or low-income populations anticipated.</p>

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
Land Use	Site Wide	Changes in land ownership in the southern Cantonment Area from the Federal government to the private sector and purview of the City of Dublin, and changes in existing land uses from military training support to a mixed-use development, would result in a significant direct impact. Camp Parks would be generally consistent with locally assigned land use designations and would not disrupt land use configurations.	No impacts anticipated. Camp Parks would be generally consistent with locally assigned land use designations.	No impacts anticipated. Camp Parks would be generally consistent with locally assigned land use designations.
	Training Area	Land use changes are minimal as military training would continue. Conflicts associated with training activity would continue to persist; however, mitigation measures employed by the surrounding development would minimize the intensity of these conflicts.	Land use conflicts associated with training activity would be anticipated from an increase in intensity and duration of training as normal population increases occur, new facilities are constructed as money becomes available, and existing projects are implemented.	Impacts anticipated to be the same as the Slow Growth Alternative. However, population increases would be lower and occur over a longer timeframe.
	Northern Cantonment	Patterning of land uses would improve. The type and intensity of land uses proposed would be consistent with surrounding land uses.	Impacts would be the same as the Proposed Action. However, beneficial changes to land use patterning would take much longer to implement.	Although compatible with uses occurring off-post, inefficient and incompatible land use patterning would remain. Land use compatibility could either decrease or increase over time as new projects are initiated on a site-specific basis.



**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Southern Cantonment	Significant impacts anticipated from change in land ownership from federal into the private sector and purview of the City of Dublin, and the change in existing land uses from military training support to a mixed-use development.	At such time that a facility is proposed, a land use analysis should be conducted that considers compatibility with adjacent uses on and off post. Until such time development occurs, the use of the area as undeveloped grassland would serve as a buffer between on-post and off-post uses and would be consistent with other uses.	Although current uses have resulted in unsightly, inefficient, and indiscriminately segregated uses, there are no conflicts between adjacent uses on post and off post. The existing land use patterning would largely remain and land use conflicts could arise over time as new projects are initiated on a site-specific basis.
Transportation and Access	Dublin Blvd./Dougherty Road	Significant deterioration of level of service to LOS E or worse due to constraints on possible mitigation.	Minimal impacts anticipated, unless construction is proposed in the future because the 98 percent of total traffic added by Dublin Crossing under the Proposed Action would not occur.	No impacts anticipated, unless construction is proposed in the future.
	Dougherty Road/I580 WB ramp	Existing LOS D would be maintained. Impacts would not be significant.	Existing LOS D or better would be maintained . Impacts would not be significant.	No impacts anticipated
	Hopyard Road/I580 EB ramp	Existing LOS D would be maintained. Impacts would not be significant.	Existing LOS D or better would be maintained. Impacts would not be significant.	No impacts anticipated

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
	Dougherty Road/Amador Valley Blvd.	Existing LOS D would be maintained. Impacts would not be significant.	Existing LOS D or better would be maintained . Impacts would not be significant.	No impacts anticipated
	Dublin Blvd/Hacienda Dr.	Existing LOS D would be maintained. Impacts would not be significant.	Existing LOS D or better would be maintained . Impacts would not be significant.	No impacts anticipated
	Hacienda Dr./I-580 WB ramp	Existing LOS D would be maintained. Impacts would not be significant.	Existing LOS D or better would be maintained . Impacts would not be significant.	No impacts anticipated
Noise	Site Wide	Redevelopment of the remaining northern and southern Cantonment Areas are not expected to result in any significant increases in noise levels. The contribution to traffic noise from implementation is anticipated to be subsumed by and inseparable from traffic noise from other sources.	Impacts would be the same as the Proposed Action.	Impacts would be the same as the Proposed Action.
	Training Area	Current level of noise generated at the Camp Parks weapons range does not appear to limit the planned development of Camp Parks.	Impacts would be the same as the Proposed Action.	Impacts would be the same as the Proposed Action.
	Northern Cantonment	Redevelopment would not be constrained to any degree by noise impacts.	Impacts would be the same as the Proposed Action.	Impacts would be the same as the Proposed Action.
	Southern Cantonment	Redevelopment would not be constrained to any degree by noise impacts.	Impacts would be the same as the Proposed Action.	Impacts would be the same as the Proposed Action.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
Nearby Special Management Areas	Site Wide	Indirect impacts to resource values of neighboring special management areas could occur as a result of redevelopment; impacts would not be significant.	Indirect impacts to resource values of neighboring special management areas could occur over time as a result of redevelopment.	Indirect impacts to resource values of neighboring special management areas could occur if development occurred over time.
Visual and Aesthetic Resources	Site Wide	Proposed construction activities would impact views of grassy, open space areas and where increased or intensive human activity is anticipated. Impacts would not be significant.	Impacts would be the same as the Proposed Action.	Impacts would be the same as the Proposed Action.
	Training Area	Indirect impacts could occur to the visual quality of the rolling grasslands from an increase in training activities. Whether the impacts from training activities are short term or long term would depend on the frequency of use of specific locations and activity sites.	Impacts would be the same as the Proposed Action. However, the intensity and duration of training activities and associated visual impacts would be less.	Impacts would be the same as the Proposed Action. However, the intensity and duration of training activities and associated visual impacts would be less.
	Northern Cantonment	Proposed construction activities would impact views of grassy, ruderal open space and where increased or intensive human activity is anticipated.	Impacts would be similar to the Proposed Action. However, impacts would generally be less extensive because development would be staged, occurring over a much longer time period.	Impacts would be similar to the Proposed Action. However, impacts would be gradual and less extensive.
	Southern Cantonment	Proposed construction activities would impact views of grassy, ruderal open space and where increased or intensive human activity is anticipated.	Impacts would be similar to the Proposed Action. However, impacts would generally be less extensive because development would be staged, occurring over a much longer time period.	Impacts would be similar to the Proposed Action. However, impacts would be gradual and less extensive.

**Table 4-13. Summary of Impacts**

Resource Area	Location	Impacts under the Proposed Action	Impacts under the Slow Growth Alternative	Impacts under the No Action Alternative
Health/Safety and Hazardous Substances	Site Wide	Beneficial impacts from reducing the known or potential health, safety, and hazardous substance hazards are likely to be significant.	Beneficial impacts from reducing the known or potential health, safety, and hazardous substance hazards would be addressed more gradually.	Impacts would be similar to the Slow Growth Alternative. However, impacts would be gradual and less extensive.
	Training Area	No impacts on hazardous substance sites anticipated.	No impacts on hazardous substance sites anticipated.	No impacts on hazardous substance sites anticipated.
	Northern Cantonment	Potential hazardous substance sites would be investigated, and if necessary cleaned up, before any development. If the investigation and cleanup are not conducted in a timely manner, they could adversely impact the development schedule.	Impacts would be similar to the Proposed Action. However, impacts would generally be less extensive because development would be staged, occurring over a much longer time period.	There may be fewer impacts to development from hazardous substances because fewer structures may be built.
	Southern Cantonment	If not addressed in a timely manner, the hazardous substances in these areas could delay development. Dust control should be a priority for all future cleanup and development activities in the southern Cantonment Area.	Impacts would be similar to the Proposed Action if development were proposed in the future.	Impacts would be similar to the Proposed Action if development were proposed in the future.

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
<b>Air</b>	Construction-related diesel emissions	Construction	Develop and implement a Construction Emission Mitigation Plan (CEMP) that would include a Diesel Particulate Matter Plan (DPM) that may include the use of low-sulfur fuels, idling diesel equipment away from residential areas, trip minimization, and tuning equipment to minimize emissions. Measures to minimize particulate matter may include use of water or dust palliative, wind fences, and low truck speeds.
<b>Air</b>	Operation-related ROG, PM10, and air toxics emissions	Site-specific Planning/ Operations	Encourage the use of alternate modes such as bicycling and walking by providing facilities (e.g. bicycle lockers or racks) and connectivity of bike/pedestrian paths, acquisition and use of zero-emissions vehicles for on-base travel, and use landscaping to reduce heat-island effect.
<b>Topography, Geology, Mineralogy and Paleontology</b>	Structures for human occupancy near an active fault	Site-Specific Planning/ Construction	Conduct geotechnical investigation to determine if active fault trace crosses proposed building site. Facilities should be designed to reduce risk of earthquake ground failure and prevent buildings from collapsing. Buildings should be situated at least 50 feet from active fault traces (Alquist-Priolo Earthquake Fault Zone Act 1973).
<b>Hydrology, Groundwater and Soils</b>	Construction-site erosion/ storm water pollution Urban storm water pollution Spills of chemicals and fuels	All Phases	Follow appropriate regulations for control of storm water and proper use, storage, and disposal of chemicals and fuels.
<b>Hydrology, Groundwater and Soils</b>	Construction sites that disturb greater than one acre	Site-Specific Planning/ Construction	Obtain NPDES General Construction Permit for storm water discharges from San Francisco Bay Regional Water Quality Control Board (SFRWQCB) prior to initiating construction activities. File notice of intent to discharge storm water with SFRWQCB and develop construction SWPPP that outlines the erosion and sediment control BMPs to ensure that storm water runoff from the site does not impair local water bodies. Each site-specific SWPPP should consider on-post and off-post drainage and water flow surrounding its area of purview. BMPs should be properly installed and maintained to reduce or eliminate impacts to surface water. Hydromodification Management (HM) Standard such that stormwater discharges from applicable new development and redevelopment projects at Camp Parks and Dublin Crossing shall be designed to incorporate appropriate measures to not cause an increase in the erosion

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			potential of the receiving creek over the preproject (existing) condition.
<b>Hydrology, Groundwater and Soils</b>	Urban storm water pollution	Operation and Maintenance	<p>Reduce or eliminate pollution by using post-construction, public education, and public involvement storm water BMPs.</p> <ul style="list-style-type: none"> <li>• Post-construction BMPs include use of vegetated filter strips along edges of parking areas to filter storm water or wet ponds to collect and treat storm water through settling and algal uptake.</li> <li>• Public education BMPs include providing handouts, posters, or presentations to community groups on common practices (fertilizing a lawn; disposing of used oil; properly storing chemicals and paints; and cleaning up pet waste) can improve the storm water runoff and help clean local water bodies.</li> <li>• Public involvement BMPs include stenciling storm drains, cleaning up streams, and maintaining wetlands.</li> </ul>
<b>Hydrology, Groundwater and Soils</b>	Potential urban/ industrial impacts to surface water	Operation and Maintenance	Implement good housekeeping BMPs and a chemical/fuel spill prevention plan with use, storage, and disposal guidelines.
<b>Hydrology</b>	Potential flooding	Site-Specific Planning/ Construction	<p>Avoid construction in the 100-year floodplain of the Chabot Canal whenever possible. Provide adequate storm water drainage for the new development. Construct new buildings located in the floodplain such that their first floors are at least one foot above the base flood elevation.</p>
<b>Wetlands</b>	Construction within or adjacent to jurisdictional wetlands including freshwater marsh, vernal pools, and forest vegetation communities	Site-Specific Planning/ Construction	<p>Avoid wetland disturbance and resulting need for compensatory mitigation whenever possible by relocating or reconfiguring proposed facilities. If avoidance could not be achieved, the following measures could apply after consultation with the USACE prior to disturbance activities in jurisdictional wetlands (Booz Allen 2003) to determine specific mitigation measures and requirements:</p> <ul style="list-style-type: none"> <li>• Minimize unavoidable impacts by making the area of impact as small as possible and mitigating impact intensity.</li> <li>• Mitigation measures could include, but would not be limited to, access limitations, use of buffer zones, formal SWPPP protocols, implementation of BMPs, and wetland enhancement.</li> <li>• When wetlands could not be fully avoided and mitigation was insufficient, compensation would be used to restore or create wetlands in other locations. Mitigation would be carried out before or in conjunction with activities that adversely affect these sensitive</li> </ul>

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			habitats.
<b>Wetlands</b>	Construction adjacent to jurisdictional wetlands including freshwater marsh, vernal pools, and forest vegetation communities	Operation	Camp Parks currently has a policy that designates wetlands as “no digging,” or “limited access” for military training activities. This policy is documented in the Integrated Natural Resource Management Plan (INRMP; USACE 2003) and stated during training briefings. These policies would remain in effect under all alternatives.
<b>Wetlands</b>	Construction adjacent to jurisdictional wetlands including freshwater marsh, vernal pools, and forest vegetation communities	All Phases	<p>Establish buffer zones around adjacent wetlands, drainages and riparian forest within which no activity would be allowed. The buffer zones would be of sufficient width to:</p> <ul style="list-style-type: none"> <li>• Prevent incursion into protected area by equipment and workers</li> <li>• Avoid construction runoff into the protected area</li> <li>• Prevent degradation of the wetland by providing long-term protection of the watershed in its immediate vicinity.</li> </ul> <p>Use temporary fencing or other materials during construction to divert surface water flow and silt from drainages and associated vegetation. Buffer zones width around individual wetlands would be established on a case-by-case basis after consideration of terrain and drainage patterns, type of disturbance, season and anticipated length of disturbance, resources that would be affected, and the likelihood that a Federally listed species might be found in the wetland.</p>
<b>Wetlands</b>	Surface water runoff	Site-Specific Planning/ Construction	<p>Appropriately convey, capture, and treat stormwater runoff.</p> <p>In keeping with the principles of pollution prevention in the installation’s SWPPP (CSS 2003), develop and implement construction site-specific SWPPPs specifically focused on redevelopment. These SWPPPs would prescribe BMPs and compliance monitoring to control erosion and contaminated runoff from construction sites, and supplement BMPs defined for specific industrial activities in the current Camp Parks SWPPP.</p> <p>BMPs could include use of sediment trapping and filtering systems, bioswales, storm drain inlet protection, natural depressions, stormwater detention or retention ponds, and sediment basins, in addition to access restrictions and buffers. The following goals would be part of the construction site specific SWPPPs to control stormwater runoff during construction at Camp Parks:</p> <ul style="list-style-type: none"> <li>• Onsite capture and treatment of 100 percent of construction period runoff to prevent</li> </ul>

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			<p>stormwater pollution during this period.</p> <ul style="list-style-type: none"> <li>• Develop specific long-term stormwater control measures such as vegetated swales and storm drain inlet filters to capture and treat 80 to 90 percent of the site's runoff.</li> <li>• Develop setbacks from drainages and vegetate areas to control stormwater.</li> </ul>
<b>Wetlands</b>	Surface water runoff	Operation and Maintenance	<p>Vehicles and equipment would use existing roads and routes of travel to the greatest extent practicable. Vehicles traveling off road at night within 100 feet of a water body within the designated HMUs and Tassajara Creek are to maintain a speed of 10 miles per hour or less. Continue Integrated Training Area Management programs such as Land Rehabilitation and Maintenance, which repair damaged areas and minimize potential future damage. In addition, known breeding ponds are marked as “no-go” areas using Siebert stakes.</p> <p>Current SWPPP would need to be modified to address ongoing operations housed in new facilities specifically designed for them and incorporating containment mechanisms. Many sites specifically addressed in the current SWPPP would change under Master Plan implementation. Each activity would be reviewed as to its nature, its materials and processes, and its potential for storm water contamination before a comprehensive list of BMPs was tailored to individual building complexes. The BMPs would include measures such as:</p> <ul style="list-style-type: none"> <li>• Good housekeeping</li> <li>• Preventive maintenance of oil-water separators</li> <li>• Minimize outdoor storage of materials</li> <li>• Use of dry sweep and drip pans</li> <li>• Use of pavement, small berms, or secondary containment structures where needed.</li> </ul> <p>One difference between the current and proposed situation under the Master Plan may be the installation of more landscaped areas than currently exist. Maintenance of such areas would employ the following prescriptions within the SWPPP:</p> <ul style="list-style-type: none"> <li>• Avoid discharge of water used to irrigate ornamental plants into nearby drainages because this water likely contains chloramine (a residual disinfectant) that could negatively impact aquatic life</li> <li>• Control runoff from areas that are landscaped and fertilized.</li> </ul>
<b>Fish and Wildlife</b>	Construction adjacent to ponds, wet meadows, riparian areas, and grassland vernal pools	Site-Specific Planning/ Construction	<p>In the Training Area, continue existing buffer areas around wetlands and riparian areas. Wherever possible, ponds, wet meadows, riparian areas, and grassland vernal pools at Camp Parks would be avoided or protected as discussed above under wetlands.</p> <p>The following types of mitigation would be applied as needed to avoid, minimize, or compensate for the impacts discussed above:</p>



**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			<ul style="list-style-type: none"> <li>• Buffer zones around aquatic or other sensitive habitats</li> <li>• Preconstruction surveys to locate currently active breeding sites for important vertebrate species so they can be avoided</li> <li>• Implementation of construction BMPs</li> <li>• Creation/restoration/enhancement of wetlands</li> </ul>
<b>Fish and Wildlife</b>	Redevelopment construction activity	Site-Specific Planning/ Construction	<p>To minimize the potential for redevelopment actions to increase erosion and sedimentation and disturb sensitive wildlife species, BMPs would be implemented such as:</p> <ul style="list-style-type: none"> <li>• Revision of the SWPPP prior to groundbreaking; implementation of erosion control measures.</li> <li>• Relocation of burrowing owls.</li> <li>• Control of domestic pets to avoid wildlife mortality and harassment.</li> <li>• Reclamation and revegetation of habitat .</li> <li>• Ongoing wildlife surveys to keep the database on Camp Parks wildlife populations and use areas current.</li> <li>• Regular monitoring to identify/repair damaged or eroded areas.</li> <li>• Revegetation methods using appropriate native plants.</li> <li>• Prior to construction, an on-site construction personnel briefing on environmentally sensitive habitats and species and specific conservation measures developed for each.</li> <li>• Containment and frequent disposal of garbage so as not to attract wildlife.</li> <li>• Presence of biologist on installation during construction activities.</li> <li>• Designate specific sites for vehicle parking, storage of construction supplies, etc. in previously disturbed locations that would minimize potential effects to federally listed species.</li> <li>• Control dust, erosion, and sedimentation through use of Best Available Control Technology (BACT), for example, use of silt/wind fences, use of water or chemical stabilizers for dust control, covering of haul vehicles, and minimizing time graded areas are exposed.</li> <li>• Implement Best Management Practices such as a 20-mph vehicle speed limit within the project area, covering or providing escape ramps for trenches greater than two feet deep, checking pipes or culverts that have a diameter over four inches before moving them, placing food-related trash in closed containers.</li> <li>• Rapidly rehabilitate disturbed areas to minimize erosion and downstream flow of sediment.</li> </ul>

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			<ul style="list-style-type: none"> <li>• Use well-maintained vehicles and defined refueling and maintenance locations to minimize uncontained petroleum leaks.</li> <li>• Minimize and define work area boundaries for each construction site.</li> <li>• Conduct pre-construction briefings for construction crews to review BMPs being implemented during construction.</li> <li>• Vehicles and equipment are to use existing roads and routes of travel to the greatest extent practicable.</li> <li>• To minimize potential adverse effects caused by surface water runoff, measures would be implemented to appropriately convey, capture, and treat stormwater runoff.</li> <li>• Existing BMPs defined for specific industrial activities in the current Camp Parks SWPPP would also be implemented (CSS Environmental Services, Inc. 2003).</li> <li>• Establish, mark, and protect buffer areas around wetlands adjacent to development areas.</li> </ul>
<b>Fish and Wildlife</b>	Encountering special status species	Operations	If a special status species were encountered during operations, activities in the area would cease and the Camp Parks Environmental Office would be notified to determine if any action needed to be taken. The Army will notify USFWS within 24-hours of finding an injured or dead listed species, or any unanticipated damage to listed species habitat associated with project activities. Camp Parks would also submit any survey results to the CNDDDB and include them in the installation's annual INRMP update.
<b>Fish and Wildlife</b>	Raptor Nests	All Phases	Whenever possible, impacts to larger trees that occur in the Training Area riparian habitats or in the Cantonment Area would be avoided.
<b>Fish and Wildlife</b>	Raptor Nests	All Phases	Prior to construction or intensive training activity, a biologist would conduct site-specific surveys for active raptor nests in the area during the appropriate nesting period for these raptors (typically March through August). Surveys would be conducted for each specific activity or annually across the post so that potentially disturbing activities would be avoided or minimized within 1/8 mile of active nests between February 1 and August 15. If a previously active nest is not occupied by May 15, the buffer may be suspended for that breeding year.
<b>Fish and Wildlife</b>	Western Burrowing Owl	Site-Specific Planning/ Construction	The mitigation goal for the burrowing owl is to compensate for the anticipated impact by replacing or providing substitute resources or environments elsewhere on Camp Parks according to recommended guidelines published in the California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CADFG 1995). Before initiating ground-disturbing activities in grassland habitats, preconstruction surveys for burrowing owls would

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			<p>be conducted by a qualified biologist within 150 meters (approx. 500 ft.) of construction areas. Surveys would be conducted no more than 90 days before ground disturbance. If burrowing owls were found, the burrow site would be avoided, if possible, and given at least a 50 meter (approx. 160 ft.) buffer. If the burrow could not be avoided, the biologist would determine whether eggs or young were present in the nest. If eggs or young were present, no disturbance would occur within 50 meters of the nest site until the young had fledged. If no young were present or if young had fledged, burrowing owls would be passively relocated to other nearby areas of suitable habitat on Camp Parks.</p> <p>Owls would be excluded from burrows in the immediate impact zone and within a 50 meter buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g. modified dryer vents) should be left in place 48 hours to ensure owls have left the burrow before excavation. Two artificial burrows would be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area would be monitored daily for one week to confirm owl use of burrows before excavating burrows in the immediate impact zone.s.</p>
<b>Fish and Wildlife</b>	San Joaquin Kit Fox	Site-Specific Planning/ Construction	<p>Conduct surveys, establish exclusion zones, and conduct monitoring consistent with the USFWS “Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance,” dated June 1999 (USFWS 1999b). Negative survey results would be reported as part of Camp Parks’ INRMP annual update. If kit foxes were observed during surveys, then Camp Parks would contact USFWS to coordinate construction activities, in accordance with the Endangered Species Act.</p>
<b>Fish and Wildlife</b>	California Red Legged Frog	Site-Specific Planning/ Construction	<p>Conduct pre-activity surveys of wetland habitat within 200-feet of the construction site in accordance with the field survey methodology outlined in the <i>U.S. Fish and Wildlife Service Revised Guidance on Site Assessments and Field Surveys for California Red-legged Frogs, August 2005</i> (USFWS 1997). Surveys would typically consist of four night and two day surveys. If California red-legged frogs are observed within the project area and have the potential to be harmed, they would be relocated from the site to an area within one of the installation’s HMUs. If they are known or suspected to occur near a construction or demolition site, install silt fences or another similar barrier around any adjacent wetlands that are within 200 feet of construction to separate them from the site and monitor as needed for these species during construction. The barrier would be inspected for integrity on a weekly basis during construction and repaired as needed</p>

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
<b>Fish and Wildlife</b>	California Tiger Salamander	Site-Specific Planning/ Construction	Conduct pre-activity surveys consisting of two nights of burrow inspections within five days prior to the initiation of construction or ground disturbance activities. If California tiger salamanders were observed within the project area, they would be relocated from the site to a burrow near a known or potential breeding pond. If they are known or suspected to occur near a construction or demolition site, install silt fences or another similar barrier around any adjacent wetlands that are within 200 feet of construction to separate them from the site and monitor as needed for these species during construction. The barrier would be inspected for integrity on a weekly basis during construction and repaired as needed."
<b>Cultural</b>	National Register of Historic Places (NRHP) Eligible Sites (Camp Parks entrance sign)	All Phases	To minimize the potential for adverse effects, the Camp Parks entrance sign would be treated and managed in a manner that prevents the deterioration or destruction of the character of the sign. The sign should be regularly protected and maintained as needed by methods identified and outlined in the ICRMP.
<b>Cultural</b>	Eligible Historic Archeological Sites	Operations and Maintenance	Methods would be developed to avoid or reduce effects on the NRHP eligible historic period site located in the Training Area. These methods (e.g., avoidance markers if appropriate, occasional monitoring if intense training activity is planned near the site, and coordinating with the DPT) would be designed to protect the sites from training-related damage.
<b>Cultural</b>	Potential Buried Cultural Resources or Human Remains	Site-Specific Planning/ Construction	If previously undetected cultural resources or human remains were unearthed during construction excavations, the application of standard practices in accordance with the Integrated Cultural Resources Management Plan (ICRMP; Parsons 2001) would mitigate potential adverse impacts. If buried cultural resources, such as chipped or ground stone, historic debris, building foundations, or human bone, were inadvertently discovered during ground-disturbing activities, work would stop in that area and within 100 feet of the find. The Camp Parks Environmental Office would be notified immediately and guide compliance with the ICRMP.
<b>Cultural</b>	Potential Buried Cultural Resources or Human Remains	Site-Specific Planning/ Construction	Camp Parks will implement monitoring during grading, excavation, and disturbance activities as outlined in the Section 106 coordination letter and concurred with by the SHPO on 1 June 2006.
<b>Land Use</b>	Considerable change in land ownership uses	Site-Specific Planning/ Construction	The proposed Dublin Crossing is compatible with the City of Dublin's guiding policy for the Eastern Extended Planning Area. However, the type and intensity of land uses proposed in

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
	in the southern Cantonment Area	Construction	Dublin Crossing are not consistent with the City of Dublin's current designation of public and semi-public and would require amendment of its General Plan.
<b>Land use</b>	Land use conflicts identified in the Training Area (e.g., level of activity and use of artillery, helicopters, and demolition in areas adjacent to residences)	All Phases	The potential for these land use conflicts with neighboring areas would continue to persist; however, mitigation measures employed by the surrounding development would minimize the intensity of these conflicts. Mitigation already proposed in existing EIRs would minimize these land use conflicts.
<b>Transportation and Access</b>	Traffic improvements needed to mitigate decreased LOS at several major intersections in the local transportation network from the proposed Dublin Crossing development	Site-Specific Planning/ Construction	Development of Dublin Crossing could result in direct and indirect traffic impacts that would require mitigation; however, any mitigation would be implemented cooperatively with the developers of Dublin Crossing in coordination with the City of Dublin. These specific mitigations, detailed in the City of Dublin's Phase I Traffic Study for the Proposed Camp Parks Development (TJKM 2003), include capacity improvements at the following intersections: Dougherty Road/Central Parkway, Arnold Road/Central Parkway, Dublin Boulevard/Iron Horse, Hopyard Road/I-580 Eastbound off-ramp, Westbound Hacienda Crossing at Hacienda Drive, Dougherty Road/Amador Valley, Arnold Road/Dublin Boulevard, and Hacienda Drive/I-580 Eastbound off-ramp. Capacity improvements at Dublin Boulevard/Dougherty Road are also recommended, and signal operation mitigations should be considered the approaches to Dougherty Road/Scarlett Drive and Dougherty Road/Central Parkway intersections. In addition to the intersection improvements, there is the potential that street segment improvements may also be necessary. This could include widening Dougherty Road from four lanes to six lanes between Houston Place and Amador Valley Boulevard, the extension of Scarlett Drive from Houston Place to Dublin Boulevard, and widening of Arnold Road from two lanes to four lanes between Dublin Boulevard and Central Parkway.
<b>Noise</b>	Potential complaints about future noise	Operations and Maintenance	Camp Parks could implement a program of outreach to communities surrounding Camp Parks to explain the types of military activities that generate the noises and help alleviate their sense of annoyance.
<b>Visual and Aesthetic Resources</b>	Removal of features important to community's visual	Site-Specific Planning/ Construction	Mitigation measures could include, but are not limited to, avoidance, screening, habitat restoration or creation, view-compatible facility color schemes and design, suitable landscaping, and implementation of BMPs that could further protect quality visual and

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
	character (e.g., mature trees, landscaping, or historic structures; Disruption of locally or regionally significant views or views from a community setting; Placement of a structure providing undesirable views or not conforming to city zoning ordinances.		aesthetic resources. Be consistent with the visual character of the established Camp Parks design theme (Nakata 2002) in facility design and construction. In Dublin Crossing, (i) Adhere to the City of Dublin Development Elevation Cap at an elevation of 770 feet; and (ii) Develop property consistent with other applicable Plan and policies.
<b>Health/Safety and Hazardous Substances</b>	Demolition of buildings	Site-Specific Planning/ Construction	Demolition of buildings that may contain ACM or LBP must be in compliance with DoD policies, and state and Federal regulations for prevention of air releases and worker exposure, accurate characterization, and appropriate disposal of debris and other wastes. Asbestos and LBP abatement contractors must be authorized to perform work in the State of California.
<b>Health/Safety and Hazardous Substances</b>	Demolition and construction	Site-Specific Planning/ Construction	Workers operating demolition or earthmoving equipment, installing foundations or pipelines, or performing other tasks that may involve excavation of, or contact with potentially contaminated soil, buried fuel tanks, septic tanks, abandoned sewer or fuel lines, or demolition debris, must be trained in hazardous substance site operations and supervised as required by 29 CFR 1910.120. These workers must also be provided adequate personal protective equipment and repeatedly be informed of the known and potential hazards during daily safety meetings.
<b>Health/Safety and Hazardous Substances</b>	Residual hazardous constituent concentrations in soil	Site-Specific Planning/ Construction	Before redevelopment contracts are finalized, standards for allowable residual hazardous constituent concentrations in soil at each location must be established and requirements to verify compliance set and documented in consultation with state and local officials. The Housing and Recreational Land Use Categories should have the most restrictive limits.
<b>Health/Safety and Hazardous Substances</b>	Previously unknown potential hazardous substance release sites	Site-Specific Planning/ Construction	Contingency plans and mitigation measures to address discovery of previously unknown potential hazardous substance release sites must be included in redevelopment plans and contracts, requiring that work stop and the Camp Parks Environmental Office be notified immediately if indications of previously unknown, suspected hazardous substance

**Table 4-14. Proposed Mitigation and Monitoring**

Resource Area	Impact/ Situation	Project Phase	Proposed Mitigation and Monitoring
			contamination or releases are discovered during redevelopment work.
<b>Health/Safety and Hazardous Substances</b>	All demolition, construction, and landscaping	Site-Specific Planning/ Construction	Strict dust control should be explicitly required for all demolition, construction, and landscaping contracts, especially where elevated arsenic and chromium are found in the natural soil. In addition to wetting of dirt roads and excavated soils, methods to minimize dust from demolition of buildings and foundations, removal of asphalt and concrete, grading and landscaping, should be evaluated in consultation with local and state officials and written into engineering plans and specifications.
<b>Health/Safety and Hazardous Substances</b>	Traffic impacts or potential hazardous substance releases or exposure incidents	Site-Specific Planning/ Construction	Additional mitigation measures (e.g., secure containment or covering of demolition debris, contaminated soil or wastes in truck beds) may be required by city or county ordinances or other regulations to prevent releases during transport. Additional voluntary mitigation measures (e.g., such as scheduling transport of demolition debris or other wastes to offsite landfills outside of heavy traffic time periods.) should be considered to minimize traffic impacts or potential hazardous substance releases or exposure incidents.

**Table 5-1. Cumulative Projects Occurring on Camp Parks**

Project <sup>1</sup>	Type of Project	Project Location	Project Status
<b>RCI Housing</b>	Recently completed construction of 113 new family housing units, demolition of 13 units, and revitalization of 1 unit (Commander’s quarters)	34-acre parcel in the northern Cantonment Area	Implementation of the initial development plan began in 2003. Clearing of the building site began in late 2003. Actual construction of housing units began in mid-2004 and was completed in mid-2005.
<b>CA ARNG Readiness Center and OMS</b>	Construct and operate an Organizational Maintenance Shop (OMS) and Readiness Center. The OMS will be used to repair and maintain ancillary and support vehicles. The Readiness Center will be used for training, administration, and storage.	25-acre parcel in the northern Cantonment Area	Construction of the OMS has begun. The OMS will be constructed over 18 months. Construction of the Readiness Center is expected to take 22 months, but has not yet begun.
<b>Oakland Exchange Relocation</b>	Construction of an Army Reserve facilities at Camp Parks and relocation of approximately 663 Army Reserve positions currently assigned to the 63D Regional Readiness Command (RRC). The facilities will be used for administration, classroom training, maintenance support, and vehicle and equipment storage.	34-acre parcel in the northern Cantonment Area that is presently designated as the parade field	

<sup>1</sup> These projects are further described in Section 1.3 of this EIS.



**Table 5-2. Cumulative Projects in the Vicinity of Camp Parks**

<b>Project Name</b>	<b>Type of Project</b>	<b>Project Size</b>
Dublin Ranch (Area A)	Single family residential development and proposed golf course	573 dwelling units on 363 acres
Dublin Ranch (Area B-E)	Commercial and mixed density (residential and non-residential land use) development	72 acres of commercial and 1,875 mixed density residential units and non-residential land uses on 454 acres
Dublin Ranch (Area F south)	Medium density residential development	689 medium density dwelling units (neighborhood square, park, and school site included in acreage) on 93 acres
Dublin Ranch (Area F north)	Mixed density (middle school and public/semi-public site) development	236 single family low and medium density residential units (middle school site & public/semi public site included in acreage) on 88 acres
Dublin Ranch (Areas F, G, & H)	Commercial and residential development	93 acres of commercial office, 22 acres of village commercial in Area G, and 2,180 dwelling units and other non-residential land uses on 304 acres
Dublin Ranch (Area G, aka Toll Brothers Area G)	Mixed density residential development	1,396 dwelling units on 39 acres
Dublin Ranch (Town Center Area G)	Commercial development	22 acres of commercial uses
Dublin Ranch West (aka James Tong (Wallis Annexation))	Mixed density residential and open space development	77 single family units, 579 medium density units, 438 medium-high density units, and approximately 80 acres of open space/elementary school/neighborhood park on 184 acres
Greenbriar/Tassajara Creek (Yarra Yarra Ranch)	Mixed density residential and open space development	26 single family detached units (phase I), 46 single family detached units (phase II), 107 single family detached units (phase III), 2 acre home site (Estate Lot Koller), and 10 acre home site with horse riding facility (Estate Lot Adams) on 66 acres
Pinn Brothers/ Silveria Ranch	Mixed density residential and open space development	102 condo units, 152 single family units, and 50 acres of open space on 368 acres

**Table 5-2. Cumulative Projects in the Vicinity of Camp Parks**

Project Name	Type of Project	Project Size
Dougherty Valley - Windemere	Residential, commercial, and open space development	5,170 dwelling units, 17 acres commercial/mixed use, 173 acres schools and parks, and 1,066 acres unimproved open space on 2,320 acres
Dougherty Valley - Shapell (Gale Ranch)	Mixed density residential and open space development	1,215 single and multiple family units (phase I), 1,885 single and multiple family units (phase II), 1,885 single and multiple family units (phase III), and 1,306 single and multiple family units (phase IV) on 2,708 acres
Dublin Transit Center Site A-2	Residential development	112 very low and low income apartment units on 2 acres
Dublin Transit Center Site B-1	Residential development	234 condominiums and 26 townhomes on 3 acres
Dublin Transit Center Site B-2	Residential development	305 apartments and 15,000 sq. ft. retail on 3 acres
Dublin Transit Center	Mixed commercial, residential, and open space development	2 million sq. ft. campus office, 70,000 sq. ft. of retail commercial, and 1,500 residential units on 75 acres
DiManto GPA Study	Commercial development	56 acres
DiManto GPA Study	High density residential development	25 acres
Quarry Lane School	Preschool - high school facility	Preschool and Elementary (phase I) and 70,289

**Table 5-2. Cumulative Projects in the Vicinity of Camp Parks**

<b>Project Name</b>	<b>Type of Project</b>	<b>Project Size</b>
		sq. ft. bldg. for 750 middle and high school students (phase II) on 10 acres
IKEA	Commercial development	317,000 sq. ft. home furnishing store and 137,000 sq. ft. retail space on 27 acres
East County Hall of Justice (County Courthouse)	Courtrooms, offices, and associated facilities	208,408 sq. ft. courthouse facility on 22 acres
Dublin Honda	Commercial (auto sales and service establishment) development	55,000 sq. ft. commercial space on 8 acres
Dublin Gateway Medical Center	Medical office complex	178,849 sq. ft. medical facility
Fairway Ranch	Multi density residential development	930 units (322 senior apartments, 304 multi family apartments, 304 condominiums) on 25 acres
Moller Ranch	Residential development	184 single family units on 226 acres
Mission Peak Property	Residential development	101 single family units on 68 acres
Dublin Corners	Commercial development	462,000 sq. ft. retail space
Ulferts Center	Commercial development	50,500 sq. ft. retail space
New Auto Dealership	Commercial development	32,000 sq. ft. retail space

**Table 5-2. Cumulative Projects in the Vicinity of Camp Parks**

Project Name	Type of Project	Project Size
Retail Project (east of Tassajara Road and south of Dublin Blvd.)	Commercial development	315,000 sq. ft. retail space
Circuit City	Commercial development	35,000 sq. ft. retail space

**Table 5-3. Population Trends for the Camp Parks Cumulative Study Area**

Area	2000 Population	2005 Population	2010 Population	2015 Population	2020 Population	2025 Population	2030 Population	% Change 2005 to 2030
Alameda County	1,443,741	1,517,100	1,584,500	1,648,800	1,714,500	1,796,300	1,884,600	24.2%
<i>City of Dublin</i> <sup>1</sup>	<i>30,007</i>	<i>40,700</i>	<i>50,000</i>	<i>57,000</i>	<i>63,800</i>	<i>70,800</i>	<i>78,200</i>	<i>92.1%</i>
<i>City of Pleasanton</i> <sup>1</sup>	<i>65,058</i>	<i>69,900</i>	<i>74,600</i>	<i>78,500</i>	<i>82,500</i>	<i>87,000</i>	<i>90,900</i>	<i>30.0%</i>
Contra Costa County	948,816	1,016,300	1,055,600	1,102,300	1,150,900	1,200,500	1,244,800	22.5%
<i>City of San Ramon</i> <sup>2</sup>	<i>44,834</i>	<i>52,500</i>	<i>59,300</i>	<i>65,100</i>	<i>71,200</i>	<i>77,600</i>	<i>83,100</i>	<i>58.3%</i>
Study Area Total <sup>3</sup>	2,392,557	2,533,400	2,640,100	2,751,100	2,865,400	2,996,800	3,129,400	23.5%

Source: Projections 2005 (Association of Bay Area Governments).

Notes: 1. Population for the city sphere of influence.  
2. Population for other subregional area.  
3. Total includes Alameda and Contra Costa Counties.

**Table 5-4. Emissions from Proposed Action, Development of Dublin Crossing, and Other Development Projects in the City of Dublin (ton/year)**

	<b>ROG</b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>2</sub></b>	<b>PM<sub>10</sub></b>	<b>PM<sub>2.5</sub></b>
Existing City of Dublin (Excluding Camp Parks)	630	494	4,449	3.8	704	135
Camp Parks - No Action Alternative	28	15	123	0.1	18	3.6
Proposed Action <sup>1</sup>	35	22	163	0.1	26	5.2
Dublin Crossing Development	31	23	205	0.1	33	6.2
Other City of Dublin Development Projects	248	174	1,545	1.3	248	47
Cumulative Increase <sup>2</sup> (ton/year)	286	203	1,789	1.5	288	55
Significant	Yes	Yes	Yes	No	Yes	Yes
Cumulative Increase (%)	43%	40%	39%	40%	40%	40%
Increase Based on Proposed Action <sup>2</sup>	1.1%	1.3%	0.9%	0.9%	1.1%	1.2%

<sup>1</sup> Emissions have not been baseline corrected.

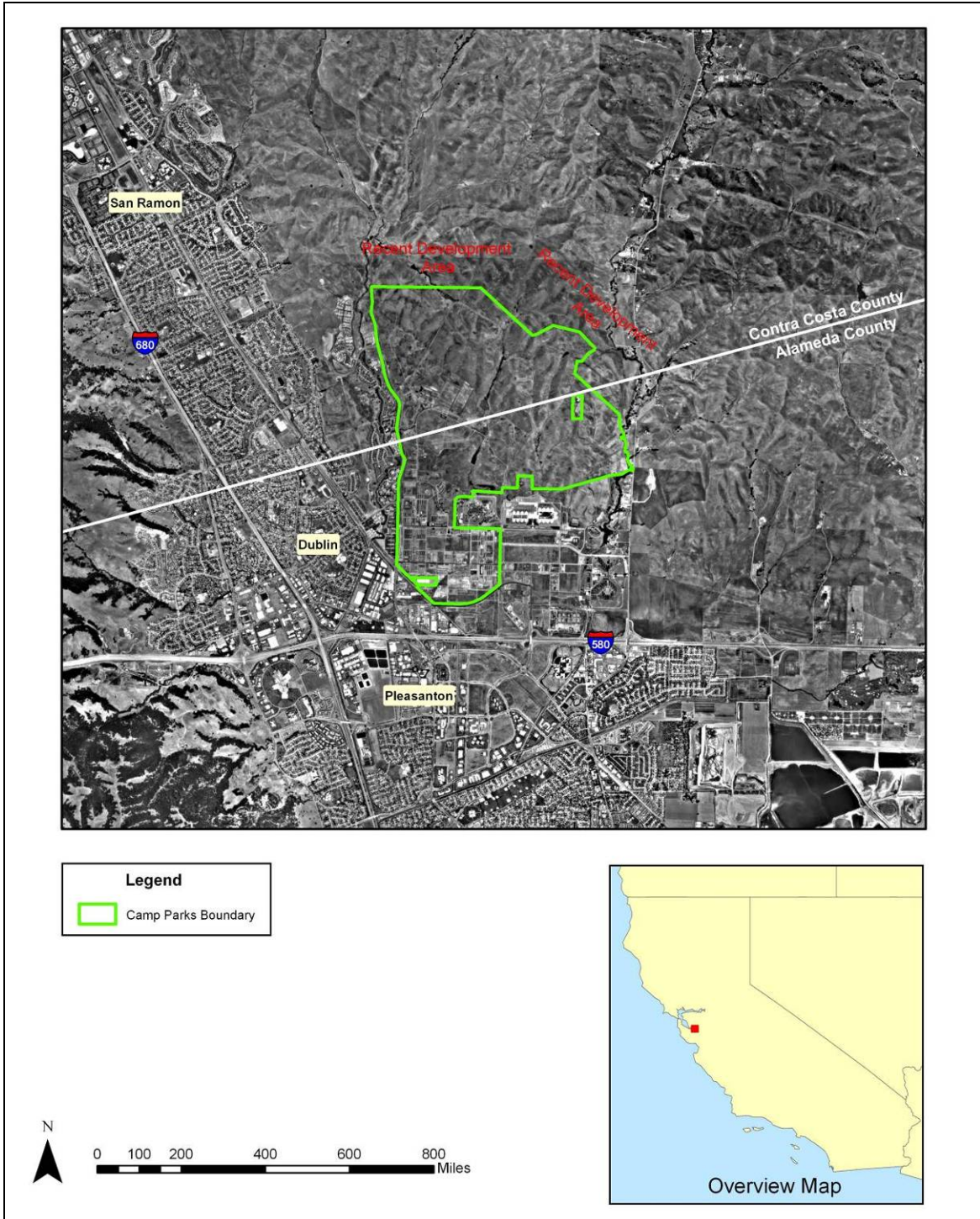
<sup>2</sup> Emissions increases from the Proposed Action are based on subtraction of No Action Alternative.

## **APPENDIX B: SUPPORTING FIGURES**

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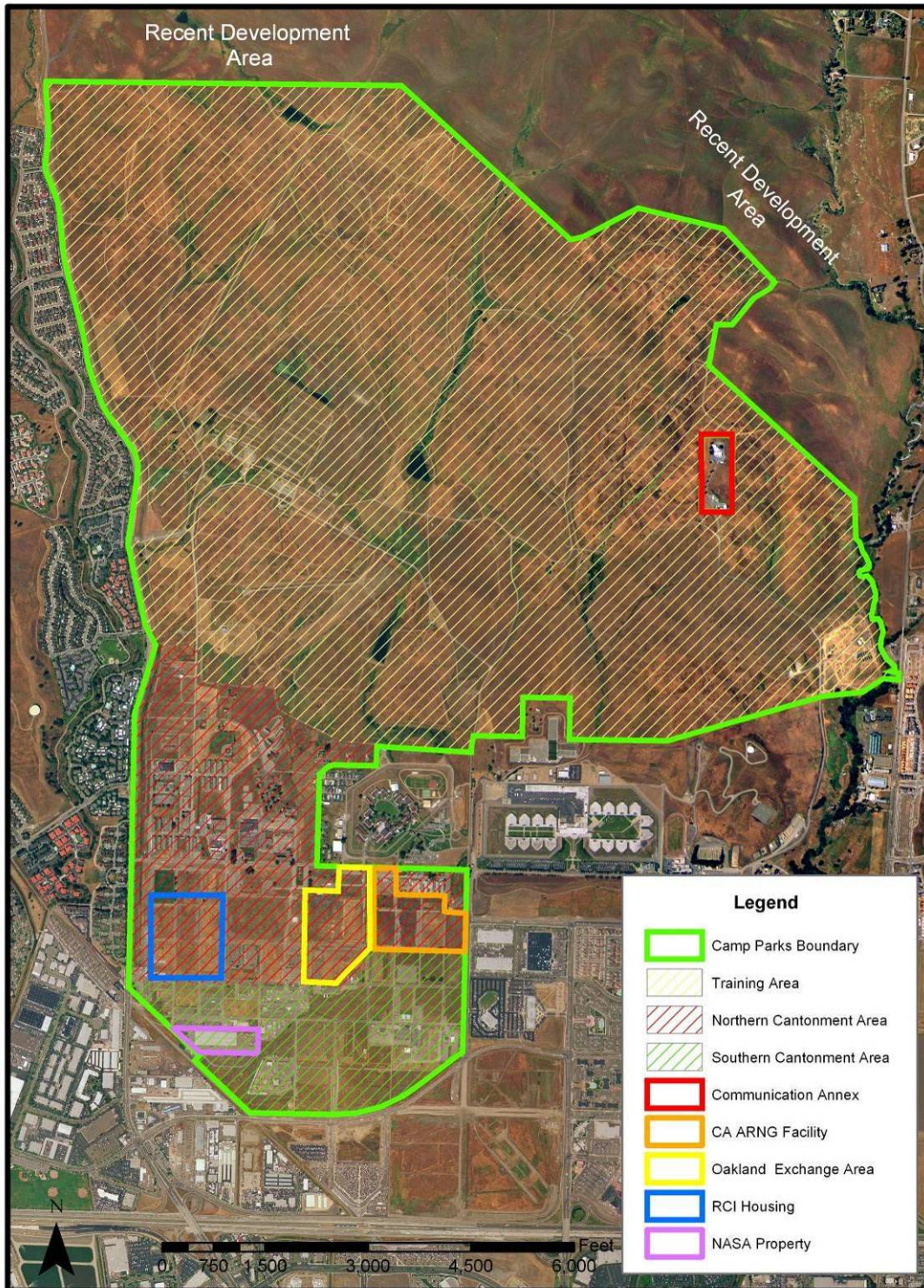
Figure 1-1. The Location of Camp Parks<sup>1</sup>



<sup>1</sup> Source: Camp Parks 2002- 2005. This aerial photograph from June 1993 does not show recent development such as that which has occurred to the north and east of Camp Parks. However, major development areas are noted on the photo.



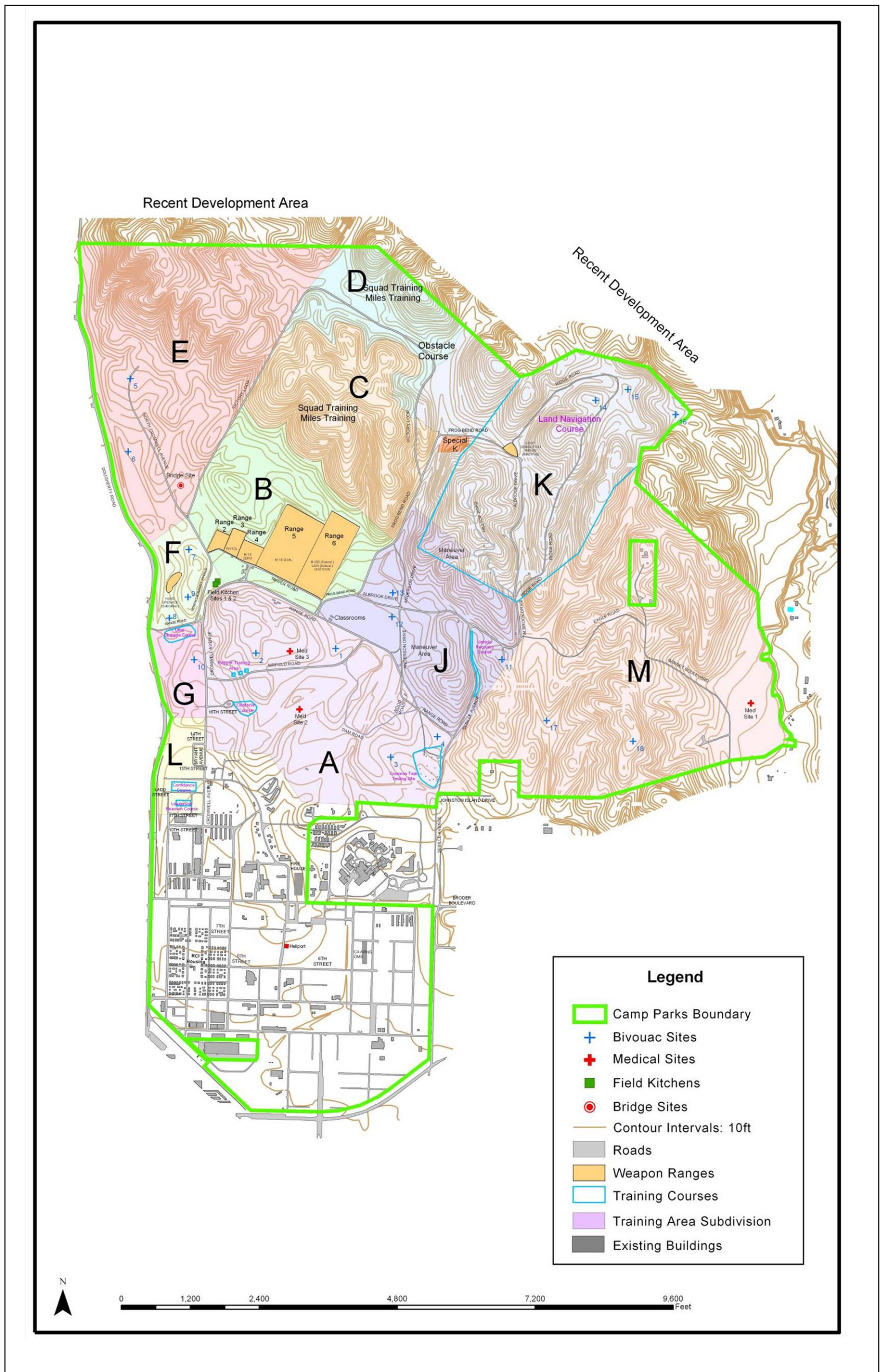
Figure 1–2. Major Subdivisions and Areas of Interest at Camp Parks<sup>2</sup>



<sup>2</sup> Source: Camp Parks 2002-2005. This aerial photograph is from June 2000.



Figure 1-3. Major Military Use Areas at Camp Parks<sup>3</sup>



<sup>3</sup> Source: Camp Parks 2002-2005. This map is current as of 2005.



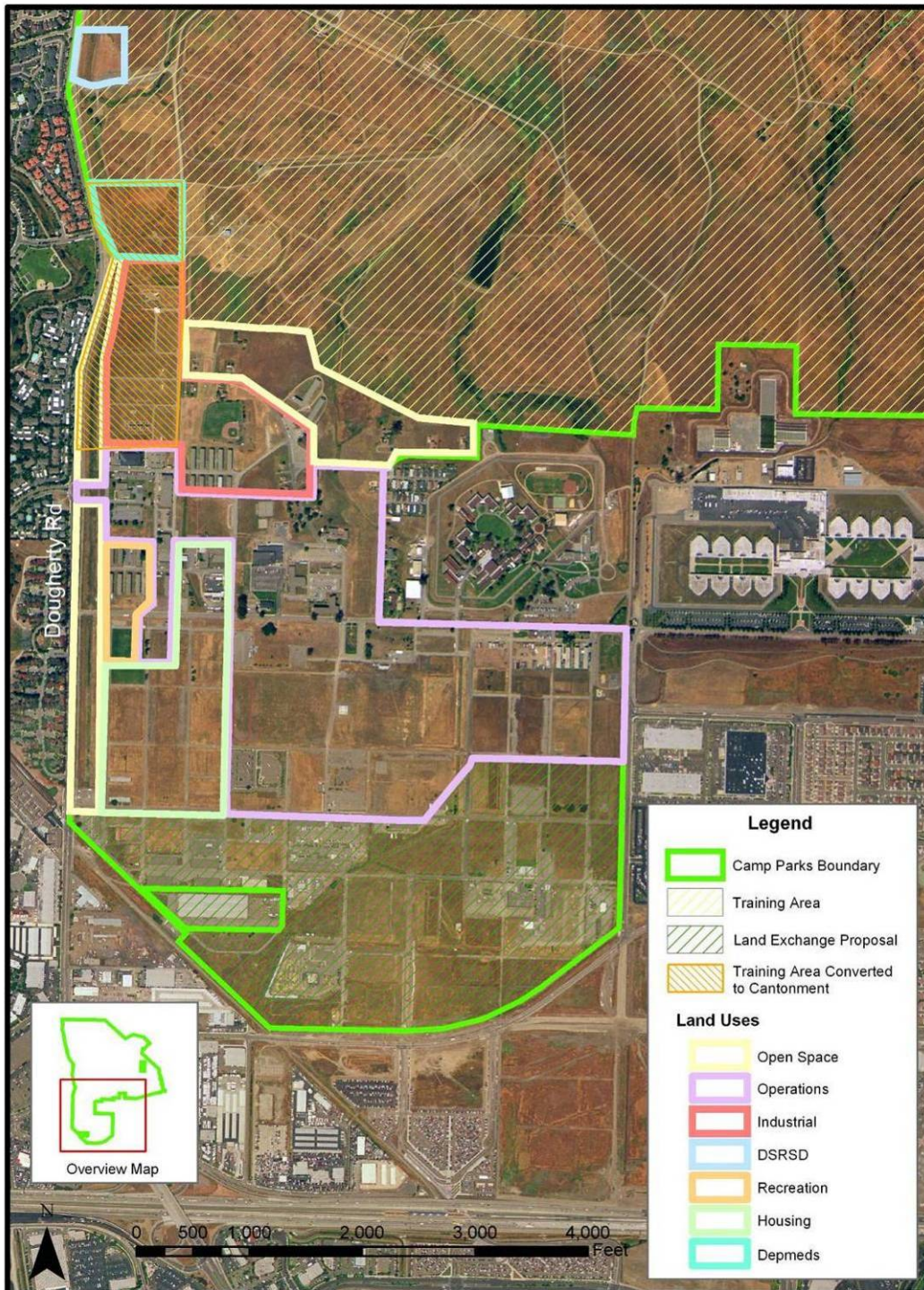
Figure 1–4. Existing Facilities at Camp Parks<sup>4</sup>



<sup>4</sup> Source: Camp Parks 2002-2005. Minor facilities that occur in the Training Area, such as range control and the firing ranges, are not depicted. Some buildings shown in this June 2000 aerial photograph have since been demolished.



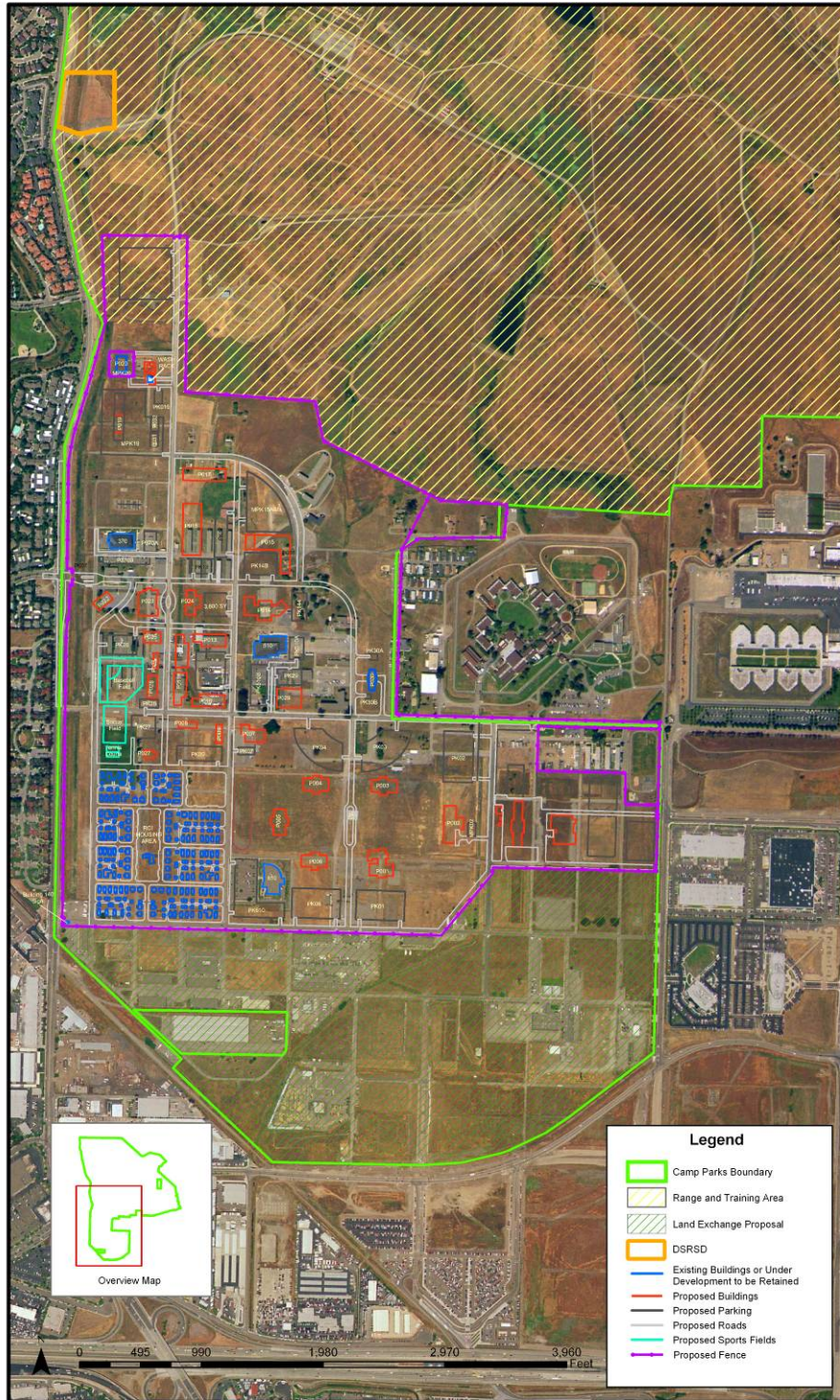
Figure 2–1. Land Use Categories Proposed in the Camp Parks Master Plan<sup>5</sup>



<sup>5</sup> Source: Camp Parks 2002-2005, Nakata 2002. Open space along Dougherty Road is a berm that serves as a visual and security barrier.



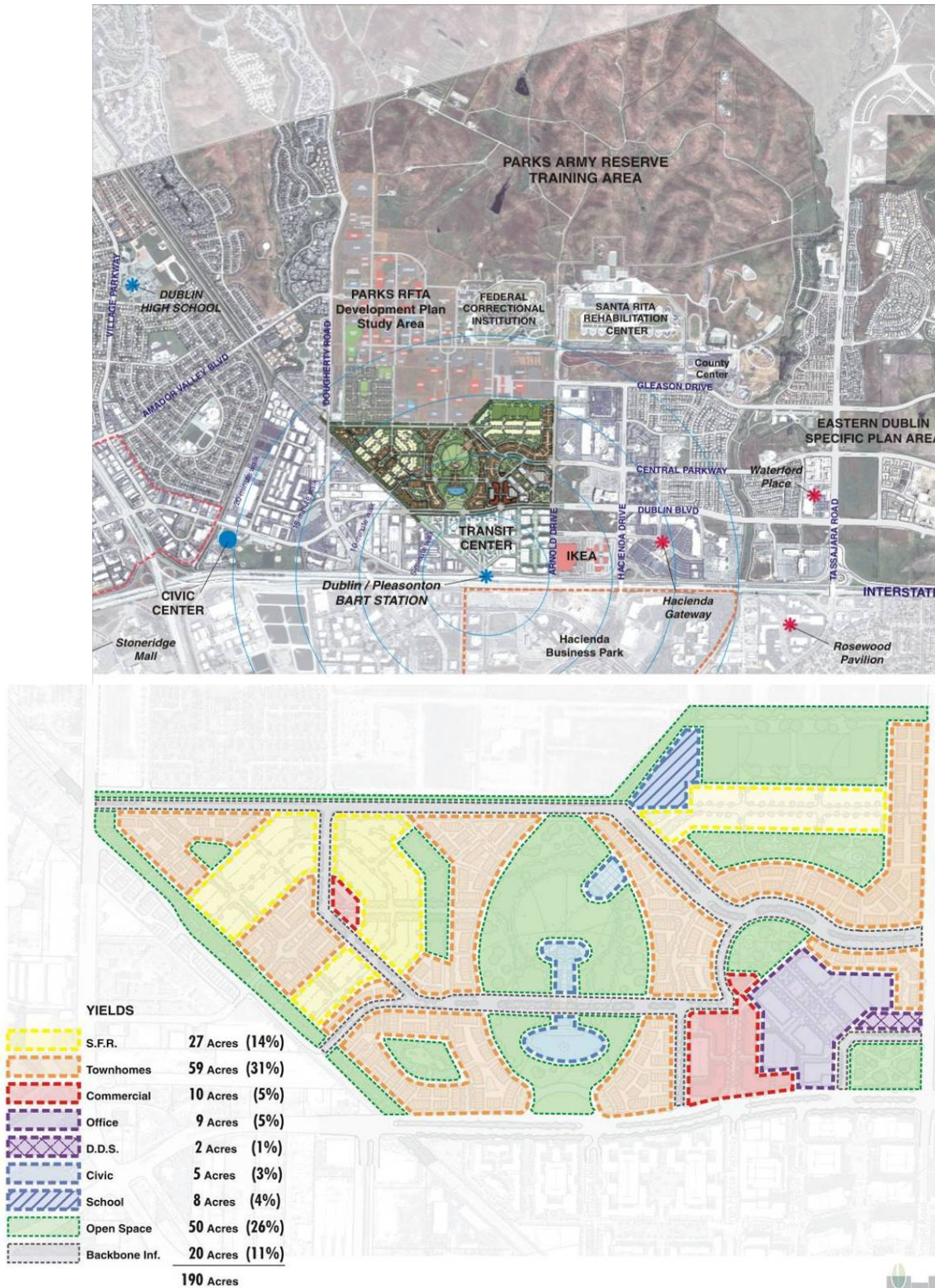
Figure 2–2. Facility Locations Proposed in the Camp Parks Master Plan and Other Ongoing Actions<sup>6</sup>



<sup>6</sup> Source: *Camp Parks 2002-2005, Nakata 2002.*

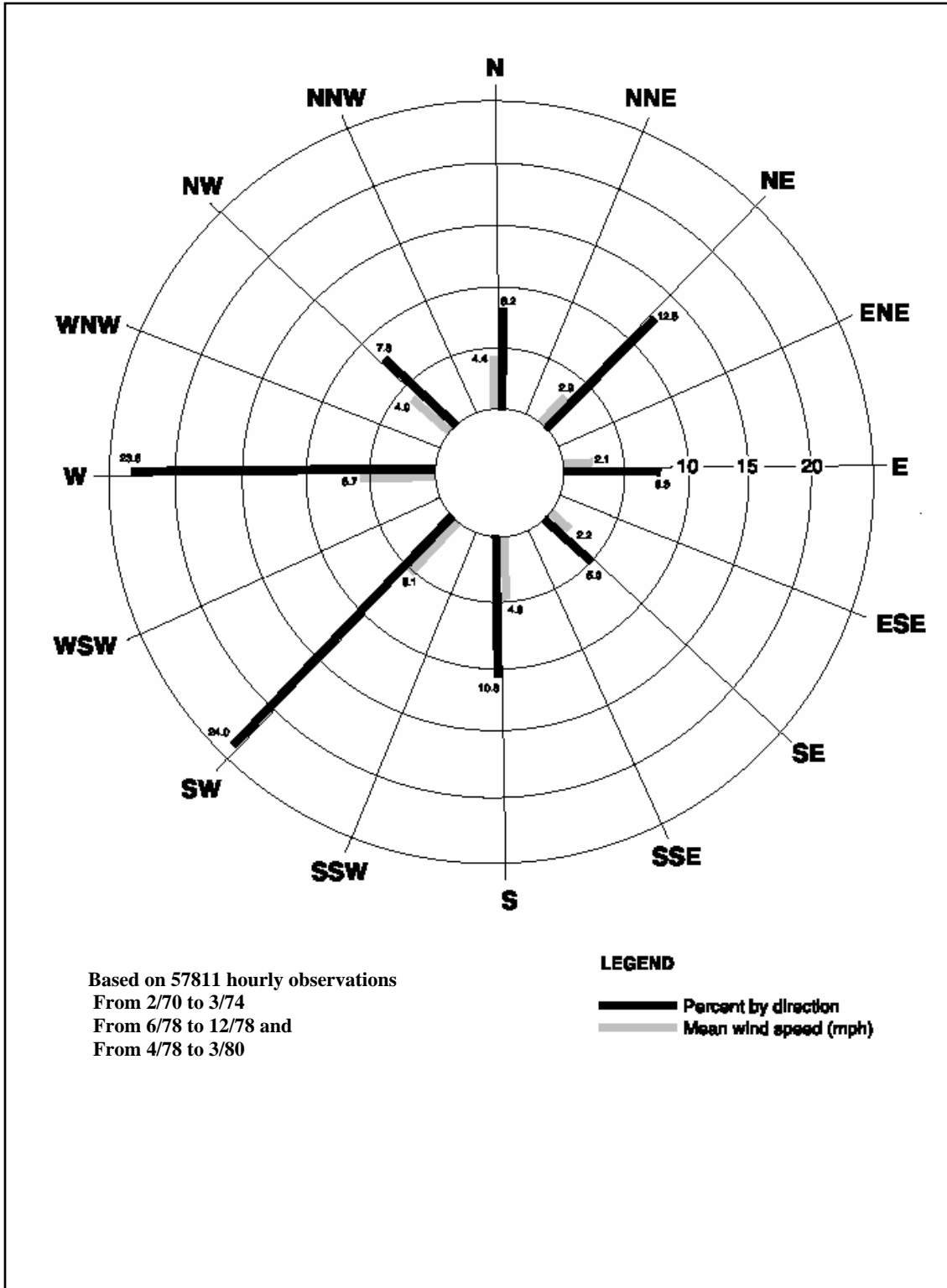


Figure 2–3. Context and Land Use Categories Evaluated for Dublin Crossing<sup>7</sup>



<sup>7</sup> Source: RTKL 2004.

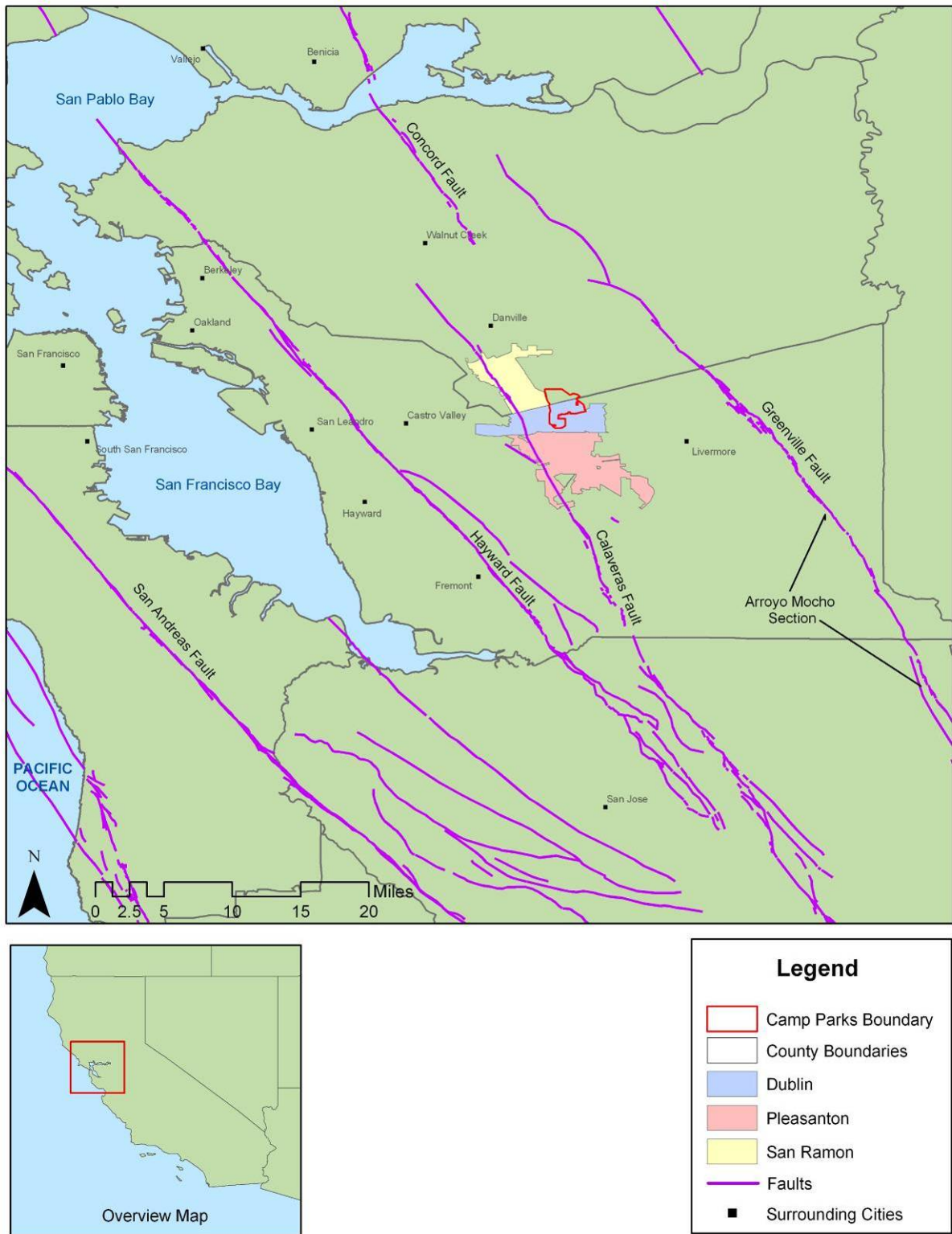
Figure 3-1. Livermore Station Wind Rose<sup>8</sup>



<sup>8</sup> Source: California Air Resources Board 1984.

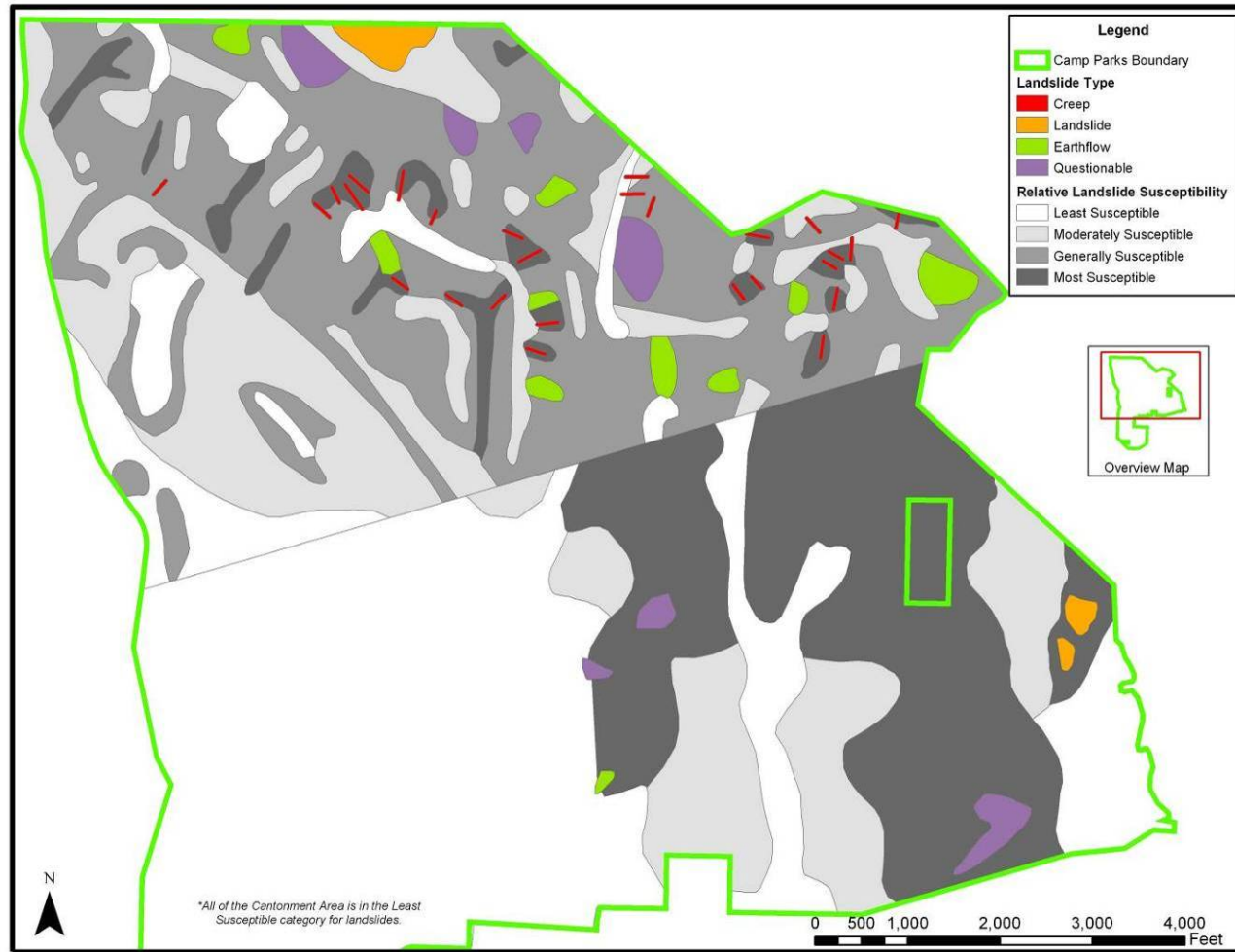


**Figure 3-2. Structural Geology and Faults of the Camp Parks Area<sup>9</sup>**



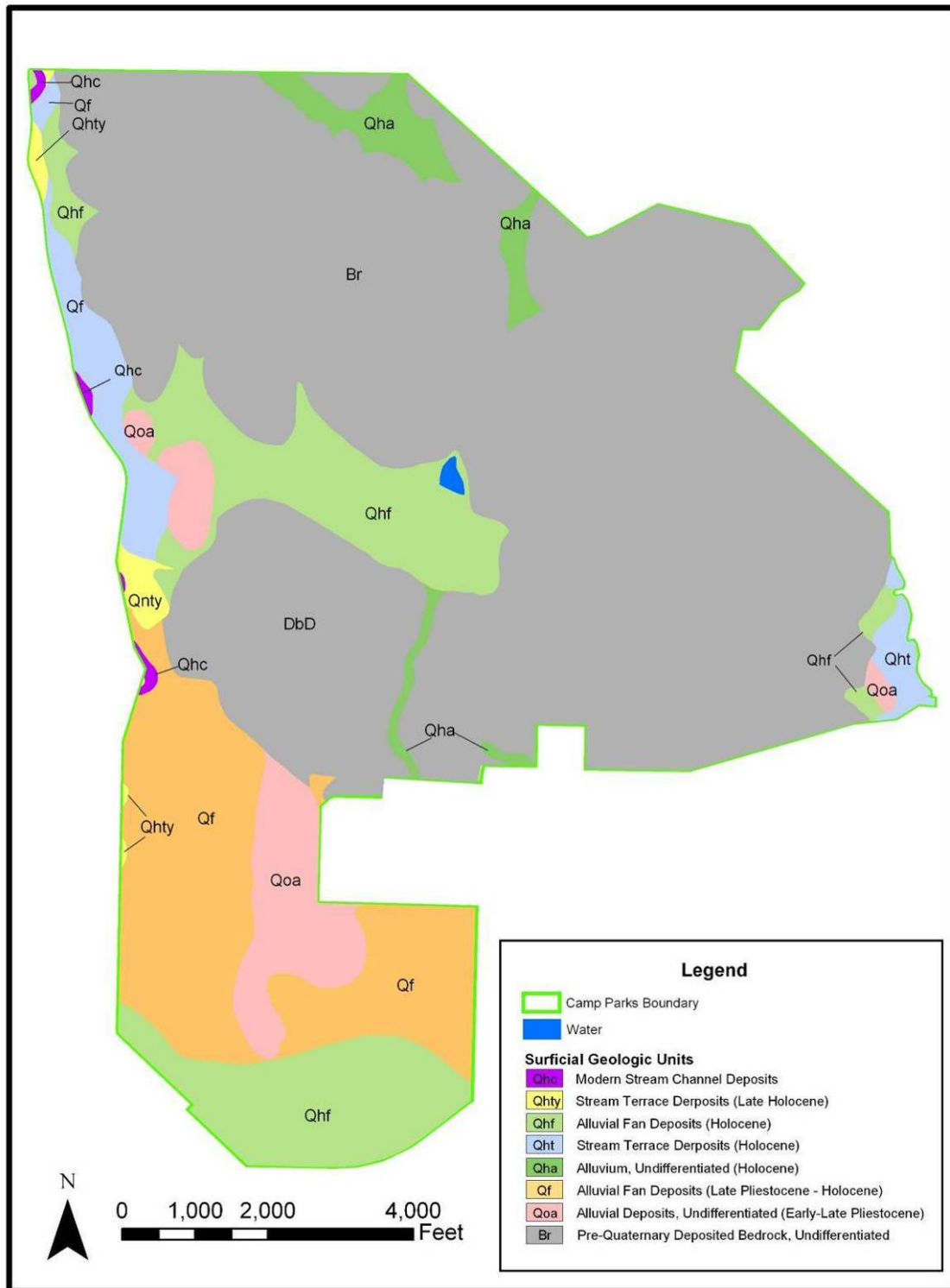
<sup>9</sup> Source: Census Bureau 2005c, USGS 2005.

Figure 3–3. Mass Movement and Landslide Susceptibility at Camp Parks<sup>10</sup>



<sup>10</sup> Source: Camp Parks 2002-2005.

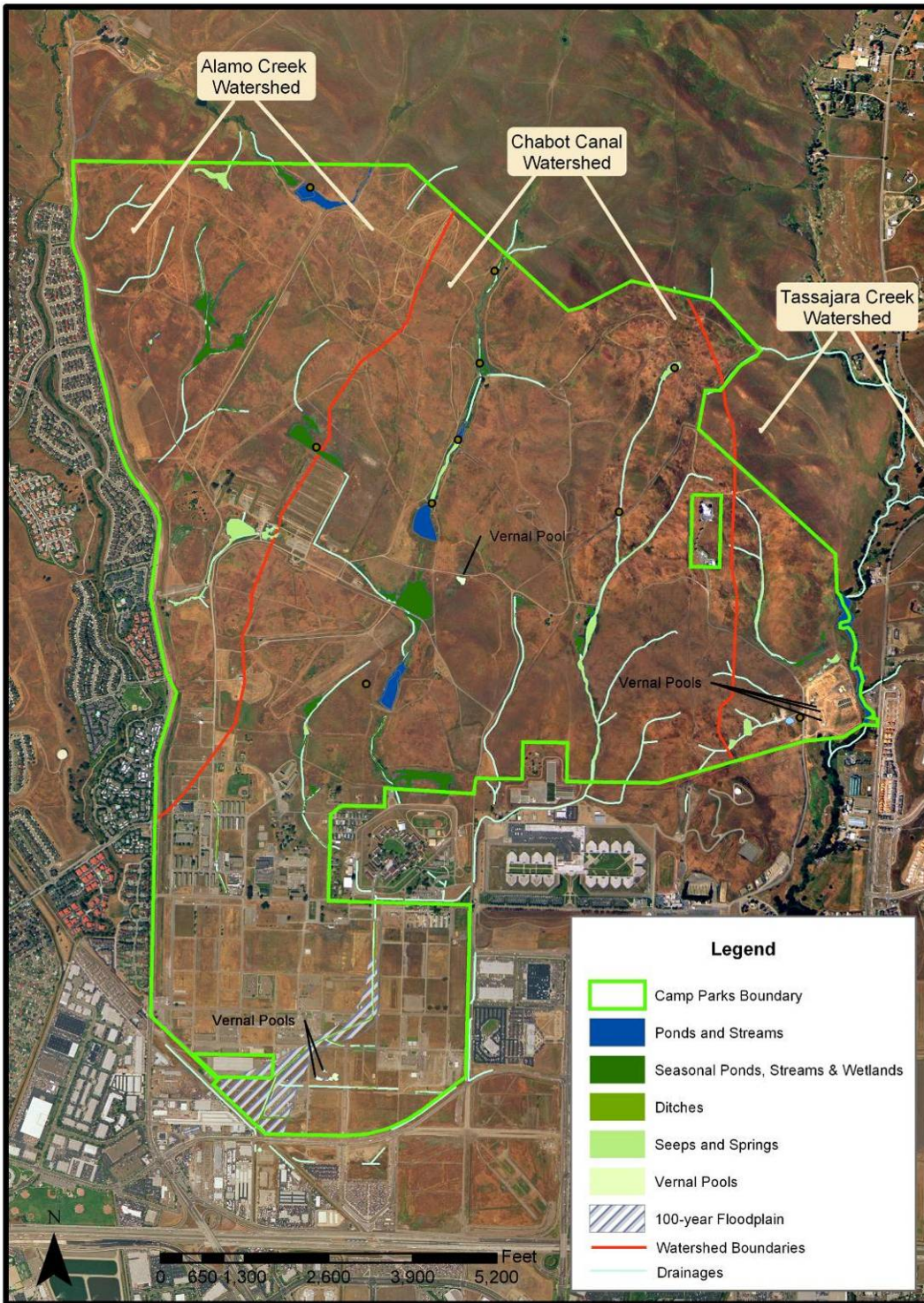
Figure 3–4. Surficial Geology at Camp Parks<sup>11</sup>



<sup>11</sup> Source: Camp Parks 2002-2005.

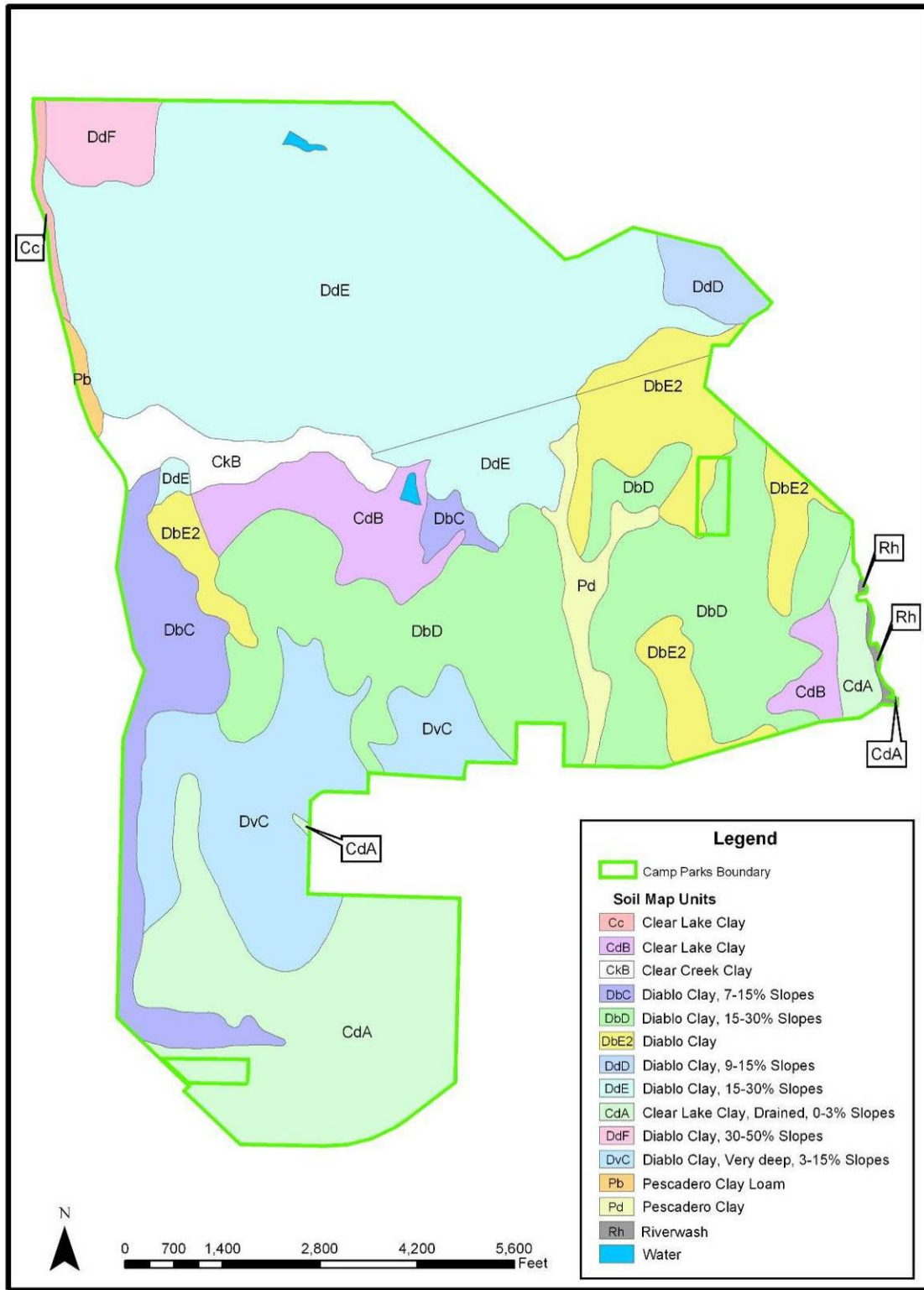


Figure 3–5. Surface Water Features at Camp Parks<sup>12</sup>



<sup>12</sup> Source: *Camp Parks 2002-2005*.

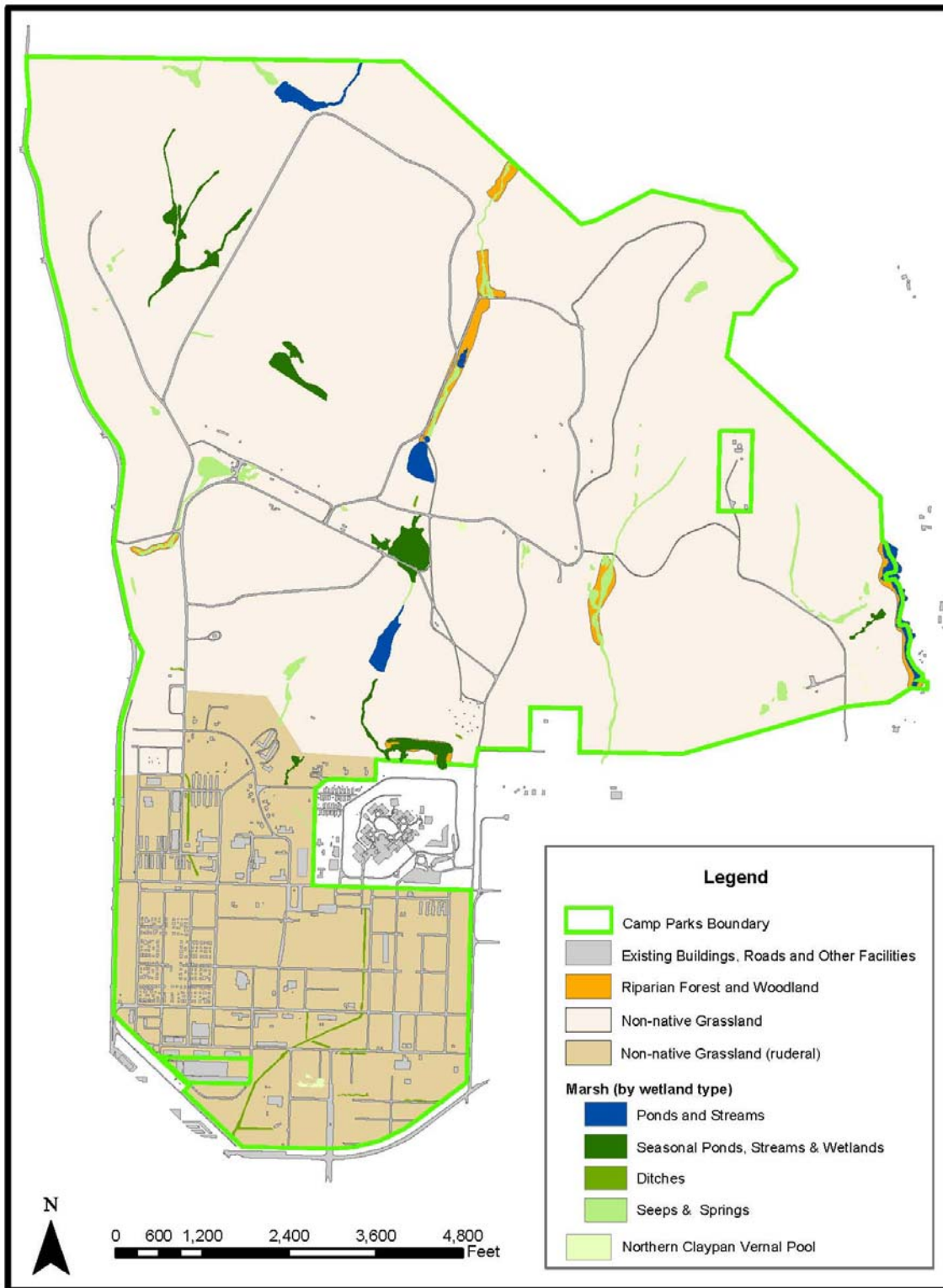
Figure 3–6. Soil Mapping Units at Camp Parks<sup>13</sup>



<sup>13</sup> Source: Camp Parks 2002-2005.

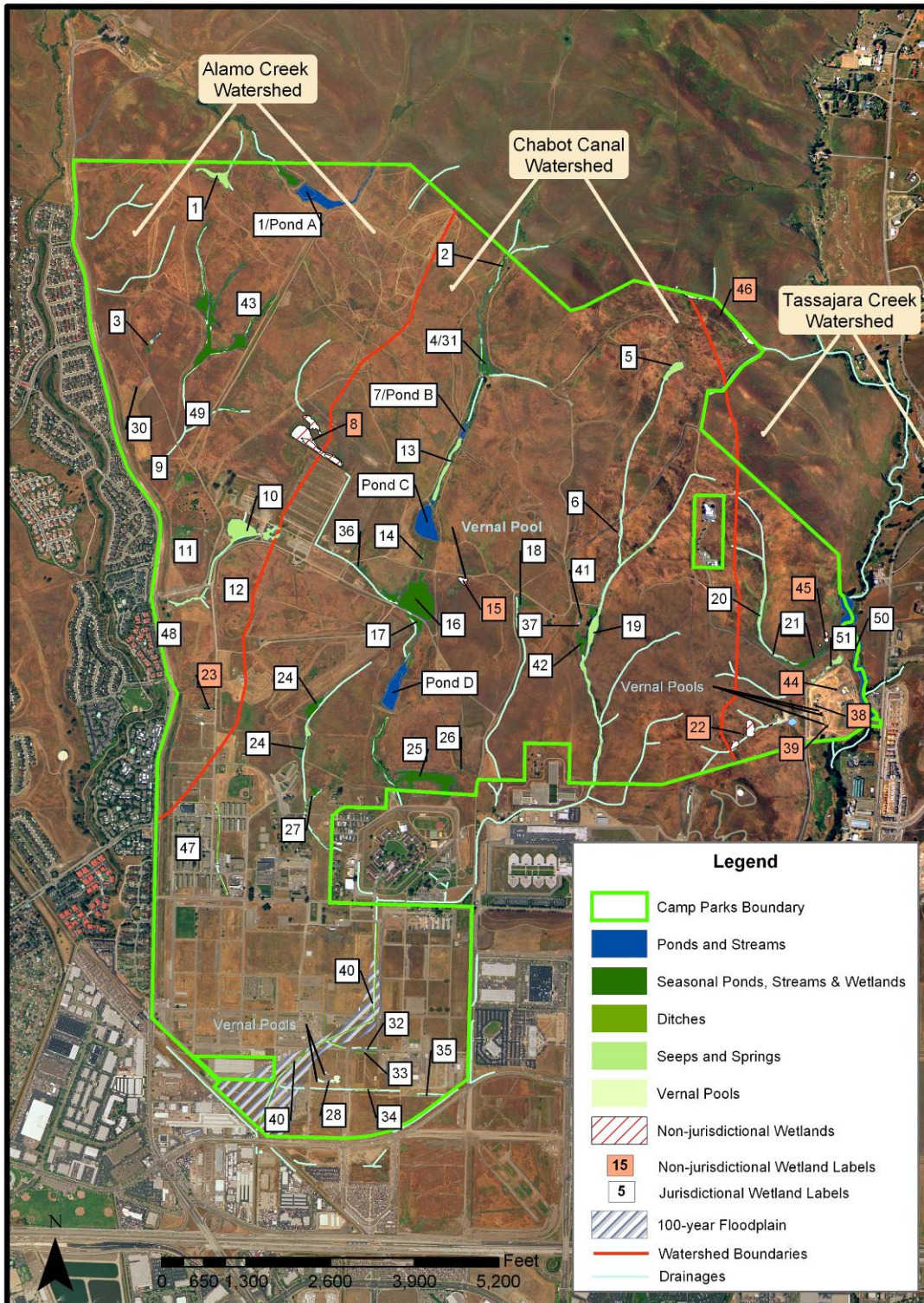


Figure 3–7. Vegetation Communities at Camp Parks<sup>14</sup>



<sup>14</sup> Source: *Camp Parks 2002-2005*, Booz Allen 2003.

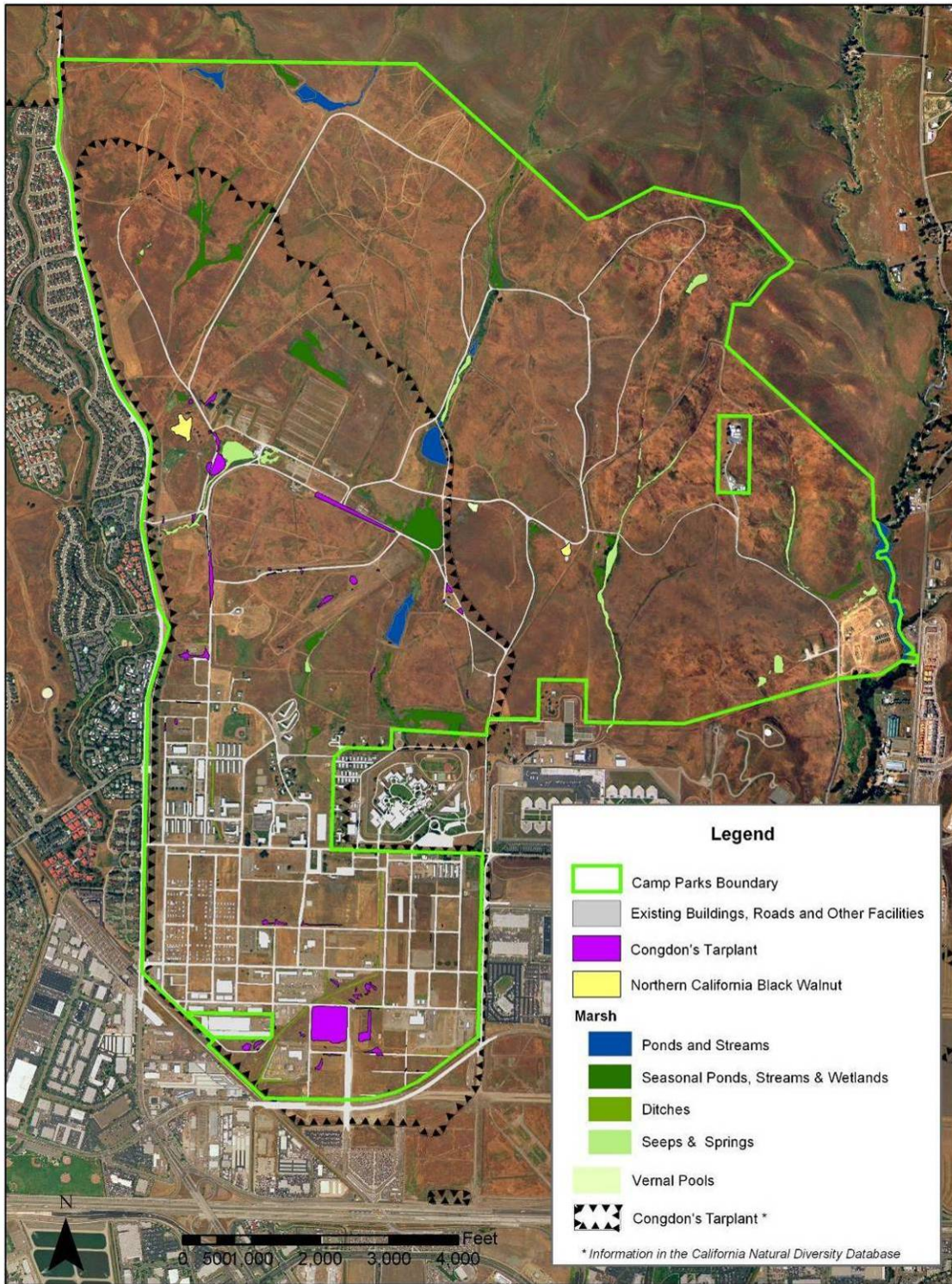
Figure 3–8. Delineated Wetlands at Camp Parks<sup>15</sup>



<sup>15</sup> Source: Camp Parks 2002-2005, Booz Allen 2004a.



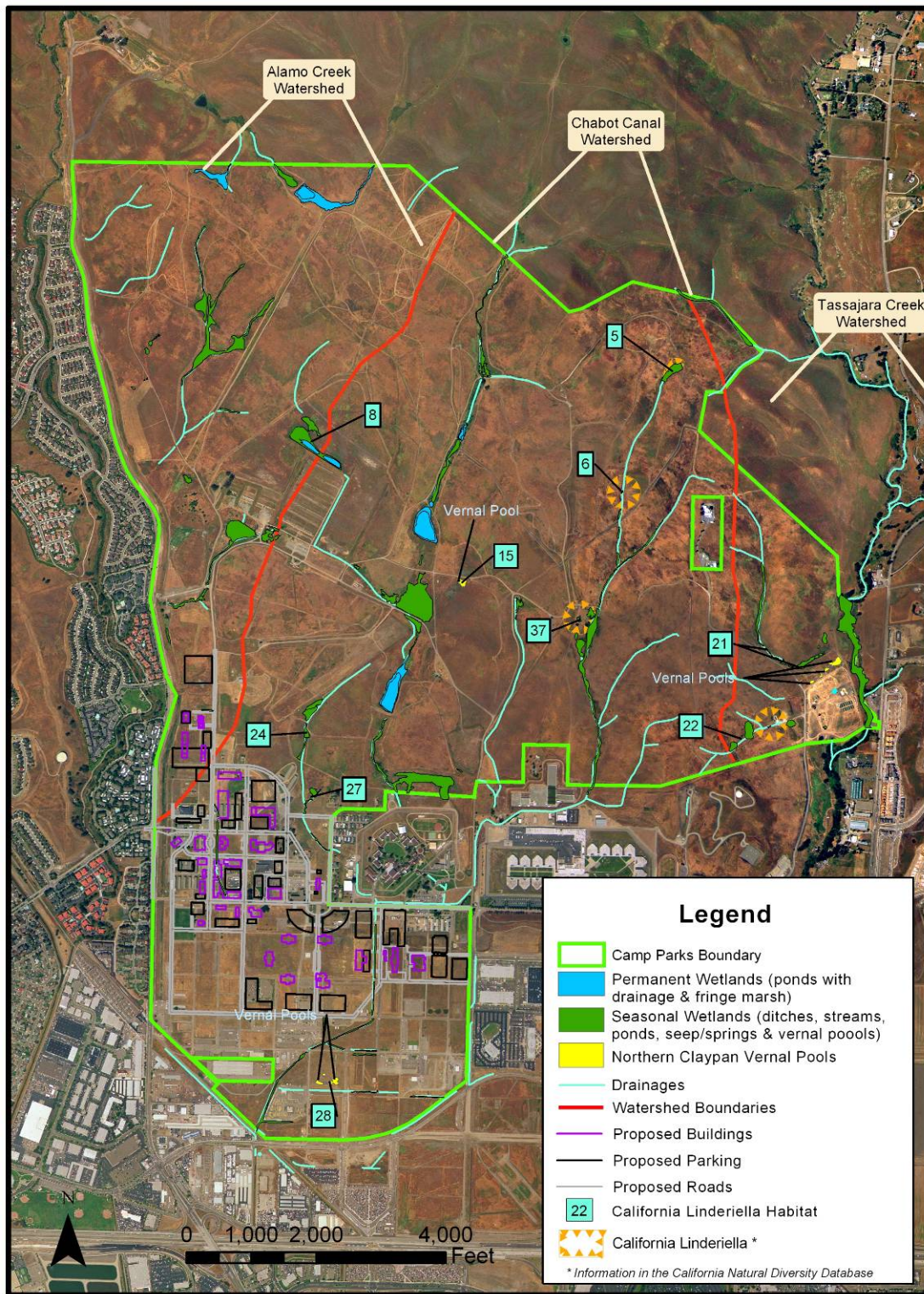
Figure 3–9. Special-Status Plant Species Observations and CNDDDB Data<sup>16</sup>



<sup>16</sup> Source: Camp Parks 2002-2005; CDFG 2005a; GANDA 2003, 2004. CNDDDB data are from February 2005 (CDFG 2005a); vegetation locations are based on 2003 surveys (Booz Allen 2004a; GANDA 2003, 2004).



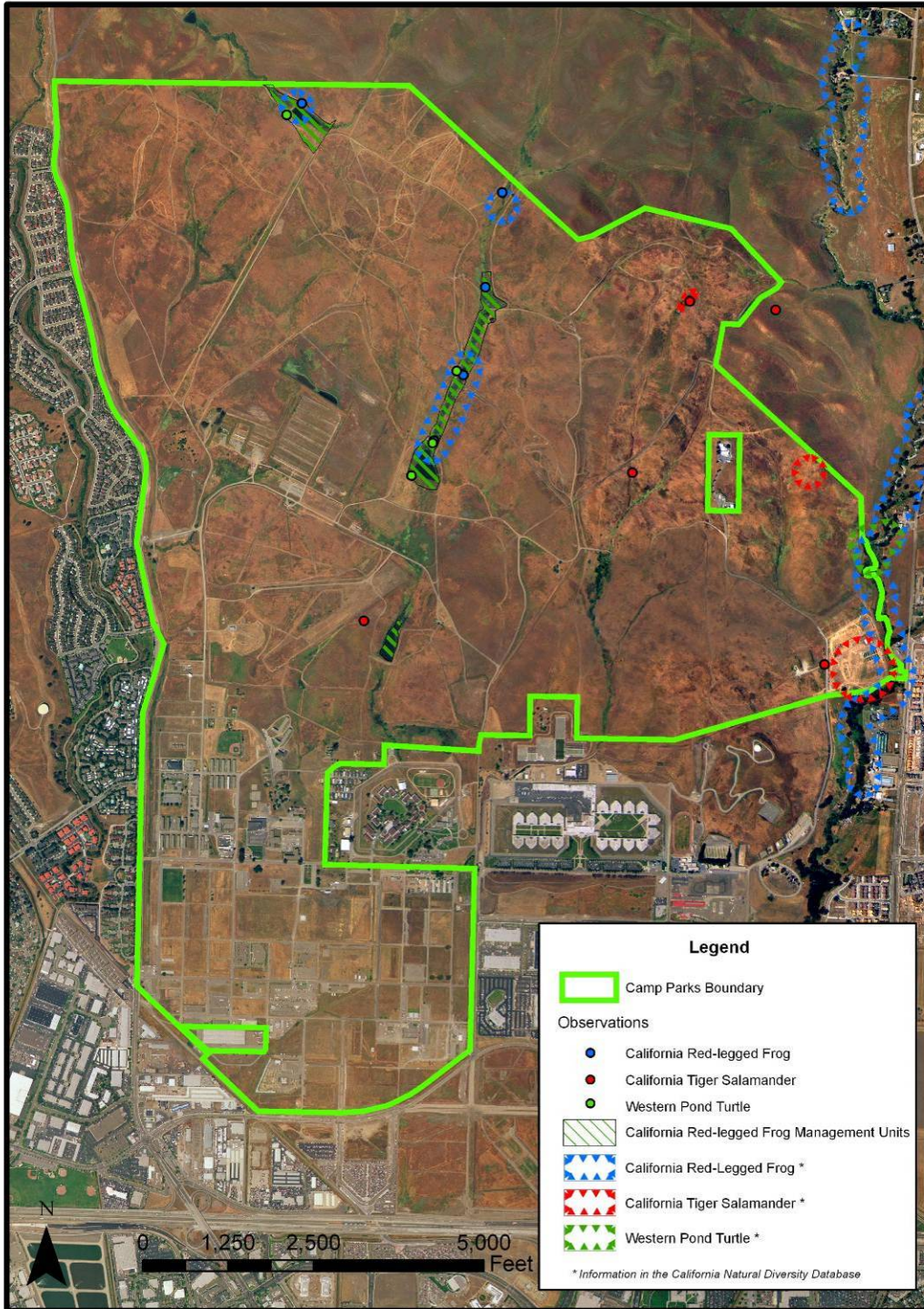
Figure 3–10. Vernal Pool Shrimp Observations, Habitat, and CNDDDB Data<sup>17</sup>



<sup>17</sup> Source: Camp Parks 2002-2005; CDFG 2005a; EcoAnalysts 2003a, 2003b. All delineated wetlands are numbered; numbers with a blue background denote wetlands that have habitat for vernal pool shrimp. They were surveyed during 2002 (dry season; EcoAnalysts 2003a) and 2003 (wet season; EcoAnalysts 2003b).



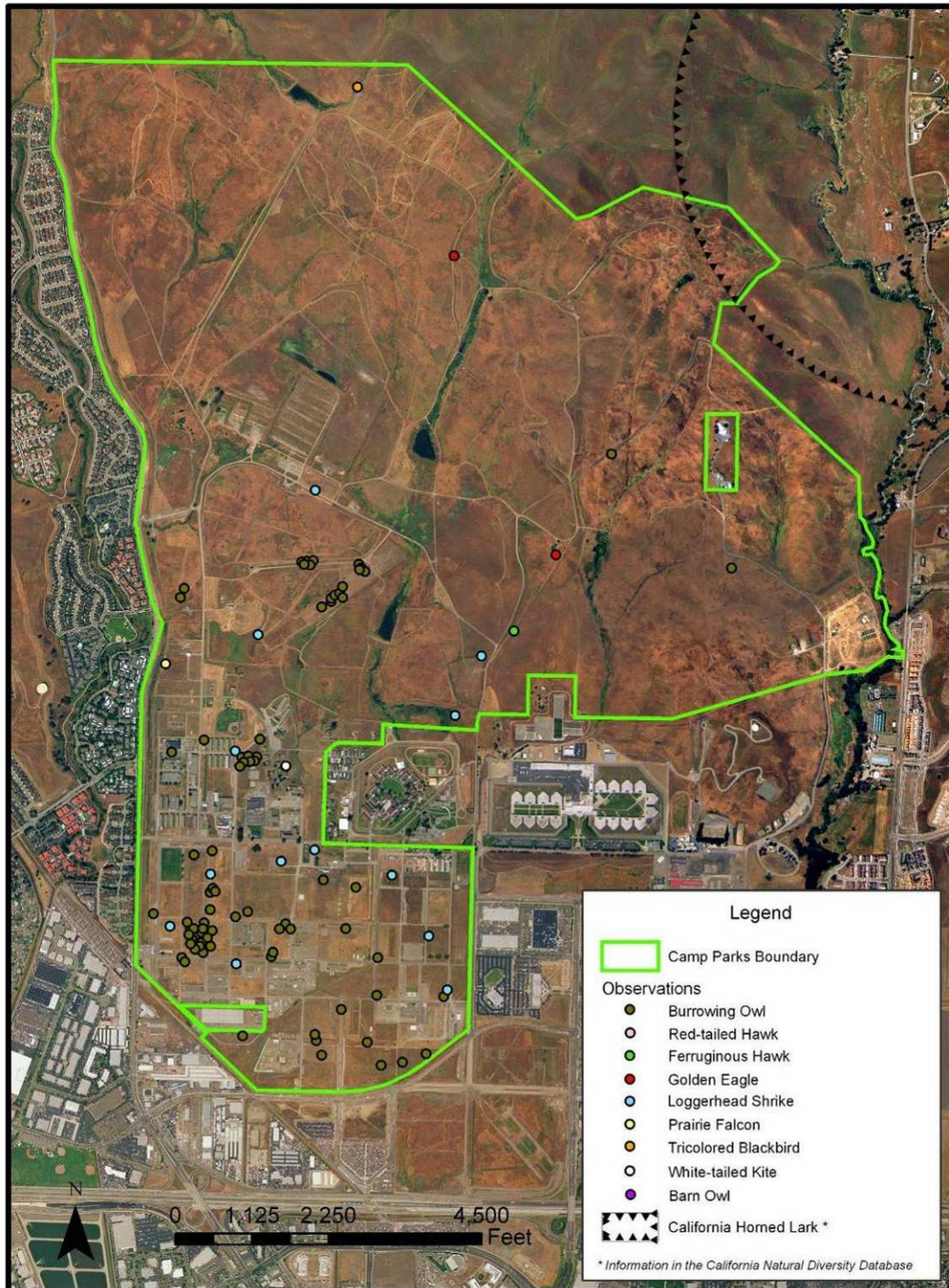
Figure 3–11. Amphibian and Reptile Special–Status Species Observations, Habitat, and CNDDDB Data<sup>18</sup>



<sup>18</sup> Source: Camp Parks 2002-2005, CDFG 2005a. Data are current through February 2005 and are an aggregation of past observations that have been documented. Individuals observed should not be expected to be present at the same locations currently.



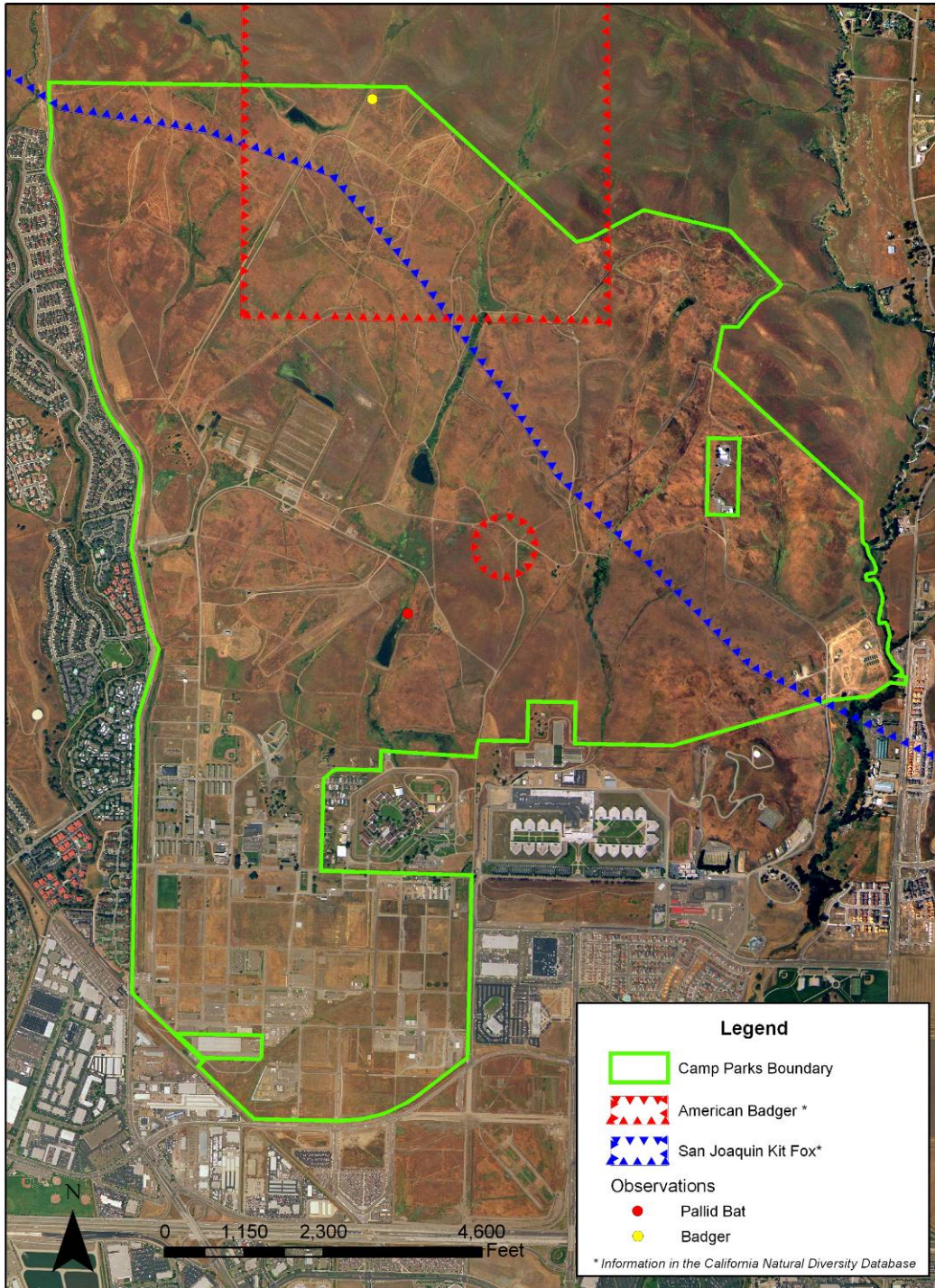
Figure 3–12. Avian Special-Status Species Observations and CNDDDB Data<sup>19</sup>



<sup>19</sup> Source: Camp Parks 2002-2005, Booz Allen 2004a, CDFG 2005a. Data are current through February 2005 and are an aggregation of past observations that have been documented. Individuals observed should not be expected to be present at the same locations currently.



Figure 3–13. Mammal Special-Status Species Observations and CNDDDB Data<sup>20</sup>.



<sup>20</sup> Source: Camp Parks 2002-2005, CDFG 2005a. Data are current through February 2005 and are an aggregation of past observations that have been documented. Individuals observed should not be expected to be present at the same locations currently.

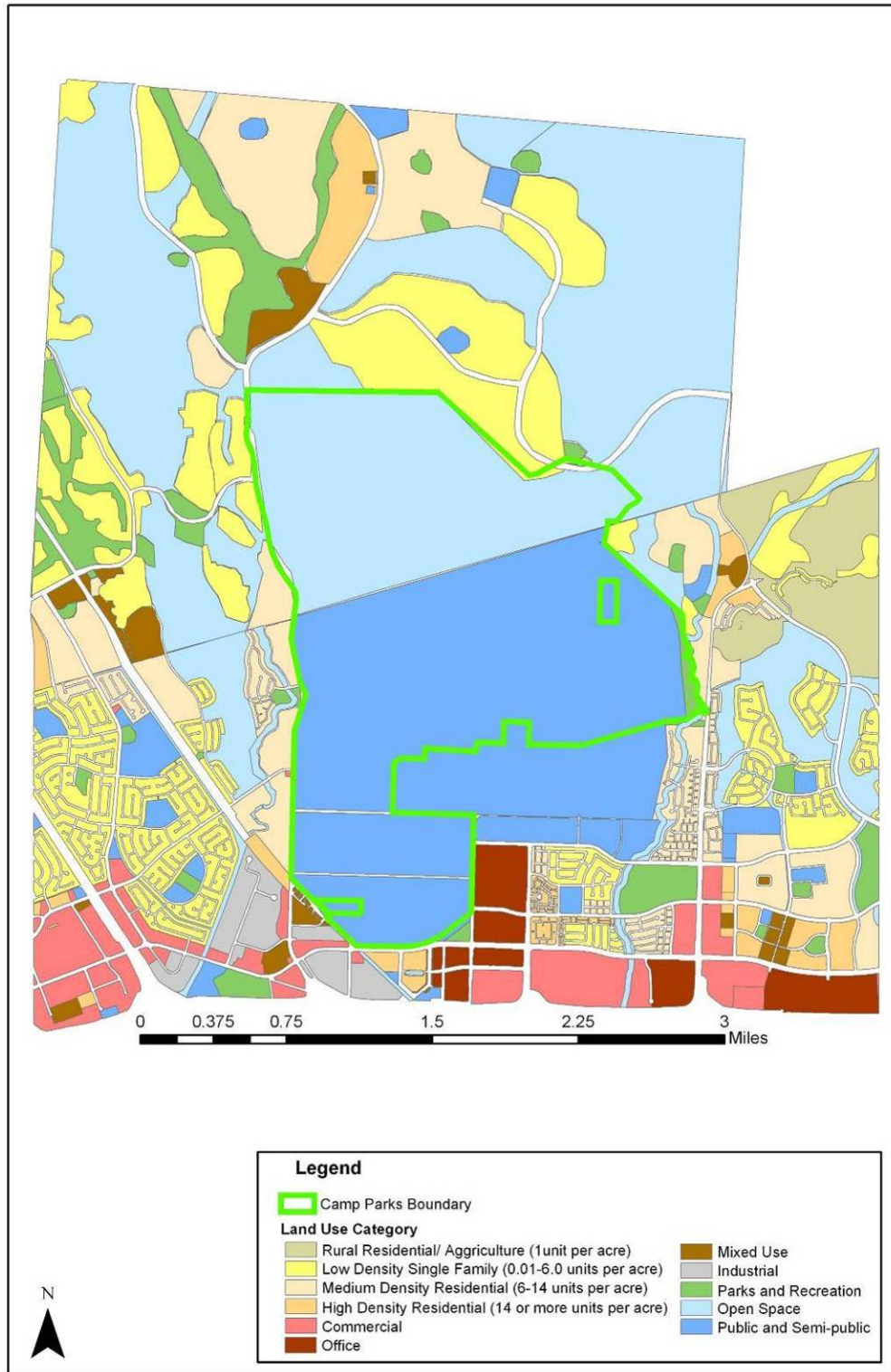
Figure 3–14. Socioeconomic Study Area<sup>21</sup>



<sup>21</sup> Source: Census Bureau 2005c.

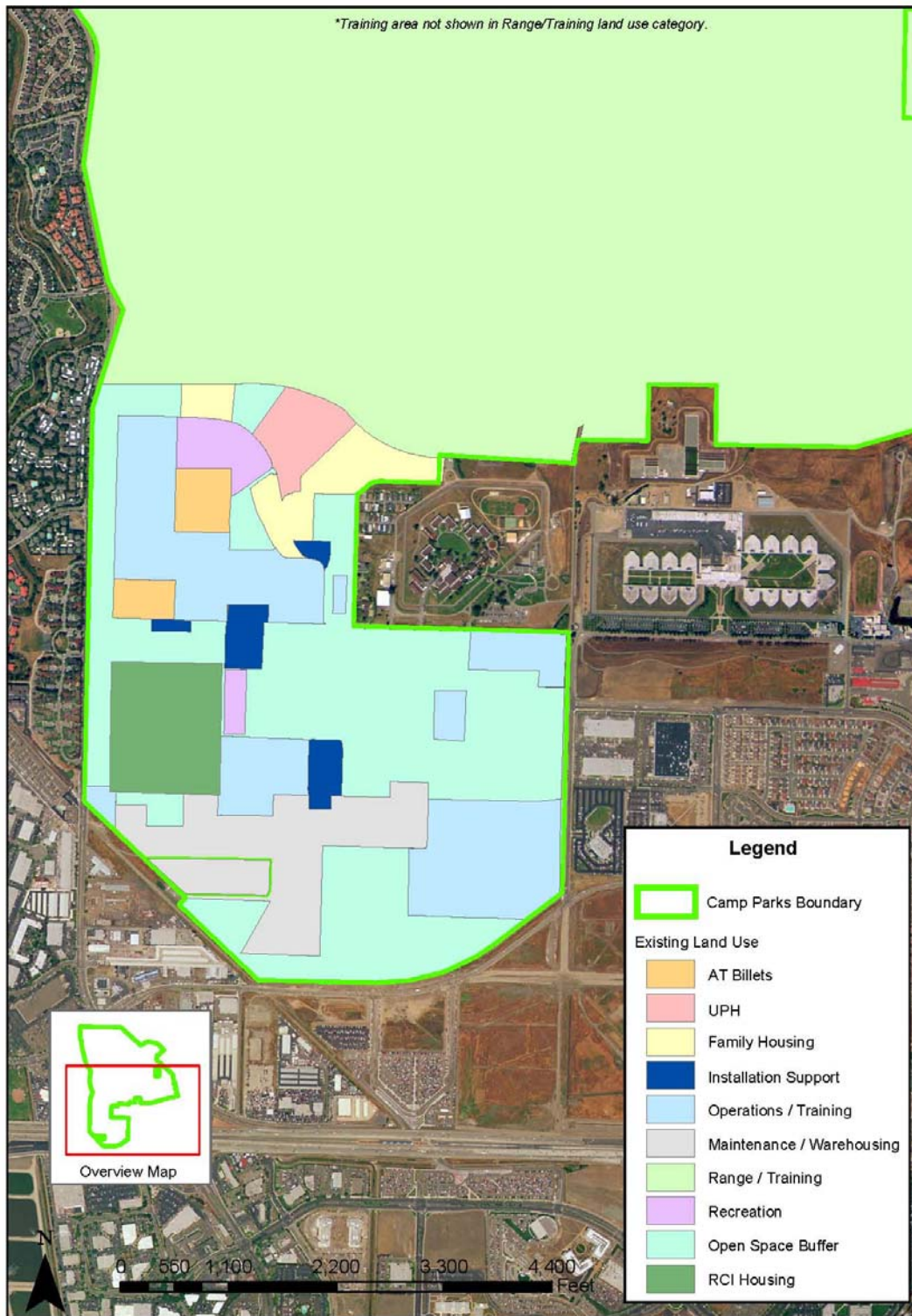


**Figure 3–15. Land Uses Proposed by Local Jurisdictions in the Vicinity of Camp Parks<sup>22</sup>**



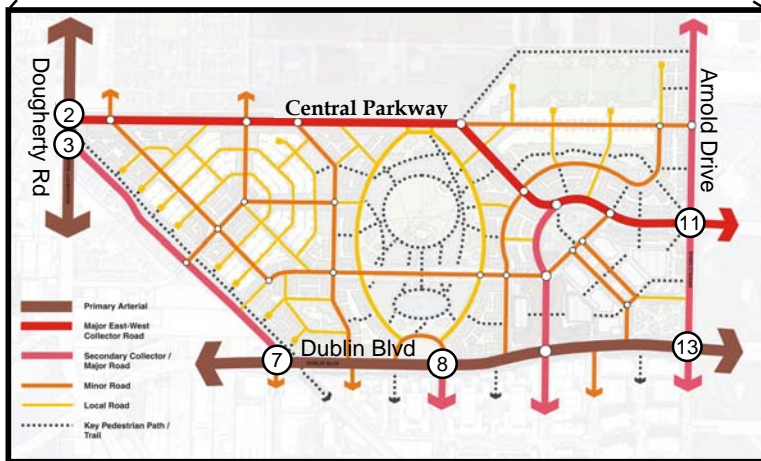
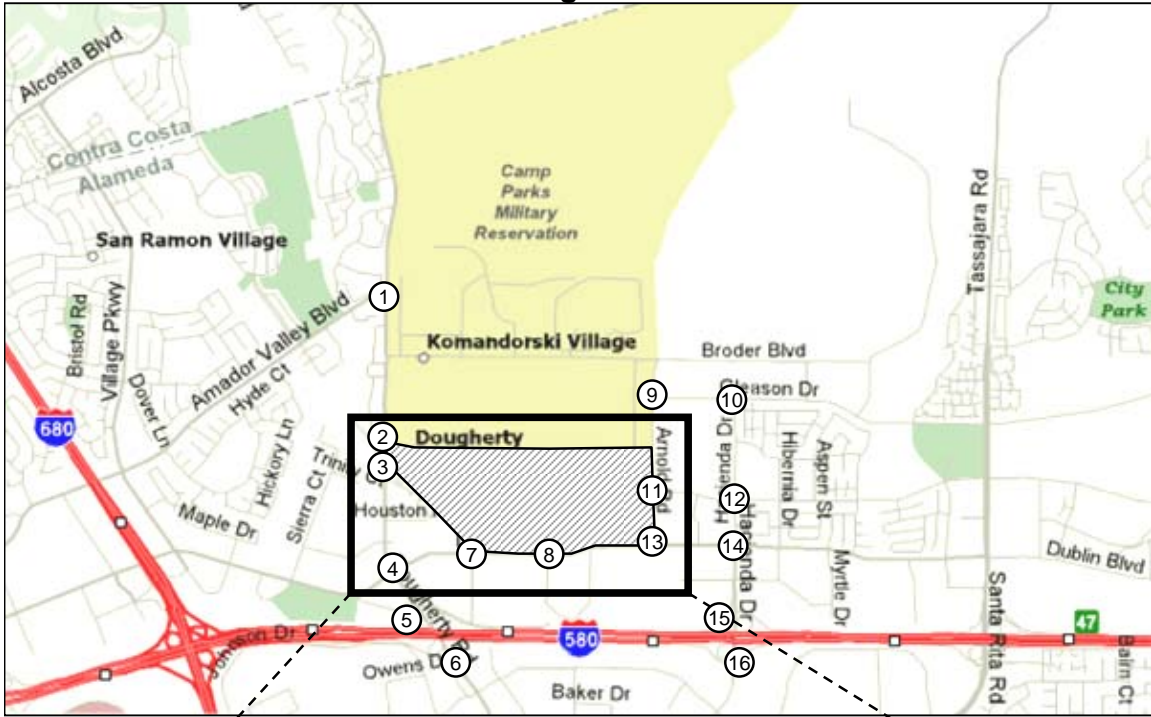
<sup>22</sup> Source: City of San Ramon 2005; City of Dublin 1992, 1994a, 1994b; Contra Costa County 1991.

Figure 3–16. Existing Camp Parks Land Uses<sup>23</sup>



<sup>23</sup> Source: *Camp Parks 2002-2005*, Nakata 2002.

**Figure 3–17. Street Network in Central Dublin and Proposed Dublin Crossing Streets<sup>24</sup>**



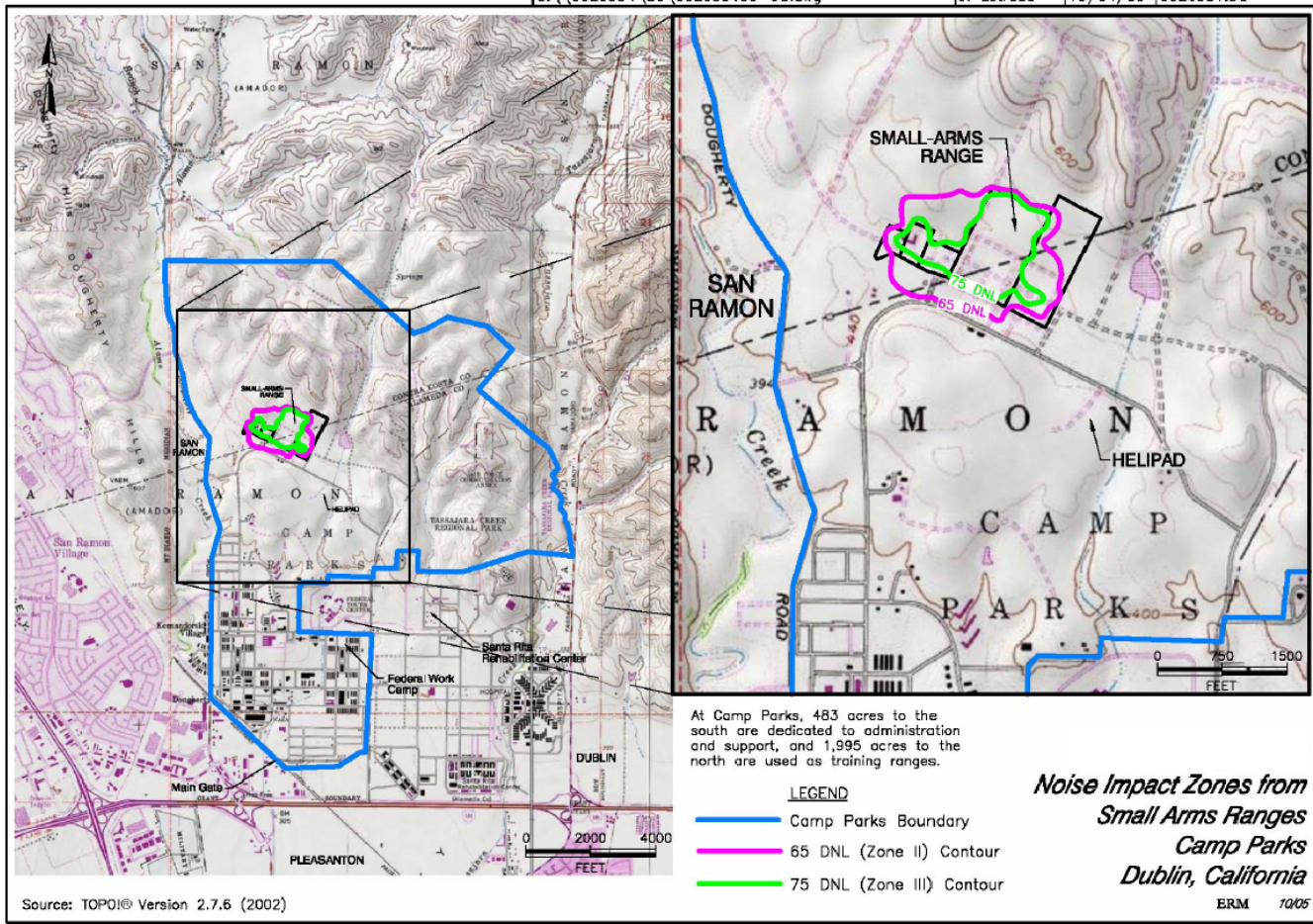
**Intersections Legend**

- |   |                                     |
|---|-------------------------------------|
| 1. Dougherty Road/Amador Valley Boulevard     | 9. Arnold Road/Gleason Drive        |
| 2. Dougherty Road/Central Parkway (extension) | 10. Hacienda Drive/Gleason Drive    |
| 3. Dougherty Road/Scarlett Drive (extension)  | 11. Arnold Road/Central Parkway     |
| 4. Dougherty Road/Dublin Boulevard            | 12. Hacienda Drive/Central Parkway  |
| 5. Dougherty Road/I-580 WB ramp               | 13. Dublin Boulevard/Arnold Road    |
| 6. Hopyard Road/I-580 EB ramp                 | 14. Dublin Boulevard/Hacienda Drive |
| 7. Dublin Blvd/Scarlett Drive                 | 15. Hacienda Drive/I-580 WB ramp    |
| 8. Dublin Boulevard/Iron Horse Parkway        | 16. Hacienda Drive/I-580 EB ramp    |

<sup>24</sup> Source: Mapquest 2005.

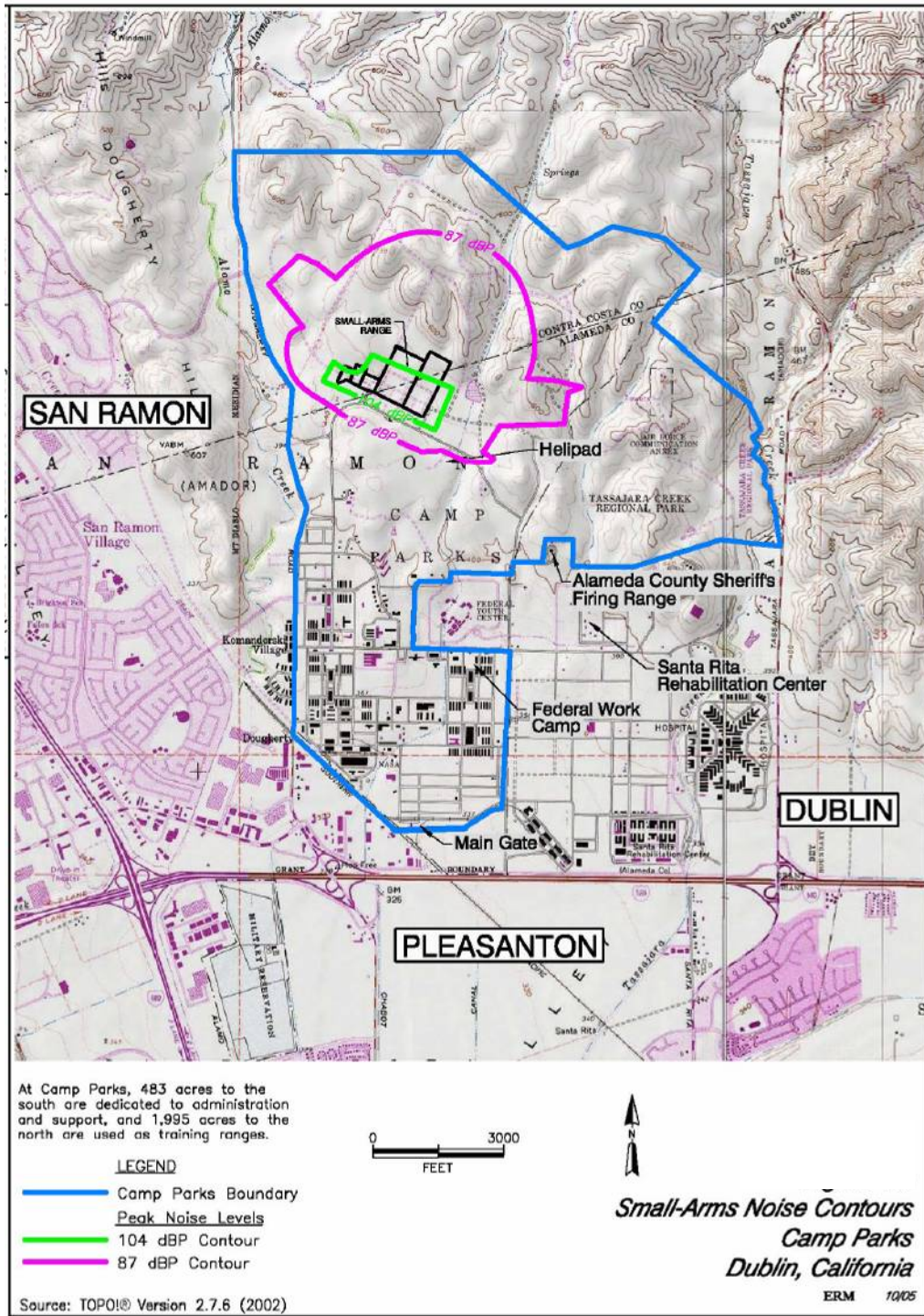


Figure 3-18. Camp Parks Day-Night Noise Level (DNL) Contours<sup>25</sup>



<sup>25</sup> Source: ERM 2005. The ongoing development north and east of Camp Parks (Figure 1-1) is further from the noise contours than the developments shown to the west.

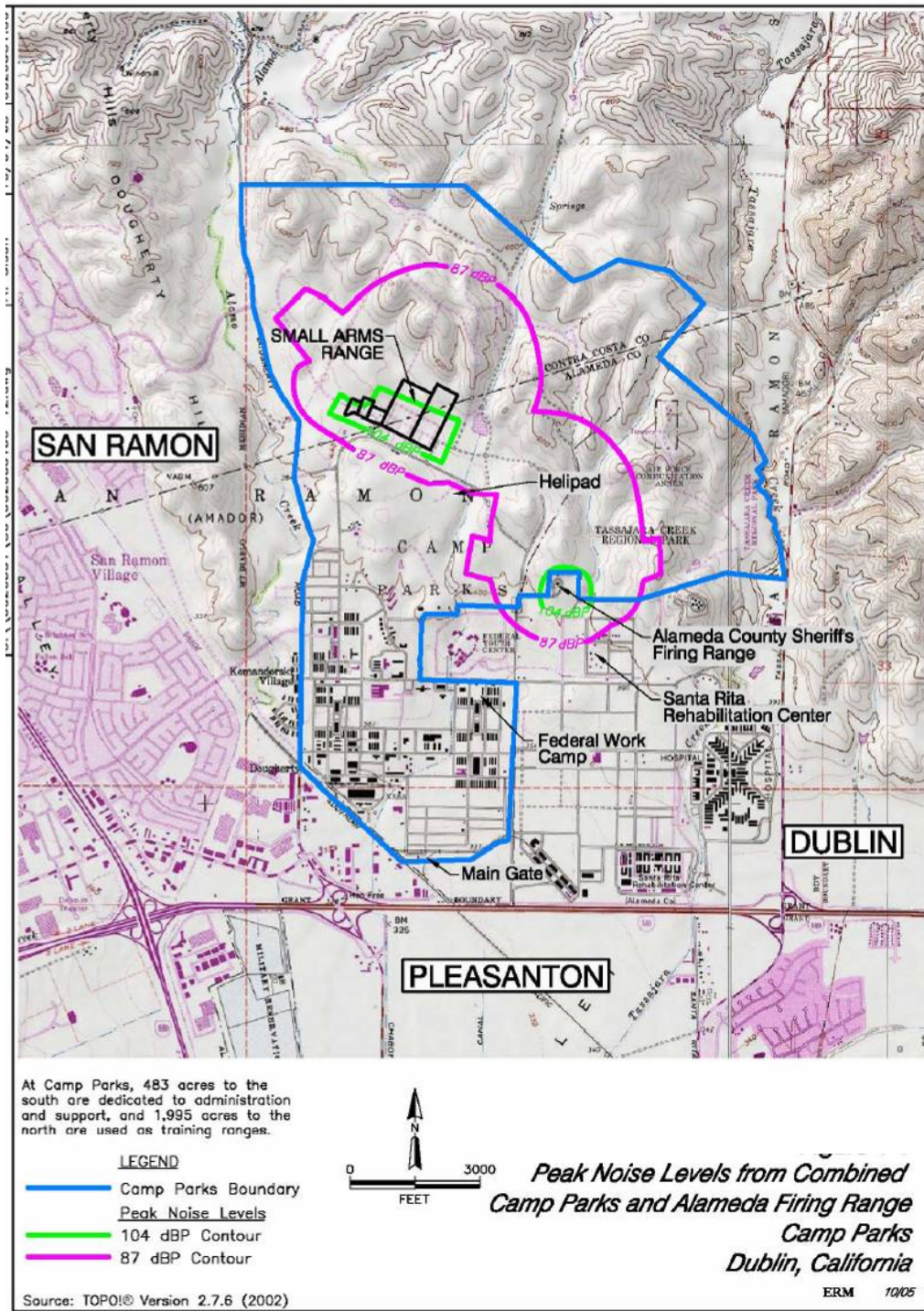
Figure 3–19a. Camp Parks Peak Noise Values<sup>26</sup>



<sup>26</sup> Source: ERM 2005.



Figure 3–19b. Camp Parks Peak Noise Values in Relation to Adjacent Uses<sup>27</sup>



<sup>27</sup> Source: ERM 2005.

**Figure 3–20. Views of the Northern Cantonment Area from Arnold Road<sup>28</sup>**



**Figure 3–21. Views of the Southern Cantonment Area from Dougherty Road near Dublin Boulevard<sup>27</sup>**



<sup>28</sup> Photos taken by Booz Allen in 2004.



**Figure 3–22. Views of the AT Billets in the Northern Cantonment Area from Dougherty Road<sup>27</sup>**



**Figure 3–23. Views of the Rappel Tower in the Training Area from Dougherty Road<sup>27</sup>**



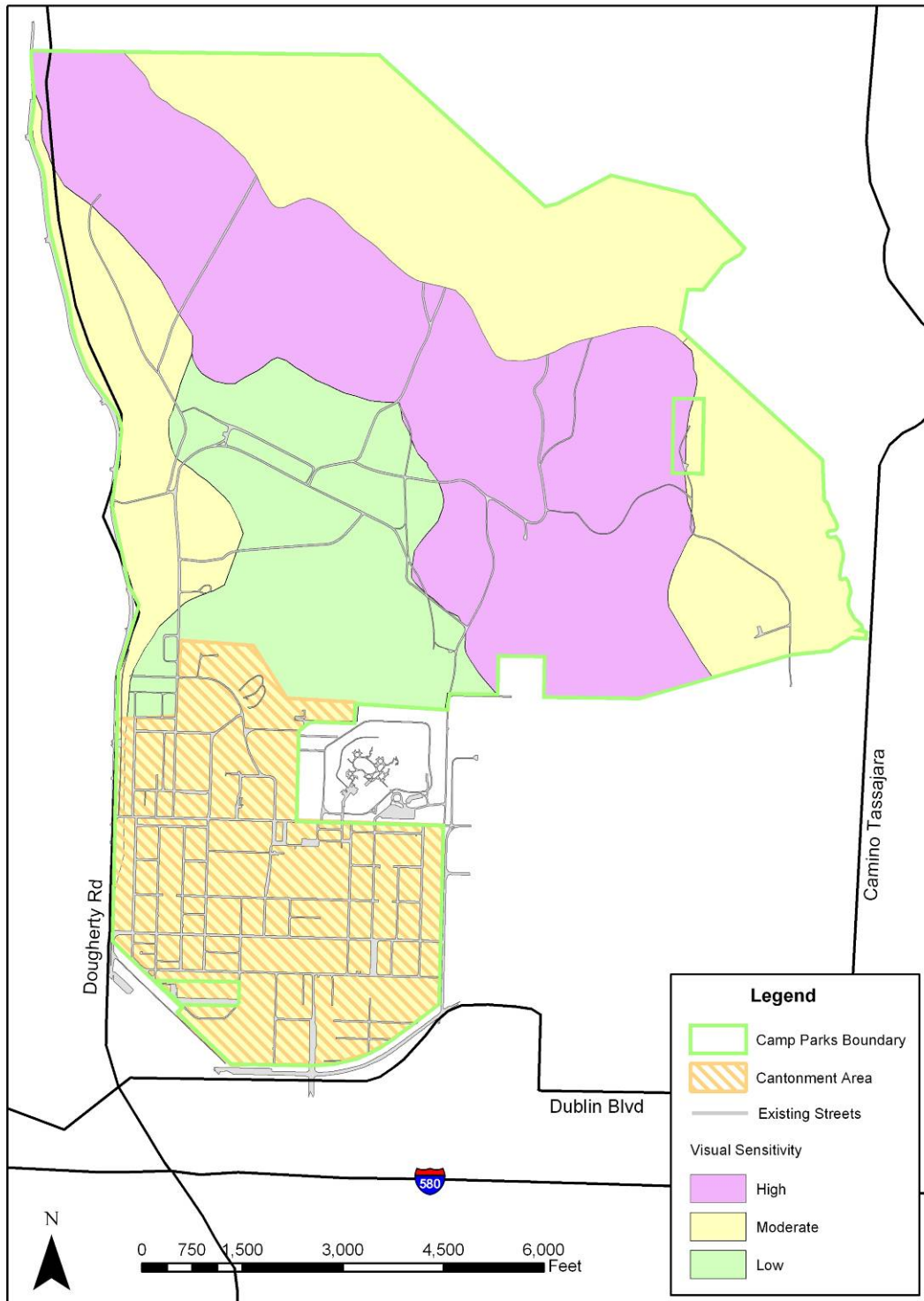
**Figure 3–24. Views of the Training Area toward the South Southwest, Dougherty Road, and the Northern Cantonment Area from Victory Loop<sup>27</sup>**



**Figure 3–25. Views of the North Boundary of the Training Area toward the West from North of North Cromwell Avenue<sup>27</sup>**



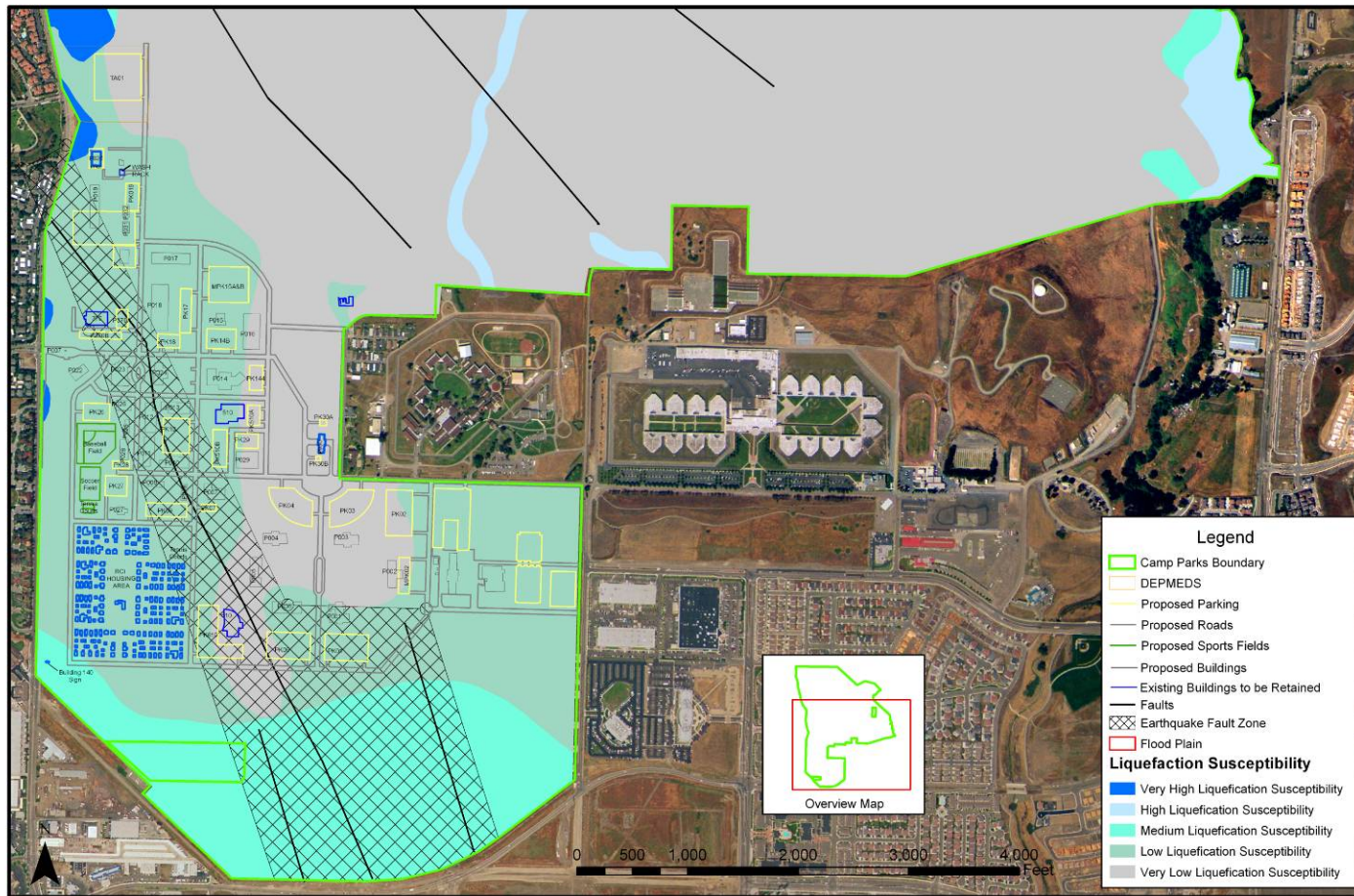
Figure 3–26. Camp Parks Visual Sensitivity Categories<sup>29</sup>



<sup>29</sup> Source: *Camp Parks 2002-2005*, Nakata 2002.



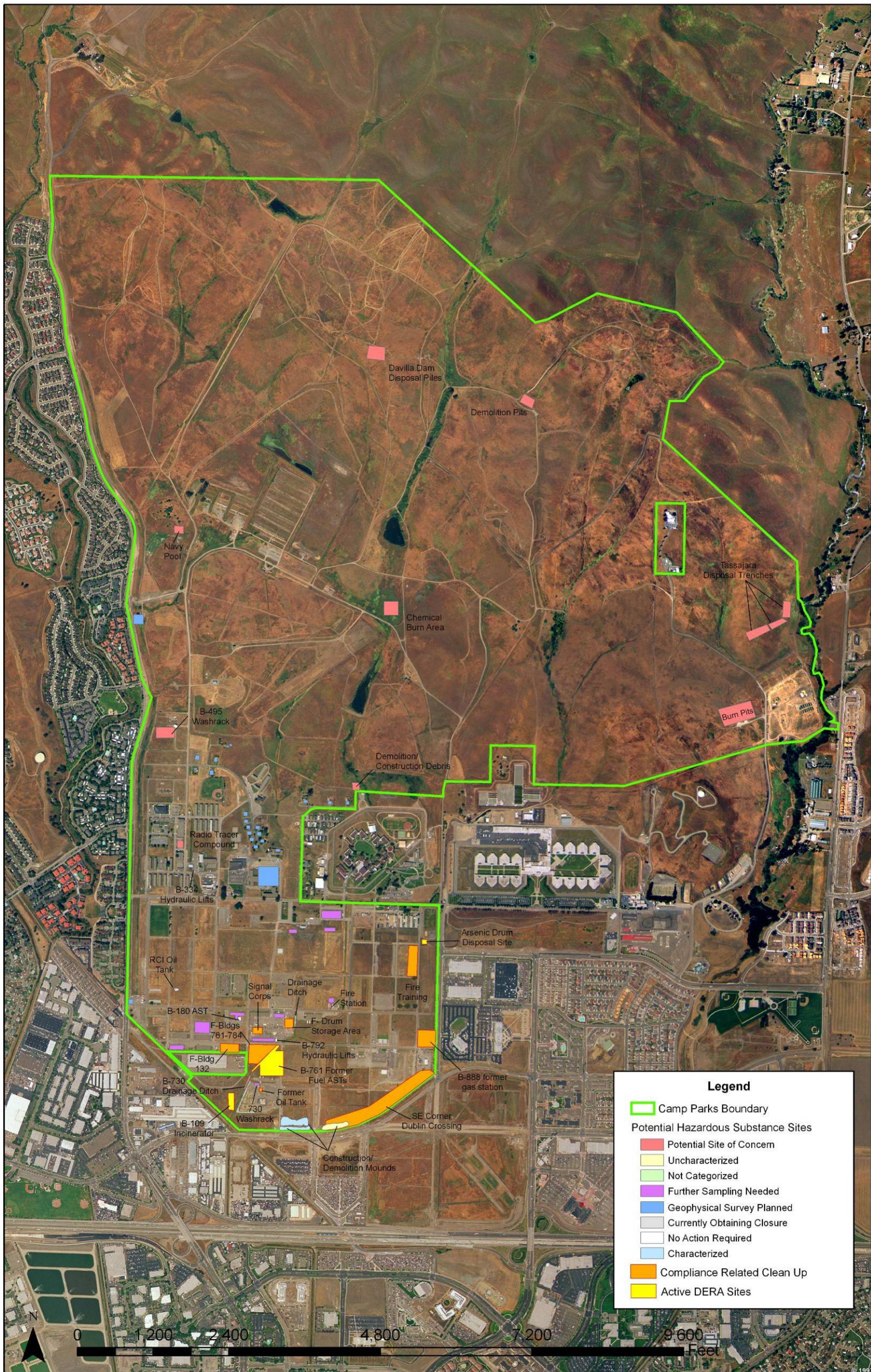
Figure 4–1. Ground Rupture Hazard Zones at Camp Parks<sup>30</sup>



<sup>30</sup> Source: Camp Parks 2002-2005, USGS 2005.



Figure 4-2. Hazardous Substance Sites at Camp Parks<sup>31</sup>



<sup>31</sup> Source: Camp Parks 2002-2005.



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## **APPENDIX C: SCOPING AND PUBLIC COMMENTS**

**Introduction**

**Scoping Meetings**

**Draft EIS Availability and Public Comment Period**

**Discussion and Conclusions**

**List of Tables**

**C-1: Notice of Intent**

**C-2: Legal Notices**

**C-3: Letters of Invitation**

**C-4: Press Release**

**C-5: Project Description Handouts**

**C-6: Contact Information Handout**

**C-7: Scoping Meeting Contacts**

**C-8: Notice of Availability**

**C-9: DEIS Delivery Letters**

**C-10: Public Meeting Sign-In Sheet**

**C-11: Draft EIS Comments**

**C-12: Draft EIS Comment Responses**

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**C-1: NOTICE OF INTENT**

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## **INTRODUCTION**

As announced in the Notice of Intent published in the Federal Register on November 18, 2003 (Appendix C-1), Camp Parks, formerly known as Parks Reserve Forces Training Area (PRFTA), has prepared an EIS on a Master Plan for installation redevelopment. As part of complying with the National Environmental Policy Act (NEPA) for this EIS, two public scoping meetings were held on 9 and 10 December 2003. The Notice of Availability (NOA) for the Draft EIS was published in the Federal Register on June 1, 2007. The public comment period for the Draft EIS was from June 1, 2007 to July 16, 2007. A public meeting for the Draft EIS was held on June 26, 2007. A total of seven comment were received during the public comment period.

### **Scoping Meetings**

The scoping meetings were announced in the Tri-Valley Herald legal notices (Appendix C-2) between November 23, 2003 and December 10, 2003. On 21 November 2003, individual letters were also mailed to 69 interested parties (agencies and individuals) to invite them to the scoping meetings (Appendix C-3). In addition to the legal notice, a press release (Appendix C-4) was sent to the Tri-Valley Herald and Contra Costa Times for release on the weekend preceding the scoping meetings.

The two scoping meetings for the EIS on the 2004 Updated Master Plan were held in December 2003. The scoping meeting on December 9, 2003 was held in the cafeteria of Dublin High School between 7:00 and 9:00 pm. The scoping meeting on December 10, 2003 was held in Building 620 at Camp Parks, Dublin, California, between 7:00 and 9:00 pm.

At each meeting, a sign-in sheet was placed near the door and attendees were personally invited to provide their names and contact information as they entered. At that time, they were provided with a handout about the proposed project (Appendix C-5) that included a map of Camp Parks and methods to obtain further information or provide further input (Appendix C-6). At each meeting, a series of 12 posters was displayed around the room. These posters consisted of the following information pertinent to Camp Parks: (1) an aerial photograph showing the roads on and adjacent to the installation; (2) a map of the facilities and designated training areas; (3) the land use areas proposed by the Master Plan; (4) the buildings and their locations proposed by the Master Plan; (5) renderings of the types of houses envisioned within the new family housing area; (6) the location of Residential Community and Army National Guard development parcels; (7) various alternative configurations considered (including the existing situation) before selecting the configuration presented as the proposed action; (8) tabular data on projected levels of service with and without the proposed action at key intersections; (9) key physical resources at the installation; (10) key biological resources at the installation; (11) a description of ongoing environmental management programs; and (12) a description of ongoing recycling programs at the installation.

Numerous personnel knowledgeable about Camp Parks and its resources were available to answer questions and hear comments from meeting attendees. Thirty-one people attended the meeting on December 9th where one comment was received; ten people attended the meeting on December 10th where two comments were received. Table C-1 provides additional information about these meetings. Attendees at the meetings were generally interested in what was happening at Camp Parks, but expressed few concerns. Installation tenants asked detailed questions regarding redevelopment activities and their real property interests at the December 10, 2003 meeting.

#### **Draft EIS Availability and Public Comment Period**

A hard copy of the Draft EIS was placed on file at the Alameda county Library – Dublin Branch on May 16, 2007. Letters announcing the Draft EIS with an electronic copy enclosed were sent to members of the public and various regulatory agencies between May 18, 2007 and May 21, 2007 (Appendix C-9). Five hard copies of the Draft EIS were sent to EPA on May 22, 2007 (Appendix C-9). The NOA was published in the Federal Register on June 1, 2007 (Appendix C-8). The publication of the NOA commenced the official public comment period that extended until July 16, 2007.

A public meeting for the Draft EIS was held on June 26, 2007 from 7 p.m. to 9 p.m. at Dougherty Elementary School in Dublin. The meeting was announced in the Contra Costa Times and the Tri-Valley Herald from June 8, 2007 to June 10, 2007 (Appendix C-2). The meeting was also announced in the letters that were sent announcing the availability of the Draft EIS.

At the meeting, a sign-in sheet was placed near the door and attendees were personally invited to provide their names and contact information as they entered. At that time, they were provided with a handout about the proposed project (Appendix C-5) that included a description of the proposed action and environment consequences the action as determined in the Draft EIS. A series of posters were displayed around the room providing more information about Camp Parks and figures contained in the Draft EIS. Numerous personnel knowledgeable about Camp Parks and its resources were available to answer questions and hear comments from meeting attendees. Seven people attended the meeting. Attendees at the meeting were generally interested in what was happening at Camp Parks, but expressed few concerns.

During the public comment period seven written comments were received from various agencies. Appendix C-11 contains copies of all written comments and Appendix C-12 details the response to those comments.



## Discussion and Conclusions

Despite adequate notification, the public exhibited little interest in the redevelopment of Camp Parks during scoping. Based on comments heard at the scoping and public meetings, there appear to be several factors contributing to this low interest:

- ❑ There seems to be public acceptance of Camp Parks and little interest in what the military does on its own land.
- ❑ Redevelopment of the Camp Parks facilities, most of which have outlived their intended life span, would overall be a benefit to the community, even though few of these facilities are readily visible from the road because the Cantonment Area is flat.
- ❑ Potential redevelopment of Camp Parks is not a new consideration to the local populace and the public may have become apathetic because past redevelopment announcements were never implemented.
- ❑ Information made available to the public about the configuration of Dublin Crossing and the retail/residential mix and type of residential housing that is planned for the site was rudimentary (because these details are still being negotiated with the City of Dublin). Once more details about the Dublin Crossing development become available, public interest may well intensify and concerns over impacts to local resources may develop.

**Table C-1. Summary of Scoping Meetings for the Environmental Impact Statement of the Master Planned Redevelopment of Camp Parks**

**Dec 9, 2003**

<b>Date:</b>	December 9, 2003
<b>Time:</b>	7 to 9 pm
<b>Where:</b>	Dublin Public High School Cafeteria
<b>Number of Attendees:</b>	31
<b>Types of Attendees:</b>	Residents, newspaper reporters, and representatives from Parks, City of Dublin, Tri Valley Babe Ruth (baseball club that uses field at Parks), etc.
<b>Types of Comments/Questions:</b>	Request to be on the mailing list and to receive updated project maps when available (1 comment).
<b>Next Steps:</b>	<ul style="list-style-type: none"> <li>• Ongoing release of information online and to mailing list as any substantive project developments occur.</li> <li>• Preparation of Draft EIS and its release for public comment.</li> </ul>

**Dec 10, 2003**

<b>Date:</b>	December 10, 2003
<b>Time:</b>	7 to 9 pm
<b>Where:</b>	Camp Parks, Bldg. 620
<b>Number of Attendees:</b>	10
<b>Types of Attendees:</b>	Representatives from Camp Parks, NASA, the Alameda County Planning Dept, Dublin Ranch HOA, DSRSD, etc.
<b>Types of Comments/Questions:</b>	<p>Request to be kept informed of upcoming meetings and releases of documents (1 comment).</p> <p>Request for further coordination of DSRSD maintenance yard location with DSRSD staff (1 comment).</p>
<b>Next Steps:</b>	<ul style="list-style-type: none"> <li>• Ongoing release of information online and to mailing list as any substantive project developments occur.</li> <li>• Preparation of Draft EIS and its release for public comment.</li> </ul>

## RECORD ACCESS PROCEDURES:

under the RPX program. These actions have the potential to significantly affect certain natural, economic, social, and cultural resources in and adjacent to Parks RFTA. The EIS will evaluate the environmental impacts associated with the implementation of the RPMP/FPX and other alternatives, while also developing mitigation measures when appropriate.

**ADDRESSES:** Interested parties desiring additional information regarding this proposed project or to be placed on a project information mailing list can contact: Installation Management Agency—Army Reserve Division (SFIM—AR/Mr. Borchardt), 1401 Deshler Street, Fort McPherson, Georgia 30330–2000.

**FOR FURTHER INFORMATION CONTACT:** Installation Management Agency—Army Reserve Division (SFIM—AR/Mr. Borchardt), 1401 Deshler Street, Fort McPherson, Georgia 30330–2000 or by sending electronic mail to [david.borchardt.JMWaller@usarc-emh2.army.mil](mailto:david.borchardt.JMWaller@usarc-emh2.army.mil).

**SUPPLEMENTARY INFORMATION:** The strategic location of the Parks RFTA in northern California makes it the most accessible and economic training resource for over 250 Reserve component units supporting over 20,000 Reservists. The installation supports combined training space and facilities for the Armed Forces, and other Federal and local agencies in the north central part of California. The IMA—ARD has prepared an RPMP that proposed a program for revitalizing the installation infrastructure and accelerating facility replacements.

The RPMP for Parks RFTA was completed in November 2002. The RPMP proposes approximately 1.3 million square feet of new buildings/structures and approximately 370,000 square feet of parking area. The majority of the existing structures on Parks RFTA were intended to be temporary and are inadequate for today's military personnel and lifestyle. The RPMP proposes the modernization of facilities to meet the troop training requirements and amenities that are consistent to the private sector.

Alternatives to be considered include (1) no action, (2) incremental modernization utilizing existing cantonment area, and (3) accelerated modernization in a redeveloped compacted cantonment area. These alternatives will be refined and other alternatives may be developed further during the preparation of the EIS as a result of public input and environmental analysis. The study area for the environmental analysis will be

the Cantonment Area and a small portion of the Training Area of Parks RFTA and the surrounding community.

**Issues:** Parks RFTA contains approximately 2,500 acres of which approximately 500 acres are located in the Cantonment Area. The majority of the RPMP involves the redevelopment of the Cantonment area. The EIS will analyze potential impacts to resources, which are expected to include natural resources, cultural resources, archaeological resources, human health and safety, socioeconomic, land use changes, air/noise/traffic impacts, and other impacts that will be identified through the scoping process and other analysis in the EIS.

**Scoping:** A public scoping meeting will be held in close proximity to Parks RFTA. The date and time of these meetings will be announced in the general media and will be at times and locations convenient to the public. A scoping letter will be sent to interested organizations, individuals, Federal, state, and local agencies inviting attendance. To be considered in the EIS, comments and suggestions should be received no later than 15 days following the public scoping meeting.

Dated: November 7, 2003.

**Raymond J. Fatz,**  
Deputy Assistant Secretary of the Army,  
(Environmental, Safety and Occupational Health) OASA(I&E).

[FR Doc. 03–28723 Filed 11–17–03; 8:45 am]

**BILLING CODE 3710–08–M**

## Department of the Army

**Notice of Intent To Prepare an Environmental Impact Statement (EIS) for the Real Property Master Plan (RPMP) and Real Property Exchange (RPX) for the Parks Reserve Forces Training area (RFTA), Dublin, CA**

**AGENCY:** Department of the Army, DoD.

**ACTION:** Notice of intent.

**SUMMARY:** The U.S. Army's Installation Management Agency-Army Reserve Division (IMA—ARD) and Parks RFTA intend to prepare an EIS in support of the installation's RPMP and RPX. The RPMP presents a plan for rapid redevelopment of the cantonment area of Parks RFTA, with 182 acres of the current cantonment area being transferred out of Federal ownership

## DEPARTMENT OF DEFENSE

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**C-2: LEGAL NOTICES**

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PUBLIC NOTICE: The Installation Management Agency-Army Reserve Division (IMA-ARD) and Parks Reserve Forces Training Area (RFTA) have scheduled public scoping meetings to receive comments on a **proposed plan to redevelop Parks RFTA's Cantonment Area (the developed area)**. Pursuant to the National Environmental Policy Act (NEPA), an Environmental Impact Statement (EIS) will be prepared to evaluate the Parks RFTA Master Plan and Land Exchange.

The redevelopment proposal, which is detailed in a 2003 Master Plan, would exchange approximately 182 acres at the southern end of the Cantonment Area for the reconstruction of facilities in the remaining Cantonment Area. It is proposed that the 182 acres be transferred out of Federal ownership into the private sector.

All interested parties are encouraged to attend meetings scheduled for:

**December 9, 7:00 to 9:00 pm, in the Dublin High School cafeteria and  
December 10, 7:00 to 9:00 pm in Building 620 at Camp Parks.**

Dublin High School is located at 8151 Village Parkway, Dublin, California, which is between Dougherty Road and I 680 and north of both Dublin Boulevard and Amador Valley Boulevard. Parks RFTA, Dublin, California, is on Camp Parks Boulevard and just opposite the BART Station on Dublin Boulevard. Directions to Building 620, on Fifth Street, can be obtained from the guards at the Camp Parks entrance gate.

For further information please contact:

Mr. Don Sundius  
Public Affairs Officer  
Parks Reserve Forces Training Area  
Building 790, Fifth Street  
RAFTA  
Dublin, California 94568  
Phone: 925-875-4636  
don.sundius.calidad@usarc-emh2.army.mil

**PUBLIC NOTICE:** The Installation Management Command-Army Reserve Office (IMCOM-ARO) and U.S. Army Combat Support Training Center (CSTC) have released a Draft Environmental Impact Statement (EIS) on a proposed Master Plan to redevelop the Cantonment Area (the developed area) at Camp Parks in Dublin, CA for public review and comment. The EIS was prepared pursuant to the National Environmental Policy Act (NEPA) and 32 CFR Part 651 (Environmental Analysis of Army Actions).

The Preferred Alternative includes redevelopment of the Cantonment Area in accordance with the proposed Master Plan. The redevelopment also includes the exchange of approximately 180 acres at the southern end of the Cantonment Area from Federal to private ownership within the City of Dublin for development as "Dublin Crossing." It is anticipated that Dublin Crossing would be developed into high-density residential or mixed use and would be subject to the City's zoning, permitting, and planning processes. In return, Camp Parks would receive new installation facilities at a value commensurate with the value of the exchanged land.

The 45-day public comment period will end on July 16, 2007. The Draft EIS is available for review at the following locations: the Dublin Library located at 200 Civic Plaza, Dublin, CA 94568 or electronically at <http://www.usarc.army.mil/cstc/sites/directorates/pw.asp> (click Environmental at Camp Parks tab). Comments, questions, or requests for copies of the Draft EIS may be directed to Ms. Michelle Santos, Attn: Environmental Department, U.S. Army Combat Support Training Center, Camp Parks, 791 5th Street, Camp Parks, CA 94568-5201, phone: 925-875-4269, e-mail: [michelle.santos@usar.army.mil](mailto:michelle.santos@usar.army.mil).

All interested parties are encouraged to attend the public meeting scheduled for:

June 26, 2007 from 7 P.M. to 9 P.M. at Dougherty Elementary School

Dougherty Elementary School is located at 5301 Hibernia Drive, Dublin, CA 94568.

Legal PT/VT #2391831  
Publish June 8, 9, 10, 2007



**THE VALLEY TIMES**  
(Incorporating The Pleasanton Times)  
**P.O. Box 607 – Pleasanton, Calif.**  
**94566**  
\*\*\*

**AFFIDAVIT OF PUBLICATION**

The undersigned declares and says:

That he is and was during all the times herein mentioned a citizen of the United States, over the age of 21 years, and neither party to nor in any way interested in the matter of action herein set forth, and is and was competent to be a witness in said matter of action.

That he is now and was at all times mentioned the Publisher/Legal Clerk/Legal Coordinator of THE VALLEY TIMES, incorporating the Pleasanton Times and is now, and was all the times therein mentioned a newspaper of general circulation printed and published in the City of Pleasanton, Township of Pleasanton, County of Alameda, State of California, and as such has now at all times had charge of all legal notices and advertisements in said newspaper; and that said THE VALLEY TIMES, incorporating The Pleasanton Times is now and was at all times herein mentioned a newspaper of general circulation as that term is defined by Section 6040.5 of the Government code, and as provided by said Section is published for dissemination of local and telegraphic news and intelligence of general character, having a bonafide subscription list of paying subscribers, and is not devoted to the interests or published for the entertainment or instruction of a particular class, profession, trade, calling, race or denomination, or for any number of such classes, professions, trades, callings races, or denominations; that all of said times said newspaper has been established, printed, and published at regular intervals in said township, county, and state, for more than a year preceding the date of the first publication of the notice mentioned; the said notice was set in type not smaller than nonpariel, and was preceded with words in blackface type not smaller than nonpariel, describing or expressing in general terms the purport and character of the notice intended to be given.

That the Public Notice a copy of which is attached hereto, was published in said newspaper, The Valley Times (incorporating The Pleasanton Times) on the

June 8, 9, 10,

all in the year of 2007

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

.....  
Signature



Executed at Walnut Creek, California.  
Date: June 13, 2007

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**C-3: LETTERS OF INVITATION**

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**DEPARTMENT OF THE ARMY**

**US ARMY GARRISON WEST COAST (Provisional)  
790 US ARMY  
DUBLIN CALIFORNIA 94568-5201**

November 20, 2003

Office of the Commander

Address  
Address  
Address  
Address  
Address

Dear Sir or Madam:

The Installation Management Agency - Army Reserve Division (IMA-ARD) and the Camp Parks Training Site have prepared a 2003 Master Plan to guide the redevelopment of the Parks Cantonment Area in Dublin, California. This 2003 Master Plan will be the Proposed Action analyzed in an Environmental Impact Statement (EIS) that will evaluate potential environmental impacts. This evaluation will be performed in accordance with the National Environmental Policy Act (NEPA) and Army Regulation 200-2.

The redevelopment proposal, which is detailed in the 2003 Master Plan, would exchange approximately 182 acres at the southern end of the Cantonment Area for reconstruction of facilities in the remaining Cantonment Area. It is expected that the 182 acres would be transferred out of Federal ownership.

IMA-ARD and the Camp Parks Training Site are requesting your participation in the public scoping meetings addressing the 2003 Camp Parks Master Plan EIS. If a representative from your agency/department cannot attend the scoping meetings, please send written comments and an indication of your desire to remain on the mailing list for this project to the address below within fifteen (15) days of the meeting dates.

Meetings are scheduled for:

**December 9, 7:00 to 9:00 pm, in the Dublin High School Cafeteria, 8151 Village Parkway, Dublin, California, and**

**December 10, 7:00 to 9:00 pm in Building 620 at Camp Parks, Dublin, California.**

Dublin High School, at 8151 Village Parkway, is between Alcosta Blvd. and Dublin Blvd. inside the city of Dublin. The entrance to Camp Parks is at the intersection of Camp Parks Boulevard with Dublin Boulevard, just opposite the Dublin BART Station.

For further information please contact:

Mr. Don Sundius, Public Affairs Officer  
Camp Parks Training Site  
790 US Army  
Dublin, California 94568-5201  
Phone: 925-875-4636  
don.sundius.calidad@usarc-emh2.army.mil

Please call if you have questions. We hope to see you on either December 9 or 10.

Sincerely,

A handwritten signature in dark ink, appearing to read "James H. Doty Jr.", with a horizontal line extending to the right.

James H. Doty Jr.  
Lieutenant Colonel, US Army  
Commander

Enclosure: Directions to Camp Parks bldg. 620

**Addressees For Letter of Invitation to December 9 and 10, 2003, Scoping Meetings for Environmental Impact Statement on Updated Master Plan for Camp Parks**

<b>Name</b>	<b>Organization</b>	<b>ADDR1</b>	<b>ADDR2</b>	<b>CITY</b>	<b>ST</b>	<b>ZIP</b>
Officer in Charge	CBMU 303, DET D, USNR (Seabees)	Camp Parks Box 6	790 US Army	Dublin	CA	94568-5201
Director	Camp Parks Communications Annex, USAF	Camp Parks Box 19	790 US Army	Dublin	CA	94568-5201
	Association of Bay Area Governments (ABAG)	PO Box 2050		Oakland	CA	94604-2050
	Bay Area Air Quality Management District	939 Ellis St		San Francisco	CA	94109
Dennis Barry	Contra Cost County	Community Development Department	651 Pine Street – 4th Floor – North Wing	Martinez	CA	94553
Rhodora Biagton	Dublin San Ramon Services District	7051 Dublin Blvd		Dublin	CA	94568-3080
David Borchardt	HQ U.S. Army Reserve Command	ATTN: AFRC-EN (Borchardt)	1401 Deshler Street SW	Fort McPherson,	GA	30330-2000
Megan Chen	Engineering & Environment, Inc.	Building 791 - ATTN: AFRC-FMC-ENV (Chen)	790 US Army	Dublin	CA	94568-5201
City Engineer	City of Dublin	P.O. Box 2340		Dublin	CA	94568-0233
City Engineer	City of Pleasanton	200 Old Bernal	P.O. Box 520	Pleasanton	CA	94566-0802
	Dublin Public Library	200 Civic Plaza		Dublin	CA	94568-2619
Barbara Duffy	Livermore Amador Valley Transit Authority (Wheels)		1362 Rutan Court, Suite 100	Livermore	CA	94551-7318
	East Bay Regional Parks District	2950 Peralta Oaks Court	P.O. Box 5381	Oakland	CA	94605-0381

**Addressees For Letter of Invitation to December 9 and 10, 2003, Scoping Meetings for Environmental Impact Statement on Updated Master Plan for Camp Parks**

<b>Name</b>	<b>Organization</b>	<b>ADDR1</b>	<b>ADDR2</b>	<b>CITY</b>	<b>ST</b>	<b>ZIP</b>
Terry Escarda	California EPA – Department of Toxic Substances Control	Office of Military Facilities – Northern California Operations	8800 Cal Center Drive	Sacramento	CA	95826-3200
	Immigration and Naturalization Service	ATTN: Facilities & Engineering	24000 Avila Road (ROENG)	Laguna Niguel	CA	92677-3400
David Farrel	Federal Activities Office	U.S. Environmental Protection Agency, Region IX	75 Hawthorne Street	San Francisco	CA	94105-3901
Mr. John Fenstermacher	Alameda County	Public Works Agency, Real Estate	399 Elmhurst Street	Hayward	CA	94544-1307
Calvin Fong	U.S. Corps of Engineers – San Francisco District	ATTN: Regulatory Branch – 8th Floor	333 Market Street	San Francisco	CA	94105-2197
Janice Gan	California Department of Fish and Game		P.O. BOX 850	Tracy	CA	95378-0850
Warden Schelia A. Clark	Federal Correcional Institute, Dublin		5701 Eighth Street	Dublin	CA	94568-3399
Mr. Steve Lockhart	Dublin Historical Preservation Association	4592 Pheasant Ct		Dublin	CA	94568-7518
	Land Services Division	Pacific Gas & Electric	3480 Buskirk Avenue, Suite 150	Pleasant Hill	CA	94523-4387
Chief Patrol Agent	Livermore Sector Headquarters	U.S. Border Patrol	6102 Ninth Street	Dublin	CA	94568-3312
	Livermore-Amador Valley Water Management Agency	7051 Dublin Blvd.	P.O. Box 2945	Dublin	CA	94568-0945
Linda J. Mahon, Test Coordinator	TRACOR Aerospace, Inc.	San Ramon Operations, Bollinger Canyon Rd	P.O. Box 196	San Ramon	CA	94583-0196
The Adjutant General	State of California Military Department	ATTN: CAFE-RP (MAJ Marlow)	P.O. Box 269101	Sacramento	CA	95826-9101
Dr. Knox Mellon	State Historic Preservation Officer	California Office of Historic	P.O. Box	Sacramento	CA	94296-



**Addressees For Letter of Invitation to December 9 and 10, 2003, Scoping Meetings for Environmental Impact Statement on Updated Master Plan for Camp Parks**

<b>Name</b>	<b>Organization</b>	<b>ADDR1</b>	<b>ADDR2</b>	<b>CITY</b>	<b>ST</b>	<b>ZIP</b>
		Preservation	942896			0001
Rafael Muniz, Project Director,	Residential Communities Initiatives	Clark Pinnacle, Bldg 1086	P.O. Box 10034	Fort Irwin	CA	92310- 0034
Commander	Naval and Marine Corps Reserve Center	2144 Clement Avenue		Alameda	CA	94501- 1486
Ms. Shirley Ng	Bay Area Rapid Transit District	1330 Broadway, 12th Floor		Oakland	CA	945612
Commander	Fort McCoy	ATTN: AFRC-FM-JA (Novotne)	100 East HQ Road	Fort McCoy	WI	54656- 5263
Eddie Peabody	Community Development Director	City of Dublin	P.O. Box 2340	Dublin	CA	94568- 0233
	Dublin San Ramon Services District	ATTN: Ken Peterson	7051 Dublin Blvd.	Dublin	CA	94568- 3080
	Public Works	City of San Ramon	2222 Camino Ramon	San Ramon	CA	94583- 1350
	Real Estate Division	SBC	401 Lennon Lane, Room 205	Walnut Creek	CA	94598
	CalTrans	ATTN: Right of Way Agent	P.O. Box 7791	San Francisco	CA	94120
Jean Roggenkamp	Bay Area Air Quality Management District	939 Ellis Street		San Francisco	CA	94109
	San Ramon Public Library		100 Montgomery Street	San Ramon	CA	94583- 4707
James Sorensen	Alameda County	Planning Department	399 Elmhurst - Room 136	Hayward	CA	94544
LTC Stratton	U.S. Army Corps of Engineers, Baltimore District	Realty Services Field Office CENAB-RE-RS	P.O. Box 1715	Baltimore	MD	21203- 1715
	Tri-Valley Babe Ruth		8686	Dublin	CA	94568-

**Addressees For Letter of Invitation to December 9 and 10, 2003, Scoping Meetings for Environmental Impact Statement on Updated Master Plan for Camp Parks**

<b>Name</b>	<b>Organization</b>	<b>ADDR1</b>	<b>ADDR2</b>	<b>CITY</b>	<b>ST</b>	<b>ZIP</b>
			Fenwick Way			3601
Wayne White	U.S. Fish and Wildlife Service	Sacramento Field Office	2800 Cottage Way, Suite W-2605	Sacramento	CA	95825
Carl Wilcox	California Department of Fish and Game, Region 3		P.O. BOX 47	Yountville	CA	94599
Phil Wong	Planning Department	City of San Ramon	2226 Camino Ramon	San Ramon	CA	94583
Bonnie Powers	Valley Spokesman Touring Club	P.O. Box 2630		Dublin	CA	94568
Richard Ambrose	City of Dublin	P.O. Box 2340		Dublin	CA	94568-0233
Diane Lowert	Parks & Community Services Director	City of Dublin	P.O. Box 2340	Dublin	CA	94568-0233
Commander	91st Division (Training Support)	ATTN: Engineer	790 US Army	Dublin	CA	94568-5201
Commander	104th Division (IT)	ATTN: Engineer	987 McClelland Road	Vancouver	WA	98661
Commander	Regional Training Site, Medical		790 US Army	Dublin	CA	94568-5201
Commander	Western Army Reserve Intelligence Support Center		790 US Army	Dublin	CA	94568-5201



## **DIRECTIONS TO PARKS RESERVE FORCES TRAINING AREA**



### **FROM SAN FRANCISCO AIRPORT (SFO) TO DUBLIN BLVD:**

- Exit airport and enter Highway (Hwy) 101 Southbound.
- Take Hwy-101 (South) approximately 7 miles to Hwy-92 Eastbound.
- Take Hwy-92 approximately 15 miles over the San Mateo Bridge.
- Enter Interstate (I)-880 Northbound (towards Oakland) and keep right.
- Exit from I-880 to I-238 Eastbound. Follow the “Stockton” signs.
- Take I-238 Eastbound to I-580 Eastbound.
- Take I-580 approximately 11 miles to Hacienda Blvd. Exit.
- Exit I-580 Eastbound at Hacienda Blvd. and turn left at the light.
- Go approximately 0.5 miles to Dublin Blvd and turn left at light.
- Go approximately 0.6 miles to Gate #1 at Camp Parks (on right across from Bart)

### **FROM OAKLAND AIRPORT (OAK) TO DUBLIN BLVD:**

- Exit airport and continue on 98<sup>th</sup> Avenue down through underpass to I-80 South (San Jose).
- Take the on-ramp to I-880 Southbound.
- Take I-880 approximately 4 miles to I-238 towards I-580/Stockton/Fresno.
- Take I-238 approximately 2 miles to I-580 East (I-238 becomes I-580 Eastbound).
- Take I-580 approximately 11 miles to Hacienda Blvd. Exit.
- Exit I-580 Eastbound at Hacienda Blvd. and turn left at the light.
- Go approximately 0.5 miles to Dublin Blvd and turn left at light.
- Go approximately 0.6 miles to Gate #1 at Camp Parks (on right across from Bart)

### **FROM DUBLIN BLVD TO BUILDING 620:**

- From Dublin Blvd. enter onto Camp Parks Blvd. at Gate #1.

- There is a Parks RFTA sign at the installation's entrance. The street to the left is DeMarcus Blvd and goes into the BART station.
- Turn right onto 4<sup>th</sup> Street at the yellow barricade, there is no street sign (Camp Parks Blvd ends at 4<sup>th</sup> Street).
- Make the first left onto Hutchins Avenue.
- Make the second left onto 6<sup>th</sup> Street.
- Building 620 is on the south side of 6th Street (approximately 0.2 miles, the first building on the left).



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
US ARMY COMBAT SUPPORT TRAINING CENTER  
US ARMY GARRISON CAMP PARKS  
790 5TH STREET  
CAMP PARKS, CA 94568-5201

MAY 16, 2007

IMSW-CST-PWE

Dear Sir or Madam:

The Installation Management Command – Army Reserve Office (IMCOM-ARO) and the U.S. Army Combat Support Training Center (CSTC) announce the availability of a Draft Environmental Impact Statement (EIS) on the Camp Parks Real Property Master Plan, Dublin, California.

The Preferred Alternative includes redevelopment of 487 acres in the cantonment area in accordance with the proposed Master Plan. The redevelopment also includes the exchange of approximately 180 acres at the southern end of the cantonment area from Federal to private ownership within the City of Dublin for development as "Dublin Crossing." It is anticipated that Dublin Crossing would be developed into high-density residential or mixed use and would be subject to the City's zoning, permitting, and planning processes. In return, Camp Parks would receive new installation facilities at a value commensurate with the value of the exchanged land. Any funds received for the 8.5-acre parcel owned by NASA with the exchange area may be used for construction of facilities or improvements at NASA-Ames Research Center, Moffett Field, California.


Enclosed with this letter is a copy of the Draft EIS and an information paper, "Master Planned Redevelopment at Camp Parks." Printed copies of the Draft EIS are available for review at the following locations: Alameda County Dublin Library, 200 Civic Plaza, Dublin, CA 94568. The Draft EIS may also be viewed on line at <http://www.usarc.army.mil/cstc>.

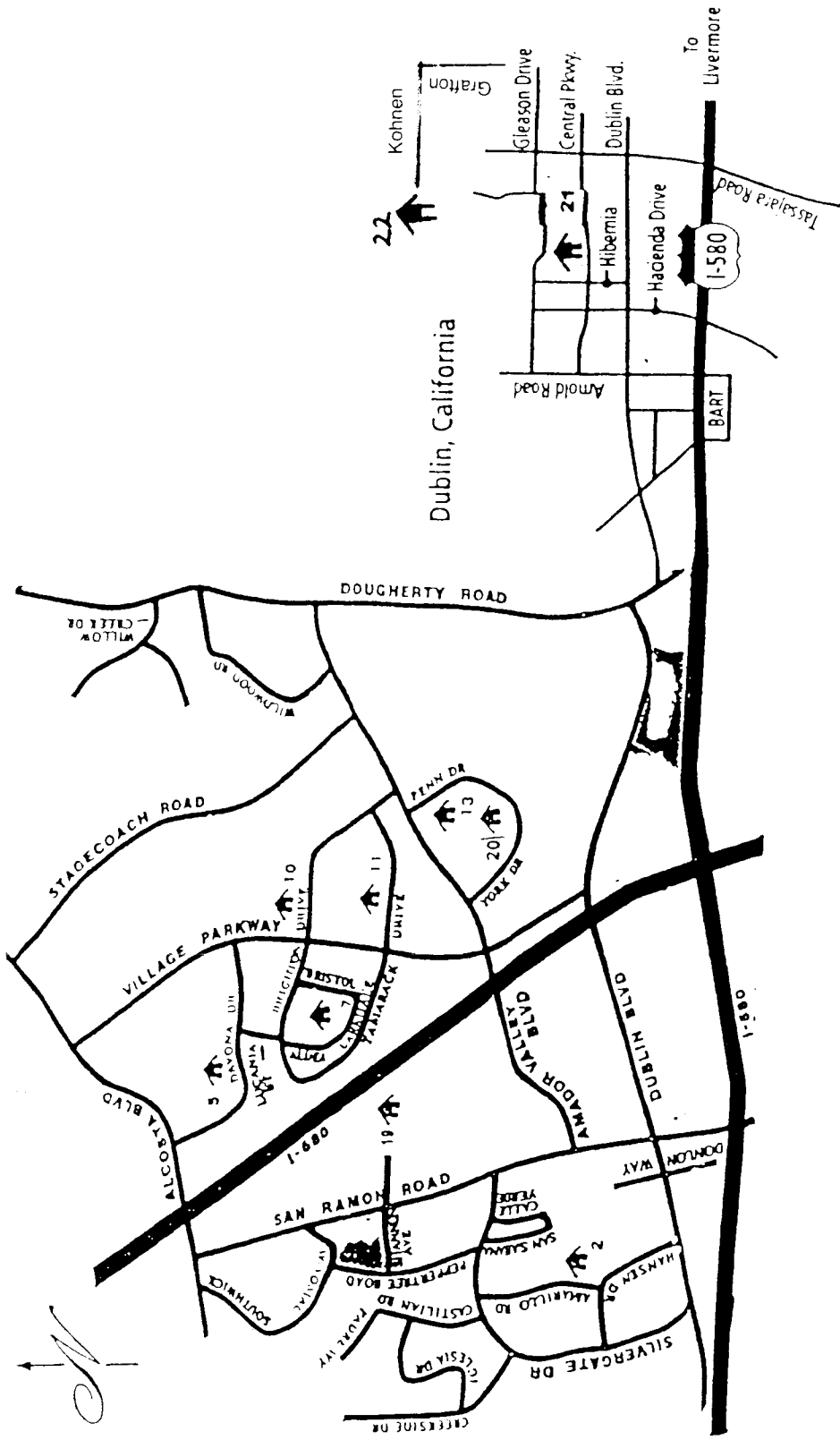
You are invited to submit written comments on the Draft EIS by mail, email, or facsimile at any time before the end of the 45-day public comment period. The dates of the public comment period will be announced in the local news media. The comments may be sent to: Gary Houston, Environmental Division Chief, U.S. Army, Combat Support Training Center (CSTC), 791 U.S. Army, Attn: IMWL-CST-P, Dublin, CA 94568-5201; phone (831) 386-2763; facsimile (831) 386-2787, or e-mail [public.comment@liggott-emh1.army.mil](mailto:public.comment@liggott-emh1.army.mil)

You are also invited to attend the public meeting on the Draft EIS which will occur on 26 June 2007, between 7:00 p.m. and 9:00 p.m. at Dougherty Elementary School, 5301 Hibernia Drive, Dublin, CA 94568.

Requests for copies of the Draft EIS may be directed to Ms. Amy Phillips, Public Affairs Officer, Department of the Army, Installation Management Command, Headquarters U.S. Army Combat Support Training Center, 790 Fifth Street, Camp Parks, California 94568-5201, phone: 925-875-4298, e-mail amy.phillips@usar.army.mil.

Sincerely,

  
Kevin R. Riedler  
Colonel, US Army  
Commanding



DUBLIN UNIFIED SCHOOL DISTRICT

- 2. Nielsen Elementary
- 5. Murray Elementary
- 7. District Office
- 10. Dublin High School
- 11. Frederiksen Elementary
- 13. Wells Middle School
- 19. Dublin Elementary
- 20. Valley High School
- 21. Dougherty Elementary
- 22. Fallon School (K-8)

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**C-4: PRESS RELEASE**

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## **PRESS RELEASE**

December 2, 2003

The U. S. Army's Installation Management Agency has informed Congress of its decision to prepare an Environmental Impact Statement at the Camp Parks Training Site, Dublin, CA, Headquarters of the West Coast Army Garrison (P). The Statement will analyze the impacts of the Real Property Master Plan and the 182 acre Real Property Exchange affecting the Dublin located Camp Parks Installation and the local surrounding communities.

The proposed action involves the implementation of the Master Plan, which includes approximately 1.3 million square feet of new buildings/structures and approximately 370,000 square feet of parking area. Under this redevelopment, approximately 182 acres, located in the southern portion of the cantonment area, would be exchanged outside of Federal ownership for like funds.

Camp Parks is strategically located in Dublin, making it the most accessible and economical training resource for over 250 Reserve component units supporting over 20,000 Reservists. The Installation also supports combined training space and facilities for the various Armed Forces and Federal and local agencies in the Greater San Francisco Bay area. The Master Plan was developed as a strategic long-range component training center for the 21<sup>st</sup> Century. Environmental cleanup, if necessary, will occur on the 182 acres before the property is released from Federal ownership.

The final Environmental Impact Statement will address the implementation of the Master Plan, the Real Property Exchange and any other issues relevant to the proposed project, including but not limited to, air resources, topography, geology, hydrology, vegetation, fish and wildlife, soils, socioeconomics, land use, transportation issues and visual resources. A decision will be made by the Installation Management Agency and Camp Parks, based on the development and results of the final Environmental Impact Statement and upon consideration of all relevant factors on how to provide for military training, readiness and facilities requirements while ensuring the sustained use of resources entrusted to the stewardship of the Army Reserves.

The public scoping meetings addressing the 2003 Camp Parks Master Plan Environmental Impact Statement are scheduled for:

**December 9, 7:00 to 9:00 pm, in the Dublin High School Cafeteria, 8151 Village Parkway, Dublin, California,  
And  
December 10, 7:00 to 9:00 pm in Building 620 at Camp Parks, Dublin, California.**

Don Sundius, PAO, Camp Parks, Dublin, CA

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**C-5: PROJECT DESCRIPTION HANDOUTS**

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# REDEVELOPMENT OF CAMP PARKS RESERVE FORCES TRAINING AREA



## SUMMARY

The Installation Management Agency - Army Reserve Division (IMA-ARD) and the Camp Parks Reserve Forces Training Area (PRFTA) prepared an **Updated Master Plan** in November 2002 to guide the redevelopment of the Parks Cantonment Area in Dublin, California. This Updated Master Plan was further revised through November 2003. The Updated Master Plan includes a Future Land Use Plan for the PRFTA Cantonment Area (the developed area), along with a proposal for exchanging approximately 182 acres at the southern end of the Cantonment Area for reconstruction of facilities in the remaining portion of the Cantonment Area. If the Updated Master Plan were to be implemented, this 182-acre parcel would be transferred out of Federal ownership.

Implementation of the Updated Master Plan will be the Proposed Action analyzed in an Environmental Impact Statement that will be prepared to evaluate the potential environmental impacts. This evaluation will be performed in accordance with the National Environmental Policy Act (NEPA) and Army Regulation 200-2.

## PURPOSE AND SCOPE OF THE UPDATED MASTER PLAN

The PRFTA Cantonment Area has many outdated facilities and requires redevelopment to fulfill its mandate and mission. To guide this redevelopment, the U.S. Army prepared an Updated Master Plan in November 2002 and revised it through November 2003. The Master Plan is a document that develops and describes an approach to modernize the PRFTA

Area, along with a small portion of the Training Area.

The three major objectives of the Updated Master Plan are:

- Establishing areas where specific types of land uses would occur at PRFTA through a Future Land Use Plan
- Defining specific square footage and numbers of buildings to be present in the final reconstruction of the Cantonment Area
- Transferring a 182-acre parcel within the Cantonment Area (182-RPX) out of Federal ownership in exchange for new facilities within the retained Cantonment Area.

Key aspects of the Future Land Use Plan are creating a defined campus area, incorporating family housing that is being reconstructed, consolidating similar land use areas, and arranging land use areas so that adjacent uses are compatible with each other.

The Updated Master Plan proposes that the 182-RPX parcel, called Dublin Crossing, would pass from Federal control to private control, and thus be subject to the City's zoning, permitting, and planning processes. It is anticipated that Dublin Crossing would be developed into high-density residential or mixed-use (residential and commercial). The parcel lies approximately south of 5<sup>th</sup> Street west of Hutchins Avenue, and south of 6<sup>th</sup> Street east of Hutchins Avenue. In return for the transfer, PRFTA would receive new facilities equal in value to the saleable value

of the 182-RPX parcel. The exchange of this land parcel for new facilities would enable PRFTA to rapidly upgrade the remaining portion of the Cantonment Area in accordance with the Updated Master Plan.

### **FEDERALLY REQUIRED ENVIRONMENTAL ASSESSMENTS**

Implementation of the Updated Master Plan would be considered a major Federal action, and such actions fall under the purview of NEPA. NEPA requires Federal agencies to integrate environmental values into their decision-making process by considering the impacts of their proposed actions and reasonable alternatives to those actions. To meet this requirement, Federal agencies must prepare either an Environmental Assessment (EA) or Environmental Impact Statement (EIS) to assess the impacts that are anticipated if the proposed action, or reasonable alternatives to it, were implemented.

In order to comply with NEPA, a Draft EA dated March 2003 was prepared for PRFTA to analyze the potential environmental impacts that could result from implementation of the Proposed Action (the November 2002 Updated Master Plan) and the other alternatives being considered. In this Draft EA, Slow Growth and No Action Alternatives were also developed and evaluated. Under the Slow Growth Alternative, the vision for PRFTA would be similar to the vision under the Proposed Action, but the land exchange would not occur. Considerably more land would be available within PRFTA, enabling a less dense campus. However, more time would be needed for implementation, since money would come from annual military budgets, and be applied toward planned facilities as it became available. The No Action Alternative assumes facilities would remain in their current condition, with gradual changes as opportunities for redevelopment of selected facilities became available.

The Draft EA found that the proposed action could have potentially significant impacts on air quality through increased emissions of carbon monoxide (CO), on Federally protected species should they be found in the Cantonment Area,

and on other special-status species that are found in the Cantonment Area. Habitat impacts would be primarily to wide-ranging species, since impacts to localized, and mostly water-related, important habitats could be managed through avoidance, minimization, mitigation, or compensation. There also could be impacts to schools if development of family housing were rapid. However, there could be benefits from economic stimulus, area revitalization, and rapid hazardous waste remediation. In addition, the cumulative impacts from development of Dublin Crossing and redevelopment of the remaining Cantonment Area would have potentially significant impacts on nearby transportation levels of service and on land uses. The Draft EA also listed specific mitigation measures, studies, and plans that should be implemented if the Proposed Action is chosen.

There are two potential outcomes from preparation of an EA—preparation of a Finding of No Significant Impact (FNSI), which means that the project can proceed; and preparation of a Notice of Intent to prepare an Environmental Impact Statement (EIS), which means that further study is needed. The Draft EA on the November 2002 Updated Master Plan concluded that further evaluation was needed to assess the impacts from the ultimate use of the exchanged parcel, and the suitability of this previously contaminated parcel to be transferred. Therefore, IMA-ARD and PRFTA decided not to release the Draft EA and to prepare an EIS on the Updated Master Plan. The NOI was published in the Federal Register on November 18, 2003. An Environmental Impact Report (EIR) that is responsive to California Environmental Quality Act will be prepared by the City of Dublin in a separate, parallel process.

### **NEXT STEPS**

The EIS will be prepared in 2004. It will provide a more thorough exploration and evaluation of the potential impacts of each alternative. In addition, the potential impacts associated with the transfer of the 182-RPX parcel and the subsequent development of Dublin Crossing will be more thoroughly



addressed in the EIS. The land exchange portion of the EIS will focus on evaluating potential impacts from population increases, housing development or demand, school capacity, land use and ownership changes, coordination with the City of Dublin during the evaluation, and increases in traffic. This public scoping meeting is the next step in the EIS process.

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# Master Planned Redevelopment at Camp Parks



Camp Parks, formally known as the Parks Reserve Forces Training Area, is 2,478-acre military installation located in Dublin, California and part of U. S. Army, Combat Support Training Center (CSTC). The ~2,000-acre Training Area is the most accessible and economical for an estimated 250 reserve component units and 20,000 reservists in northern California. The rest of the installation consists of a Cantonment Area where many administrative, maintenance, and storage facilities are located. However, most of the 100 plus buildings in its Cantonment Area are at least 50 years old and do not readily accommodate modern office equipment or meet today's standards for convenience, health, or safety. Because these facilities are insufficient to support current and future mission requirements, redevelopment is needed to enable Camp Parks to fulfill its mandate and mission.

An Environmental Impact Statement (EIS) has been prepared in accordance with the National Environmental Policy Act (NEPA) and 32 CFR Part 651 (Environmental Analysis of Army Actions) to analyze the potential environmental consequences that could result from implementation of the Proposed Action and other alternatives being considered—A Slow Growth Alternative and a No Action Alternative.

The time frame for these actions is assumed to be 2007 to 2027 for the Proposed Action, and 2013 to 2043 for the Slow Growth Alternative. Definition of the No Action Alternative is based on the 2005 situation. Pre-construction activity for the Proposed Action would begin immediately upon final approval of the Record of Decision (ROD).

## The Proposed Action

The Proposed Action being evaluated in this EIS is redevelopment under the Master Plan prepared by the Installation Management Command - Army Reserve (IMCOM-AR) and the U. S. Army, CSTC to guide the redevelopment and group similar land uses. Components of the Proposed Action are detailed below.

**Redevelopment of the Cantonment Area.** The redevelopment would be concentrated in the Cantonment Area located in the southern portion of the installation. New facilities proposed in the Master Plan would replace all but five recently constructed permanent structures, a historic sign and associated guard post, a wash rack, and Residential Community Initiative (RCI) Housing. The Oakland Exchange and California Army National Guard (CA ARNG) construction currently under development would also remain.

**Land Exchange to Private Ownership.** The Master Plan also involves exchange of 180-acres of the property from Federal to private ownership, consisting of 171.5-acres managed by the U.S. Army and 8.5-acres managed by the National Aeronautics Space Administration (NASA). In return, Camp Parks would receive new installation facilities at a value commensurate with the value of the exchanged land. Any funds received by NASA may be used for construction of facilities or improvements at NASA-Ames Research Center, Moffett Field, California.

A private developer is anticipated to transform the exchanged parcel into a high-density mixed use area that would be subject to the City of Dublin's zoning, permitting, and planning processes. A mixed use development concept is evaluated in this EIS, but the actual development plan for the exchanged portion of land is still subject to the City's approval process. Specific and definitive changes in land use zoning for the land exchange would be addressed by the proponent, the City of Dublin. It is anticipated that an Environmental Impact Report (EIR) would be prepared under the California Environmental Quality Act by the City of Dublin for the change in zoning.

**Training Area Use.** The Training Area in the northern portion would remain largely undeveloped and the location, facilities, and types of training performed unchanged. A 45-acre parcel would become part of the cantonment redevelopment. In addition, existing training

activities would continue and the replacement/refurbishment of existing facilities, particularly around the firing ranges, would continue as part of normal installation operation. Under the Proposed Action, facility refurbishment, the frequency and duration of training activities and the population performing these activities would likely increase in response to installation population increases and military training needs.

#### Environmental Consequences

Significant impacts are anticipated to air quality, selected species, socioeconomics, land use, and transportation from redevelopment of Camp Parks under the Master Plan. Under any of the alternatives, the relative importance of even the significant impacts from Camp Parks' development would be minor when cumulative impacts are considered. Further, Camp Parks' importance to military training in the San Francisco Bay Area warrants redevelopment of the installation.

Potential impacts associated with the Proposed Action include are summarized below. Further detail on the impacts identified and appropriate mitigation measures are discussed in Chapter 4 of the EIS.

- Net increase in NO<sub>x</sub>, PM<sub>10</sub>, and ROG that would exceed California Environmental Quality Act (CEQA) Guideline Thresholds for Significance.
- Loss of 297.6 acres of non-native grasslands (mostly ruderal) and modification of 3.6 acres of wetland.
- Loss of Congdon's tarplant (species of concern) individuals and habitat in the Cantonment Area

and potentially increased disturbance in the Training Area.

- Loss of Western burrowing owl (species of concern) burrow locations and habitat in the Cantonment Area and potentially increased disturbance in the Training Area.
- Benefits for the local economy and surrounding communities.
- Need for additional teachers and classrooms (partially supported by military funds).
- Change in land ownership in the southern Cantonment Area from the federal government to the private sector and purview of the City of Dublin, and significant change in existing land uses from military training support to a mixed-use development.
- Cumulative deterioration of level of service to Level of Service (LOS) E (congested) or worse at the Dublin Boulevard/Dougherty Road intersection when the proposed project is combined with the City of Dublin buildout scenario which includes all currently approved and planned projects due to constraints on possible mitigation.

When possible, these potential impacts would be minimized through avoidance, use of best management practices, compliance with regulations and policies, and mitigation used as appropriate to reduce their severity or extent. However, not all potential impacts can be completely mitigated. In addition, significant benefits would occur from reducing the known or potential health, safety, and hazardous substance hazards.

The significance of these impacts and the cumulative impacts to which they contribute is summarized in the following tabulation. These impacts identified as significant below could not be fully mitigated.

Resource	Significant Master Plan Impacts?	Significant Cumulative Impacts?
Air Quality	Yes	Yes
Hydrology	No	No
Topography, Geology, Mineralogy and Paleontology	No	No
Soils	No	No
Vegetation, Including Special-status Plant Species and Wetlands	No	Yes
Fish and Wildlife, Including Special-status Species	No	Yes
Cultural Resources	No	No
Socioeconomics	No	Yes
Land Use	Yes	No
Transportation	Yes	Yes
Noise	No	No
Visual and Aesthetic Resources	No	Yes
Health/Safety and Hazardous Substances	No (benefits)	No (benefits)

**C-6: CONTACT INFORMATION HANDOUT**

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## CONTACT INFORMATION

A web site is being established at: [www.prfta-eis.net](http://www.prfta-eis.net)

Comments may be emailed to: [comments@prfta-eis.net](mailto:comments@prfta-eis.net)

Local Phone, regular mail, or email contact may be with:

Mr. Don Sundius  
Public Affairs Officer  
Parks Reserve Forces Training Area  
Building 790, Fifth Street  
RAFTA  
Dublin, California 94568  
Phone: 925-875-4636  
[don.sundius.calidad@usarc-emh2.army.mil](mailto:don.sundius.calidad@usarc-emh2.army.mil)

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**C-7: SCOPING MEETING CONTACTS**

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# Parks RFTA Public Meeting

## Attendee Sign-In Sheet

Please Print Clearly

Date: Dec 9 03  
 Time: 7-9:24

Name	Organization	Address	Phone	Would you like to be added to the PRFTA mailing list?
Peter Oswald	SELF	1800 ALMA AV # 307 WALNUT CREEK, 94596	925 519 9763	YES
TOM + JACQUE VAN METER	SELF	4772 GARDELLA DR. DUBLIN	925-828-2450	YES
Kiley Russell	Valley Times	127 Spring St. Pleasanton	647-2119	YES
SCOTT W. Vovody	Federal Bureau of Prisons	5701 8th Street Camp Parks Dublin Ca	(925) 833-7500 ext 332	YES
Tom DeWen	City Parks			
William Hausche	US Army	Camp Parks	925-260-8201	
Hinders Elk	self	5435 Aspen St.	925-533-2822	NO
MIKE PARSONS	PARKS	2000 7th St ITAN PARKS	925-875-4600	YES
ALLAN GRAFF	PARKS	15105 7th St CAMP PARKS	925 875-4691	YES
MICHAEL ROCHEFFE	RUGGER	1515 CLAY ST STE 1400 OAKLAND, CA 94612	(510) 622-2411	YES
Tim Timberlake	Haines Co CA	1401 Lakeside Dr. Oakland CA	510 208-9741	YES
George Z. K.	City	5016 12th St Dublin		
Nancy DeProspero	Tri Valley Park	8686 Fenwick Way DUBLIN	925-829-1346	YES

# Parks RFTA Public Meeting

## Attendee Sign-In Sheet

Please Print Clearly

Date: Dec 9 03  
 Time: 7:41 pm

Name	Organization	Address	Phone	Would you like to be added to the PRFTA mailing list?
COL. E. W. SULLIVAN	PFE DIV.	Camp PARKS	925 875 4096	
DAVID BEHRENS	DSRSD	7051 DUBLIN BLVD.	875-2242	
David Humbert	Resident	4886 Redwood	895-6640	
Terry Escardo	DTSC	8900 Calaveras Dr Sacto 95826	916 255 3714	Yes
Darwin Lee	PG4 E	998 MURRIETA BLVD. LIV. 94556	925-373- 2604	YES
JEFF HOLMWOOD	RJA	41 CHABOT DRIVE #30 507 PLEASANTON 94528	925-227- 9100	YES
SAMIR ABORA	PARKS - ENV		925-975-4635	no
Mike Burchard	Resident	3309 Longmeadow Pl	833-7454	NO
Bonnie Bryant	Headed	4716 Willow Rd, Pleasanton	416-4863	Yes
William Chenoweth	AUSA Ret	Camp Parks	(925) 570-6502	NO
MIKE CONKLIN	AUSA	2428 TRAVERT DR SAN RAMON CA. 94583		YES
Guy Warren	Resident	10130x 20512 CV 94546	925 828-7999	YES
Ryan Rodriguez	Resident	273 S. 6th Fenwick Way 94568	425-891-4551	YES



# Parks RFTA Public Meeting

## Attendee Sign-In Sheet

Please Print Clearly

Date: Dec 10 '63  
 Time: 7-9 pm

Name	Organization	Address	Phone	Would you like to be added to the PRFTA mailing list?
Ada "Tommie" Simpson	Camp Parks History Center	4557 Alma Ave Castro Valley Ca 94546	510/868-1997	yes
Wright, Veronica L.	RIS-NEO	21659 Sienna Ave Hayward, CA 94541	510 581-0922	yes
MICHAEL READE	HQ 91st Div (-3)	BLDG 510, EVANS AVE Parks RFTA, Dublin, CA 94568	(925) 875-4187	yes
ROGER SCHMITT	635th	127 DARRINGTON DR FOLSOM, CA 95630	(916) 633-7803	yes
Stamm-Smith, Mary	Garrison	Camp Parks CSM	875-4649	
DAVID YEE	NASA	Moffett Field M/S 19-11 AMES Research Center 2 94035	(650) 604-4106	yes
CAROLYN KLEWER	WARSC PARKS	BLDG 610 790 US Army Dublin, CA 94568	(425) 875-4508	yes
Steven Buckley	Alameda County Planning Dept Dublin Ranch	224 W. Winton Ave, #111, Hayward 94534	510/670-5400	yes
Tom Casabonte	HOA	3324 Oak Bluff Lane Dublin 94568	925-895-3295	yes
Richard Rose	DSRSD	4511 Sparrow Ct. Dublin	925-833-2059	yes

COMMENT SHEET FOR THE PARKS RFTA EIS

DATE: 12-9-03

NAME: DAVID BEHRENS - PRINCIPAL ENGR - DSRSD

ADDRESS: 7051 DUBLIN BLVD., DUBLIN, CA

PHONE: 875-2242 EMAIL: BEHRENS@DSRSD.COM

COMMENT (Use backside if necessary): WOULD LIKE TO BE KEPT  
UP TO DATE ON STATUS OF PROJECT. WOULD ALSO  
LIKE UPDATED PROJECT MAPS WHEN AVAILABLE.

THANK YOU

COMMENT SHEET FOR THE PARKS RFTA EIS

DATE: 12-10-03

NAME: Richard Rose (Member on Board of Directors, DSRSD)

ADDRESS: 4511 Sparrow Ct.  
Dublin

PHONE: 833-2059 EMAIL: \_\_\_\_\_

COMMENT (Use backside if necessary): The location of the  
DSRSD Maintenance yard needs to be coordinated  
further with DSRSD Staff. I discussed this  
with Dan Flaherty (Army Planner) - ~~2~~

COMMENT SHEET FOR THE PARKS RFTA EIS

DATE: 12/10/03

NAME: DAVID YEE

ADDRESS: NASA AMES RESEARCH CENTER  
M/S 19-11  
MOFFETT FIELD, CA 94035-1000

PHONE: (650) 604-4106 EMAIL: david.h.yee@nasa.gov

COMMENT (Use backside if necessary): Please keep me informed on upcoming meetings or  
release of documents

Thanks



**C-8: NOTICE OF AVAILABILITY**

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**DEPARTMENT OF DEFENSE****Department of the Air Force**

[No. USAF-2007-0022]

**Proposed Collection; Comment Request**

**AGENCY:** Headquarters, Air Force Reserve Officer Training Corps (AFROTC), Maxwell Air Force Base, Alabama, DoD.

**ACTION:** Notice.

In compliance with Section 3506(c)(2)(A) of the *Paperwork Reduction Act of 1995*, Headquarters, Air Force Reserve Officer Training Corps announces the proposed extension of a public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

**DATES:** Consideration will be given to all comments received by July 31, 2007.

**ADDRESSES:** You may submit comments, identified by docket number and title, by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Mail:* Federal Docket Management System Office, 1160 Defense Pentagon, Washington, DC 20301-1160.

*Instructions:* All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at <http://www.regulations.gov> as they are received without change, including any personal identifiers or contact information.

**FOR FURTHER INFORMATION CONTACT:** To request more information on this proposed information collection or to obtain a copy of the proposal and associated collection instruments, please write to the above address or call 334-953-0266.

*Title; Associated Form; and OMB Number:* Application for AFROTC Membership, OMB Number 0701-0105.

*Needs and Uses:* Air Force ROTC uses the AFROTC Form 20 to collect data from applicants to the Air Force ROTC program. This collected data is used to determine whether or not an applicant is eligible to join the Air Force ROTC program and, if accepted, the enrollment status of the applicant within the program. Upon acceptance into the program, the collected information is used to establish personal records for Air Force ROTC cadets. Eligibility for membership cannot be determined if this information is not collected.

*Affected Public:* Individuals or households.

*Annual Burden Hours:* 4,000.

*Number of Respondents:* 12,000.

*Responses per Respondent:* 1.

*Average Burden per Response:* 20 minutes.

*Frequency:* On occasion.

**SUPPLEMENTARY INFORMATION:****Summary of Information Collection**

Respondents are college students desiring to join the Air Force ROTC program. AFROTC Form 20 provides vital information needed by detachment personnel to determine their eligibility to participate in that program.

Dated: May 21, 2007.

**Patricia L. Toppings,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

[FR Doc. 07-2705 Filed 5-31-07; 8:45 am]

**BILLING CODE 5001-06-M**

**DEPARTMENT OF DEFENSE****Department of the Army**

[No. USA-2006-0038]

**Submission for OMB Review; Comment Request**

**ACTION:** Notice.

The Department of Defense has submitted to OMB for clearance, the following proposal for collection of information under the provisions of the *Paperwork Reduction Act* (44 U.S.C. Chapter 35).

**DATES:** Consideration will be given to all comments received by July 2, 2007.

*Title, Form, and OMB Number:* The Contractor Manpower Reporting Study; OMB Control Number 0702-0120.

*Type of Request:* Extension.

*Number of Respondents:* 4,149.

*Responses per Respondent:* 1.

*Annual Responses:* 4,149.

*Average Burden per Response:* 5 minutes.

*Annual Burden Hours:* 344.

*Needs and Uses:* The Contractor Manpower Reporting System obtains information, regarding the use of contractor employees to perform functions (other than functions that are inherently governmental).

*Affected Public:* Business or other for-profit.

*Frequency:* Annually.

*Respondent's Obligation:* Required to obtain or retain benefits.

*OMB Desk Officer:* Ms Hillary Jaffe.

Written comments and recommendations on the proposed information collection should be sent to Ms. Jaffe at the Office of Management and Budget, Desk Officer for DoD, Room 10236, New Executive Office Building, Washington, DC 20503.

You may also submit comments, identified by docket number and title, by the following method:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

*Instructions:* All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at <http://www.regulations.gov> as they are received without change, including any personal identifiers or contact information.

*DOD Clearance Officer:* Ms. Patricia Toppings.

Written requests for copies of the information collection proposal should be sent to Ms. Toppings at WHS/ESD/Information Management Division, 1777 North Kent Street, RPN, Suite 11000, Arlington, VA 22209-2133.

Dated: May 21, 2007.

**Patricia L. Toppings,**

*Alternate OSD Federal Register Liaison Officer, Department of Defense.*

[FR Doc. 07-2715 Filed 5-31-07; 8:45 am]

**BILLING CODE 5001-06-M**

**DEPARTMENT OF DEFENSE****Department of the Army****Draft Environmental Impact Statement (DEIS) in Support of the Real Property Master Plan (RPMP) and Real Property Exchange (RPX) for Camp Parks, Dublin, CA**

**AGENCY:** Department of the Army, DoD.

**ACTION:** Notice of availability.

**SUMMARY:** The U.S. Army Chief of Staff for Installation Management (ACSIM), Army Reserve Installations Directorate (ARID) and U.S. Army Combat Support Training Center (CSTC) have prepared a DEIS in support of the RPMP and RPX on Camp Parks. The RPMP presents a plan for the redevelopment of the cantonment area of Camp Parks, with approximately 180-acres being transferred out of Federal ownership (approximately 171.5-acres is controlled by the U.S. Army and 8.5-acres controlled by the National Aeronautics and Space Administration (NASA)).

**DATES:** The public comment period for the DEIS will end 45 days after publication of the NOA in the **Federal Register** by the U.S. Environmental Protection Agency.

**ADDRESSES:** Questions and/or written comments pertaining to this DEIS, or a request for a copy of the document may be directed to the U.S. Army Chief of Staff for Installation Management (ACSIM), Army Reserve Installations Directorate (ARID) (Mr. David Borchardt), 3848 Northwest Drive, Suite 160, Atlanta, Georgia 30337.

**FOR FURTHER INFORMATION CONTACT:** Mr. David Borchardt, 3848 Northwest Drive, Suite 160, Atlanta, Georgia 30337, or Amy Phillips, Public Affairs Office, US Army CTSC, Camp Parks 790 5th Street, Dublin, CA 94568-5201; via phone at (925) 875-4298; or e-mail: amy.phillips@usar.army.mil.

**SUPPLEMENTARY INFORMATION:** The DEIS evaluates three alternatives to support the redevelopment of Camp Parks: (1) The no action alternative, under which there would be no comprehensive plan or vision for overall Camp Parks development, which would occur ad hoc as funds became available and facilities would remain largely unchanged; (2) the slow growth alternative, under which Camp parks would retain all its land holdings and gradually move towards developing faculties and activities identified in the RPMP; the southern cantonment Area would remain an opportunity site for future planning; and (3) accelerated modernization in a redeveloped compacted cantonment area (the proposed action), under which the RPMP would be implemented using the value of the land exchange (180-acres of the southern Cantonment area from Federal to private ownership) in return for new installation facilities and infrastructure with NASA's inholding being sold and that value being used at their NASA-Ames Research Center, Moffet Field, California. The strategic

location of Camp Parks in northern California makes it the most accessible and economical training resource for over 250 Reserve component units supporting over 20,000 Reservists. The installation supports combined training space and facilities for the Armed Forces, and other Federal and local agencies in the north central part of California. ACSIM-ARID and CSTC have prepared a RPMP that proposed a program for revitalizing the installation infrastructure and accelerating facility replacements.

The RPMP proposes approximately 1.3 million square feet of new buildings/structures and approximately 370,000 square feet of parking area. Majority of the existing structures on Camp Parks were intended to be temporary when originally constructed and are considered inadequate for today's military personnel and lifestyles. The RPMP proposes the modernization of facilities to meet the troop training requirements and amenities that are consistent to the private sector.

The DEIS concludes the no action alternative is not reasonable based on the infrastructure and buildings at Camp Parks being antiquated and requiring excessive maintenance. The DEIS concludes the slow growth alternative, the incremental modernization utilizing existing cantonment area is not reasonable since facility/activity upgrades would be prioritized and dependent on annual funding from Military Construction Army Reserve (MCAR) allocations and project proponents. MCAR funds are appropriated on a availability basis which is not a regular and consistent occurrence.

ACSIM-ARID and U.S. Army CSTC have concluded the proposed alternative to be the preferred alternative which is the accelerated modernization in a redeveloped compacted cantonment area at Camp Parks, under which the RPMP would be implemented using the value of the land exchange (180 acres of the southern cantonment area transferring from Federal to private ownership) in return for new faculties and infrastructure. This alternative provides a quick implementation of the RPMP while providing the necessary facilities and infrastructure upgrades for adequate training for military personnel in the Bay Area.

Meeting Dates and Review Period: A public meeting will be held in the vicinity of Camp Parks to present the DEIS as well as to answer any questions and allow the Public and local governments to comment on the action.

A notice of the public meeting will be published in local newspapers.

Dated: May 9, 2007.

**Addison D. Davis, IV,**  
*Deputy Assistant Secretary of the Army,*  
*(Environment, Safety and Occupational Health).*

[FR Doc. 07-2722 Filed 5-31-07; 8:45 am]

**BILLING CODE 3710-08-M**

## DEPARTMENT OF DEFENSE

### Department of the Navy

[No. USN-2007-0035]

#### Proposed Collection; Comment Request

**AGENCY:** Marine Corps Marathon, Marine Corps Base Quantico, DoD.

**ACTION:** Notice.

In compliance with Section 3506(c)(2)(A) of the Paperwork Reduction Act of 1995, the Marine Corps Marathon, Marine Corps Base Quantico announces the revision of a proposed public information collection and seeks public comment on the provisions thereof. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology.

**DATES:** Consideration will be given to all comments received by July 31, 2007.

**ADDRESSES:** You may submit comments, identified by docket number and title, by any of the following methods:

- Federal eRulemaking Portal: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Mail: Federal Docket Management System Office, 1160 Defense Pentagon, Washington, DC 20301-1160.

**Instructions:** All submissions received must include the agency name, docket number and title for this **Federal Register** document. The general policy for comments and other submissions from members of the public is to make these submissions available for public viewing on the Internet at <http://www.regulations.gov> as they are received without change, including any personal identifiers or contact information.

**ENVIRONMENTAL PROTECTION AGENCY****[ER-FRL-6687-5]****Environmental Impact Statements and Regulations; Availability of EPA Comments**

Availability of EPA comments prepared pursuant to the Environmental Review Process (ERP), under section 309 of the Clean Air Act and Section 102(2)(c) of the National Environmental Policy Act as amended. Requests for copies of EPA comments can be directed to the Office of Federal Activities at 202-564-7167.

An explanation of the ratings assigned to draft environmental impact statements (EISs) was published in FR dated April 6, 2007 (72 FR 17156).

**Draft EISs**

EIS No. 20070116, ERP No. D-AFS-J65478-00, Norwood Project, Proposes to Implement Multiple Resource Management Actions, Black Hills National Forest, Hell Canyon Ranger District, Pennington County, SD and Weston and Crook Counties, WY.

*Summary:* EPA expressed environmental concerns about impacts to water quality, impacts to wetlands, impacts from noxious and invasive weeds, and impacts to wildlife habitat. Also, the final EIS should include information about future interactions with the soon to be completed cellulosic ethanol plant.

Rating EC2.

EIS No. 20070119, ERP No. D-NOA-L02034-AK, PROGRAMMATIC—Outer Continental Shelf Seismic Surveys in the Beaufort and Chukchi Seas, Proposed Offshore Oil and Gas Seismic Survey, AK.

*Summary:* EPA expressed environmental concerns about the uncertainties presented in the document that do not provide support for many of the documents alternatives and conclusions. EPA also requested that the cumulative effects analysis be expanded.

Rating EC2.

EIS No. 20070122, ERP No. D-BLM-J03020-00, Overland Pass Natural Gas Liquids Pipeline Project (OPP), Construction and Operation of 760 Mile Natural Gas Liquids Pipeline, Right-of-Way Grant, KS, WY and CO.

*Summary:* EPA expressed environmental concerns about potential impacts to river and stream water quality. EPA requested additional analysis of water quality impacts and mitigation measures.

Rating EC2.

EIS No. 20070154, ERP No. D-NOA-E91018-00, Amendment 27 to the Reef Fish Fishery Management Plan and Amendment 14 to the Shrimp Fishery Management Plan, To Address Stock Rebuilding and Overfishing of Red Snapper, Gulf of Mexico.

*Summary:* EPA does not object to the proposed actions.

Rating LO.

EIS No. 20070140, ERP No. DR-NOA-A91073-00, PROGRAMMATIC—Toward an Ecosystem Approach for the Western Pacific Region: From Species-Based Fishery Management Plans to Place-Based Fishery Ecosystem Plans, Bottomfish and Seamount Groundfish, Coral Reef Ecosystems, Crustaceans, Precious Corals, Pelagics, Implementation, American Samoa, Commonwealth of the Northern Mariana Islands, Hawaii, U.S. Pacific Remote Island Area.

*Summary:* EPA expressed a lack of objections to the proposed action.

Rating LO.

**Final EISs**

EIS No. 20070164, ERP No. F-AFS-J65440-MT, Northeast Yaak Project, Additional Documentation of Cumulative Effects Analysis, Proposed Harvest to Reduce Fuels in Old Growth, Implementation, Kootenai National Forest, Three Rivers Ranger District, Lincoln County, MT.

*Summary:* EPA continues to express concern about impacts to wildlife habitat.

Dated: May 29, 2007.

**Ken Mittelholtz,**

*Environmental Protection Specialist, Office of Federal Activities.*

[FR Doc. E7-10600 Filed 5-31-07; 8:45 am]

**BILLING CODE 6560-50-P**

**ENVIRONMENTAL PROTECTION AGENCY****[ER-FRL-6687-4]****Environmental Impact Statements; Notice of Availability**

*Responsible Agency:* Office of Federal Activities, General Information (202) 564-7167 or <http://www.epa.gov/compliance/nepa/>.

Weekly receipt of Environmental Impact Statements

Filed 05/21/2007 Through 05/25/2007 Pursuant to 40 CFR 1506.9.

EIS No. 20070205, Draft EIS, AFS, WA, Tripod Fire Salvage Project, Proposal to Salvage Harvest Dead Trees and Fire-Injured Trees Expected to Die Within One Year, Methow Valley and Tonasket Ranger Districts, Okanogan

and Wenatchee National Forests, Okanogan County, WA, *Comment Period Ends:* 07/16/2007, *Contact:* John Newcom 509-996-4003.

EIS No. 20070206, Final EIS, FHW, NY, NY Route 347 Safety and Mobility Improvement Project, from Northern State Parkway to NY Route 25A, Funding, Towns of Smithtown, Islip and Brookhaven, Suffolk County, NY, *Wait Period Ends:* 07/02/2007, *Contact:* Robert Arnold 518-431-4167.

EIS No. 20070207, Draft EIS, AFS, SD, Citadel Project Area, Proposes to Implement Multiple Resource Management Actions, Northern Hills Ranger District, Black Hills National Forest, Lawrence County, SD, *Comment Period Ends:* 07/16/2007, *Contact:* Chris Stores 605-642-4622.

EIS No. 20070208, Draft EIS, HUD, CA, Vista Village Workforce Housing Project, To Provide Professional Managed Affordable Housing, Tahoe Vista, Placer County, CA, *Comment Period Ends:* 07/16/2007, *Contact:* Joanne Auerboch 530-745-3150.

EIS No. 20070209, Draft EIS, FHW, NY, Long Island Truck-Rail Intermodal (LITRIM) Facility, Construction and Operation, Right-of-Way Acquisition, Town of Islip, Suffolk County, NY, *Comment Period Ends:* 07/25/2007, *Contact:* Robert Arnold 518-431-4127.

EIS No. 20070210, Draft EIS, USA, CA, Camp Parks Real Property Master Plan and Real Property Exchange, Provide Exceptional Training and Modern Facilities for Soldiers, Master Planned Development, Alameda and Contra Costa Counties, CA, *Comment Period Ends:* 07/16/2007, *Contact:* Amy Phillip 925-875-4298.

EIS No. 20070211, Draft EIS, AFS, OR, Thorn Fire Salvage Recovery Project, Salvaging Dead and Dying Timber, Shake Table Fire Complex, Malheur National Forest, Grant County, OR, *Comment Period Ends:* 07/16/2007, *Contact:* Jerry Hensley 541-575-3000.

EIS No. 20070212, Draft EIS, TVA, AL, Bear Creek Dam Leakage Resolution Project, To Modify Dam and Maintain Summer Pool Level of 576 Feet, Bear Creek Dam, Franklin County, AL, *Comment Period Ends:* 07/16/2007, *Contact:* James F. Williamson 865-632-6418.

EIS No. 20070213, Draft EIS, DOE, 00, FutureGen Project, Planning, Design, Construction and Operation a Coal Fueled Electric Power and Hydrogen Gas Production Plant, Four Alternative Sites: Mattoon, IL, Tuscola, IL, Jewett, TX and Odessa, TX, *Comment Period Ends:* 07/16/

2007, *Contact*: Mark McKoy 304-285-4426.

*EIS No. 20070214, Final EIS, FRC, 00*, East Texas to Mississippi Expansion Project, Construction and Operation of 243.3 miles Natural Gas Pipeline to Transport Natural Gas from Production Fields in eastern Texas to Markets in the Gulf Coast, Midwestern, Northeastern and Southeastern United States, *Wait Period Ends*: 07/02/2007, *Contact*: Andy Black 1-866-208-3372.

*EIS No. 20070216, Draft Supplement, AFS, 00*, Southwest Idaho Ecogroup Land and Resource Management Plan, Additional Information Concerning Terrestrial Management Indicator Species (MIS), Boise National Forest, Payette National Forest and Sawtooth National Forest, Forest Plan Revision, Implementation, Several Counties, ID; Malheur County, OR and Box Elder County, UT, *Comment Period Ends*: 08/30/2007, *Contact*: Sharon LaBrecque 208-737-3200.

*EIS No. 20070217, Final EIS, CDB, NY*, East River Waterfront Esplanade and Piers Project, Revitalization, Connecting Whitehall Ferry Terminal and Peter Minuit Plaza to East River Park, Funding New York, NY, *Wait Period Ends*: 07/02/2007, *Contact*: Irene Chang 212-962-2300.

*EIS No. 20070218, Draft EIS, FHW, CA*, Interstate 405 (San Diego Freeway) Sepulveda Pass Widening Project, From Interstate 10 to US-101 in the City of Los Angeles, Los Angeles County, CA, *Comment Period Ends*: 07/16/2007, *Contact*: Steve Healow 916-498-5849.

*EIS No. 20070219, Final EIS, AFS, 00*, Norwood Project, Proposes to Implement Multiple Resource Management Actions, Black Hills National Forest, Hell Canyon Ranger District, Pennington County, SD and Weston and Crook Counties, WY, *Wait Period Ends*: 07/02/2007, *Contact*: Kelly Honors 605-673-4853.

#### Amended Notices

*EIS No. 20070069, Second Final Supplement, FHW, WV*, Appalachian Corridor H Project, Construction of a 9-mile Long Segment between the Termini of Parsons and Davis, Updated Information the Parsons-to-Davis Project, Funding and U.S. Army COE Section 404 Permit Issuance, Tucker County, WV, *Wait Period Ends*: 08/01/2007, *Contact*: Thomas J. Smith 304-347-5928. Revision to FR Notice Published 03/02/2007: Reopen and Extending Comment Period from 4/27/2007 to August 1, 2007.

Dated: May 29, 2007.

#### Ken Mittelholtz,

*Environmental Protection Specialist, NEPA Compliance Division, Office of Federal Activities.*

[FR Doc. E7-10593 Filed 5-31-07; 8:45 am]

**BILLING CODE 6560-50-P**

### ENVIRONMENTAL PROTECTION AGENCY

[EPA-HQ-OPP-2006-0072; FRL-8131-1]

#### Pesticide Products; Registration Applications

**AGENCY**: Environmental Protection Agency (EPA).

**ACTION**: Notice.

**SUMMARY**: This notice announces receipt of applications to register pesticide products containing new active ingredients not included in any currently registered products pursuant to the provisions of section 3(c)(4) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended.

**DATES**: Comments must be received on or before July 31, 2007.

**ADDRESSES**: Submit your comments, identified by docket identification (ID) number EPA-HQ-OPP-2006-0072, by one of the following methods:

- *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the on-line instructions for submitting comments.

- *Mail*: Office of Pesticide Programs (OPP) Regulatory Public Docket (7502P), Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001.

- *Delivery*: OPP Regulatory Public Docket (7502P), Environmental Protection Agency, Rm. S-4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. Deliveries are only accepted during the Docket's normal hours of operation (8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays). Special arrangements should be made for deliveries of boxed information. The Docket telephone number is (703) 305-5805.

*Instructions*: Direct your comments to docket ID number EPA-HQ-OPP-2006-0072. EPA's policy is that all comments received will be included in the docket without change and may be made available on-line at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you

consider to be CBI or otherwise protected through [regulations.gov](http://regulations.gov) or e-mail. The Federal [regulations.gov](http://regulations.gov) website is an "anonymous access" system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through [regulations.gov](http://regulations.gov), your e-mail address will be automatically captured and included as part of the comment that is placed in the docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

*Docket*: All documents in the docket are listed in the docket index available in [regulations.gov](http://regulations.gov). To access the electronic docket, go to <http://www.regulations.gov>, select "Advanced Search," then "Docket Search." Insert the docket ID number where indicated and select the "Submit" button. Follow the instructions on the [regulations.gov](http://regulations.gov) web site to view the docket index or access available documents. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either in the electronic docket at <http://www.regulations.gov>, or, if only available in hard copy, at the OPP Regulatory Public Docket in Rm. S-4400, One Potomac Yard (South Bldg.), 2777 S. Crystal Dr., Arlington, VA. The hours of operation of this Docket Facility are from 8:30 a.m. to 4 p.m., Monday through Friday, excluding legal holidays. The Docket telephone number is (703) 305-5805.

#### FOR FURTHER INFORMATION CONTACT:

Eugene Wilson, Registration Division (7505P), Office of Pesticide Programs, Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460-0001; telephone number: (703) 305-6103; e-mail address: [wilson.eugene@epa.gov](mailto:wilson.eugene@epa.gov).

#### SUPPLEMENTARY INFORMATION:

**C-9: DEIS DELIVERY LETTERS**

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DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
INSTALLATIONS AND ENVIRONMENT  
110 ARMY PENTAGON  
WASHINGTON, DC 20310-0110

MAY 09 2007

SAIE-ESOH

Director  
Office of Federal Activities  
U. S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, D. C. 20044

Dear Sir:

Enclosed are five copies of the Draft Environmental Impact Statement (DEIS) for the Camp Parks Real Property Master Plan and Real Property Exchange, California.

These copies are forwarded for filing in accordance with the President's Council on Environmental Quality regulations for implementing the provisions of the National Environmental Policy Act (40 CFR, Parts 1500-1508). Copies of the Draft EIS have been mailed to federal, state, and local agencies, as well as to interested members of the public.

Please call Mr. Doug Benson at (703) 602-1257 or Mr. Lesca Strickland at (703) 602-1477 for further information.

Regards,

Addison D. Davis, IV  
Deputy Assistant Secretary of the Army  
(Environment, Safety and Occupational Health)

Enclosures



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
US ARMY COMBAT SUPPORT TRAINING CENTER  
US ARMY GARRISON CAMP PARKS  
790 5TH STREET  
CAMP PARKS, CA 94568-5201

MAY 16, 2007

IMSW-CST-PWE

Dear Sir or Madam:

The Installation Management Command – Army Reserve Office (IMCOM-ARO) and the U.S. Army Combat Support Training Center (CSTC) announce the availability of a Draft Environmental Impact Statement (EIS) on the Camp Parks Real Property Master Plan, Dublin, California.

The Preferred Alternative includes redevelopment of 487 acres in the cantonment area in accordance with the proposed Master Plan. The redevelopment also includes the exchange of approximately 180 acres at the southern end of the cantonment area from Federal to private ownership within the City of Dublin for development as "Dublin Crossing." It is anticipated that Dublin Crossing would be developed into high-density residential or mixed use and would be subject to the City's zoning, permitting, and planning processes. In return, Camp Parks would receive new installation facilities at a value commensurate with the value of the exchanged land. Any funds received for the 8.5-acre parcel owned by NASA with the exchange area may be used for construction of facilities or improvements at NASA-Ames Research Center, Moffett Field, California.


Enclosed with this letter is a copy of the Draft EIS and an information paper, "Master Planned Redevelopment at Camp Parks." Printed copies of the Draft EIS are available for review at the following locations: Alameda County Dublin Library, 200 Civic Plaza, Dublin, CA 94568. The Draft EIS may also be viewed on line at <http://www.usarc.army.mil/cstc>.

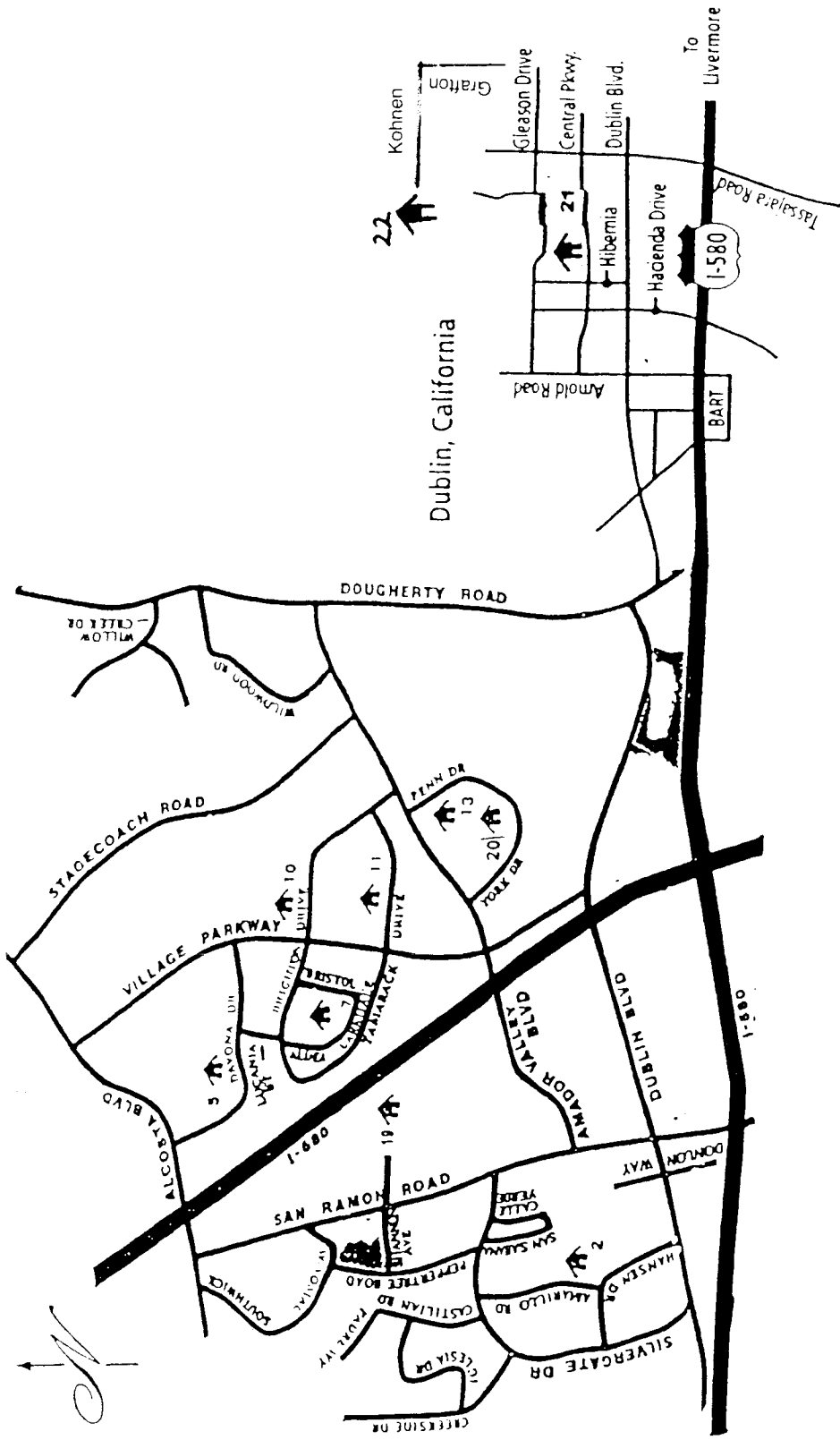
You are invited to submit written comments on the Draft EIS by mail, email, or facsimile at any time before the end of the 45-day public comment period. The dates of the public comment period will be announced in the local news media. The comments may be sent to: Gary Houston, Environmental Division Chief, U.S. Army, Combat Support Training Center (CSTC), 791 U.S. Army, Attn: IMWL-CST-P, Dublin, CA 94568-5201; phone (831) 386-2763; facsimile (831) 386-2787, or e-mail [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil)

You are also invited to attend the public meeting on the Draft EIS which will occur on 26 June 2007, between 7:00 p.m. and 9:00 p.m. at Dougherty Elementary School, 5301 Hibernia Drive, Dublin, CA 94568.

Requests for copies of the Draft EIS may be directed to Ms. Amy Phillips, Public Affairs Officer, Department of the Army, Installation Management Command, Headquarters U.S. Army Combat Support Training Center, 790 Fifth Street, Camp Parks, California 94568-5201, phone: 925-875-4298, e-mail amy.phillips@usar.army.mil.

Sincerely,

  
Kevin R. Riedler  
Colonel, US Army  
Commanding



DUBLIN UNIFIED SCHOOL DISTRICT

- 2. Nielsen Elementary
- 5. Murray Elementary
- 7. District Office
- 10. Dublin High School
- 11. Frederiksen Elementary
- 13. Wells Middle School
- 19. Dublin Elementary
- 20. Valley High School
- 21. Dougherty Elementary
- 22. Fallon School (K-8)

**C-10: PUBLIC MEETING SIGN-IN SHEETS**

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CAMP PARKS DEIS PUBLIC MEETING ATTENDANCE ROSTER

June 26, 2007 at 7-9 P.M.

NAME	GROUP	ADDRESS	PHONE	EMAIL
George Leyva	Water Board		510-622-2379	
Joanne Wilson	RWA	4695 Chabot Dr. #200, Pleasanton, CA 94588	714-925-5279 925-399-6970	joanne.wilson@ps.com
Janice Stein	City of Pleasanton	200 Old Bernside Ave Pleasanton CA 94566	925-981-806	jstein@ci.pleasanton.ca.us
Tony Crady	Lincoln Property	6200 Stoneridge Mall 3rd Flr Pleasanton 94588		
John Stallwitz	Resident	11671 Harlan Rd Dublin		
Kate Ann Scholz	City Council member	Dublin City Hall		marnie.nuccioe
Marnie Nuccio	City of Dublin	100 CIVIC PLAZA	925-833-6610	ci.dublin.ca.us

\*

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**C-11: DRAFT EIS COMMENTS**

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# United States Department of the Interior

U. S. GEOLOGICAL SURVEY

Reston, VA 20192

In Reply Refer To:  
Mail Stop 423  
ER 07/482

June 13, 2007

## MEMORANDUM

To: California-Nevada Office, Manager  
U.S. Fish and Wildlife Service, Sacramento, California

From: James F. Devine */Signed/*  
Senior Advisor for Science Applications

Subject: Review of Draft Environmental Impact Statement in Support of the Real Property Management Plan and Real Property Exchange for the Camp Parks, Dublin, California

As requested by the U.S. Department of the Interior, Office of Environmental Policy and Compliance, in their correspondence of June 6, 2007, the U.S. Geological Survey (USGS) has reviewed the subject draft environmental impact statement (DEIS) and offers the following comment.

### SPECIFIC COMMENT

#### Volume 1, Chapter 6, References, Page 6-8

The Lovich reference cited below does not appear in either Volume 1 or Volume 2 of the DEIS. Also, the Internet address for the reference is not valid. The correct address is:  
[http://www.blm.gov/ca/pdfs/cdd\\_pdfs/clemmys1.PDF](http://www.blm.gov/ca/pdfs/cdd_pdfs/clemmys1.PDF).

Lovich, J. n.d. Western Pond Turtle. USGS, Western Ecological Research Center, Department of Biology, University of California. Available at:  
[http://64.233.179.104/search?q=cache:ovzS26VF7oUJ:www.ca.blm.gov/pdfs/cdd\\_pdfs/clemmys1.PDF](http://64.233.179.104/search?q=cache:ovzS26VF7oUJ:www.ca.blm.gov/pdfs/cdd_pdfs/clemmys1.PDF) Accessed April 2005 via html version.

Thank you for the opportunity to review and comment on the DEIS. If you have any questions concerning our comment, please contact Lloyd Woosley, Chief of the USGS Environmental Affairs Program, at (703) 648-5028 or at [lwoosley@usgs.gov](mailto:lwoosley@usgs.gov).

Copy to: Office of Environmental Policy and Compliance

**DUBLIN  
SAN RAMON  
SERVICES  
DISTRICT**



7051 Dublin Boulevard  
Dublin, California 94568  
Phone: 925 828 0515  
FAX: 925 829 1180  
www.dersd.com

June 25, 2007

Gary Houston, Environmental Division Chief  
U.S. Army, Combat Support Training Center (CSTC)  
791 U.S. Army  
ATTN: IMWE-CST-P  
Dublin, CA 94568-5201

**Subject: Comments to the DRAFT Environmental Impact Statement on Master Planned Redevelopment at Camp Parks**

Dear Mr. Houston:

Thank you for the opportunity to provide comments on the DRAFT Environmental Impact Statement on Master Planned Redevelopment at Camp Parks. Dublin San Ramon Services District (DSRSD) has the following comments.

#### **Potable Water Service**

DSRSD is responsible for the operation and maintenance of the water distribution system within Camp Parks. DSRSD is not required under the privatization agreement to relocate, upsize or install any pipelines at Camp Parks for existing or new facilities. The proposed redevelopment may require the relocation or upsizing of pipelines in order to comply with DSRSD requirements. Additional water connection fees may need to be paid, both Zone 7 and DSRSD, and service connections installed in order to provide service to the proposed redevelopment. Camp Parks may transfer existing water connection fee credits, both Zone 7 and DSRSD, to new buildings within Camp Parks from existing buildings once those buildings have been abandoned. However, the cost of new service connections must still be paid. In regard to Chapter 2 Proposed Action and Alternatives, Section 2.1.1, any installation of services must conform to the requirements of the Dublin San Ramon Services District Code and DSRSD "Standard Procedures, Specifications and Drawings for Design and Installation of Water and Wastewater Facilities".

#### **Wastewater Services**

DSRSD is responsible for the operation and maintenance of the wastewater collection system within Camp Parks. DSRSD is not required under the privatization agreement to relocate upsize or

Gary Houston  
June 25, 2007  
Page 2 of 2

install any pipelines at Camp Parks for existing or new facilities. Camp Parks is currently using 120,230 gallons per day (gpd) of the 300,000 gpd owned sewer capacity, based on the average monthly flows from January to May of 2007. Any increase in excess of the 300,000 gpd capacity will have to be purchased. Sewer capacity is transferable within Camp Parks in a similar manner as potable water connections.

### **Recycled Water Service**

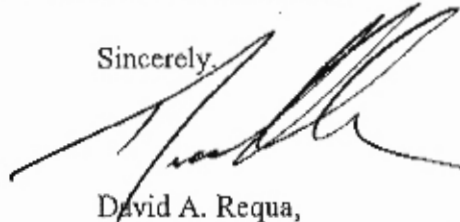
District Ordinance 301 requires that new development located within the potable water service area of the District, which represents landscape irrigation demand for recycled water, must provide for and utilize recycled water. Unless specifically exempted by the District Engineer, compliance with Ordinance 301, as may be amended or superseded, is required. The DRAFT EIS must examine the impacts, which may be associated with the provision of recycled water service. Camp Parks will be responsible for installing the required recycled water facilities. Some existing potable irrigation meters may be required to be transferred to the recycled water system.

### **DSRSD Land Use Category**

DSRSD does not currently have a finalized development plan regarding the intensity, specific use and timeline for the development of the proposed location for the Field Operations Division of DSRSD. Any assumptions made in the DRAFT EIS regarding the final development of this area are subject to change and subsequent review and approval by Camp Parks at DSRSD expense.

If you have any questions, please feel free to contact me at 875-2244.

Sincerely,



David A. Requa,  
Assistant General Manager/District Engineer

DAR/AJ:es

cc: Rhodora Biagtan, DSRSD  
Aaron Johnson, DSRSD



July 12, 2007

Gary Houston  
Environmental Chief  
U.S. Army  
Combat Support Training Center (CSTC)  
791 U.S. Army  
Attn: IMSO-PRK-PWE  
Dublin, CA 94568-5201

Via U.S. Mail and Electronic Mail at [public.comment@liggett-emh1.army.mil](mailto:public.comment@liggett-emh1.army.mil)

Dear Mr. Houston:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (EIS) for the Master Planned Redevelopment at Camp Parks. The project area, as described in the Draft EIS, consists of a 2,478 acre military installation of which 487 acres in the southern portion of the installation, also known as the Cantonment Area, will be largely redeveloped. The EIS further describes the exchange of 180 acres of property within the 487 acre Cantonment Area to private ownership for a high-density, mixed-use development identified as "Dublin Crossing".

The City of Dublin has reviewed the draft EIS which, among other things, describes the training activities which would take place on the 1,991 acre Training Area on the northern portion of the military installation and the operations/administration uses within the 487 acre Cantonment area. The draft EIS also describes the proposed 180 acre exchange area as "Dublin Crossing" and identifies specific land uses and acreages for each of the land uses (Figure 2-3, Context and Land Use Categories Evaluated for Dublin Crossing). On page 4-53 the draft EIS states, "Final decisions on specific land uses would be made during the City's approval process." The City would like to reiterate that the proposed land uses for the exchange area, Dublin Crossing, have not been approved by the City and are subject to review and modification at the discretion of the Dublin City Council.

The City of Dublin respectfully submits the following comments:

1. Page 3-67, City of Dublin General Plan: In the first paragraph, last sentence, the Eastern Dublin Specific Plan (EDSP) is noted as "an important and dynamic influence on the installation" and in the second paragraph the land use

designations within the EDSP are discussed. It should be noted that the EDSP establishes residential densities in terms of dwelling units per acre, not floor-area ratios, but more importantly, that the City of Dublin has not determined at this time whether the proposed exchange area (Dublin Crossing) will be annexed into the EDSP area.

2. Page 4-51/52, Section 4.9.1.2. (Land Use): The last sentence on Page 4-51 indicates that Camp Parks is located within the Eastern Extended Planning Area of the Dublin General Plan; the General Plan Land Use Map reveals that Camp Parks is not within the Eastern Extended Planning Area. Also, the land use attributed to Camp Parks in the Dublin General Plan is "Public Lands" not "Public/Semi-Public"; the General Plan does not further define Public Lands.
3. Page 4-53, Section 4.9.1.2. (Land Use): Under the section titled "Southern Cantonment Area", in the last paragraph, an assertion is made that Dublin Crossing is compatible with the guiding policies for the Eastern Extended Planning Area however, it should be noted that the proposed exchange area (Dublin Crossing) is not currently within the Eastern Extended Planning Area. In the same paragraph it is also noted that the land uses proposed for the exchange area (Dublin Crossing) are "not consistent with the City of Dublin's current designation of public and semipublic" however, it should be noted that Public Lands is the City's land use designation for the property not Public/Semi-Public.
4. Page 4-61, Section 4.10.1 (Military Noise): Facilities proposed directly north of the proposed exchange area (Dublin Crossing) are identified in Appendix B, Figure 2-1 Land Use Categories and include (from west to east): 1) Open Space, 2) the 34-acre Residential Community Initiative (RCI) Housing (113 single family homes); 3) the Operations Area which includes retention of an existing building (use of this building was not readily apparent within the draft EIS); six new campus-like buildings, three of which would be part of the 29-acre Oakland Exchange Area; and, the 34-acre California Army National Guard (CA ARNG) Facility. Residential uses are proposed within the exchange area (Dublin Crossing) directly south of the Operations area.

The draft EIS does not evaluate the impacts of noise on the land uses proposed within the exchange area (Dublin Crossing). While it is understood that development of Dublin Crossing will likely require the preparation of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA), an analysis of noise impacts on the land uses proposed within the exchange area (Dublin Crossing) from Camp Parks operations needs to be conducted as part of the draft EIS and mitigation measures identified to address any potentially significant impacts.

It should also be noted that the Dublin General Plan establishes the normally acceptable noise levels for residential uses at 60db or less; conditionally acceptable noise levels are 60-70db with noise insulation features required.

Consideration should be taken to ensure that noise generated by Camp Parks, and specifically within the Operations area, does not result in exceeding normally or conditionally acceptable noise levels within the proposed exchange area. Possible mitigation for potentially significant noise impacts could include incorporating sound attenuation features into the fence proposed along the southern boundary of the Cantonment Area between the Cantonment Area and the proposed exchange area (Dublin Crossing).

5. Page 4-15, Section 4.31.3 (Hydrology): The discussion of mitigation related to hydrology impacts is limited to water quality and avoidance of flooding problems within the project area by keeping structures out of the floodplain. There is no discussion of mitigation of impacts to downstream properties or downstream watercourses due to increased runoff from development within the project area. The discussion should include measures needed for conformance with the San Francisco Bay Regional Water Quality Control Board's requirements for hydromodification (HMP) measures to maintain post-development runoff to match pre-development runoff, in order to avoid erosion impacts to downstream watercourses. Discussion is also needed on the need for analysis of impacts to downstream water courses with regards to flood capacity and potential flooding of adjoining properties.
6. Page 4-60, Section 4.9.2.3 (Transportation): The draft EIS discusses improvements at various intersections in the vicinity of the project to mitigate traffic impacts. In addition to the intersection improvements, it is likely that street segment improvements would also be necessary. This would include widening Dougherty Road from four lanes to six lanes between Houston Place and Amador Valley Boulevard, the extension of Scarlett Drive from Houston Place to Dublin Boulevard, and widening of Arnold Road from two lanes to four lanes between Dublin Boulevard and Central Parkway.

In addition, the document should discuss more specifically the impacts of relocating the Camp Parks entry from the Dublin Boulevard/Camp Parks Boulevard intersection to the Dougherty Road/Amador Valley Boulevard intersection. The analysis should discuss geometric changes to the Dougherty Road/Amador Valley Boulevard intersection, as well as potential right-of-way needs, and the need to widen Dougherty Road from Amador Valley Boulevard south to I-580. The analysis should also consider an alternate access location on Dougherty Road, midway between Scarlett Drive and Amador Valley Boulevard that could align with an access point to the Arroyo Vista redevelopment project on the west side of Dougherty Road.

7. Page 5-2 (Cumulative Analysis Methodology): The chart shows that there is no significant master plan or cumulative impact to hydrology. Based on the comments noted above on hydrology, the chart should be changed to indicate that there is a significant impact to hydrology or that the impact could be



mitigated to less than significant with the appropriate mitigation measures identified.

8. Page 5-3, Section 5.1.2.2 (Hydrology): See comments above.
9. Appendix "F", LOS Analysis, Detailed Calculations: The assumed land geometrics are not consistent with the City's planned road segment improvements as follows:
  - a. Dougherty Road is incorrectly shown as having four northbound and four southbound lanes at Amador Valley Boulevard; Dougherty Road is planned as a six-lane facility with three northbound and 3 southbound lanes.
  - b. Dublin Boulevard at Iron Horse Parkway is incorrectly shown as an eight-lane facility; it is currently constructed to its ultimate width of six lanes.
  - c. Hacienda Drive at Gleason Drive is incorrectly shown as a six-lane facility; it is planned as a four-lane facility.
  - d. Arnold Road (northbound) at Central Parkway is incorrectly shown as having three lanes; Arnold Road is planned as a four-lane facility.

Thank you for the opportunity to comment on the Draft EIS. Please feel free to contact me at 925-833-6610 if you have any questions or require additional information.

Best Regards,



Marnie R. Nuccio  
Associate Planner

cc: City of Dublin City Council  
Richard Ambrose, City Manager  
Jeri Ram, Community Development Director  
Mary Jo Wilson, Planning Manager  
Melissa Morton, Public Works Director  
Mark Lander, City Engineer



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION IX**

**75 Hawthorne Street**

**San Francisco, CA 94105-3901**

July 16, 2007

Gary Houston  
Environmental Division Chief  
U.S. Army Combat Support Training Center  
791 U.S. Army  
Attn: IMWE-CST-P  
Dublin, CA 94568-5201

Subject: Draft Environmental Impact Statement (DEIS), Camp Parks Real Property Master Plan, Dublin, California (CEQ # 20070210)

Dear Mr. Houston:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

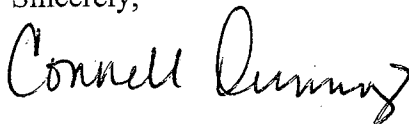
The proposed action is redevelopment of a 487-acre section of the Camp Parks military training area under a Master Plan, and transfer of 180 acres to private ownership for development. The project also includes increases in military training on existing training land.

Based on our review, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed “Summary of Rating Definitions”). We have concerns regarding impacts to air quality, especially since the area does not currently meet air quality standards that are necessary for protection of human health. Additional mitigation measures should be incorporated into the project to reduce air pollutant emissions. In addition, the DEIS focuses largely on the development component of the project and does not include an adequate impact analysis for the increases in training activities that will occur. More information on training impacts should be included in the Final EIS, including specific mitigation measures that will reduce impacts to resources from training exercises.

EPA appreciates the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any

questions, please contact me at (415) 972-3846 or Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or [vitulano.karen@epa.gov](mailto:vitulano.karen@epa.gov).

Sincerely,

*FOR*  
  
Nova Blazej, Manager  
Environmental Review Office

Enclosure: Summary of EPA Rating Definitions  
EPA's Detailed Comments

## **SUMMARY OF EPA RATING DEFINITIONS**

This rating system was developed as a means to summarize EPA's level of concern with a proposed action. The ratings are a combination of alphabetical categories for evaluation of the environmental impacts of the proposal and numerical categories for evaluation of the adequacy of the EIS.

### **ENVIRONMENTAL IMPACT OF THE ACTION**

#### ***"LO" (Lack of Objections)***

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

#### ***"EC" (Environmental Concerns)***

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

#### ***"EO" (Environmental Objections)***

The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

#### ***"EU" (Environmentally Unsatisfactory)***

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

### **ADEQUACY OF THE IMPACT STATEMENT**

#### ***Category 1" (Adequate)***

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

#### ***"Category 2" (Insufficient Information)***

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analysed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

#### ***"Category 3" (Inadequate)***

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analysed in the draft EIS, which should be analysed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

\*From EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."

### **Air Quality Impacts**

The DEIS indicates that the air quality in the region of Camp Parks is not in attainment for the health-based National Ambient Air Quality Standards (NAAQS) for ozone (p. 3-4). The cumulative impact analysis notes the large increases in development surrounding Camp Parks, and acknowledges that the cumulative effects on air quality are significant (p. 5-3), resulting in decreased air quality in the vicinity of Dublin and San Ramon.

The DEIS states that since Best Management Practices were assumed during emission calculations, little additional mitigation is likely (p. 5-3). Appendix D-4 and p. 4-4 of the DEIS identify construction mitigation only as consisting of watering exposed surfaces and unpaved haul roads to control dust and to replace ground cover in disturbed areas quickly. The only operational measure identified is that no wood stoves would be constructed in any of the Camp Parks buildings, but there is no further information regarding how this assumption will be ensured, especially since the Dublin Crossing development will be the purview of the City of Dublin. In addition, there is no discussion of diesel emissions. EPA is aware of the serious health effects that diesel particulate and other fine particulates can cause and urges the Army to reduce particulate emissions to the greatest extent possible.

*Recommendation:* In the FEIS, provide additional information to ensure that no wood stoves will be installed for the project. If these assurances can not be made, update the modeling assumptions accordingly.

Identify additional operational phase mitigation measures to reduce emissions and incorporate these into the project. Examples are inclusion of bicycle lanes and bicycle parking into project designs, incorporation of BART shuttles and ride-sharing programs, and use of zero-emission vehicles for on-base travel, etc.

Construction phase mitigation measures should also be more robust. EPA recommends including a Construction Emissions Mitigation Plan (CEMP) for fugitive dust and diesel particulate matter (DPM) in the FEIS and adopting this plan in the Record of Decision. The following mitigation measures should be included in the CEMP in order to reduce impacts associated with emissions of ozone precursors, particulate matter and air toxics from construction-related activities:

- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. Control technologies such as particle traps control approximately 80 percent of DPM. Specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions.

- Ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations.
- Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and sensitive receptors (schools, daycare centers, and hospitals).
- Require the use of low sulfur diesel fuel (<15 parts per million sulfur) for diesel construction equipment, if available.
- Reduce construction-related trips of workers and equipment, including trucks. Develop a construction traffic- and parking-management plan that minimizes traffic interference and maintains traffic flow.
- Lease or buy newer, cleaner equipment (1996 or newer model), using a minimum of 75 percent of the equipment's total horsepower.
- Use lower-emitting engines and fuels, including electric, liquified gas, hydrogen fuel cells, and/or alternative diesel formulations.
- Implement the following Fugitive Dust Source Controls:
  - Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate, to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
  - Install wind fencing and phase grading operations where appropriate, and operate water trucks for surface stabilization under windy conditions.
  - When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

EPA recommends that the DEIS disclose the available information about the health risks associated with vehicle emissions and mobile source air toxics (see <http://www.epa.gov/otaq/toxics.htm>).

We also have the following comments regarding the Air Quality section of Chapter 3:

- The DEIS states that in March 2001, EPA again proposed a finding that the Bay Area had not attained the one-hour ozone NAAQS and that currently the Bay Area is in the process of requesting EPA to redesignate the area "attainment/maintenance" for ozone (p. 3-4). The FEIS should be updated to state that in 2004, EPA made a finding that the Bay Area had attained the 1-hr ozone standard. The effect of that finding is to suspend certain nonattainment area requirements. The 1-hr standard

was subsequently revoked by EPA. The Bay Area is currently designated as a marginal nonattainment area for the federal 8-hr ozone standard. The Bay Area Air Quality Management District is not at present working on a redesignation request/maintenance plan for the 8-hr ozone standard. Please note that EPA has recently proposed to lower the ozone standard, indicating our concern that the current standard is not protective enough of human health. This information should be included in the FEIS.

- EPA has not yet designated areas as non-attainment for the new 24-hour standard for Particulate Matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>); however, preliminary data indicate that the Bay Area is not meeting the revised PM<sub>2.5</sub> 24-hr NAAQS. Preliminary monitoring data indicate that the San Jose monitor is recording violations of the new standard and monitors in Livermore and Concord are very close to violating the standard. This information should be included in the FEIS.
- The data for all pollutants under “Local Ambient Air Quality” (p. 3-4 through 3-5) should be updated to include data for 2006. We note that for the ozone discussion, the operative standard (federal) at present is the 8-hour ozone standard, not the 1-hr standard. This discussion should be expanded to include more current data and should be framed in the context of the 8-hr standard. For the particulate matter discussion, update data and discuss within the context of the new 24-hr standard of 35 ug/m<sup>3</sup>.
- Under Title V permit status, the information in the DEIS appears to be based on the old standard. This discussion should be updated to be consistent with the 8-hr ozone NAAQS. The Bay Area is classified, as marginal. Also, this section references a 2003 air emissions inventory at Camp Parks. Update this using more recent information.

### **Impacts from Increased Training Activities**

The proposed action anticipates a population increase at Camp Parks of 85% for total assigned personnel, increasing the population by almost 2,000 people by 2012 (p. 2-1). The DEIS states that the frequency and duration of training activities would likely increase in response to installation population increases and military training needs (p. iii), and that the number of soldiers and amount of training is expected to “dramatically” increase during a time of war (p. 3-73). While the DEIS outlines the different kinds of training activities that generally occur, the DEIS does not identify and assess the environmental impacts from increases in these training activities.

*Recommendation:* The FEIS should include an assessment of environmental impacts from expected wartime training activities occurring now and expected in the future. The assessment should include impacts to all environmental resources, including soils, hydrology and groundwater, and habitat. The FEIS should clarify whether the current wars in Iraq and Afghanistan will result in dramatic increases in wartime training

activities at Camp Parks.

### **Hazardous Waste Contamination**

EPA is currently assessing the Parks Reserve Forces Training Area under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The preliminary assessment evaluates whether the site is a federal concern and determines whether it is eligible for placement on the National Priorities List. It is anticipated that this assessment will be completed within a year.

The DEIS notes several areas that may be impacted by hazardous substances that have not been fully assessed and/or remediated. The full impact of redevelopment cannot be evaluated without completing all necessary hazardous substance assessments. The potential for vapor intrusion, when chemicals in soil or groundwater move up through the soil and into nearby buildings contaminating indoor air, should be considered in these assessments.

*Recommendation:* In the FEIS, disclose that the project site is being evaluated by EPA under the Superfund program. Any updates to the hazardous substance assessments should be included in the FEIS. EPA recommends the vapor intrusion pathway be evaluated to identify risks to human health at redevelopment sites.

### **Biological Resources**

EPA is concerned that the proposed development in the Cantonment Area will impact a number of Western burrowing owls which, in addition to being U.S. Fish and Wildlife Service (USFWS) species of concern, are designated as a California Species of Special Concern. This designation was not identified in the DEIS. In addition, EPA does not agree with the statement that "loss of occupied nesting habitat in the Cantonment Area on Camp Parks does not directly affect the regional population" of burrowing owls (page 4-31). Any loss of a breeding population for this species is of concern and should be avoided.

*Recommendation:* In the FEIS, substantiate the conclusions regarding impacts to the burrowing owl. Incorporate measures into the project to mitigate these impacts. EPA recommends that in addition to consultation with the USFWS, that the Army also consult with the California Department of Fish and Game for the species impacted by the project that are also protected by the State of California, such as the western burrowing owl, the California red-legged frog and the California tiger salamander.

### **Sustainable Building**

The project involves new construction of facilities. The DEIS does not discuss the Executive Order (E.O.) 13423 – Strengthening Federal Environmental, Energy, and Transportation Management. This E.O. supports energy efficiency, water conservation, and the use of renewable energy products by the federal government, providing specific goals towards these ends. The E.O. also states that agencies shall ensure that new construction and major renovation of agency buildings comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the 2006 Federal Leadership in High



Performance and Sustainable Buildings Memorandum of Understanding (MOU), of which the U.S. Army is a signatory. Through the MOU, the DoD agreed to: reduce the energy cost budget by 30% for new construction and 20% for major renovations; employ strategies to reduce indoor and outdoor water use and reduce stormwater runoff and pollution; use products with recycled content; and use biobased products made from rapidly renewable resources and certified sustainable wood products.

*Recommendation:* The FEIS should identify the sustainable building requirements identified above and indicate how the project will comply with them. Specific commitment towards the goals of the E.O. and MOU should be included. Consistent with Executive Order 13423, Section 2(f) and MOU Section II, the project should be designed to earn the Energy Star® targets for new construction and major renovation where applicable. EPA also recommends the Army commit to facilities that are certified as a green building per the Leadership in Energy and Environmental Design (LEED) green building rating system. LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor air quality. More information about the LEED green building rating system is available at <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>.



# DUBLIN SCHOOLS

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## DUBLIN UNIFIED SCHOOL DISTRICT

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7471 LARKDALE AVENUE • DUBLIN, CA 94568 • (925) 828-2551

Gary Houston  
Environmental Chief, US Army  
Combat Support Training Center (CSTC)  
791 US Army  
Attn: IMSO-PRK-PWE  
Dublin, CA 94568-5201

Dear Mr. Houston:

Thank you for giving the Dublin Unified School District the opportunity to comment on the Draft Environmental Impact Statement (EIS) on Master Planned Redevelopment at Camp Parks.

The District's comments are listed below:

Section 3.8.6.7. The EIS indicates that the high school is operating within capacity. The high school is at capacity. The housing already approved within the City of Dublin requires additional capacity be added to the campus.

Page 3-60, Schools. The correct spelling for the kindergarten through eighth grade campus is Fallon.

Page 4-46, Public Schools: The paragraph should be corrected to read, "Schools serving this area are generally at capacity or exceeding capacity." The projected additional students (200-300) in your estimate can not be evenly distributed through each of the grade levels, the generation rates vary by grade level. Further, class sizes vary by grade level, using a 25 student average is an incorrect assumption. Finally, there are 13 grades kindergarten through twelve. The conclusion of one additional teacher and classroom for each of the 12 grade levels is not correct.

Page A-139, Table 4-8, Lists school acres as 8. The California Department of Education recommended site acreage for a 650 student campus is 12 acres not 8.

Page A-140, Table 4-9, Same acreage note as the item above.

Page B-8, Figure 2-3, Again the site acreage listed should be 12 acres not the 8 acres shown. The District is also concerned about the location of the proposed site on a major traffic route with limited access. The shape of the site shown should be on a 2:1 ratio of width to length as opposed to the triangular shape shown. Finally, a more direct relationship of the school site to the adjacent housing is preferable and reduces the need for students crossing a major traffic route.

Again, thank you for providing this opportunity to comment on the Draft Document. Please contact me if you have any questions, (925) 828-2551 x 8061.

Sincerely,

Kim McNeely  
Director of Facilities

Cc: Beverly Heirmonimus, Dublin Unified School District



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## CITY OF SAN RAMON

2222 CAMINO RAMON  
SAN RAMON, CALIFORNIA 94583  
PHONE: (925) 973-2500  
WEB SITE: [www.sanramon.ca.gov](http://www.sanramon.ca.gov)

---

July 2, 2007

Gary Houston  
Environmental Division Chief  
US Army Combat Support Training Center  
791 US Army  
Attn: IMWE-CST-P  
Dublin CA 94568-5201

RE Draft Environmental Impact Statement (EIS) – Camp Parks Real Property Master Plan, Dublin California

Dear Mr. Houston:

The City of San Ramon appreciates the opportunity to review the Draft Environmental Statement for the above referenced project. The City has completed its review and is submitting the following comments for inclusion in the Final EIS.

The traffic study to be prepared for the Dublin Crossing project should include an assessment of impact related to new project traffic on both Interstate 680 and 580. In addition, because the proposed project causes six intersections to operate at LOS D and E or worse, specifically the Dougherty Road/Dublin Boulevard intersection operates at level of service E during the a.m. and p.m. peak hours; even with the planned improvements it will not be reduce to a less than significant level of service standard. Given the restrictions within the Dougherty Road/Dublin Boulevard intersection, the City recommends the following:

1. Implementation of a comprehensive Transportation Demand Management (TDM) program, similar to the Cities of Pleasanton and San Ramon to achieve reduction in the single vehicle occupant trips during the a.m. and p.m. peak hour. Dublin should

work in concert with neighboring jurisdictions to offer commute alternative incentive programs to residents, commuters, and students.

2. Insist that the Developers finance "seed" money to implement TDM incentive programs to residents, commuters, and merchants located within the project vicinity.
3. Continue to monitor intersection to track peak hour volumes and respond accordingly.
4. A transit evaluation should be developed to review and evaluate effectiveness of future transit service for the proposed project. A written and graphical description of existing and planned transit service located near the project should be developed and include:

Transit routes/description/map

Transit station/stop locations

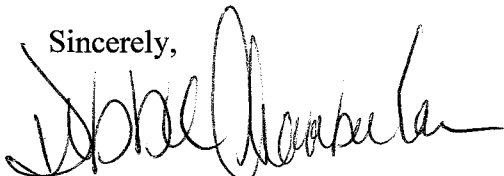
Site access to major regional transit center

Existing and planned transit schedules and headway information

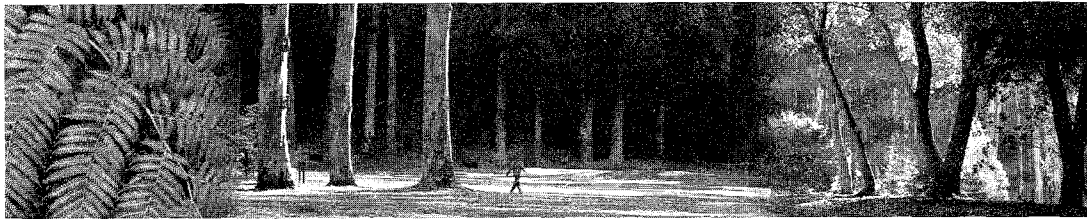
Finally, reference to the Dougherty Valley Specific Plan on page 3-66 should add the phrase, "...as amended..."

Again, thank you for the opportunity to comment. Should you have any questions, or need further clarification, I may be reached at (925) 973-2566.

Sincerely,



Debbie Chamberlain  
Planning Manager



2950 PERALTA OAKS COURT P.O. BOX 5381 OAKLAND CALIFORNIA 94605-0381 T. 510 635 0135 F. 510 569 4319 TDD. 510 633 0460 WWW.EBPARKS.ORG

July 6, 2007

Mr. Gary Houston  
Environmental Division Chief  
U.S. Army, Combat Support Training Center  
791 U.S. Army, Attn: IMWE-CST-P  
Dublin, CA 94568-5201

Subject: Comments on Draft EIS Camp Parks Real Property Master Plan  
Tassajara Creek Regional Park

Dear Mr. Houston,

Thank you for providing the East Bay Regional Park District ("District") with a copy of the Draft Environmental Impact Statement for the proposed Camp Parks Real Property Master Plan in Dublin, CA. The following are the District's comments on the DEIS.

The District owns the 27.4 acre Tassajara Creek Regional Park ("Park") that is adjacent to the northeastern boundary of Camp Parks. The Park may be adversely affected by increased noise, light and dust resulting from construction of new facilities adjacent or near the Park. The EIS should consider and mitigate for these potential adverse effects.

In 1994, the District exchanged 442.9 acres of parkland with the Army that resulted in the Park being reduced from 450.3 acres to its present size of 27.4 acres. When this property was conveyed, it was done so with a reversionary clause that if the property were declared surplus in the future that these lands would revert to District ownership. These are Assessor Parcel #'s 986-0001-001-06 & 07. The District has a long-term interest in protecting the open space character and natural resources on these parcels in the event that they are conveyed to the District as parkland.

It does not appear that the two parcels will be directly affected by the proposed project; however, they are adjacent to or near some of the areas proposed for redevelopment. The EIS should consider potential effects to this area, including increased noise, light and dust resulting from demolition and construction of new Army facilities.

Please call me at (510) 544-2622 should you have questions.

Sincerely,

Brad Olson  
Environmental Programs Manager

Board of Directors

John Sutter President Ward 2	Ayn Wieskamp Vice-President Ward 5	Ted Radke Treasurer Ward 7	Doug Siden Secretary Ward 4	Beverly Lane Ward 6	Carol Severin Ward 3	Nancy Skinner Ward 1	Pat O'Brien General Manager
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**C-12: DRAFT EIS COMMENT RESPONSES**

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## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	Dublin Unified School District	Volume I, Section 3.8.6.7	The EUS indicates that the high school is operating within capacity. The high school is at capacity. The housing already approved within the City of Dublin requires additional capacity be added to the campus.	INSERT p 3-58: The high school for the district is operating at capacity.
2	Dublin Unified School District	Volume I, Section 3.8.6.11, Page 3-60	The correct spelling for the kindergarten through eighth grade campus is Fallon.	INSERT p 3-61: The Dublin USD has planned for growth in the eastern Dublin area by establishing Dougherty Elementary School at Hacienda Drive and Central Parkway, just east of Camp Parks, in 2000 and opening Fallon kindergarten through 8th grade at Kohnen Way in the fall of 2005.
3	Dublin Unified School District	Volume I, Section 4.8.2.1, Page 4-46	The paragraph should be corrected to read, "Schools serving this area are generally at capacity or exceeding capacity." The projected additional students (200-300) in your estimate cannot be evenly distributed through each of the grade levels, the generation rates vary by grade level. Further, class sizes vary by grade level, using a 25 student average is an incorrect assumption. Finally, there are 13 grades kindergarten through twelve. The conclusion of one additional teacher and classroom for each of the 12 grade levels is not correct.	<p>INSERT p 4-49: Students from families of Camp Parks-assigned personnel would be added to the school population in the eastern portion of the Dublin Unified School District (DUSD). Schools in this district are generally at or exceeding capacity. About 200 to 300 new students would be added to DUSD (Appendix A, Table 2-1), which (using the higher figure) would may require additional teachers and/or classrooms for some of the 13 grades. Impacts would be typical of those in other rapidly growing areas, although military subsidies may be available as mitigation.<sup>1</sup></p> <p>In summary, the on-site infrastructure and service improvements would be beneficial impacts associated with implementation of the Proposed Action. Requirements of local public services to support the redeveloped community within the post would be minimal except for schools, where the need for additional teachers and/or classrooms might prove a hardship. However, military subsidies typically provided to schools attended by the children of active-duty military personnel may be available to at least partially mitigate these impacts.</p> <p><sup>1</sup> <i>The increase in students whose parents live on or work on federal property would increase federal aid per student to the schools in the area. (NMFA 2003).</i></p>

<sup>1</sup> *The increase in students whose parents live on or work on federal property would increase federal aid per student to the schools in the area. (NMFA 2003).*

Com #	Commenter	Section/ Subsection	Comment	Response
4	Dublin Unified School District	Volume II, Appendix A, Page A-139, Table 4-8	Lists school acres as 8. The California Department of Education recommended site acreage for a 650 student campus is 12 acres not 8.	Comment Acknowledged but no change in table will be made because this was an assumption made during preparation of the proposed action.
5	Dublin Unified School District	Volume II, Appendix A, Page-140, Table 4-9	Same acreage note as the item above.	Comment Acknowledged but no change in table will be made because this was an assumption made during preparation of the proposed action.
6	Dublin Unified School District	Volume II, Appendix B, Page B-8, Figure 2-3	Again the site acreage listed should be 12 acres not the 8 acres shown. The District is also concerned about the location of the proposed site on major traffic route with limited access. The shape of the site shown should be on a 2:1 ratio of width to length as opposed to the triangular shape shown. Finally, a more direct relationship of the school site to the adjacent housing is preferable and reduces the need for students crossing a major traffic route.	Comment Acknowledged but no change in table will be made because this was an assumption made during preparation of the proposed action.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, US ARMY GARRISON FORT HUNTER LIGGETT  
BUILDING 238 CALIFORNIA AVENUE  
FORT HUNTER LIGGETT, CA 93928-7000

IMWE-CST-ZA

March 16, 2009

Office of the Commander

Ms. Kim McNeely  
Director of Facilities  
Dublin Unified School District  
7471 Larkdale Avenue  
Dublin, CA 94568

Dear Ms. McNeely:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

**Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement**

<b>Com #</b>	<b>Commenter</b>	<b>Section/ Subsection</b>	<b>Comment</b>	<b>Response</b>
1	East Bay Regional Park District	Volume I, Sections 3.9, 4.9, and 5.1	The District owns the 27.4 acre Tassajara Creek Regional Park that is adjacent to the northeastern boundary of Camp Parks. The Park may be adversely affected by increased noise, light and dust resulting from construction of new facilities adjacent or near the Park. The EIS should consider and mitigate for these potential adverse effects.	<p>INSERT p 3-66: The East Bay Regional Park District owns and manages the 27.4 acre Tassajara Creek Regional Park which is adjacent to northeast corner of the Training Area. The park contains vehicle parking, picnic tables, and hiking trails.</p> <p>INSERT p 4-55: The proposed action would have no impact on the 27.4 acre Tassajara Creek Regional Park which is adjacent to northeast corner of the Training Area.</p>
2	East Bay Regional Park District	Volume I, Sections 3.9, 4.9, and 5.1	<p>In 1994, the District exchanged 442.9 acres of parkland with the Army that resulted in the Park being reduced from 450.3 acres to its present size of 27.4 acres. When this property was conveyed, it was done so with a reversionary clause that if the property were declared surplus in the future that these lands would revert to District ownership. These are Assessor Parcel #'s 986-0001-001-06 &amp; 07. The District has a long-term interest in protecting the open space character and natural resources on these parcels in the even that they are conveyed to the District as parkland.</p> <p>It does not appear that the two parcels will be directly affected by the proposed project; however, they are adjacent to or near some of the areas proposed for redevelopment. The EIS should consider potential effects to this area, including increased noise, light and dust resulting from demolition and construction of new Army facilities.</p>	Addressed by response to comment above.



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, US ARMY GARRISON FORT HUNTER LIGGETT  
BUILDING 238 CALIFORNIA AVENUE  
FORT HUNTER LIGGETT, CA 93928-7000

IMWE-CST-ZA

March 16, 2009

Office of the Commander

Mr. Brad Olson  
Environmental Programs Manager  
East Bay Regional Park District  
2950 Peralta Oaks Court  
P. O. Box 5381  
Oakland, CA 94605-0381

Dear Mr. Olson:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	Based on our review, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2). We have concerns regarding impacts to air quality, especially since the area does not currently meet air quality standards that are necessary for protection of human health. Additional mitigation measures should be incorporated into the project to reduce air pollutant emissions. <i>See Detailed Comment Below.</i>	Addressed by detailed comments below.
2	U.S. EPA. Region IX	Volume I, All Sections	In addition, the DEIS focuses largely on the development component of the project and does not include an adequate impact analysis for the increases in training activities that will occur. More information on training impacts should be included in the Final EIS, including specific mitigation measures that will reduce impacts to resources from training exercises. <i>See Detailed Comment Below.</i>	Addressed by detailed comments below.
3	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>Air Quality Impacts – The DEIS indicates that the air quality in the region of Camp Parks is not in attainment for the health-based National Ambient Air Quality Standards (NAAQS) for ozone (p. 3-4). The cumulative impact analysis notes the large increases in development surrounding Camp Parks, and acknowledges that the cumulative effects on air quality are significant (p. 5-3), resulting in decreased air quality in the vicinity of Dublin and San Ramon.</p> <p>The DEIS states that since Best Management Practices were assumed during emission calculations, little additional mitigation is likely (P. 5-3). Appendix D-4 and p. 4-4 of the DEIS identify construction mitigation only as consisting of watering exposed surfaces and unpaved haul roads to control dust and to replace ground cover in disturbed areas quickly. The only operational measure identified is that no wood stoves would be constructed in any of the Camp Parks buildings, but there is no further information regarding how this assumption will be ensured, especially since the Dublin Crossing development will be the purview of the City of Dublin. In addition, there is no discussion of diesel emissions. EPA is aware of the serious health effects that diesel particulate and other fine particulates can cause and</p>	<p>INSERT p 4-4: For operational emissions, it was assumed that no wood burning devices would be installed in any of the Camp Parks buildings which would be ensured by the incorporation of such prohibition in future Army construction documents and technical specifications for redevelopment at the site. The use of wood-burning devices as part of any future Dublin Crossing development would have to comply with all applicable local and air quality district regulations. The BAAQMD is currently seeking to reduce emissions of harmful PM from wood-burning devices, including indoor and outdoor fireplaces and wood-burning stoves and has proposed Draft Regulation 6 Particulate Matter and Visible Emissions, Rule 3 Wood-Burning Devices to establish standards relating to the installation and operation of wood-burning devices in the region.</p>

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			<p>urges the Army to reduce particulate emissions to the greatest extent possible.</p> <p>Recommendations: In the FEIS, provide additional information to ensure that no wood stoves will be installed for the project. If these assurances cannot be made, update the modeling assumptions accordingly.</p>	
4	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>Recommendations Cont: Identify additional operational phase mitigation measures to reduce emissions and incorporate these into the project. Examples are inclusion of bicycle lanes and bicycle parking into project designs, incorporation of BART shuttles and ride-sharing programs, and use of zero-emission vehicles for on-base travel, etc.</p>	<p>INSERT p 4-7: 4.1.4 Additional Mitigation Measures: Additional mitigation measures have been identified to further reduce air quality impacts associated with implementation of the Proposed Action. These measures are identified by phase of activity to include Construction Phase Mitigation (4.1.4.1) and Operational Phase Mitigation (4.1.4.2).</p> <p>4.1.4.1 Construction Phase Mitigation  A Construction Emissions Mitigation Plan (CEMP) for fugitive dust and diesel particulate matter (DPM) will be prepared by the Army prior to the beginning of significant demolition or construction activity associated with the Updated Master Plan. The following mitigation measures will be included in the CEMP in order to reduce impacts associated with emissions of ozone precursors, particulate matter and air toxics from construction-related activities:</p> <ul style="list-style-type: none"> <li>▪ Ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.</li> <li>▪ Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations.</li> <li>▪ Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and sensitive receptors (schools, daycare centers, and hospitals).</li> <li>▪ Require the use of low sulfur diesel fuel (&lt;15</li> </ul>

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				<p>parts per million sulfur) for diesel construction equipment, if available.</p> <ul style="list-style-type: none"> <li>▪ Reduce construction-related trips of workers and equipment, including trucks. Develop a construction traffic- and parking-management plan that minimizes traffic interference and maintains traffic flow.</li> <li>▪ Use lower-emitting engines and fuels, including electric, liquefied gas, hydrogen fuel cells, and/or alternative diesel formulations where possible.</li> <li>▪ Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate, to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.</li> <li>▪ Install wind fencing and phase grading operations where appropriated, and operate water trucks for surface stabilization under windy conditions.</li> <li>▪ When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph at the construction site.</li> </ul> <p>4.1.4.1 Operational Phase Mitigation The following mitigation measures will be implemented, to the extent that funding is available, in order to reduce impacts associated with emissions of ozone precursors, particulate matter and air toxics from operational and training-related activities:</p> <ul style="list-style-type: none"> <li>▪ Promote energy efficiency incentive programs.</li> <li>▪ Design non-residential projects with bicycle lockers and/or racks.</li> <li>▪ Provide for separate, safe, and convenient bicycle and pedestrian paths connecting residential, training, and administrative uses.</li> <li>▪ Provide a development pattern that eliminates</li> </ul>



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				<p>physical barriers such as walls, berms, landscaping, and slopes between residential and nonresidential areas that impede bicycle or pedestrian circulation</p> <ul style="list-style-type: none"> <li>▪ Identify applicable measures to reverse the urban heat island condition by providing strategically-planted vegetation and reflective surfaces.</li> <li>▪ Acquisition and operation of rideshare of zero-emission vehicles for on-base travel.</li> </ul>
5	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>Recommendations Cont: Construction phase mitigation measures should also be more robust. EPA recommends including a Construction Emissions Mitigation Plan (CEMP) for fugitive dust and diesel particulate matter (DPM) in the FEIS and adopting this plan in the Record of Decision. The following mitigation measures should be included in the CEMP in order to reduce impacts associated with emissions of ozone precursors, particulate matter and air toxics from construction-related activities:</p> <ul style="list-style-type: none"> <li>• Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. Control technologies such as particle traps control approximately 80 percent of DPM. Specialized catalytic converters (oxidation catalysts) control approximately 20 percent of DPM, 40 percent of carbon monoxide emissions, and 50 percent of hydrocarbon emissions.</li> <li>• Ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.</li> <li>• Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations.</li> <li>• Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and sensitive receptors (schools, daycare</li> </ul>	Addressed by response to comment above.

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			<p>centers, and hospitals).</p> <ul style="list-style-type: none"> <li>• Require the use of low sulfur diesel fuel (&lt;15 parts per million sulfur) for diesel construction equipment, if available.</li> <li>• Reduce construction-related trips of workers and equipment, including trucks. Develop a construction traffic- and parking-management plan that minimizes traffic interference and maintains traffic flow.</li> <li>• Lease or buy newer, cleaner equipment (1996 or newer model), using a minimum of 75 percent of the equipment's total horsepower.</li> <li>• Use lower-emitting engines and fuels, including electric, liquefied gas, hydrogen fuel cells, and/or alternative diesel formulations.</li> </ul>	
6	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>Recommendations Cont: Implement the following Fugitive Dust Source Controls:</p> <ul style="list-style-type: none"> <li>• Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate, to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.</li> <li>• Install wind fencing and phase grading operations where appropriated, and operate water trucks for surface stabilization under windy conditions.</li> <li>• When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.</li> </ul>	Addressed by response to comment above.
7	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>EPA recommends that the DEIS disclose the available information about the health risks associated with vehicle emissions and mobile source air toxics (see <a href="http://www.epa.gov/otaq/toxics.htm">http://www.epa.gov/otaq/toxics.htm</a>).</p>	<p>INSERT p 3-6: Mobile source air toxics are compounds emitted from highway vehicles and nonroad equipment which are known or suspected to cause cancer or other serious health and environmental effects. For example, diesel particulate matter is part of a complex mixture that makes up diesel exhaust and is emitted from a broad range of diesel engines; the on road diesel engines of trucks, buses and cars and the off road diesel engines that include heavy duty equipment. In September 2000, the California Air Resources Board (CARB) approved a comprehensive Diesel Risk Reduction Plan to</p>

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				<p>reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. People exposed to toxic air pollutants at sufficient concentrations and durations may have an increased chance of getting cancer or experiencing other serious health effects. In response to this nationwide hazard, the EPA has conducted an extensive review of the literature to produce a list of the compounds identified in the exhaust or evaporative emissions from onroad and nonroad equipment, using baseline as well as alternative fuels (e.g., ethanol, biodiesel, compressed natural gas).</p> <p>Camp Parks' 2006 air emission inventory reports estimated total actual and potential Hazardous Air Pollutant (HAP) emissions. Both actual and potential HAP emissions are currently negligible, with actual emissions estimated at approximately 0.36 TPY, and estimated potential emissions amounting to 1.70 TPY. Estimated actual and potential 2006 HAP emissions at Camp Parks are provided in Appendix A, Table 3-3.</p>
8	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	<p>We also have the following comments regarding the Air Quality section of Chapter 3: The DEIS states that in March 2001, EPA again proposed a finding that the Bay Area had not attained the one-hour ozone NAAQS and that currently the Bay Area is in the process of requesting EOA to redesignate that area "attainment/maintenance" for ozone (p.3-4). The FEIS should be updated to state that in 2004, EPA made a finding that the Bay Area had attained the 1-hr ozone standard. The effect of that finding is to suspend certain nonattainment area requirements. The 1-hr standard was subsequently revoked by EPA. The Bay Area is currently designated as a marginal nonattainment area for the federal 8-hr ozone standard. The Bay Area Air Quality Management District is not at present working on a redesignation request/maintenance plan for the 8-hr ozone standard. Please note that EPA has recently proposed to lower the ozone standard, indicating our concern that the current standard is not protective enough of human health. This information should be included in the FEIS.</p>	<p>INSERT p 3-4: In 2004, the EPA made a finding that the Bay Area had attained the 1-hr ozone standard. The 1-hr standard was subsequently revoked by EPA. The Bay Area is currently designated as a marginal nonattainment area for the federal 8-hr ozone standard. The Bay Area Air Quality Management District is not at present working on a redesignation request/maintenance plan for the 8-hr ozone standard.</p>
9	U.S. EPA.	Volume I,	EPA has not yet designated areas as non-attainment for the	INSERT p 3-4: The Bay Area is a currently designated

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	Region IX	Sections 3.1, 4.1, and 5.1.2.1	new 24-hour standard for Particulate Matter with a diameter of 2.5 microns or less (PM <sub>2.5</sub> ); however, preliminary data indicate that the Bay Area is not meeting the revised PM <sub>2.5</sub> 24-hr NAAQS. Preliminary monitoring data indicate that the San Jose monitor is recording violations of the new standard and monitors in Livermore and Concord are very close to violating the standard. This information should be included in the FEIS.	as nonattainment for the California Air Resource Board (ARB) standards for particulate matter less than 10 microns in diameter (PM <sub>10</sub> ) and less than 2.5 microns in diameter (PM <sub>2.5</sub> ). EPA has not yet designated areas as non-attainment for the new 24-hour standard for particulate matter with a diameter of 2.5 microns or less (PM <sub>2.5</sub> ); however, preliminary data indicate that the Bay Area is not meeting the revised PM <sub>2.5</sub> 24-hr NAAQS. Preliminary monitoring data indicate that the San Jose monitor is recording violations of the new standard and monitors in Livermore and Concord are very close to violating the standard.
10	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	The data for all pollutants under "Local Ambient Air Quality" (p. 3-4 through 3-5) should be updated to include data for 2006. We note that for the ozone discussion, the operative standard (federal) at present is the 8-hour ozone standard, not the 1-hr standard. This discussion should be expanded to include more current data and should be framed in the context of the 8-hr standard. For the particulate matter discussion, update data and discuss within the context of the new 24-hr standard of 35 ug/m <sup>3</sup> .	<p>INSERT p 3-4/5: The following information is based on 2000-2006 monitoring data collected from the Livermore station, the closest air quality monitoring station to Camp Parks (BAAQMD 2007). Measured ambient air concentrations were below the NAAQS, except for ozone. The ozone exceedance is not unexpected, as the Livermore station is located within a designated ozone nonattainment area.</p> <ul style="list-style-type: none"> <li>□ <b>Ozone.</b> The Livermore monitoring station recorded 19 exceedances of the national eight-hour ozone NAAQS (235 micrograms per cubic meter [ug/m<sup>3</sup>]) from 2000 to 2006. During that same time period, the station recorded 60 exceedances of the more stringent (180 ug/m<sup>3</sup>) one-hour California standard.</li> <li>□ <b>Carbon Monoxide.</b> No violations of either the national or California CO standards were recorded at the Livermore monitoring station from 2000-2006.</li> <li>□ <b>Particulate Matter.</b> The Livermore monitoring station did not record an exceedance of the national 24-hour PM<sub>10</sub> standard (150 ug/m<sup>3</sup>) from 2000-2006. However, during that same period, an estimated 60 exceedances of the more stringent (50 ug/m<sup>3</sup>) California standard were</li> </ul>

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				<p>calculated. The Livermore monitoring station recorded three exceedances of the national 24-hour PM<sub>2.5</sub> standard (35 µg/m<sup>3</sup>) in 2006. On Dec. 17, 2006, the U.S. EPA implemented a more stringent national 24-hour PM<sub>2.5</sub> standard—revising it from 65 µg/m<sup>3</sup> to 35 µg/m<sup>3</sup> and revoked the national annual average PM<sub>10</sub> standard. PM<sub>2.5</sub> exceedance days for 2006 reflect the new standard.</p> <ul style="list-style-type: none"> <li>❑ <b>Nitrogen Dioxide.</b> No violations of either the national or California NO<sub>2</sub> standards were recorded at the Livermore monitoring station from 2000-2006.</li> <li>❑ <b>Sulfur Dioxide.</b> The Livermore monitoring station does not measure for SO<sub>2</sub>, however no violations of either the national or California SO<sub>2</sub> standards have been recorded at any BAAQMD monitoring station from 2000-2006.</li> </ul>
11	U.S. EPA. Region IX	Volume I, Sections 3.1, 4.1, and 5.1.2.1	Under Title V permit status, the information in the DEIS appears to be based on the old standard. This discussion should be updated to be consistent with the 8-hr ozone NAAQS. The Bay Area is classified, as marginal. Also, this section references a 2003 air emissions inventory at Camp Parks. Update this using more recent information.	INSERT p 3-6: Camp Parks is located in the marginal BAAQMD ozone nonattainment area. USEPA has determined that the emission thresholds applicable to the area, which is classified as “marginal,” are 100 tons per year of a criteria air pollutant (NO <sub>x</sub> , SO <sub>2</sub> , Pb, VOC, CO or PM <sub>2.5</sub> ); 10 tons per year of any single HAP, or 25 TPY for a combination of HAPs. In order for a source to be classified as “major” by the BAAQMD and become subject to Title V permit requirements, the potential emissions must exceed any one of these thresholds. Based on the 2006 air emission inventory at Camp Parks (Appendix A, Tables 3-2 and 3-3), both the actual and potential emissions are well below the Title V thresholds listed. Therefore, Camp Parks is not subject to the requirements of a federally enforceable Title V operating permit.
12	U.S. EPA. Region IX	Volume I, All Sections	Impacts from Increased Training Activities – The proposed action anticipates a population by almost 2,000 people by 2012 (p. 2-1). The DEIS states that the frequency and duration of training activities would likely increase in response to installation population increases and military	INSERT p 4-4: Future increases in air emissions as a result of anticipated increases in assigned personnel and training activities associated with the Proposed Action is not anticipated to be significant and likely to only provide for marginal increases over existing 2006

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			<p>training needs (p. iii), and that the number of soldiers and amount of training is expected to “dramatically” increase during a time of war (p. 3-73). While the DEIS outlines the different kinds of training activities that generally occur, the DEIS does not identify and assess the environmental impacts from increases in these training activities.</p> <p>Recommendation: The FEIS should include an assessment of environmental impacts from expected wartime training activities occurring now and expected in the future. The assessment should include impacts to all environmental resources, including soils, hydrology and groundwater, and habitat. The FEIS should clarify whether the current wars in Iraq and Afghanistan will result in dramatic increases in wartime training activities at Camp Parks.</p>	<p>air emission levels.</p> <p>INSERT p 3-74: These activities are expected to continue to occur at Camp Parks on a regular or irregular basis with the number of soldiers, amount of training, and probable impacts at Camp Parks fluctuating depending on existing or anticipated DoD mission readiness requirements.</p>
13	U.S. EPA. Region IX	Volume I, Sections 3.13 and 4.13	<p>Hazardous Waste Contamination: EPA is currently assessing the Parks Reserve Training Area under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund. The preliminary assessment evaluates whether the site is a federal concern and determines whether it is eligible for placement on the National Priorities List. It is anticipated that this assessment will be completed within a year.</p> <p>The DEIS notes several areas that may be impacted by hazardous substances that have not been fully assessed and/or remediated. The full impact of redevelopment cannot be evaluated without completing all necessary hazardous substance assessments. The potential for vapor intrusion, when chemicals in soil or groundwater move up through the soil and into nearby buildings contaminating indoor air, should be considered in these assessments.</p> <p>Recommendation: In the FEIS, disclose that the project site is being evaluated by EPA under the Superfund program. Any updates to the hazardous substance assessments should be included in the FEIS. EPA recommends the vapor intrusion pathway be evaluated to identify risks to human health at redevelopment sites.</p>	<p>INSERT p 3-91: The USEPA’s Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) active list of known or suspected hazardous substance release or disposal sites in Alameda County includes 45 locations, and the Contra Costa County list includes 29 locations (USEPA 2007). Camp Parks is an active CERCLIS site identified as EPA ID CAR000066613, Parks Reserve Forces Training Area. The EPA is currently in the process of conducting a Preliminary Assessment Review of the site to determine whether any further action is necessary to protect human health and the environment from previously documented releases on Camp Parks. While existing site characterization and assessment data for Camp Parks indicates that the site will likely require no further action from the EPA, the Preliminary Assessment process is underway.</p>
14	U.S. EPA. Region IX	Volume I, Sections 3.6	<p>Biological Resources: EPA is concerned that the proposed development in the Cantonment Area will impact a number</p>	<p>INSERT p 4-33: The mitigation goal for the burrowing owl is to compensate for the anticipated impact by</p>

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		and 4.6	<p>of Western burrowing owls which, in addition to being U.S. Fish and Wildlife Service (USFWS) species of concern, are designated as a California Species of Special Concern. This designation was not identified in the DEIS. In addition, EPA does not agree with the statement that “loss of occupied nesting habitat in the Cantonment Area on Camp Parks does not directly affect the regional population” of burrowing owls (page 4-31). Any loss of a breeding population for this species of concern and should be avoided.</p> <p>Recommendation: In the FEIS, substantiate the conclusions regarding impacts to the burrowing owl. Incorporate measures into the project to mitigate these impacts. EPA recommends that in addition to consultation with the USFWS, that the Army also consult with the California Department of Fish and Game for the species impacted by the project that are also protected by the State of California, such as the western burrowing owl, the California red-legged frog and the California tiger salamander.</p>	<p>replacing or providing substitute resources or environments elsewhere on Camp Parks according to recommended guidelines published in the California Department of Fish and Game Staff Report on Burrowing Owl Mitigation (CADFG 1995). Before initiating ground-disturbing activities in grassland habitats, preconstruction surveys for burrowing owls would be conducted by a qualified biologist within 150 meters (approx. 500 ft.) of construction areas. Surveys would be conducted no more than 90 days before ground disturbance. If burrowing owls were found, the burrow site would be avoided, if possible, and given at least a 50 meter (approx. 160 ft.) buffer. If the burrow could not be avoided, the biologist would determine whether eggs or young were present in the nest. If eggs or young were present, no disturbance would occur within 50 meters of the nest site until the young had fledged. If no young were present or if young had fledged, burrowing owls would be passively relocated to other nearby areas of suitable habitat on Camp Parks.</p> <p>Owls would be excluded from burrows in the immediate impact zone and within a 50 meter buffer zone by installing one-way doors in burrow entrances. One-way doors (e.g. modified dryer vents) should be left in place 48 hours to ensure owls have left the burrow before excavation. Two artificial burrows would be provided for each burrow in the project area that will be rendered biologically unsuitable. The project area would be monitored daily for one week to confirm owl use of burrows before excavating burrows in the immediate impact zone.</p>
14	U.S. EPA. Region IX	Volume I, Sections 3.8 and 4.8	Sustainable Building: The project involves new construction of facilities. The DEIS does not discuss the Executive Order (EO) 13423 – Strengthening Federal Environmental, Energy, and Transportation Management. This EO supports energy efficiency, water conservation, and the use of renewable energy products by the federal government, providing specific goals towards these ends. The EO also states that agencies shall ensure that new construction and	INSERT p 3-57: Executive Order (EO) 13423 – Strengthening Federal Environmental, Energy, and Transportation Management support energy efficiency, water conservation, and the use of renewable energy products by the federal government, providing specific goals towards these ends. The EO also states that agencies shall ensure that new construction and major renovation of agency

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			<p>major renovation of agency buildings comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the 2006 Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understand (MOU), of which the U.S. Army is a signatory. Through the MOU, the DoD agreed to: reduce the energy cost budget by 30% for new construction and 20% for major renovations; employ strategies to reduce indoor and outdoor water use and reduce stormwater runoff and pollution; use products with recycled content; and use biobased products made from rapidly renewable resources and certified sustainable wood products.</p> <p>Recommendation: The FEIS should identify the sustainable building requirements identified above and indicate how the project will comply with them. Specific commitment towards the goals of the EO and MOU should be included. Consistent with Executive Order 13423, Section 2(f) and MOU Section II, the project should be designed to earn the Energy Star targets for new construction and major renovation where applicable. EPA also recommends the Army commit to facilities that are certified as a green building per the Leadership in Energy and Environmental Design (LEED) green building rating system. LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection, and indoor air quality. More information about the LEED green building rating system is available at <a href="http://www.usgbc.org/DisplayPage.aspx?CategoryID=19">http://www.usgbc.org/DisplayPage.aspx?CategoryID=19</a>.</p>	<p>buildings comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the 2006 Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understand (MOU), of which the U.S. Army is a signatory. Through the MOU, the DoD has agreed to: reduce the energy cost budget by 30% for new construction and 20% for major renovations; employ strategies to reduce indoor and outdoor water use and reduce stormwater runoff and pollution; use products with recycled content; and use biobased products made from rapidly renewable resources and certified sustainable wood products.</p> <p>INSERT p 4-48: In compliance with Executive Order 13423, the US Army will ensure that new construction and major renovation of buildings at Camp Parks comply with the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006). Compliance with EO 13423 is anticipated to result in reduced impacts to the human environment by employing integrated design, optimizing energy performance, protecting and conserving water, enhancing indoor environmental quality, and reducing the environmental impact of materials.</p>





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March 16, 2009

Office of the Commander

Ms. Nova Blazej, Manager  
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Dear Ms. Blazej:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS. Additionally, the air analysis in the Final EIS has been revised to include a General Conformity Review, which led to the preparation of a Record of Non-Applicability. It was determined that the increases in emissions resulting from the Proposed Action fall well below the *de minimis* threshold for each applicable pollutant; therefore, a General Conformity Determination was not warranted.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	City of Dublin	Volume I, Section 4.9.1.2	The draft EIS also describes the proposed 180 acre exchange area as "Dublin Crossing" and identifies specific land uses and acreages for each of the land uses (Figure 2-3, Context and Land Use Categories Evaluated for Dublin Crossing). On page 4-53 the draft EIS states, "Final decisions on specific land uses would be made during the City's approval process." -The City would like to reiterate that the proposed land uses for the exchange area, Dublin Crossing, have not been approved by the City and are subject to review and modification at the discretion of the Dublin City Council.	INSERT p 4-55: Final decisions on specific land uses have not yet been approved by the City and are subject to review and modification at the discretion of the Dublin City Council; however, a mix of residential, retail, and multifamily, office/hotel, civic, open space, school, and infrastructure land uses has been included in this EIS for analysis.
2	City of Dublin	Volume I, Section 3.9.1.2, Page 3-67	In the first paragraph, last sentence, the Eastern Dublin Specific Plan (EDSP) is noted as "an important and dynamic influence on the installation" and in the second paragraph the land use designations within the EDSP are discussed. It should be noted that the EDSP establishes residential densities in terms of dwelling units per acre, not floor-area ratios, but more importantly, that the City of Dublin has not determined at this time whether the proposed exchange area (Dublin Crossing) will be annexed into the EDSP area.	INSERT p 3-68: The EDSP land-use designations provide potential developmental concepts for each land-use type. For example, the EDSP establishes residential densities in terms of dwelling units per acre and office land-use designations that could occur within Dublin Crossing, proposed in the southern Cantonment Area. The EDSP also has established a multiplier to estimate the amount of employment that could be generated by new development in eastern Dublin.
3	City of Dublin	Volume I, Section 4.9.1.2, Page 4-51/52	The last sentence on Page 4-51 indicates that Camp Parks is located within the Eastern Extended Planning Area of the Dublin General Plan; the General Plan Land Use Map reveals that camp Parks is not within the Eastern Extended Planning Area. Also, the land use attributed to Camp Parks in the Dublin General Plan is "Public Lands" not "Public/Semi-Public"; the General Plan does not further define Public Lands.	INSERT p 4-54: The Dublin General Plan designated the portion of Camp Parks south of the county line as Public Lands which the General Plan does not further define or associate with approved or recommended land uses.
4	City of Dublin	Volume I, Section 4.9.1.2, Page 4-53	Under the section titled "Southern Cantonment Area", in the last paragraph, an assertion is made that Dublin Crossing is compatible with the guiding policies for the Eastern Extended Planning Area however, it should be noted that the proposed exchange area (Dublin Crossing) is not currently within the Eastern Extended Planning Area. In the same paragraph it is also noted that the land uses proposed for the exchange area (Dublin Crossing) are "not consistent with the City of Dublin's current designation of public and semi-public" however, it should be noted that Public Lands	Changes made to the DEIS to correct the errors.

Com #	Commenter	Section/ Subsection	Comment	Response
			is the City's land use designation for the property not Public/Semi-Public.	
5	City of Dublin	Volume I, Section 4.10.1, Page 4-61	<p>Facilities proposed directly north of the proposed exchange area (Dublin Crossing) are identified in Appendix B, Figure 2-1 Land Use Categories and include (from west to east): 1) Open Space, 2) the 34-acre Residential Community Initiative (RCI) Housing (1 13 single family homes); 3) the Operations Area which includes retention of an existing building (use of this building was not readily apparent within the draft EIS); six new campus-like buildings, three of which would be part of the 29-acre Oakland Exchange Area; and, the 34-acre California Army National Guard (CA ARNG) Facility. Residential uses are proposed within the exchange area (Dublin Crossing) directly south of the Operations area.</p> <p>The draft EIS does not evaluate the impacts of noise on the land uses proposed within the exchange area (Dublin Crossing). While it is understood that development of Dublin Crossing will likely require the preparation of an Environmental Impact Report (EIR) in accordance with the California Environmental Quality Act (CEQA), an analysis of noise impacts on the land uses proposed within the exchange area (Dublin Crossing) from Camp Parks operations needs to be conducted as part of the draft EIS and mitigation measures identified to address any potentially significant impacts.</p>	<p>INSERT p 4-64: The Updated Master Plan includes no proposed changes in the location, types, or frequency of operational or training-related activities associated with helicopter flights, weapons ranges, or other activities associated with potentially significant noise levels. While helicopter activity is expected to continue and may independently increase throughout the duration of the Proposed Action, the anticipated frequency of flights and distributed flight patterns over Camp Parks was not enough to establish specific Zone II Noise Contours (between 65 and 75 dBA) for these operations as part of the 2005 Camp Parks Environmental Noise Management Plan (DEHE 2005). Nevertheless, helicopter noise may still be heard across Camp Parks and within the proposed Dublin Crossing area but at levels well below established Army and City of Dublin (60 dBA) acceptable noise levels. No unacceptable noise exposure from small arms training ranges would extend into either the northern or southern Cantonment areas and would not impact the Dublin Crossing area. No ongoing or future operational or training-related noise levels at Camp Parks are anticipated to exceed the City of Dublin accepted 60 dBA noise level for residential land uses within the proposed land exchange area and therefore no additional noise mitigation measures are required as part of the Proposed Action. Implementation of the Proposed Action would not have significant impacts on the existing Camp Parks noise environment.</p> <p>The additional consideration is whether the Proposed Action would be impacted by the existing or future Camp Parks noise environment. A comparison of the existing noise contours (Appendix B, Figure 3-18 and Figure 3-19) with the proposed Future Development Plan (Appendix B, Figure 2-2) shows that redevelopment of the northern Cantonment Area would not be constrained to any degree by noise</p>

Com #	Commenter	Section/ Subsection	Comment	Response
				<p>impacts. This is because areas adjacent to the weapons range are retained as a buffer and the adjacent areas at the north end of the northern Cantonment Area are proposed for industrial and maintenance uses, such as the DEP MED (outdoor) Training Area, the DSRSD compound, and warehouse, maintenance, or storage facilities. Redevelopment activities within the southern Cantonment Area and Dublin Crossing would be well clear of the least intrusive noise contour developed by the Army and would not be restricted due to ongoing or future operational or training-related noise levels at Camp Parks. Existing or future noise level impacts on these and all other components of the Proposed Action would not be significant.</p>
6	City of Dublin	Volume I, Section 4.10.1	<p>It should also be noted that the Dublin General Plan establishes the normally acceptable noise levels for residential uses at 60db or less; conditionally acceptable noise levels are 60-70db with noise insulation features required. Consideration should be taken to ensure that noise generated by Camp Parks, and specifically within the Operations area, does not result in exceeding normally or conditionally acceptable noise levels within the proposed exchange area. Possible mitigation for potentially significant noise impacts could include incorporating sound attenuation features into the fence proposed along the southern boundary of the Cantonment Area between the Cantonment Area and the proposed exchange area (Dublin Crossing).</p>	<p>Comment Acknowledged.</p>
7	City of Dublin	Volume I, Section 4.31.3, Page 4-15	<p>The discussion of mitigation related to hydrology impacts is limited to water quality and avoidance of flooding problems within the project area by keeping structures out of the floodplain. There is no discussion of mitigation of impacts to downstream properties or downstream watercourses due to increased runoff from development within the project area. The discussion should include measures needed for conformance with the San Francisco Bay Regional Water Quality Control Board's requirements for hydromodification (HMP) measures to maintain post-development runoff to match pre-development runoff, in order to avoid erosion impacts to downstream watercourses. Discussion is also needed on the need for analysis of</p>	<p>INSERT p 4-17: Camp Parks is located within the geographic jurisdiction of the SFRWQCB Alameda Countywide Clean Water Program. As such redevelopment activities within the northern and southern Cantonment as well as the Dublin Crossing are proposed upstream of areas where hydromodification impacts are of concern due to factors such as bank instability, sensitive habitat, or restoration projects. In compliance with the standing orders of the SFRWQCB related to NPDES Permit No. CAS0029831, the Proposed Action is anticipated to meet the Program's Hydromodification Management (HM) Standard such that stormwater</p>

Com #	Commenter	Section/ Subsection	Comment	Response
			<p>impacts to downstream water courses with regards to flood capacity and potential flooding of adjoining properties.</p>	<p>discharges from applicable new development and redevelopment projects at Camp Parks and Dublin Crossing shall be designed to incorporate appropriate measures to not cause an increase in the erosion potential of the receiving creek over the preproject (existing) condition. Such measures may incorporate site design/landscape characteristics which maximize infiltration (where appropriate), provide retention or detention, slow runoff, and minimize impervious land coverage (i.e., use hydrologic source controls) to the maximum extent practicable. Therefore no significant impacts to downstream water courses with regards to flood capacity or the potential flooding of adjoining properties is anticipated to result.</p>
8	City of Dublin	Volume I, Section 4.9.23, Page 4-60	<p>The draft EIS discusses improvements at various intersections in the vicinity of the project to mitigate traffic impacts. In addition to the intersection improvements, it is likely that street segment improvements would also be necessary. This would include widening Dougherty Road from four lanes to six lanes between Houston Place and Amador Valley Boulevard, the extension of Scarlett Drive from Houston Place to Dublin Boulevard, and widening of Arnold Road from two lanes to four lanes between Dublin Boulevard and Central Parkway.</p> <p>In addition, the document should discuss more specifically the impacts of relocating the Camp Parks entry from the Dublin Boulevard/Camp Parks Boulevard intersection to the Dougherty Road/Amador Valley Boulevard intersection. The analysis should discuss geometric changes to the Dougherty Road/Amador Valley Boulevard intersection, as well as potential right-of-way needs, and the need to widen Dougherty Road from Amador Valley Boulevard south to 1-580. The analysis should also consider an alternate access location on Dougherty Road, midway between Scarlett Drive and Amador Valley Boulevard that could align with an access point to the Arroyo Vista redevelopment project on the west side of Dougherty Road.</p>	<p>INSERT p 4-60: In addition to the intersection improvements, there is the potential that street segment improvements may also be necessary. This could include widening Dougherty Road from four lanes to six lanes between Houston Place and Amador Valley Boulevard, the extension of Scarlett Drive from Houston Place to Dublin Boulevard, and widening of Arnold Road from two lanes to four lanes between Dublin Boulevard and Central Parkway. The potential widening of these specific arterials could be warranted if the traffic on those arterials exceeds the City of Dublin's thresholds for maximum allowable traffic. If the threshold is exceeded then the arterial would potentially need to be upgraded to the next level, though there may be exceptions that would need to be discussed with and approved by the City of Dublin. These mitigation measures would be implemented cooperatively with the developers of Dublin Crossing.</p> <p>Regarding entry: The proposed action under analysis in this EIS identifies the proposed new Camp Parks entrance to be located on the western edge of the installation. It is not within the purvue of this impact analysis to challenge this earlier determination or offer an optional entrance location analysis given that several main entrance locations were evaluated</p>

Com #	Commenter	Section/ Subsection	Comment	Response
				<p>during the Army's master planning process, but were found to be inferior from a land use and transportation pattern perspective. A western entrance more appropriately services the more intensive land uses such as military vehicle storage and maintenance activities located on the western side of the installation, away from City of Dublin residential areas and the administrative core of Camp Parks. An eastern entrance alignment was determined to be in conflict with prison system access and traffic and would not provide for a large enough queuing area along the roadway for required security plan implementation. A southern entrance was determined likely to adversely impact future Dublin Crossing redevelopment options. Therefore it was determined in the master planning process that the new entrance to the installation would be located on the western side of Camp Parks, resulting in the least amount of potential conflicts and incompatibilities with existing land use and traffic patterns.</p>
9	City of Dublin	Volume I, Section 5.1.1, Page 5-2	<p>The chart shows that there is no significant master plan or cumulative impact to hydrology. Based on the comments noted above on hydrology, the chart should be changed to indicate that there is a significant impact to hydrology or that the impact could be mitigated to less than significant with the appropriate mitigation measures identified.</p>	<p>Comment Acknowledged.</p>
10	City of Dublin	Volume I, Section 5.1.2.2, Page 5-3	<p>See comments above.</p>	<p>INSERT p 5-3: This would minimize the cumulative effect of these development actions because each of these developments may be assumed to be individually compliant with state standards relating to hydrology including SFRWQCB standards for hydromodification. It is assumed that each development successfully implements mitigation measures for hydromodification, construction-site storm water pollution, urban storm water pollution, and spills of chemicals and fuels.</p>
11	City of Dublin	Volume II, Appendix F, LOS Analysis, Detailed	<p>The assumed land geometrics are not consistent with the City's planned road segment improvements as follows:</p> <ol style="list-style-type: none"> <li>a. Dougherty Road is incorrectly shown as having four northbound and four southbound lanes at Amador Valley Boulevard; Dougherty Road is planned as a</li> </ol>	<p>INSERT New Table 4-11 in Volume II and the following on p 4-58: Appendix A, Table 4-11 summarizes the results of the intersection LOS analysis (detailed calculations are provided in Appendix F). Under the Proposed Action, 12 of the 16</p>

Com #	Commenter	Section/ Subsection	Comment	Response
		Calculations	<p>six-lane facility with three northbound and 3 southbound lanes.</p> <p>b. Dublin Boulevard at Iron Horse Parkway is incorrectly shown as an eight-lane facility; it is currently constructed to its ultimate width of six lanes.</p> <p>c. Hacienda Drive at Gleason Drive is incorrectly shown as a six-lane facility; it is planned as a four-lane facility.</p> <p>d. d. Arnold Road (northbound) at Central Parkway is incorrectly shown as having three lanes; Arnold Road is planned as a four-lane facility.</p>	<p>intersections are expected to operate at LOS C or better in the AM and 11 of the 16 intersections to operate at LOS C or better in the PM. The following 4 intersections are expected to operated at LOS D and E or worse in the AM peak hour: Dougherty Road/Dublin Boulevard (LOS E) , Dougherty Road/I-580 WB ramp (LOS D), Dublin Boulevard/Hacienda Drive (LOS D), and Hacienda Drive/I-580 WB ramp (LOS D). Five (5) intersections are expected to operate at LOS D and E or worse in the PM peak hour: Dougherty Road/Dublin Boulevard (LOS E), Hopyard Road/I-580 EB ramp (LOS D), Dougherty Road/Amador Valley Boulevard (LOS D), Dublin Boulevard/Hacienda Drive (LOS D) , and Hacienda Drive/I-580 WB ramp.</p>



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, US ARMY GARRISON FORT HUNTER LIGGETT  
BUILDING 238 CALIFORNIA AVENUE  
FORT HUNTER LIGGETT, CA 93928-7000

IMWE-CST-ZA

March 16, 2009

Office of the Commander

Ms. Marnie R. Nuccio  
Associate Planner  
City of Dublin  
100 Civic Plaza  
Dublin, CA 94568

Dear Ms. Nuccio:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding



## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	City of San Ramon	Volume I, Sections 3.9 and 4.9	The traffic study to be prepared for the Dublin Crossing project should include an assessment of impact related to new project traffic on both Interstate 680 and 580.	All future traffic studies for redevelopment at Dublin Crossing will include an assessment of impact related to new project traffic on both Interstate 680 and 580.
2	City of San Ramon	Volume I, Sections 3.9 and 4.9	<p>In addition, because the proposed project causes six intersections to operate at LOS D and E or worse, specifically the Dougherty Road/Dublin Boulevard intersection operates at the level of service E during the a.m. and p.m. peak hours; even with the planned improvements it will not be reduce to a less than significant level of service standard. Given the restrictions with the Dougherty Road/Dublin Boulevard intersection, the City recommends the following:</p> <ol style="list-style-type: none"> <li>1. Implementation of a comprehensive Transportation Demand Management (TDM) program, similar to the Cities of Pleasanton and San Ramon to achieve reduction in the single vehicle occupant trips during the a.m. and p.m. peak hour. Dublin should work in concert with neighboring jurisdictions to offer commute alternative incentive programs to residents, commuters, and students.</li> <li>2. Insist that the Developers finance "seed" money to implement TDM incentive programs to residents, commuters, and merchants located within the project vicinity.</li> <li>3. Continue to monitor intersection to track peak hour volumes and respond accordingly.</li> <li>4. A transit evaluation should be developed to review and evaluate effectiveness of future transit service for the proposed project. A written and graphical description of existing and planned transit service located near the project should be developed and include: Transit routes/description/map; Transit station/stop locations; Site access to major regional transit center; and Existing and planned transit schedules and headway information.</li> </ol>	Comment Acknowledged. The EIS addresses mitigation measures that have been accepted by the City of Dublin. Additional mitigation measures would be addressed in the EIR that will be prepared in accordance with CEQA.
3	City of San Ramon	Volume I, Section 3.9.1.2, Page 3-66	Reference to the Dougherty Valley Specific Plan on page 3-66 should add the phrase, "...as amended..."	INSERT p 3-66: The Contra Costa County General Plan land use designations for the portion of Camp Parks within Contra Costa County and for land bordering the installation to the north have been

Com #	Commenter	Section/ Subsection	Comment	Response
				<p>superseded by the Dougherty Valley Specific Plan, as amended (DVSP) (Contra Costa County 1992a), and the subsequent Agreement to Settle Litigation Relating to Dougherty Valley General Plan Amendment, Specific Plan, and Environmental Impact Report (Settlement Agreement 1994).</p>



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**DEPARTMENT OF THE ARMY**  
INSTALLATION MANAGEMENT COMMAND  
HEADQUARTERS, US ARMY GARRISON FORT HUNTER LIGGETT  
BUILDING 238 CALIFORNIA AVENUE  
FORT HUNTER LIGGETT, CA 93928-7000

IMWE-CST-ZA

March 16, 2009

Office of the Commander

Ms. Debbie Chamberlain  
Planning Manager  
City of San Ramon  
2222 Camino Ramon  
San Ramon, CA 94583

Dear Ms. Chamberlain:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	DOI – U.S. Geological Survey	Volume I, Chapter 6, References, Pages 6-8	<p>The Lovich reference cited below does not appear in either Volume I or Volume 2 of the DEIS. Also, the internet address for the reference is not valid. The correct address is: <a href="http://www.blm.gov/ca/pdfs/cdd_pdfs/clemmys1.pdf">http://www.blm.gov/ca/pdfs/cdd_pdfs/clemmys1.pdf</a>.</p> <p>Lovich, J. n.d. Western Pond Turtle. USGS, Western Ecological Research Center, Department of Biology, University of California. Available at: <a href="http://64.233.179.104/search?q=cache:ovzS26VF7oUJ:www.ca.blm.gov/pdfs/cdd_pdfs/clemmys1.PDF">http://64.233.179.104/search?q=cache:ovzS26VF7oUJ:www.ca.blm.gov/pdfs/cdd_pdfs/clemmys1.PDF</a>. Accessed April 2005 via html version.</p>	Reference was removed from Reference List.



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BUILDING 238 CALIFORNIA AVENUE  
FORT HUNTER LIGGETT, CA 93928-7000

IMWE-CST-ZA

March 16, 2009

Office of the Commander

Mr. Lloyd Woosley  
Chief of the USGS Environmental Affairs Program  
United States Department of Interior  
U.S. Geological Survey  
Mail Stop 423, ER 07/482  
Reston, VA 20192

Dear Mr. Woosley:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

## Responses to Agency Comments on the Camp Parks Draft Environmental Impact Statement

Com #	Commenter	Section/ Subsection	Comment	Response
1	Dublin San Ramon Services District (DSRSD)	Volume I, Chapter 3, Section 3.8.6 and Section 4.8.2	<p>DSRSD is responsible for the operation and maintenance of the water distribution system within Camp Parks, DSRSD is not required under the privatization agreement to relocate, upsize or install any pipelines at Camp Parks for existing or new facilities. The proposed redevelopment may require the relocation or upsizing of pipelines in order to comply with DSRSD requirements. Additional water connection fees may need to be paid, both Zone 7 and DSRSD, and service connections installed in order to provide service to the proposed redevelopment. Camp Parks may transfer existing water connection fee credits, both Zone 7 and DSRSD, to new buildings within Camp Parks from existing buildings once those buildings have been abandoned. However, the cost of new service connections must still be paid. In regard to Chapter 2 Proposed Action and Alternatives, Section 2.1.1, any installation of services must conform to the requirements of the Dublin San Ramon Services District Code and DSRSD "Standard Procedures, Specifications and Drawings for Design and Installation of Water and Wastewater Facilities".</p>	<p>INSERT p 3-55: DSRSD is responsible for the operation and maintenance of the water distribution system within Camp Parks. Water is currently delivered by DSRSD to a central meter located on Camp Parks. The water distribution system for Camp Parks is in immediate need of repair, upgrade, and replacement. A privatization initiative with the DSRSD has been completed; however, laterals and pipes inside the buildings are owned and operated by Camp Parks. While DSRSD is not required under the privatization agreement to relocate, upsize or install any pipelines at Camp Parks for existing or new facilities, DSRSD plans to replace many of the distribution facilities in the future.</p> <p>INSERT p 4-47: The water distribution and wastewater collection systems at Camp Parks would continue to be improved and operated by the DSRSD as part of the privatization process already underway. Proposed redevelopment may require the relocation or upsizing of some pipelines in order to comply with DSRSD requirements. Additional water connection fees may need to be paid, both Zone 7 and DSRSD, and service connections installed in order to provide service to the proposed redevelopment. Camp Parks may transfer existing water connection fee credits, both Zone 7 and DSRSD, to new buildings within Camp Parks from existing buildings once those buildings have been abandoned. Water supply and wastewater treatment needs could be accommodated within the projected DSRSD capacity for the region.</p>
2	Dublin San Ramon Services District (DSRSD)	Volume I, Chapter 3, Section 3.8.6 and Section	<p>DSRSD is responsible for the operation and maintenance of the wastewater collection system within Camp Parks, DSRSD is not required under the privatization agreement to relocate, upsize or install any pipelines at Camp Parks for existing or new facilities. Camp Parks is currently using 120,230 gallons per day (gpd) of</p>	<p>INSERT p 3-56: DSRSD is responsible for the operation and maintenance of the wastewater collection system within Camp Parks. The mains and distribution system are owned, operated, and repaired by DSRSD. Laterals and pipes inside</p>

Com #	Commenter	Section/ Subsection	Comment	Response
		4.8.2	the 300,000 gpd owned sewer capacity based on the average monthly flows from January to May of 2007. Any increase in excess of the 300,000 gpd capacity will have to be purchased. Sewer capacity is transferable within Camp Parks in a similar manner as potable water connections.	the buildings are owned and operated by Camp Parks. The Camp Parks wastewater collection system is in immediate need of repair and much of the installation's collection system will be replaced in the future with a new collection system to be owned and operated by DSRSD. DSRSD is not required under the privatization agreement however to relocate, upsize or install any pipelines at Camp Parks for existing or new facilities. All sanitary waste is collected and passed to a central metering station installed by DSRSD. From this station, the waste is dumped into the City of Dublin's sanitary sewer system and flows through a regional connection to a regional treatment plant. Camp Parks is currently using 120,230 gallons per day (gpd) of the 300,000 gpd owned sewer capacity based on the average monthly flows from January to May of 2007. Any increase in excess of the 300,000 gpd capacity will have to be purchased. Sewer capacity is transferable within Camp Parks in a similar manner as potable water connections.
3	Dublin San Ramon Services District (DSRSD)	Volume I, Sections 3.8.6 and 4.8.2	District Ordinance 301 requires that new development located within the potable water service area of the District, which represents landscape irrigation demand for recycled water, must provide for and utilize recycled water. Unless specifically exempted by the District Engineer, compliance with Ordinance 301, as may be amended or superseded, is required. The Draft EIS must examine the impacts, which may be associated with the provision of recycled water service. Camp Parks will be responsible for installing the required recycled water facilities. Some existing potable irrigation meters may be required to be transferred to the recycled water system.	INSERT p 4-47/48: District Ordinance 301 requires that new development located within the potable water service area of the District, which represents landscape irrigation demand for recycled water, must provide for and utilize recycled water. Unless specifically exempted by the District Engineer, compliance with Ordinance 301, as may be amended or superseded, is required. Camp Parks will be responsible for installing any required recycled water facilities during redevelopment. Some existing potable irrigation meters may be required to be transferred to the recycled water system.
4	Dublin San Ramon Services District (DSRSD)	Volume II, Appendix B, Figures 2-1 and 2-2, Volume I, Section	DSRSD does not currently have a finalized development plan regarding the intensity, specific use and timeline for the development of the proposed location for the Field Operations Division of DSRSD. Any assumptions made in the Draft EIS regarding the final development of this area are subject to change and subsequent review and approval by Camp Parks at	INSERT p 4-71: The DSRSD Land Use Category contains a large amount of natural, grassy open space. While DSRSD does not currently have a finalized development plan regarding the intensity, specific use and timeline for the development of the proposed location for the Field Operations

Com #	Commenter	Section/ Subsection	Comment	Response
		4.12.2.1	DSRSD expense.	<p>Division of DSRSD, the Proposed Action includes the anticipated construction of a storage area, a parking facility, and a new roadway along the existing dirt road alignment. The facilities would not entail a substantial impact to viewer groups. However, because these facilities would be accessible from Dougherty Road, activities associated with DSRSD would be more apparent to viewers on the west side of Dougherty Road and intrude into their view as well as their activity space.</p>





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IMWE-CST-ZA

March 16, 2009

Office of the Commander

Mr. David Requa  
Assistant General Manager/District Engineer  
Dublin San Ramon Services District  
7051 Dublin Boulevard  
Dublin, CA 94568

Dear Mr. Requa:

Thank you for your comments on the Draft Environmental Impact Statement (EIS) for the redevelopment of the Camp Parks Cantonment Area in Dublin, California. The U.S. Army Garrison, Camp Parks has reviewed your comments and incorporated their response into the forthcoming Final EIS.

The Final EIS is scheduled to be released in April 2009. If you have any further comments or concerns please contact:

Mr. Paul Kot  
US Army Garrison, Camp Parks  
791 Fifth Street  
Camp Parks, CA 94568-5201  
Phone: 925.875.4682  
Email: Paul.Kot@usar.army.mil

Sincerely,

Kevin R. Riedler  
Colonel, US Army  
Commanding

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**Appendix D-1**  
**Air Quality Regulations**

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## **APPENDIX D: AIR QUALITY**

### **THE FEDERAL CLEAN AIR ACT**

Air quality is regulated at the national level by the 1970 Clean Air Act (CAA) (42 U.S.C. 7401 *et seq.*), as amended in 1977 and 1990. The purpose of the CAA is to protect and enhance air quality in order to promote public health, welfare, and the productive capacity of the nation.

The Environmental Protection Agency (EPA) has promulgated regulations implementing the CAA at 40 CFR Parts 50 through 99, and has established National Ambient Air Quality Standards (NAAQS) (40 CFR Part 50) for six criteria pollutants:

- Ozone (O<sub>3</sub>)
- Carbon Monoxide (CO)
- Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)
- Nitrogen Dioxide (NO<sub>2</sub>)
- Sulfur dioxide (SO<sub>2</sub>)
- Lead (Pb).

For each criteria pollutant, health-based (or primary) standards have been established to protect public health with an adequate margin of safety, and welfare-based (or secondary) standards have been established to protect the public welfare (e.g., crops, vegetation, wildlife, buildings and national monuments, visibility, etc.) from adverse effects of air pollution. The CAA also regulates hazardous air pollutants (HAPs). HAPs cause, or contribute to, air pollution that may reasonably be anticipated to result in an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness (42 U.S.C. 74212).

EPA has delegated the primary authority and responsibility for implementing air pollution prevention and control programs to the states under the CAA. This is accomplished through the issuance of State Implementation Plans (SIPs) that identify for EPA the major sources of air pollution within a state, and describe the types of air pollution prevention and control programs that will be undertaken in order to achieve the NAAQS. CAA provisions of particular importance to Camp Parks include those that:

- Address the attainment status of the area
- Establish a preconstruction review and permitting program
- Establish a state-issued, federally-enforceable operating permit program for major stationary sources of air pollution
- Require federal conformity with approved SIPs
- Address emissions of hazardous or toxic air pollutants
- Address visibility and regional haze.

### **ATTAINMENT STATUS**

The attainment status of an area is determined by the area's air quality. A geographic area with air quality that achieves the ambient standards for a given pollutant is referred to as being in attainment with the standards for that pollutant. Likewise, an area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the NAAQS for a given

pollutant is referred to as being a nonattainment area. EPA classifies ozone nonattainment areas in terms of the degree of their air quality problems (e.g., marginal, moderate, serious, severe, extreme); CO and PM nonattainment areas are categorized as moderate or serious. Where insufficient data exist to determine an area's attainment status, it is designated as unclassifiable (or in attainment). An increase in the severity of an area's nonattainment classification typically leads to the application of increasingly stringent pollution control requirements on emission sources.

### **NEW SOURCE REVIEW**

Each federally-approved SIP is required to contain provisions for a preconstruction review and permitting program (a New Source Review (NSR) program) designed to minimize emissions from the construction of new, and modification of existing, stationary sources of air pollution (40 CFR Part 52).

NSR program permitting requirements are dependent upon the annual potential to emit (PTE) of a source, whether the source is located in an attainment or nonattainment area, and the appropriate CAA major source applicability thresholds. PTE is the maximum physical and operational capacity of a source, or emission unit, to emit any air pollutant. This potential is predicated on year-round, day-and-night operation, but it also takes into account federally-enforceable restrictions and controls on the facility, such as those found in a permit. It does not take into account voluntary limits on operation or state controls.

In areas not meeting the NAAQS and in designated ozone transport regions (OTR), the preconstruction review and permitting are implemented under the nonattainment NSR program. Proposed new or modified sources in nonattainment areas are required to achieve the Lowest Achievable Emission Rate (LAER). LAER is based on the most stringent emission limitation contained in any SIP or that is achieved in practice by any similar source, whichever is more stringent.

In areas meeting the NAAQS (attainment areas) or in areas for which there is insufficient information to determine whether they meet the NAAQS (unclassifiable areas), NSR review and permitting are implemented under the Prevention of Significant Deterioration (PSD) program. Proposed new or modified sources are required to apply Best Available Control Technology (BACT), the maximum degree of emission reduction achievable given economic, energy, and environmental factors. Such sources are required to demonstrate that their emissions will not significantly impact the air quality or result in the attainment area being reclassified as nonattainment. The PSD major source threshold level for 28 specific source categories is 100 tons per year of potential emissions of any air pollutant. For other source categories, the PSD major source threshold level is 250 tons per year of any air pollutant, with the exception being that a modification to an existing major source is subject to PSD if the modification would result in a net emissions increase greater than 40 tons per year (100 tons per year for CO). Camp Parks is not on the list of 28, so it would be considered a major source only if the emissions of any criteria air pollutant exceeded 250 tons per year. Emissions at Camp Parks are far less than this amount. Furthermore, because the existing facility is not a major source, any modification to Camp Parks would be reviewed as a minor modification unless the emission increase exceeded the 250 ton per year major source threshold.

## **TITLE V OPERATING PERMIT**

Title V of the 1990 Amendments to the CAA establishes a nationwide operating permit program for major stationary sources of air pollution (40 CFR Parts 70 and 71). The program consolidates all of a source's regulatory obligations into a single, state-issued, federally-enforceable permit document. It details, in a single document, all operating requirements and restrictions applicable to affected sources. Important regulatory information found in the permits includes: emission limitations and standards; hours of operation; mandatory air pollution control equipment; and monitoring, record keeping and reporting requirements. In determining a facility's status, total emissions and potential emissions from all activities and equipment on the installation are considered.

A source with a PTE at or above regulatory thresholds is subject to the Title V operating permit program. Sources emitting less than the threshold level are required to obtain a less complex minor source construction permit from the state or local permitting agency. Sources that would otherwise qualify for major source status may choose to obtain a minor construction permit that limits their air emissions to below the threshold levels. Since these sources use permit limits to achieve minor status, they are commonly referred to as synthetic minor sources, and their permits are commonly called synthetic minor permits.

## **GENERAL CONFORMITY**

The General Conformity rule (40 CFR Parts 51 and 93) prohibits the federal government from conducting, supporting or approving any actions that do not conform to an EPA approved SIP. The general conformity rule was designed to ensure that federal actions do not impede local efforts to control air pollution. It is called a conformity rule because federal agencies are required to demonstrate that their actions "conform with" (i.e., do not undermine) the approved SIP for their geographic area. Federal agencies make this demonstration by conducting a conformity review.

A conformity review is the process used to evaluate and document project-related air pollutant emissions, local air quality impacts, and the potential need for emission mitigation. All actions that a federal facility located in a federally-designated nonattainment or maintenance area proposes to take must be evaluated for the total direct and indirect emissions expected to be generated by the action. Direct emissions are emissions of a criteria pollutant or its precursors caused by a federal action that occur at the same time/place of the action. Indirect emissions are emissions of a criteria pollutant or its precursor that are caused by a federal action, but may occur later in time and/or may be removed in distance from the action, but are still reasonably foreseeable.

The emissions associated with the proposed action are then assessed to determine whether they exceed established *de minimis* thresholds and could therefore impeded the progress of a SIP or maintenance plan in improving or maintaining air quality. Table 4-1 in Appendix A provides General Conformity *de minimis* thresholds for federally-designated nonattainment and maintenance areas. Camp Parks is located in a federally-designated unclassified ozone nonattainment area and a federally-designated CO maintenance area. The area will likely also be an EPA-designated PM<sub>2.5</sub> nonattainment area by April 2009. The General Conformity *de*

*minimis* thresholds for the federally-designated nonattainment and maintenance area pollutants and their precursors are 100 ton/yr, including the *de minimis* threshold for the unclassified ozone nonattainment area. Guidance received by the BAAQMD from EPA indicates that in the unclassified Bay Area ozone nonattainment area, the *de minimis* threshold is the same as for a moderate or marginal nonattainment area (100 ton/yr).

## **HAZARDOUS OR TOXIC AIR POLLUTANTS**

The National Emission Standards for Hazardous Air Pollutants (NESHAP) program targets emissions of toxic air pollutants. Toxic air pollutants are those pollutants that are hazardous to human health or the environment, but are not specifically covered under another portion of the CAA. EPA has developed a list of sources and source categories that emit any of 187 identified HAPs, and is developing emission standards for these source categories based on the application of maximum achievable control technology (MACT). MACT is emission control technology that achieves a level of emission control and reduction that is at least equivalent to the level of control achieved by the best controlled source for the category. MACT is required for any stationary source that emits more than 10 tons per year of any one, or 25 tons per year of any combination, of HAPs.

A potentially applicable NESHAP to the Proposed Action and its alternatives is the National Emission Standards for Asbestos (referred to as the Asbestos NESHAP). The Asbestos NESHAP includes standards specifically for demolition and for the waste disposal for demolition operations. These requirements are codified at 40 CFR §§61.145 and 61.150, respectively. The standard for demolition requires that an inspection of the affected facility must be conducted for the presence of asbestos-containing material (ACM); a written notice of intent to demolish must be submitted to the Administrator; and specific procedures to control emissions of asbestos must be used during removal of regulated ACM (RACM) prior to demolition. The standards for waste disposal for demolition operations contain specific requirements for disposal of RACM from demolition operations. These requirements include the use of specific emission control and waste treatment methods, appropriate disposal sites, marking of vehicles used to transport asbestos-containing waste material during loading and unloading of waste, and maintaining waste shipment records and providing copies at the time the asbestos-containing waste materials are delivered to the disposal site.

## **REGIONAL HAZE AND VISIBILITY**

Haze obscures the clarity, color, texture and form of what we see. While some haze-causing pollutants are emitted directly into the atmosphere from stationary and mobile sources, others are formed during secondary reactions when gases emitted to the air are carried downwind and form particles as they are transported. Examples of haze-causing pollutants include sulfate, formed from sulfur dioxide (SO<sub>2</sub>), and nitrates, formed from nitrogen oxides (NO<sub>x</sub>). EPA first proposed regional haze regulations in 1997, issuing them in conjunction with its new PM<sub>2.5</sub> NAAQS because the same particulate matter that causes serious respiratory health effects also degrades visibility. EPA's 1999 Regional Haze rule (RHR--40 CFR Part 51.300 to 309) requires the states, in coordination with EPA, the National Park Service, U.S. Fish and Wildlife Service, U.S. Forest Service, and other interested parties, to develop and implement air quality protection plans to reduce the pollution that causes visibility impairment in 156 national parks and wilderness areas across the country, and to ensure that future visibility impairment does not occur in those



areas, with the goal of attaining natural visibility conditions by the year 2064. The first state plans for regional haze are due in 2003 to 2008, and are expected to have the additional benefit of improving visibility in broad areas across the country that are beyond the targeted national parks and wilderness areas. Actions at Camp Parks will have a minimal on achieving the goals presented by the RHR, particularly in the near-term, because emissions from Camp Parks and the Proposed Action are only a minor fraction of the overall regional emissions. However, as the 2064 deadline for “natural conditions” approaches, CARB will probably become more aggressive with implementing emissions reductions programs that may impact Camp Parks, but this timing is far beyond the horizon of this EIS.

### **STRATOSPHERIC OZONE PROTECTION**

The presence in the atmosphere of substances commonly used as refrigerants, coolants, and solvents (chloroflourocarbons (CFCs), hydrochloroflourocarbons (HCFCs), halons, and other chlorinated hydrocarbons (so-called ozone depleting chemicals, ODC)) has been linked by scientists around the world to a depletion of the stratospheric ozone layer. Unlike ground level ozone, which is harmful to human health, stratospheric ozone is crucial to life on earth, as it absorbs the harmful UV-B portion of the sun’s radiation and prevents it from reaching the planet's surface. Regulations have been promulgated under the CAA to protect the stratospheric ozone layer and to implement the international agreement to protect the ozone layer, the Montreal Protocol on Substances that Deplete the Ozone Layer (the Montreal Protocol) (40 CFR Part 82). The regulations include provisions for phased out production of certain ODC, storage and recycling/recovery of ODCs, use of approved alternatives, and prohibition of the intentional release of any ODC.

### **THE CALIFORNIA CLEAN AIR ACT**

Because of demographic and geographic characteristics that are conducive to the formation of air pollution, the State of California and its localities have adopted an aggressive approach to air pollution control and are recognized as national leaders in air quality management. The California Clean Air Act of 1988 (CCAA) provides the framework for air quality planning in California. It includes state-specific ambient air quality standards that are more health protective than the NAAQS and contains additional elements to address transport of air pollutants and reduce motor vehicle trips. The California Air Resources Board (CARB) plays the dual roles of oversight agency and partner of the Air Pollution Control Districts (APCDs) and Air Quality Management Districts (AQMDs). In its primary oversight role, CARB is responsible for ensuring that both federal and state air quality standards are met. In its role as partner with the local districts, CARB provides technical assistance for the development of CCAA implementation plans and is responsible for ensuring adequate coordination and consistency between the districts.

In California, responsibility for development and implementation of the SIP is divided between local APCDs and the state. In general, the local agencies have primary authority to control emissions from stationary sources (everything from refineries and power plants to gas stations and dry cleaners), while CARB has primary authority to develop controls for fuels, consumer products and mobile sources. The CCAA requires local jurisdictions that violate state air quality standards to prepare an air quality attainment plan for the affected area.

## **BAY AREA AIR QUALITY MANAGEMENT DISTRICT**

The Bay Area Air Quality Management District (BAAQMD) is the local air pollution control district that has been delegated the authority by California to develop, implement, and enforce air quality regulations in the Bay Area. The BAAQMD's rules and regulations provide affected sources with the information necessary to comply with air quality standards. With a total regional land area of approximately 5,600 square miles, an estimated population of 6.5 million people, and 4.5 million cars and light duty trucks, mobile source emissions are a significant source of air pollution in the Bay Area.

## **BAAQMD REGULATIONS**

BAAQMD regulations target a broad spectrum of stationary, mobile and area sources, and include provisions to minimize emissions of organic compounds, PM, and HAPs; enhance visibility; conduct preconstruction reviews; and issue operating permits. All activities conducted at Camp Parks and in the Bay Area must comply with the requirements of the BAAQMD's 13 Regulations and associated rules. In recognition of the important role organic compounds play in the formation of ground level ozone, the BAAQMD has implemented 51 rules to directly control organic compounds from stationary and mobile sources.

## **BAAQMD CLEAN AIR PLAN**

The BAAQMD is required by state law to update its Clean Air Plan (CAP) on a triennial basis. The goal of the CAP is to reduce emissions of reactive organic gases (ROG) and NO<sub>x</sub> that lead to the formation of ozone in the lower atmosphere. Under the CCAA, areas not complying with the state ozone standard must prepare plans to reduce emissions of ozone precursors in order to reduce ambient ozone concentrations. The control measures identified in the CAP serve as a blueprint for the development of BAAQMD regulations to reduce ozone precursor emissions. Each update to the CAP adds new control measures, and deletes some control measures that have not yet been implemented. The most recent CAP (the 2000 Clean Air Plan) was adopted by the BAAQMD in December 2000 and feeds directly into the revised ozone attainment plan discussed below.

## **REVISED 2001 OZONE ATTAINMENT PLAN**

In June 1999, the BAAQMD submitted its 1999 Ozone Attainment Plan to CARB and EPA for approval. The plan was developed in coordination with the Association of Bay Area Governments and the Metropolitan Transportation Commission (MTC). EPA issued a partial disapproval of the plan and a finding that the Bay Area was failing to attain the ozone NAAQS. In October 2001, the BAAQMD issued a revised ozone attainment plan that addressed the plan deficiencies identified by EPA, and the plan was subsequently approved. It describes the steps that the BAAQMD will take to bring the area into attainment with federal ozone standards by 2006. The plan's control strategy includes measures to address emissions of ozone precursors from stationary sources and mobile sources, and implementation of transportation control measures. Many of the measures to reduce ozone precursors will also serve to improve visibility in the Bay Area by reducing sulfates, nitrates, and PM that contribute to regional haze and lowered visibility.

## **TOXIC AIR CONTAMINANT CONTROL PROGRAM**

The BAAQMD operates several programs that are used to identify and control emissions of toxic air contaminants (TAC) from stationary sources that operate in the Bay Area (BAAQMD 2001b). New and modified sources are reviewed for TAC emissions, and air toxic control measures (ATCMs) targeting specific source categories are in various stages of implementation. In addition, California's Air Toxics Hot Spots (ATHS) program evaluates the health risks due to routine and predictable emissions from industrial and commercial facilities. The BAAQMD estimates that over 50 percent of the public's total exposure to TAC in the Bay Area comes from benzene and 1,3-butadiene, two organic compounds found in automobile exhaust.

## **ACID RAIN AND ATMOSPHERIC DEPOSITION**

The products of fuel combustion undergo complex atmospheric chemical changes after they are emitted. In addition to producing ground level ozone, over a period of 3 to 5 days, the sulfur and nitrogen oxides contained in emissions are converted to acid forms and fall back to the earth in the form of acidic precipitation and dry deposition particles. Known as acid rain, this process has been shown to change the pH of small lakes in New York, Canada, and Scandinavia enough to kill many aquatic species. Because the emission of sulfur oxides is considerably lower in California than in other parts of the world due to low-sulfur fuel requirements, the primary source of acid rain in the BAAQMD is nitric acid resulting from automobile emissions. While meteorological monitoring stations have captured abnormally low pH during the initial stages of some precipitation events, thus far no significant long-range transport to vulnerable mountain lakes has been observed (BAAQMD).

## **CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS**

At the federal level, EPA has established NAAQS for six criteria pollutants. In 1997, EPA enacted a more stringent 8-hour ozone standard and proposed a new PM<sub>2.5</sub> standard for particulate matter. Both the revised ozone and the new PM<sub>2.5</sub> standards were contested, with the challenges to both standards ultimately being rejected by the courts. CARB has established state-specific ambient air quality standards for the same six criteria pollutants, plus additional standards for visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. In addition to meeting the NAAQS, the BAAQMD is responsible for achieving California's Ambient Air Quality Standards (CAAQS). Table D-1-1 presents the NAAQS as well as the more stringent CAAQS.

**Table D-1-1. Summary Of California and National Ambient Air Quality Standards**

Pollutant	Averaging Time	California Standard (CAAQS) <sup>(a)</sup>	National Standards (NAAQS) <sup>(b)</sup>	
		Concentration	Primary	Secondary
Carbon Monoxide (CO)	1-hour	20 ppm (23,000 µg/m <sup>3</sup> )	35 ppm (40,000 µg/m <sup>3</sup> )	none
	8-hour	9.0 ppm (10,000 µg/m <sup>3</sup> )	9 ppm (10,000 µg/m <sup>3</sup> )	none
Lead (Pb)	30-day	1.5 µg/m <sup>3</sup>	none	none
	calendar quarter	none	1.5 µg/m <sup>3</sup>	same as primary standard
	rolling 3-month	none	0.15 µg/m <sup>3</sup> <sup>(c)</sup>	same as primary standard
Nitrogen Dioxide (NO <sub>2</sub> )	1-hour	0.18 ppm (339 µg/m <sup>3</sup> )	none	none
	annual	0.030 ppm (57 µg/m <sup>3</sup> )	0.053 ppm (100 µg/m <sup>3</sup> )	same as primary standard
Respirable Particulate Matter (PM <sub>10</sub> )	24-hour	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup> <sup>(d)</sup>	same as primary standard
	annual	20 µg/m <sup>3</sup>	revoked <sup>(e)</sup>	revoked
Fine Particulate Matter (PM <sub>2.5</sub> )	24-hour	none	35 µg/m <sup>3</sup> <sup>(f)</sup>	same as primary standard
	annual	12 µg/m <sup>3</sup>	15.0 µg/m <sup>3</sup> <sup>(g)</sup>	same as primary standard
Ozone (O <sub>3</sub> )	1-hour	0.09 ppm (180 µg/m <sup>3</sup> )	none	none
	8-hour	0.070 ppm (137 µg/m <sup>3</sup> )	0.075 ppm (147 µg/m <sup>3</sup> ) <sup>(h)</sup>	same as primary standard
Sulfur Dioxide (SO <sub>2</sub> )	1-hour	0.25 ppm (655 µg/m <sup>3</sup> )	none	none
	3-hour	none	none	0.5 ppm (1,300 µg/m <sup>3</sup> )
	24-hour	0.04 ppm (105 µg/m <sup>3</sup> )	0.14 ppm (365 µg/m <sup>3</sup> )	none
	annual	none	0.030 ppm (80 µg/m <sup>3</sup> )	none

- a. CAAQS, unless otherwise noted, are not to be exceeded at any time.
- b. NAAQS, unless otherwise noted or based on an annual average, are not to be exceeded more than once per year. Annual averages are not to be exceeded at any time, unless otherwise noted.
- c. Final rule signed October 15, 2008.
- d. PM<sub>10</sub> 24-hour NAAQS is not to be exceeded more than once per year on average over 3 years.
- e. Due to lack of evidence linking health problems to long-term exposure to coarse particle pollution, the USEPA revoked the annual PM<sub>10</sub> NAAQS in 2006.
- f. PM<sub>2.5</sub> 24-hour NAAQS is attained when the 3-year average of the 98<sup>th</sup> percentile of 24-hour concentrations at each pollutant-oriented monitor within an area does not exceed 35 µg/m<sup>3</sup>.
- g. PM<sub>2.5</sub> annual NAAQS is attained when the 3-year average of the weighted annual mean concentration from single or multiple community-oriented monitors does not exceed 15.0 µg/m<sup>3</sup>.
- h. O<sub>3</sub> 8-hour NAAQS is attained when the 3-year average of the fourth-highest daily maximum 8-hour average concentrations measured at each monitor within an area over each year does not exceed 0.08 ppm.

**APPENDIX D-2**

**Emissions Calculation Methodology,  
Assumptions, and Results for the Air Quality Assessment**

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## Emissions Calculation Methodology, Assumptions, and Results for Camp Parks Air Quality Assessment

Estimated air pollution emissions from the Proposed Action and its alternatives were calculated using URBEMIS Environmental Management Software. URBEMIS calculates emissions in terms of pounds per day (lb/day) and tons per year (ton/yr), which can be directly compared to *de minimis* or significance threshold levels. URBEMIS calculates separate emissions for a given project from:

- Construction activities; URBEMIS default activities (phases) include
  - fine site grading
  - paving
  - building construction
  - surface coating
  - demolition (optional)
- Area source emissions from the following sources at the facilities
  - natural gas, hearth, and landscape fuel consumption
  - consumer products
  - architectural coatings
- Operational emissions from vehicular traffic considering
  - published emission factors for various pollutants
  - average trip characteristics by different land use category
    - trip length
    - vehicle fleet mix
    - average speed

This section presents the proposed methodology and the assumptions used for calculating the current and future emissions from Camp Parks for the Proposed Action and its alternatives. The following is a brief description of each alternative, and a more detailed description is provided below:

- Assessment of the **No Action Alternative** looks at emissions associated with existing activities at Camp Parks and calculates future emissions due to on-site utility fuel consumption, training activities, and off-site vehicular traffic to/from Camp Parks as well as on site between various facilities in the South Cantonment area and other parts of the installation.
- Assessment of the **Proposed Action** looks at future emissions that would result from the demolition of facilities in the South Cantonment area as part of the RPX, construction of new facilities in the North Cantonment area, on-site utility fuel consumption, training activities, and off-site vehicular traffic to/from Camp Parks as well as on site between various facilities in the North Cantonment area and other parts of the installation. Development is assumed to take place over a 5-year period.
- Assessment of the **Slow Growth Alternative** looks at the same emission scenarios as the Proposed Action, except development is assumed to take place over a 20-year period.

Additionally, emissions resulting from the development of Dublin Crossing and all other proposed projects within the City of Dublin were calculated to assess the cumulative impacts of the projects and the degree to which the Proposed Action contributes to these impacts.

### **Construction and Area Source Emissions**

Construction and area source emissions for the Proposed Action and its alternatives were calculated based on estimates of the size and general use of each existing or proposed new building and their associated parking/roadway facilities. Emissions for the No Action Alternative were based on the existing conditions at Camp Parks. The construction execution plan described in the Camp Parks Master Plan PowerPoint presentation, dated September 1, 2005, was used to define the basis for the construction/demolition activities in the Proposed Action and the Slow Growth Alternative. This construction execution plan consists of four phases (Phases 1 through 4), with four sub-phases for the first phase (Phases 1A through 1D) and two sub-phases for the second (Phases 2A and 2B). For each phase, the construction execution plan identifies individual buildings and facilities to be constructed and lists existing buildings that will be demolished. Table D-1-1 presents a summary of the new building construction activities associated with each phase of the Proposed Action, along with building identification, square footage (or dwelling unit quantity), and assigned land use for each building. The facility identification and square footage of the building construction and demolition activities were presented in Table 2-2 of the Camp Parks Master Plan Draft EIS, dated November 2006. Information in that table was also used to assign appropriate land use categories for use in the URBEMIS model for each building.

Briefly, construction and area source emissions for the Proposed Action and its alternatives were calculated based on estimates of the size and general use of each proposed new building and their associated parking/roadway facilities as summarized in Appendix A, Table 2-2. No construction or demolition activities were assumed for the No Action Alternative. The URBEMIS default settings were used for all construction and area source calculations except:

- Watering of surfaces during site grading was included as a mitigation measure
- Use of low-VOC architectural coatings was included as a mitigation measure by assuming a 60 percent reduction from the URBEMIS default value of 250 gram per liter to match BAAQMD standards for flat coatings
- Hearth combustion was excluded from the area source emissions.

Table D-2-2 presents the construction schedule established for each phase of the Proposed Action. A proposed schedule was established for each phase of the execution plan such that all construction activities would be completed within a 5-year period ending in 2014. Start and end dates for the individual activities were established based in part on default URBEMIS settings and in part on estimated durations obtained from a general contractor.



**Table D-2-1. Summary of New Construction Activities for the Proposed Action**

New Building Construction Activity <sup>(a)</sup>	Facility ID <sup>(b)</sup>	Land Use Category <sup>(c)</sup>	Unit Amt <sup>(b)</sup>	Unit Type
<b>Phase 1A</b>				
1st Campus Area Facility (Reserve Center)	P001	Junior college (2 yrs)	55.3	1000 sq. ft.
2nd Campus Area Facility (Unit Supply)	P002	Warehouse	36.4	1000 sq. ft.
Build Phase I of OMS/AMSA	P019, P021	General light industry	32.6	1000 sq. ft.
<b>Phase 1B</b>				
Two Unheated Storage Facilities, ACP	P031, P032	Warehouse	16.1	1000 sq. ft.
<b>Phase 1C</b>				
RTS-MED Admin/Training	P014	General office building	42.5	1000 sq. ft.
RTS-MED Bio-med Maint. Facility	P015	Medical office building	28.4	1000 sq. ft.
RTS-MED Warehouse	P016	Warehouse	48.0	1000 sq. ft.
<b>Phase 1D</b>				
1st 300-man AT Billets Facility	P010	Apartments mid rise	150	dwelling units
3rd Campus Area Facility (Drill Hall / Classrooms/Band Room/Training)	P003	Junior college (2 yrs)	44.6	1000 sq. ft.
<b>Phase 2A</b>				
2nd AT Billets (300 Man)	P011	Apartments mid rise	150	dwelling units
Parks Consolidated Dining Facility	P007	Fast food rest. w/o drive thru	19.8	1000 sq. ft.
CSTC & Camp Parks HQs Facility	P024	Government office building	16.9	1000 sq. ft.
<b>Phase 2B</b>				
4th Campus Area Facility (2nd Reserve Center)	P004	Government office building	50.0	1000 sq. ft.
<b>Phase 3</b>				
3rd AT Billets (300 spaces)	P012	Apartments mid rise	150	dwelling units
Community Club	P026	Racquet club	10.2	1000 sq. ft.
Fitness Center	P029	Racquetball/health	35.5	1000 sq. ft.
AAFES Retail Center	P028	Supermarket	15.0	1000 sq. ft.
DPW & DOL	P017, P018	Warehouse	97.8	1000 sq. ft.
<b>Phase 4</b>				
Fourth AT Billets (300 spaces)	P013	Apartments mid rise	150	dwelling units
Permanent Party Billets/Guest House	P008, P009	Apartments mid rise	115	dwelling units
5th and 6th Training Center Buildings (as required)	P005, P006	Junior college (2 yrs)	100.0	1000 sq. ft.
Chapel	P027	Place of worship	4.5	1000 sq. ft.
Resource/ Welcome Center	P023	Government office building	33.2	1000 sq. ft.
Medical Clinic	P025	Medical office building	6.0	1000 sq. ft.

a. Source = Construction Execution Plan given in Camp Parks Master Plan PowerPoint presentation, August 2005.

b. Source = Camp Parks Master Plan Draft EIS, Table 2-2 "Camp Parks Changes Associated with Implementation of the Proposed Action" of Appendix A in the Camp Parks, dated November 2006.

c. Each construction activity was defined as one of the available URBEMIS 2007 (Version 9.2.4) land use categories.

**Table D-2-2. Proposed Construction Schedule**

	<b>Activity</b>	<b>Start Date</b>	<b>End Date</b>
Phase 1A	Fine Grading	5/1/2009	6/11/2009
	Asphalt	5/28/2009	6/11/2009
	Building	6/11/2009	1/22/2010
	Coating	10/16/2010	2/5/2010
Phase 1B	Fine Grading	8/1/2009	8/14/2009
	Asphalt	8/17/2009	9/25/2009
	Building	8/17/2009	9/18/2009
	Coating	9/10/2009	9/25/2009
Phase 1C	Fine Grading	11/30/2009	1/11/2010
	Asphalt	12/28/2009	1/11/2010
	Building	1/11/2010	8/22/2010
	Coating	5/17/2009	9/5/2010
Phase 1D	Fine Grading	5/17/2010	6/28/2010
	Asphalt	6/11/2010	6/28/2010
	Building	6/29/2010	2/03/2011
	Coating	11/29/2010	2/18/2011
Phase 2A	Fine Grading	11/8/2010	12/17/2010
	Asphalt	11/28/2010	12/17/2010
	Building	12/17/2010	9/14/2011
	Coating	6/02/2011	10/14/2011
Phase 2B	Fine Grading	10/4/2011	10/31/2010
	Asphalt	11/01/2011	11/11/2011
	Building	11/14/2011	3/05/2012
	Coating	1/30/2012	3/23/2012
Phase 3	Fine Grading	3/26/2012	5/22/2012
	Asphalt	5/18/2012	7/04/2012
	Building	7/06/2012	4/12/2013
	Coating	12/12/2013	4/30/2013
Phase 4	Fine Grading	5/1/2013	6/14/2013
	Asphalt	5/15/2013	6/28/2013
	Building	6/28/2013	5/30/2014
	Coating	12/30/2013	6/15/2014

Table D-2-3 presents a list of the existing buildings within the Camp Parks cantonment area. Area source emissions from these buildings were calculated based on the size and general use of the existing buildings and facilities as presented in Table 2-2 of the Camp Parks Master Plan Draft EIS. Additionally, emissions from demolition of individual buildings during each phase of the Proposed Action and its alternatives were calculated.

**Table D-2-3. Existing Buildings in Cantonment Area**

<b>ID</b>	<b>Description</b>	<b>Amt</b>	<b>Unit<sup>(a)</sup></b>	<b>Assigned Land Use Category</b>
140	Guard Shack Supporting Historic Sign	218	SF	
284	Health Clinic	1914	SF	Medical Office Building
300	Enlisted Barracks, Equipment Storage, Administration	11284	SF	Government Office Building
301	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
302	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
303	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
304	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
306	Unaccompanied Personnel Housing	30	DU	Apartments, Low Rise
309	Housing Furniture Storage	80	SF	Warehouse
310	Unaccompanied Personnel Housing	30	DU	Apartments, Low Rise
311	Administration, General Purpose	11284	SF	General Office Building
312	Administration	11284	SF	General Office Building
313	Storage	975	SF	Warehouse
320	Clinical Skills Lab, Administration	11284	SF	Junior College
321	Enlisted Barracks	30	DU	Apartments, Low Rise
323	Administration	11284	SF	General Office Building
330	Administration, NBC storage	11284	SF	Government Office Building
331	Administration, General Storage (DIV training)	31669	SF	Government Office Building
332	Dining facility, Administration, General Storage	31699	SF	High-Turnover Restaurant
334	General Storage	2400	SF	Warehouse
340	Administration, Classroom	41508	SF	Junior College
341	General Storage	156	SF	Warehouse
350	Administration	14260	SF	General Office Building
360	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
361	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
362	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
363	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
364	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
370	Battle Projection Center	39400	SF	Government Office Building
390	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
391	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
392	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
393	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
394	Enlisted Barracks, Open Bay	30	DU	Apartments, Low Rise
494	COES Warehouse (Support Facility)	9600	SF	Warehouse
495	General Storage	80	SF	Warehouse
500	Administration	39361	SF	General Office Building
501	Post Chapel	7288	SF	Church
510	91st Training Support Division HQs	53700	SF	Government Office Building
511	General Storage	8005	SF	Warehouse
513	Administration	19952	SF	General Office Building
514	Distance Learning Center, General Instruction Building	4488	SF	Junior College
520	Fire Station (Company Facility)	8200	SF	Warehouse
521	Dining Facility	12044	SF	High-Turnover Restaurant
610	WARISC (parking)	33600	SF	parking
611	Administration	2304	SF	General Office Building
620	Administration, Conference Center, Museum	13364	SF	General Office Building
670	Post Exchange Trailer	2782	SF	Lot
691	General Storage	1455	SF	Warehouse
692	Police/MP Station	2048	SF	Government Office Building
801	Sentry Station	129	SF	Lot

<b>ID</b>	<b>Description</b>	<b>Amt</b>	<b>Unit<sup>(a)</sup></b>	<b>Assigned Land Use Category</b>
920	CA Army National Guard (Maintenance Shop)	28528	SF	Warehouse
973	Visitor Center	1913	SF	General Office Building
974	Maintenance, Storage	11284	SF	Warehouse
984	FCI Barracks	30	DU	Apartments, Low Rise
985	Support, Recreation	11284	SF	Racquet Club
986	FCI Barracks	30	DU	Apartments, Low Rise
987	FCI Barracks, Dining Facility	30	DU	Apartments, Low Rise
1100	Family Housing, Commander's Quarters	1	DU	Single-Family Housing
1101	Garage		DU	Single-Family Housing
1104	Family Housing, Storage		DU	Single-Family Housing
1105	Family Housing, LTC/MAJ	1	DU	Single-Family Housing
1106	Garage		DU	Single-Family Housing
1108	Family Housing, SR NCO	1	DU	Single-Family Housing
1109	Garage		DU	Single-Family Housing
1150	Guest House	65	Rooms	Condo/Townhouse General
1151	Family Housing, LTC/MAJ and Parks Lodging Office, Perm Party Billets	10	DU	Condo/Townhouse General
1152	Family Housing LTC/MAJ, Perm Party Billets	10	DU	Condo/Townhouse General

- a. SF = Square feet  
DU = Dwelling unit

### **Operational Emissions**

URBEMIS was used to calculate emissions for the Proposed Action, the No Action Alternative, and the Slow Growth Alternative to determine whether impacts exceed CEQA significance or *de minimis* thresholds. Additionally, emissions from the development of Dublin Crossing and for all other proposed projects within the City of Dublin were calculated to assess the cumulative impacts of the projects and the degree to which the Proposed Action contributes to these impacts. A related model, the Emissions Factor Model (EMFAC), is incorporated into UREMIS to provide tailpipe emission factor data for each year chosen for the calculations. The URBEMIS assumptions adopted for the emissions calculations are described in Appendix D-3.

URBEMIS normally calculates construction, area, and operational emissions based on common land use categories for individual buildings. This approach was slightly modified for the current analysis by adopting the approach of treating operational emissions at Camp Parks differently than construction and area emissions. This approach was based on defining Camp Parks as a trip destination, rather than defining each individual building within the installation as a separate trip destination. Because URBEMIS treats the individual buildings separately when estimating vehicle miles travelled (VMT), and because trips to individual buildings within Camp Parks are not independent events, the emissions calculated using the URBEMIS default settings grossly overestimate actual emissions from Camp Parks. However, the nature of Camp Parks as a military training facility, with very limited visitation from civilians, would indicate that the installation itself should be considered more like a college/university (as opposed to a collection of unrelated trip destinations). Consequently, the operational (vehicular) emissions were based on the average number of personnel who visit Camp Parks daily. Emission calculations for construction/demolition activities and area sources were still based on the land use categories for the individual buildings. Additionally, emissions from the training range were calculated separately based on area source and operational activities.

When categorizing Camp Parks as a destination, representation of travel patterns consistent with activities at Camp Parks resulted in separate definitions of off-base and on-base activities. Off-base operational emissions from vehicular traffic associated with commuting to and from the installation were calculated using the default URBEMIS settings for the vehicle fleet mix and trip characteristics. On-base vehicular emissions were calculated by making the following changes to the default URBEMIS settings:

- ❑ Average trip distances were estimated at 1.5 miles for the No Action Alternative and 0.8 miles for the Proposed Action and the Slow Growth Alternatives (compared to 7+ miles as a default), based on average measured distances from the main gate to individual buildings and distances between individual buildings for the current and proposed layout of the buildings within the Cantonment area.
- ❑ Average speeds on base were estimated to be 25 mph, compared to the 35 mph default setting.
- ❑ The vehicle fleet mix was changed for every 2-year period through 2020 and every 5-year period after that to account for the retirement of older vehicles and subsequent replacement with newer, lower emitting vehicles.

Furthermore, the number of people on base daily is expected to increase by approximately 60 percent as a result of the Proposed Action. It was assumed that this increase will occur by 10 percent per year between 2009 and 2015 for the Proposed Action, and by 3 percent per year between 2015 and 2030 for the Slow Growth Alternative. Operational emissions associated with fuel combustion in landscaping equipment and stationary fuel-burning equipment are also calculated in URBEMIS.

### **Training Range Activities**

To account for emissions from the training range activities, it is assumed that 76 personnel per day (based on average daily use statistics from FY2008 provided by Jose A. Rodriguez Jr, CHIEF/DPTMS) use the training range and all are transported to the training range in a military vehicle. The vehicle fleet mix that was used for estimating training range emissions differs significantly from the URBEMIS default vehicle fleet mix and is thought to more accurately represent military vehicle usage. Table D-2-4 presents the vehicle fleet mix input for the training range along with the URBEMIS default vehicle fleet mix.

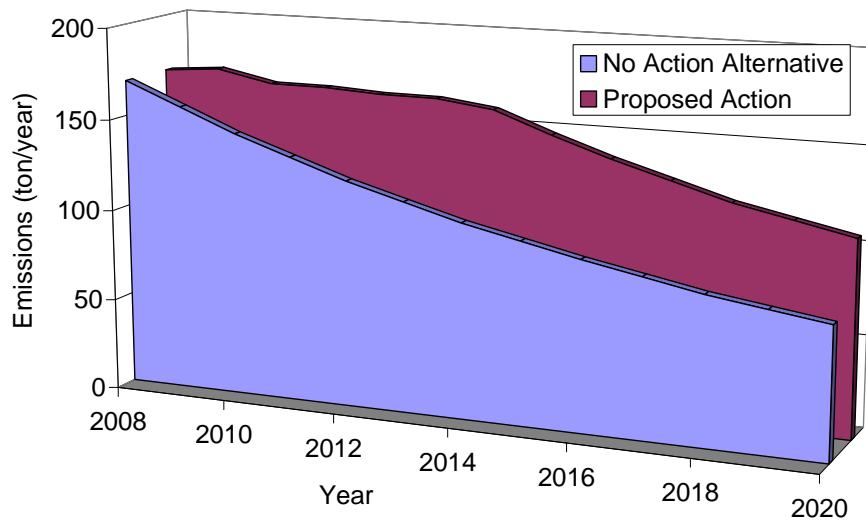
In addition to vehicular emissions, fugitive dust emissions were estimated assuming 4,000 VMT per year (draft EIS section 3.9.1.3) on unpaved surfaces in training range area. Emissions from unpaved roads in the training area were based on VMT and appropriate emission factors from AP-42.

**Table D-2-4. Vehicle Fleet Mix for Training Range Activities**

Vehicle Type	Input Percentage	Default Percentage
Light Auto	10	53.7
Light Truck < 3750 lbs		12.9
Light Truck 3751-5750 lbs	40	19.8
Med Truck 5751-8500 lbs		6.6
Lite-Heavy Truck 8501-10,000 lbs		0.9
Lite-Heavy Truck 10,001-14,000 lbs	25	0.6
Med-Heavy Truck 14,001-33,000 lbs	25	1.0
Heavy-Heavy Truck 33,001-60,000 lbs		0.4
Other Bus		0.1
Urban Bus		0.1
Motorcycle		3.2
School Bus		0.1
Motor Home		0.6

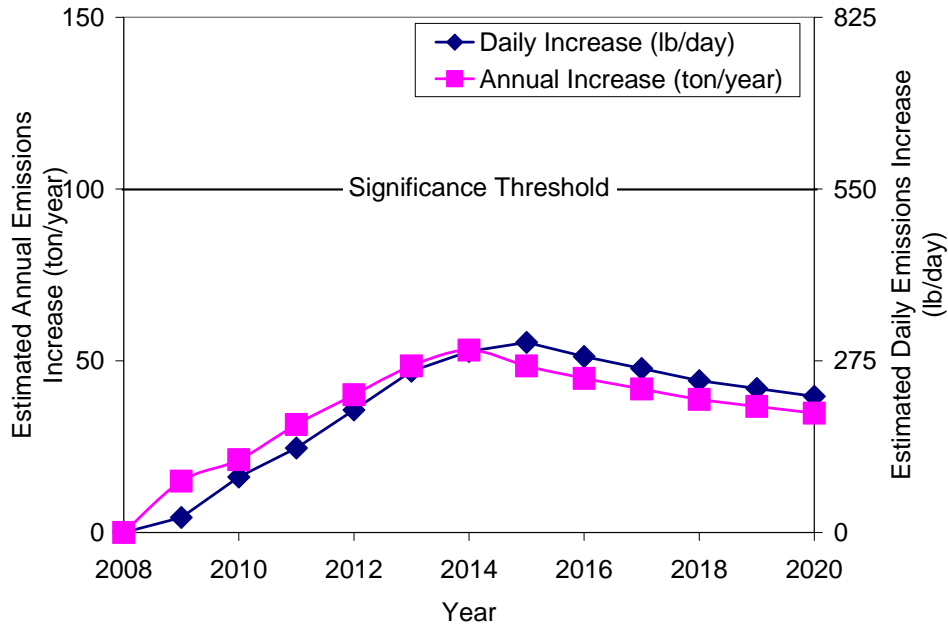
**Calculation Results for Proposed Action and Alternatives**

Figure D-2-1 shows the estimated emissions of CO anticipated from the Proposed Action and the No Action Alternative. For the No Action Alternative, the estimated emissions show a steady decline resulting from the retirement of older vehicles and the subsequent replacement of those vehicles with lower emitting vehicles. Emissions of CO are expected to increase under the Proposed Action more than the other pollutants.



**Figure D-2-1. Estimated Annual CO Emissions from No Action Alternative and Proposed Action (ton/year).**

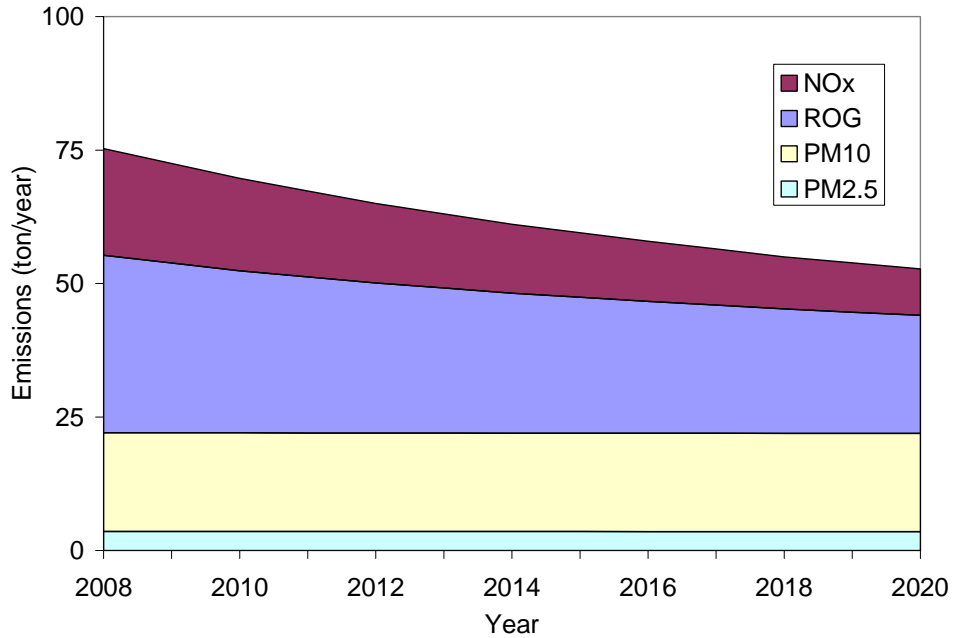
Figure D-2-2 shows the difference between the estimated CO emissions anticipated from the Proposed Action and the No Action Alternative. As illustrated in Figure D-2-2, the expected increases fall below significance levels.



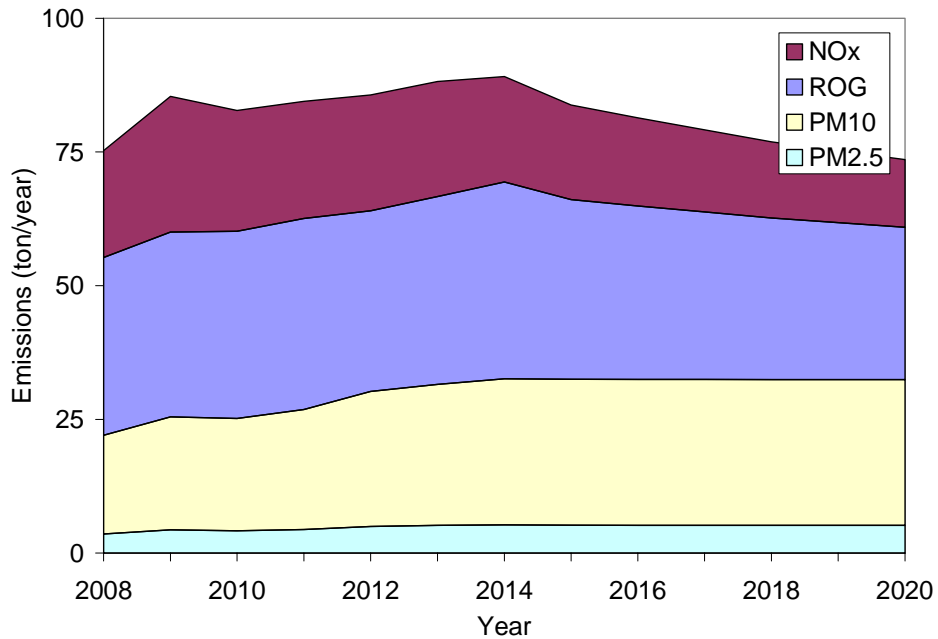
**Figure D-2-2. Estimated Annual and Daily CO Emissions Increases Resulting from Proposed Action.**

Figure D-2-3 shows the estimated annual NO<sub>x</sub>, ROG, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions for the No Action alternative. In general, there is a trend towards lower overall ROG and NO<sub>x</sub> emissions between 2008 and 2020, driven largely by the retirement of older vehicles and the subsequent replacement of those vehicles with lower emitting vehicles. Emissions reductions for these pollutants are significantly smaller in absolute magnitude than the CO reductions as shown above.

Figure D-2-4 shows the estimated annual NO<sub>x</sub>, ROG, PM<sub>10</sub>, and PM<sub>2.5</sub> emissions for the Proposed Action. This figure shows an overall increase in emissions relative to the No Action alternative. Initially, construction and demolition activities contribute to the increase in emissions between 2008 and 2014, along with increased emissions associated with an increase in personnel on base. After 2014, emissions are higher than those in the No Action alternative due primarily to the expected increase in daily vehicle operation.



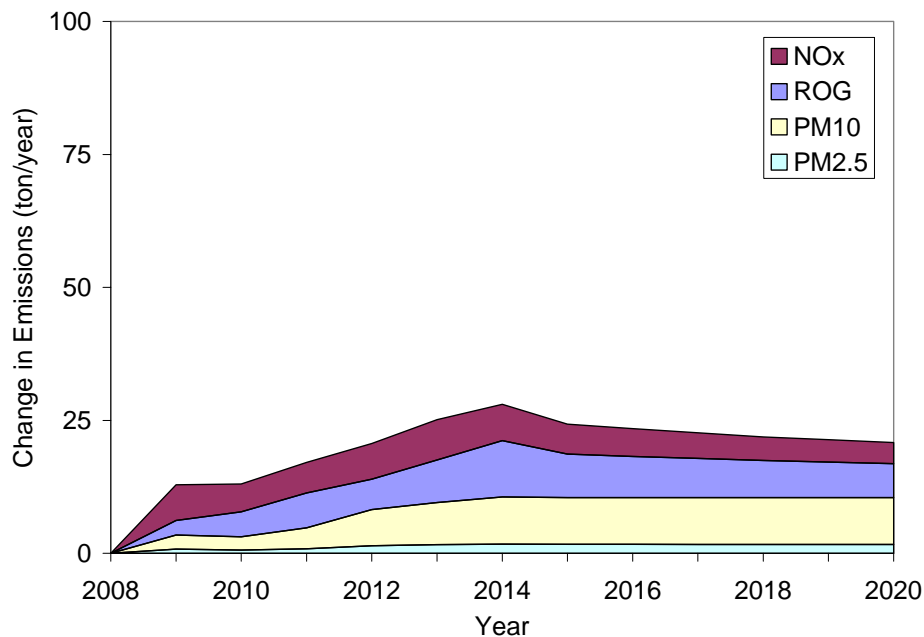
**Figure D-2-3. Estimated ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> Emissions for the No Action Alternative.**



**Figure D-2-4. Estimated ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> Emissions for the Proposed Action.**

Figure D-2-5 presents the estimated change in annual ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> emissions expected for the Proposed Action (e.g., difference between Proposed Action and No Action alternative). This figure illustrates that the emission increase from the Proposed Action will meet the general conformity requirements, i.e., emissions increases fall below *de minimus* thresholds of 100 ton/yr per pollutant for each nonattainment and maintenance pollutant.





**Figure D-2-5. Estimated ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> Emission Changes from the Proposed Action.**

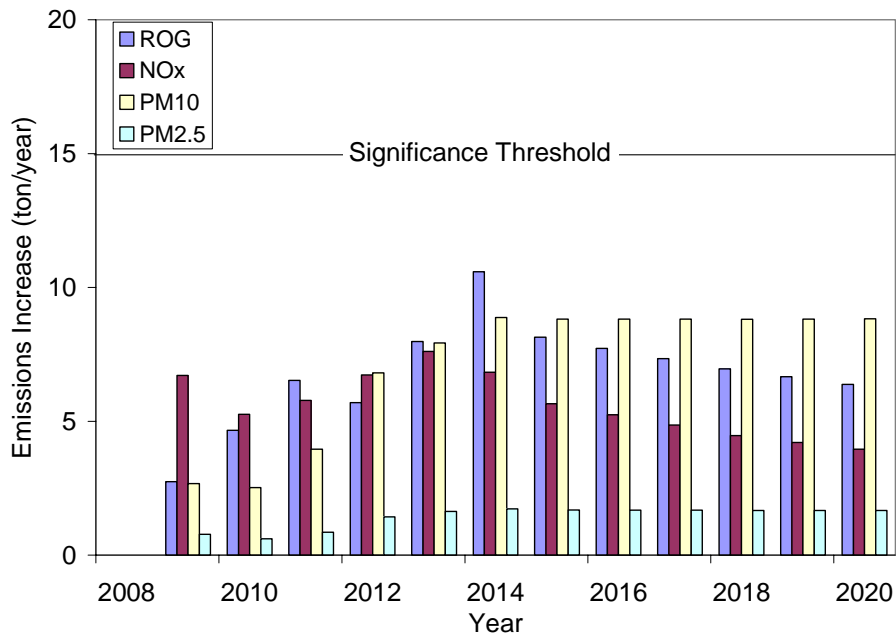
Figures D-2-6 and D-2-7 present the estimated changes in emissions for ROG, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> relative to the significance threshold levels in terms of ton/year and lb/day, respectively. These plots show that estimated emissions of these pollutants resulting from the Proposed Action fall below the CEQA threshold levels and will not be considered significant. (Note: SO<sub>2</sub> was not included as it falls well below the threshold levels.)

### Cumulative Air Quality Impact Assessment

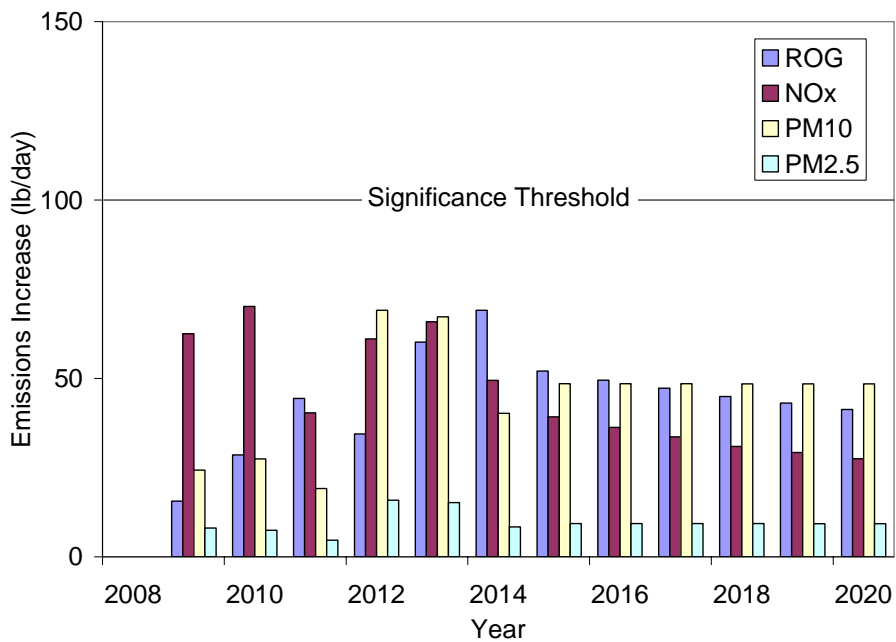
The cumulative air quality impact assessment entailed developing a set of URBEMIS parameters to describe the activities associated with all residential, commercial, industrial, and retail projects, including schools and park space, currently within the City of Dublin or proposed for future development. Future emissions were calculated for the year 2013 based on the descriptions of projects proposed by the City of Dublin Planning Department and listed on the Planning Department web page. The assessment assumed that all of these projects would be completed by 2013. The present day statistics (used to define the existing condition) and the Current Project List from the City of Dublin Planning Department web page (used to define the future cumulative condition) are presented in the following sections.

#### City of Dublin (Existing)

Existing emissions were calculated based on present day statistics obtained from the City of Dublin web page pertaining to residential, commercial, industrial, and retail projects, including schools and park space as summarized in Table D-2-5. Default URBEMIS settings for area source and operational emissions were used for the calculations assuming a vehicle fleet mix for 2013.



**Figure D-2-6. Estimated Annual ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> Emission Changes for the Proposed Action Relative to Significance Threshold (ton/year).**



**Figure D-2-7. Estimated Daily ROG, NO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub> Emission Changes for the Proposed Action Relative to Significance Threshold (lb/day).**

**Table D-2-5. Summary of Existing Land Use in the City of Dublin**

<b>Land Use Category</b>	<b>Amount</b>
Single Family	9442 units
Townhomes	7559 units
Day-care Center	10,000 sq. ft.
Elementary School	70,000 sq. ft.
Junior High School	40,000 sq. ft.
High School	40,000 sq. ft.
Junior College (2 yrs)	10,000 sq. ft.
City Park	253 acres
Fast Food Rest. w/drive thru	60,000 sq. ft.
Hotel	585 rooms
Strip Mall	3,650,000 sq. ft.
General Office Building	2,700,000 sq. ft.
General Light Industry	2,200,000 sq. ft.

### **Dublin Crossing**

Final decisions on specific Dublin Crossing land uses will be subject to analysis in an Environmental Impact Report (EIR) under CEQA. The following synopsis describes Dublin Crossing as it is envisioned, currently. The Dublin Crossing plan includes residential (14% single family, 31% townhomes), retail and multifamily (5%), office/hotel (5%), civic (3%), open space (26%), school (4%), and infrastructure (11%) land uses. These land uses are laid out such that higher density housing is emphasized adjacent to Dublin Boulevard, Dougherty Road, and core open space areas and interspersed with single family residential housing and open space. The highest density housing is co-located with commercial land uses, the largest of which is associated with the proposed transit village on the south side of Dublin Boulevard. Civic areas are well integrated with open space. Specific and definitive changes in land use zoning for the Dublin Crossing area would be addressed by the City of Dublin. It is anticipated that an EIR will be prepared by the City of Dublin, under the CEQA for the change in zoning. Table D-2-6 presents the estimated land use for the proposed Dublin Crossing construction. These values were used in URBEMIS to estimate anticipated emissions from Dublin Crossing. No construction emissions were calculated for the development of Dublin Crossing.

### **Other Development Projects in Dublin**

Estimated land use for other current and future developments within the City of Dublin was determined from the current Project List (June 2008) from the City of Dublin Planning Department web page and is summarized in Table D-2-7. No construction emissions were calculated for these developments.

**Table D-2-6. Proposed Land Use for Dublin Crossing**

<b>Land Use Category</b>	<b>Amount</b>
Single Family	75 units
Apartments (low rise)	75 units
Townhomes	900 units
Equivalent to Jr. High	20,000 sq ft
City Park	50 acres
Regional Shopping Center	196,000 sq. ft.
General Office	196,000 sq. ft.
Civic Building	117,000 sq. ft.

**Table D-2-7. Proposed Land Use for City of Dublin Projects**

<b>Land Use Category</b>	<b>Amount</b>
Single Family	2,205 units
Apartments (med. rise)	4,645 units
Townhomes	2,512 units
Government Office Building	208,408 sq. ft.
Hotel	250 rooms
Regional Shopping Center	665,211 sq. ft.
Medical Office Building	178,000 sq. ft.
Quality Restaurant	12,000 sq. ft.

**Results**

The calculated emissions for the existing City of Dublin, the No Action Alternative, the Proposed Action, the development of Dublin Crossing, and other development projects within Dublin are presented in Appendix A, Table 5-4.

## CO Hot Spot Results

According to CEQA guidelines, CALINE4 should be run to determine localized CO concentrations when

- Vehicle emissions of CO would exceed 550 lb/day
- Project traffic would impact intersections or roadway links operating at level of service (LOS) D, E, or F or would cause LOS to decline to D, E, or F; or
- Project traffic would increase traffic volumes on nearby roadways by 10 percent or more.

None of these criteria are expected to be met as a result of the Proposed Action or its alternatives. However, all three of the criteria are expected to be met when the Dublin Crossing development and the other proposed projects within the City of Dublin are completed.

To be conservative, CALINE4 was used to model CO emissions at the intersection of Dublin Boulevard and Dougherty Road. This intersection was identified having the highest projected traffic volumes and is the only intersection expected to operate below the City of Dublin's LOS standard as a result of the development of Dublin Crossing (Section 4.9.2.2). This dispersion modeling represented a conservative-case ambient air quality impact for CO because it not only used data for the intersection with the highest traffic load but also used conservative assumptions. Thus, demonstrated compliance at this intersection would also demonstrate that there would be no compliance issues at any other less impacted intersection. Per the CO protocol (UC 1997) recommendations and the CEQA guidelines, CALINE4 was run (via the model interface CL4) using worst-case assumptions for the intersection parameters. Although the link geometry is known for the intersection, the amount of red time (time spent stopped at red lights with the engine idling) and the cruise speeds are not. Accordingly, red times were assumed such that emission factors were maximized for each link. Given the guidance in the CO protocol, the vehicle speed of 3 miles per hour (mph) was used on all links. This is clearly an under estimate of the speeds, but produced the highest CO emissions factors.

The emission factor model EMFAC was used to derive emission factors for calendar year 2013 for a typical mix of vehicles moving 3 mph during the winter season. The composite CO emission factor derived from EMFAC and input into CALINE4 for the year of development (2013) was 6.45 grams per mile. Appendix D-4 presents the EMFAC output file. The peak afternoon traffic volume used was 8,994 vehicles per hour. This volume was obtained from the detailed LOS calculations made as part of the traffic study and presented for Link 4 in Appendix F. Background CO ambient concentrations were obtained using Figures 3 and 4 in the CEQA guidelines and determined to be 6 parts per million (ppm) for the 1-hr and 3.5 ppm for the 8-hr time periods. Applying a rollback to 2013, the ambient CO concentrations used in the model were 3.5 ppm and 1.8 ppm for the 1-hr and 8-hr time periods, respectively.

The CALINE4 model was run for the 1-hr worst-case wind angle/lane orientation using standard default values described above. Appendix D-5 presents the CALINE4 output file. The highest ambient 1-hr CO concentration was 5.5 ppm for the morning peak period, including background. A 0.7 persistence factor from the CEQA guidelines was used to calculate the 8-hr value of 3.8 ppm. The 1-hr and 8-hr CO CAAQS are 20 ppm and 9 ppm, respectively. Comparison of the

1-hr and 8-hr CO hot spot results of 5.5 ppm and 3.8 ppm, respectively, to the CAAQS reveals that no adverse CO hot spot impacts are expected. Thus, even when using the highest traffic volume intersection and conservative assumptions, the CO standards would not be compromised by the Proposed Action or any of its alternatives, and their emissions are not considered significant. Because there are no potential significant impacts on localized air resources due to the Proposed Action and its alternatives, no additional mitigation measures are necessary for local CO.

## **APPENDIX D-3**

### **Example URBEMIS Output Data Files**

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# Phase IA Construction and Area Source Emissions

Page: 1

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Phase 1A.urb924

Project Name: Phase 1A - Construction and Area Source Emissions

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Page: 2

11/6/2008 10:51:14 AM

**Summary Report:**

**CONSTRUCTION EMISSION ESTIMATES**

	<u>CO</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2009 TOTALS (tons/year unmitigated)	1.29	1.87	1.48	0.00	0.43	0.13	0.56	0.09	0.12	0.21	192.73
2009 TOTALS (tons/year mitigated)	0.63	1.87	1.48	0.00	0.24	0.13	0.37	0.06	0.12	0.17	192.73
Percent Reduction	50.97	0.00	0.00	0.00	43.34	0.00	33.52	43.27	0.00	18.99	0.00
2010 TOTALS (tons/year unmitigated)	0.46	0.14	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	16.62
2010 TOTALS (tons/year mitigated)	0.09	0.14	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	16.62
Percent Reduction	81.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**AREA SOURCE EMISSION ESTIMATES**

	<u>CO</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.19	0.40	0.75	0.00	0.00	0.00	470.58

**SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES**

	<u>CO</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	0.19	0.40	0.75	0.00	0.00	0.00	470.58

**Construction Unmitigated Detail Report:**

**CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated**

	<u>CO</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2009	1.29	1.87	1.48	0.00	0.43	0.13	0.56	0.09	0.12	0.21	192.73
Fine Grading 05/01/2009-06/11/2009	0.05	0.40	0.20	0.00	0.43	0.02	0.45	0.09	0.02	0.11	34.03
Fine Grading Dust	0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.09	0.00	0.09	0.00
Fine Grading Off Road Diesel	0.05	0.40	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	33.71
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32
Asphalt 05/28/2009-05/11/2009	0.03	0.10	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	7.76
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.09	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	6.23
Paving On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.31
Paving Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23
Building 05/11/2009-01/22/2010	0.31	1.38	1.22	0.00	0.00	0.10	0.10	0.00	0.09	0.09	150.71
Building Off Road Diesel	0.28	1.27	0.84	0.00	0.00	0.09	0.09	0.00	0.09	0.09	118.35
Building Vendor Trips	0.01	0.10	0.09	0.00	0.00	0.00	0.01	0.00	0.00	0.00	17.93
Building Worker Trips	0.02	0.01	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.44
Coating 10/16/2009-02/05/2010	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22
Architectural Coating	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.22

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2010	0.46	0.14	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	16.62
Building 06/11/2009-01/22/2010	0.03	0.14	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	16.62
Building Off Road Diesel	0.03	0.13	0.09	0.00	0.00	0.01	0.01	0.00	0.01	0.01	12.97
Building Vendor Trips	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.96
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.58
Coating 10/16/2009-02/05/2010	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Architectural Coating	0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11

Phase Assumptions

Phase: Fine Grading 5/1/2009 - 5/11/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 9.59

Maximum Daily Acreage Disturbed: 1.43

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 5/28/2009 - 5/11/2009 - Default Paving Description

Acres to be Paved: 9.59

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

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1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 6/11/2009 - 1/22/2010 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 10/16/2009 - 2/5/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	CO	NOx	SO <sub>2</sub>	SO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	CO <sub>2</sub>
Natural Gas	0.03	0.39	0.33	0.00	0.00	0.00	469.82
Hearth							
Landscape	0.03	0.01	0.42	0.00	0.00	0.00	0.76
Consumer Products	0.00						
Architectural Coatings	0.13						
TOTALS (tons/year, unmitigated)	0.19	0.40	0.75	0.00	0.00	0.00	470.58

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Area Source Changes to Defaults

## Off-Base Operational Annual Emissions – 2008

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Urbemis 2007 Version 9.2.4

### Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb024

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

#### Summary Report:

#### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	13.86	13.87	124.15	0.08	15.32	2.93	8,218.07

#### SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	13.86	13.87	124.15	0.08	15.32	2.93	8,218.07

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#### Operational Unmitigated Detail Report:

#### OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
University/college (4 yrs)	13.86	13.87	124.15	0.08	15.32	2.93	8,218.07
TOTALS (tons/year, unmitigated)	13.86	13.87	124.15	0.08	15.32	2.93	8,218.07

#### Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2008 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

#### Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

#### Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.9	2.0	97.6	0.4
Light Truck < 3750 lbs	12.9	3.1	93.0	3.9
Light Truck 3751-5750 lbs	19.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	6.5	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	78.1	21.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

## Off-Base Operational Daily Summer-time Emissions – 2008

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb024

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	82.19	65.24	657.55	0.47	83.95	16.06	47,113.33

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	82.19	65.24	657.55	0.47	83.95	16.06	47,113.33

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## Operational Unmitigated Detail Report:

## OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
University/college (4 yrs)	82.19	65.24	657.55	0.47	83.95	16.06	47,113.33
<b>TOTALS (lbs/day, unmitigated)</b>	<b>82.19</b>	<b>65.24</b>	<b>657.55</b>	<b>0.47</b>	<b>83.95</b>	<b>16.06</b>	<b>47,113.33</b>

## Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2008 Temperature (F): 85 Season: Summer

Emitac: Version : Emitac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.9	2.0	97.6	0.4
Light Truck < 3750 lbs	12.9	3.1	93.0	3.9
Light Truck 3751-5750 lbs	19.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	6.5	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	78.1	21.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commuter	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

## % of Trips - Commercial (by land use)

University/college (4 yrs)	5.0	2.5	92.5
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## Off-Base Operational Daily Winter-time Emissions – 2008

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Urbemis 2007 Version 9.2.4

### Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb924

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

#### Summary Report:

#### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	63.41	97.60	725.72	0.41	83.95	16.06	40,864.95

#### SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	63.41	97.60	725.72	0.41	83.95	16.06	40,864.95

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#### Operational Unmitigated Detail Report:

#### OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO</u>
University/college (4 yrs)	63.41	97.60	725.72	0.41	83.95	16.06	40,864.9
<b>TOTALS (lbs/day, unmitigated)</b>	<b>63.41</b>	<b>97.60</b>	<b>725.72</b>	<b>0.41</b>	<b>83.95</b>	<b>16.06</b>	<b>40,864.9</b>

#### Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2008 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

#### Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

#### Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.9	2.0	97.6	0.4
Light Truck < 3750 lbs	12.9	3.1	93.0	3.9
Light Truck 3751-5750 lbs	19.7	1.0	98.5	0.5
Med Truck 5751-8500 lbs	6.5	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.4	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	78.1	21.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

<u>Travel Conditions</u>						
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

## Off-Base Operational Annual Emissions – 2020

Urbemis 2007 Version 9.2.4

### Combined Annual Emissions Reports (Tons/Year)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb924

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

#### Summary Report:

#### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.12	4.88	47.53	0.08	15.27	2.89	8,160.81

#### SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (tons/year, unmitigated)	6.12	4.88	47.53	0.08	15.27	2.89	8,160.81

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## Operational Unmitigated Detail Report:

## OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
University/college (4 yrs)	6.12	4.88	47.53	0.08	15.27	2.89	8,160.81
TOTALS (tons/year, unmitigated)	6.12	4.88	47.53	0.08	15.27	2.89	8,160.81

## Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.0	0.0	100.0	0.0
Light Truck < 3750 lbs	12.6	0.0	98.4	1.6
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	40.6	59.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			

## % of Trips - Commercial (by land use)

University/college (4 yrs)	5.0	2.5	92.5
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## Off-Base Operational Daily Summer-time Emissions – 2020

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Urbemis 2007 Version 9.2.4

### Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb924

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

#### Summary Report:

#### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	38.31	23.01	256.18	0.46	83.66	15.81	46,910.48

#### SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	38.31	23.01	256.18	0.46	83.66	15.81	46,910.48

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#### Operational Unmitigated Detail Report:

#### OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
University/college (4 yrs)	38.31	23.01	256.18	0.46	83.66	15.81	46,910.48
TOTALS (lbs/day, unmitigated)	38.31	23.01	256.18	0.46	83.66	15.81	46,910.48

#### Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

#### Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

#### Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.0	0.0	100.0	0.0
Light Truck < 3750 lbs	12.6	0.0	98.4	1.6
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

<u>Vehicle Fleet Mix</u>				
Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	40.6	59.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

	<u>Travel Conditions</u>					
	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

## Off-Base Operational Daily Winter-time Emissions – 2020

Urbemis 2007 Version 9.2.4

### Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\cowenk\Application Data\Urbemis\Version9a\Projects\Off-post traffic.urb@24

Project Name: Off Base - Operational

Project Location: Bay Area Air District

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

#### Summary Report:

#### OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	24.04	34.28	268.90	0.40	83.66	15.81	40,329.40

#### SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	24.04	34.28	268.90	0.40	83.66	15.81	40,329.40

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## Operational Unmitigated Detail Report:

## OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
University/college (4 yrs)	24.04	34.28	268.90	0.40	83.66	15.81	40,329.40
TOTALS (lbs/day, unmitigated)	24.04	34.28	268.90	0.40	83.66	15.81	40,329.40

## Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2020 Temperature (F): 40 Season: Winter

Emitac: Version : Emitac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
University/college (4 yrs)		2.38	students	2,750.00	6,545.00	48,809.34
					6,545.00	48,809.34

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.0	0.0	100.0	0.0
Light Truck < 3750 lbs	12.6	0.0	98.4	1.6
Light Truck 3751-5750 lbs	19.9	0.0	100.0	0.0
Med Truck 5751-8500 lbs	6.6	0.0	100.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	0.9	0.0	77.8	22.2
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.3	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.2	40.6	59.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.6	0.0	83.3	16.7

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commuter	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
University/college (4 yrs)				5.0	2.5	92.5

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**Appendix D-4**  
**EMFAC Output Files**

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Title: Bay Area AQMD Avg 2013 Winter Default Title  
 Version: Emfac2002 V2.2 Apr 23 2003  
 Run Date : 02/22/05 07:59:32  
 Scen Year: 2013 -- Model Years: 1968 to 2013  
 Season : Winter  
 Area: Bay Area AQMD Dis

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Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases

Temperature: 35F

Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	29.768	0.359	0.629	0.401	29.399	0.558	0.42	0.699	29.628	0.508
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0.273	0.579	36.872	0.693	0.233	0.773	26.52	0.17	0.639	0.284	26.52
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0.474	0.813	0.623	39.83	1.683	0.73	0.976	114.288	14.507	1.118	1.466
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	49.876	5.468	2.584	4.473	8.146	3.64	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
6.054	39.83	5.029	1.053	2.053	39.83	1.518	0.348	2.073	23.478	0.475
					ALL	ALL				
					DSL	ALL				
					1.049	0.588				

**Pollutant Name: Carbon Monoxide**  
**Temperature: 35F**  
**Relative Humidity: 20%**

<b>Speed</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT2</b>	<b>LDT2</b>
<b>MPH</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
3	283.043	4.043	2.921	4.436	294.014	7.598	2.663	8.978	295.151	6.028
<b>LDT2</b>	<b>LDT2</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD2</b>
<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>
2.128	6.727	489.922	6.706	1.99	7.794	533.754	1.97	3.312	2.727	533.753
<b>LHD2</b>	<b>LHD2</b>	<b>LHD2</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>
<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>
5.798	3.712	4.889	800.63	21.346	6.831	10.962	3178.72	158.151	6.508	11.031
<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>MCY</b>	<b>MCY</b>	<b>MCY</b>
<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>
0	0	0	0	925.758	34.547	14.786	37.711	66.506	13.839	0
<b>MCY</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>ALL</b>	<b>ALL</b>
<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
42.046	800.63	56.332	9.392	25.548	800.63	29.812	3.339	40.755	268.933	5.444

**ALL**    **ALL**  
**DSL**    **ALL**  
6.722    6.453



Pollutant Name: Oxides of Nitrogen  
 Temperature: 35F  
 Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	4.469	0.541	2.162	0.548	4.354	0.933	2.068	0.959	4.404	1.149
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
2.185	1.163	6.788	1.488	2.214	1.513	2.268	0.306	5.407	1.271	2.268
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0.576	6.318	3.092	3.402	1.883	10.018	8.56	20.856	10.758	10.84	10.841
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	4.377	3.303	40.515	25.907	1.407	1.638	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
1.514	3.402	3.103	16.987	15.087	3.402	1.223	10.191	1.931	3.448	0.796
					ALL	ALL				
					DSL	ALL				
					12.042	1.41				

**Pollutant Name: Carbon Monoxide**  
**Temperature: 35F**  
**Relative Humidity: 20%**

<b>Speed</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT2</b>	<b>LDT2</b>
<b>MPH</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
3	283.043	4.043	2.921	4.436	294.014	7.598	2.663	8.978	295.151	6.028
<b>LDT2</b>	<b>LDT2</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD2</b>
<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>
2.128	6.727	489.922	6.706	1.99	7.794	533.754	1.97	3.312	2.727	533.753
<b>LHD2</b>	<b>LHD2</b>	<b>LHD2</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>
<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>
5.798	3.712	4.889	800.63	21.346	6.831	10.962	3178.72	158.151	6.508	11.031
<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>MCY</b>	<b>MCY</b>	<b>MCY</b>
<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>
0	0	0	0	925.758	34.547	14.786	37.711	66.506	13.839	0
<b>MCY</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>ALL</b>	<b>ALL</b>
<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
42.046	800.63	56.332	9.392	25.548	800.63	29.812	3.339	40.755	268.933	5.444

**ALL**    **ALL**  
**DSL**    **ALL**  
6.722    6.453

Pollutant Name: Sulfur Dioxide

Temperature: 35F

Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	0.02	0.01	0.003	0.01	0.021	0.013	0.003	0.013	0.021	0.013
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0.003	0.013	0.027	0.018	0.003	0.018	0.034	0.024	0.005	0.021	0.034
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0.024	0.005	0.016	0.039	0.025	0.014	0.016	0.079	0.027	0.021	0.021
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	0.041	0.025	0.026	0.026	0.004	0.003	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
0.003	0.039	0.025	0.014	0.016	0.039	0.025	0.014	0.024	0.016	0.012

ALL	ALL
DSL	ALL
0.017	0.012

**Pollutant Name: PM10**  
**Temperature: 35F**  
**Relative Humidity: 20%**

<b>Speed</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT2</b>	<b>LDT2</b>
<b>MPH</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
3	0.12	0.064	0.35	0.064	0.115	0.065	0.204	0.067	0.123	0.141
<b>LDT2</b>	<b>LDT2</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD2</b>
<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>
0.142	0.141	0.124	0.137	0.124	0.137	0.101	0.048	0.102	0.058	0.101
<b>LHD2</b>	<b>LHD2</b>	<b>LHD2</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>
<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>
0.053	0.144	0.093	0.101	0.053	0.607	0.508	0.101	0.098	0.432	0.424
<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>MCY</b>	<b>MCY</b>	<b>MCY</b>
<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>
0	0	0	0	0.101	0.084	0.989	0.634	0.08	0.005	0
<b>MCY</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>ALL</b>	<b>ALL</b>
<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
0.045	0.101	0.064	0.904	0.789	0.101	0.019	0.475	0.054	0.104	0.083
				<b>ALL</b>	<b>ALL</b>					
				<b>DSL</b>	<b>ALL</b>					
				0.483	0.104					

Pollutant Name: PM10 - Tire Wear  
 Temperature: 35F  
 Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0.008	0.008	0.008	0.008	0.008	0.008	0.012	0.012	0.012	0.012	0.012
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.036	0.035
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	0.012	0.012	0.008	0.01	0.004	0.004	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
0.004	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.012	0.007	0.008
					ALL	ALL				
					DSL	ALL				
					0.024	0.009				

Pollutant Name: PM10 - Break Wear  
 Temperature: 35F  
 Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	0.013	0.013	0.013	0.013	0.013	0.013	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
				ALL	ALL					
				DSL	ALL					
				0.013	0.013					

Pollutant Name: Gasoline - mi/gal  
 Temperature: 35F  
 Relative Humidity: 20%

Speed	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
MPH	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
3	4.183	8.171	0	8.165	4.141	6.523	0	6.511	4.134	6.534
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0	6.528	3.208	4.784	0	4.78	2.517	3.519	0	3.518	2.517
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
3.508	0	3.508	2.202	3.464	0	3.45	1.077	3.105	0	3.079
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	2.069	3.405	0	3.347	23.104	27.681	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
25.23	2.202	3.364	0	3.253	2.202	3.448	0	3.425	10.844	7.3
				ALL	ALL					
				DSL	ALL					
				0	7.313					

**Pollutant Name: Diesel - mi/gal**

**Temperature: 35F**

**Relative Humidity: 20%**

<b>Speed</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDA</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT1</b>	<b>LDT2</b>	<b>LDT2</b>
<b>MPH</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
3	0	0	28.06	28.06	0	0	28.979	28.979	0	0
<b>LDT2</b>	<b>LDT2</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>MDV</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD1</b>	<b>LHD2</b>
<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>
29.068	29.068	0	0	29.104	29.104	0	0	19.383	19.383	0
<b>LHD2</b>	<b>LHD2</b>	<b>LHD2</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>MHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>	<b>HHD</b>
<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>
0	19.122	19.122	0	0	6.698	6.698	0	0	4.639	4.639
<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>LHV</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>UBUS</b>	<b>MCY</b>	<b>MCY</b>	<b>MCY</b>
<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>
0	0	0	0	0	0	3.771	3.771	0	0	0
<b>MCY</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>SBUS</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>MH</b>	<b>ALL</b>	<b>ALL</b>
<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>	<b>DSL</b>	<b>ALL</b>	<b>NCAT</b>	<b>CAT</b>
0	0	0	6.698	6.698	0	0	6.698	6.698	0	0
				<b>ALL</b>		<b>ALL</b>				
				<b>DSL</b>		<b>ALL</b>				
				7.937		7.937				



Title : Bay Area AQMD Avg 2013 Winter Default Title  
 Version : Emfac2002 V2.2 Apr 23 2003  
 Run Date : 02/22/05 07:59:32  
 Scen Year: 2013 -- Model Years: 1968 to 2013  
 Season : Winter

Area : Bay Area AQMD Dis

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Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases  
 Temperature: 35F  
 Relative Humidity: ALL

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	9.226	0.127	0	0.155	8.846	0.159	0	0.213	8.882	0.154
10	9.147	0.248	0	0.275	8.77	0.311		0.362	8.806	0.301
20	9.234	0.47	0	0.5	8.854	0.592	0	0.639	8.89	0.574
30	9.649	0.677	0	0.703	9.252	0.843	0	0.889	9.289	0.821
40	10.392	0.856	0	0.884	9.964	1.065	0	1.111	10.004	1.04
50	11.462	1.013	0	1.044	10.99	1.257	0	1.307	11.034	1.233
60	11.917	1.147	0	1.178	11.425	1.42	0	1.469	11.472	1.398
120	5.696	1.3	0	1.312	5.461	1.364	0	1.376	5.484	1.56
180	6.201	0.628	0	0.644	5.945	0.751	0	0.776	5.969	0.774
240	6.705	0.664	0	0.682	6.429	0.794	0	0.822	6.455	0.819
300	7.21	0.7	0	0.719	6.912	0.836	0	0.866	6.94	0.864
360	7.714	0.735	0	0.755	7.396	0.877	0	0.91	7.426	0.907
420	8.219	0.768	0	0.79	7.88	0.917	0	0.952	7.912	0.949
480	8.723	0.801	0	0.825	8.364	0.956	0	0.993	8.397	0.99
540	9.227	0.834	0	0.858	8.847	0.993	0	1.033	8.883	1.03
600	9.732	0.865	0	0.891	9.331	1.03	0	1.072	9.369	1.069
660	10.236	0.895	0	0.923	9.815	1.065	0	1.11	9.854	1.107
720	10.741	0.925	0	0.954	10.298	1.099	0	1.147	10.34	1.144

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0.181	11.303	0.212	0	0.242	14.675	0.276	0	0.356	14.675
0	0.326	11.206	0.414	0	0.44	14.549	0.54	0	0.597	14.549
0	0.597	11.313	0.791	0	0.809	14.688	1.033	0	1.052	14.688
0	0.843	11.822	1.13	0	1.142	15.348	1.479	0	1.466	15.348
0	1.062	12.731	1.433	0	1.441	16.529	1.879	0	1.842	16.529
0	1.256	14.043	1.697	0	1.704	18.231	2.232	0	2.178	18.231
0	1.421	14.599	1.925	0	1.929	18.954	2.538	0	2.465	18.954
0	1.562	6.979	2.12	0	2.096	9.06	2.232	0	2.114	9.06
0	0.786	7.597	1.065	0	1.065	9.862	1.768	0	1.693	9.862
0	0.832	8.215	1.127	0	1.128	10.665	1.873	0	1.795	10.665
0	0.877	8.833	1.188	0	1.19	11.467	1.975	0	1.895	11.467
0	0.922	9.451	1.248	0	1.25	12.27	2.076	0	1.994	12.27
0	0.965	10.069	1.306	0	1.308	13.072	2.175	0	2.09	13.072
0	1.007	10.687	1.362	0	1.366	13.874	2.272	0	2.184	13.874
0	1.049	11.305	1.418	0	1.422	14.677	2.366	0	2.277	14.677
0	1.089	11.923	1.471	0	1.476	15.479	2.459	0	2.368	15.479
0	1.128	12.541	1.524	0	1.53	16.281	2.549	0	2.456	16.281
0	1.166	13.159	1.575	0	1.582	17.084	2.638	0	2.543	17.084

APPENDIX D-4—EMFAC OUTPUT FILES

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0.407	0	0.319	22.012	0.913	0	0.692	36.987	3.337	0	2.05
0.795	0	0.621	21.823	1.78	0	0.953	36.67	6.505	0	3.153
1.515	0	1.183	22.032	3.375	0	1.444	37.02	12.333	0	5.205
2.158	0	1.685	23.022	4.784	0	1.892	38.684	17.483	0	7.05
2.726	0	2.127	24.793	6.008	0	2.299	41.661	21.955	0	8.688
3.218	0	2.511	27.347	7.046	0	2.664	45.951	25.749	0	10.121
3.634	0	2.835	28.431	7.899	0	2.944	47.773	28.866	0	11.257
2.807	0	2.19	13.59	4.054	0	1.492	22.836	14.826	0	5.741
2.542	0	1.983	14.794	4.301	0	1.59	24.858	15.731	0	6.107
2.688	0	2.097	15.997	4.541	0	1.686	26.88	16.608	0	6.462
2.831	0	2.208	17.201	4.773	0	1.779	28.903	17.456	0	6.808
2.969	0	2.317	18.404	4.997	0	1.87	30.925	18.275	0	7.143
3.104	0	2.422	19.608	5.213	0	1.959	32.948	19.066	0	7.468
3.235	0	2.524	20.811	5.421	0	2.045	34.97	19.827	0	7.783
3.363	0	2.624	22.015	5.622	0	2.129	36.992	20.56	0	8.088
3.486	0	2.72	23.219	5.814	0	2.21	39.015	21.265	0	8.383
3.606	0	2.814	24.422	5.999	0	2.289	41.037	21.94	0	8.668
3.722	0	2.904	25.626	6.176	0	2.366	43.059	22.587	0	8.943

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	27.55	1.043	0	0.863	4.358	0.741	0
0	0	0	0	27.314	2.033	0	1.23	4.32	1.444	0
0	0	0	0	27.575	3.853	0	1.917	4.362	2.737	0
0	0	0	0	28.814	5.462	0	2.542	4.558	3.881	0
0	0	0	0	31.031	6.86	0	3.104	4.908	4.873	0
0	0	0	0	34.227	8.045	0	3.604	5.414	5.715	0
0	0	0	0	35.584	9.019	0	3.992	5.629	6.407	0
0	0	0	0	17.009	4.751	0	2.073	2.69	4.207	0
0	0	0	0	18.516	5.041	0	2.208	2.929	2.589	0
0	0	0	0	20.022	5.322	0	2.339	3.167	2.733	0
0	0	0	0	21.528	5.594	0	2.467	3.405	2.873	0
0	0	0	0	23.035	5.856	0	2.591	3.644	3.008	0
0	0	0	0	24.541	6.11	0	2.712	3.882	3.138	0
0	0	0	0	26.047	6.354	0	2.829	4.12	3.263	0
0	0	0	0	27.554	6.589	0	2.943	4.358	3.384	0
0	0	0	0	29.06	6.814	0	3.053	4.597	3.5	0
0	0	0	0	30.567	7.031	0	3.16	4.835	3.611	0
0	0	0	0	32.073	7.238	0	3.264	5.073	3.717	0

MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
2.95	22.012	1.114	0	0.423	22.012	0.835	0	1.187	10.468	0.172
3.201	21.823	2.172	0	0.551	21.823	1.627	0	1.902	10.378	0.336
3.73	22.032	4.117	0	0.792	22.032	3.084	0	3.227	10.477	0.64
4.294	23.022	5.836	0	1.016	23.022	4.372	0	4.414	10.948	0.913
4.895	24.793	7.329	0	1.222	24.793	5.49	0	5.463	11.79	1.155
5.531	27.347	8.596	0	1.411	27.347	6.439	0	6.373	13.005	1.365
5.932	28.431	9.636	0	1.553	28.431	7.218	0	7.101	13.52	1.544
3.281	13.59	4.88	0	0.776	13.59	2.354	0	2.4	6.463	1.548

2.797	14.794	5.178	0	0.828	14.794	2.498	0	2.554	7.035	0.861
2.998	15.997	5.466	0	0.879	15.997	2.637	0	2.704	7.607	0.91
3.198	17.201	5.745	0	0.929	17.201	2.772	0	2.85	8.18	0.959
3.396	18.404	6.015	0	0.978	18.404	2.902	0	2.991	8.752	1.006
3.592	19.608	6.275	0	1.025	19.608	3.027	0	3.128	9.324	1.052
3.787	20.811	6.526	0	1.072	20.811	3.148	0	3.262	9.897	1.097
3.979	22.015	6.767	0	1.117	22.015	3.265	0	3.391	10.469	1.141
4.17	23.219	6.999	0	1.161	23.219	3.376	0	3.516	11.042	1.184
4.359	24.422	7.221	0	1.204	24.422	3.484	0	3.636	11.614	1.225
4.546	25.626	7.434	0	1.246	25.626	3.586	0	3.753	12.186	1.265

<b>ALL</b>	<b>ALL</b>
<b>DSL</b>	<b>ALL</b>
0	0.23
0	0.385
0	0.674
0	0.936
0	1.17
0	1.377
0	1.55
0	1.508
0	0.86
0	0.911
0	0.961
0	1.01
0	1.057
0	1.103
0	1.148
0	1.192
0	1.235
0	1.277

**Pollutant Name: Carbon Monoxide**

**Temperature: 35F**

**Relative Humidity: ALL**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	23.983	1.362	0	1.429	24.9	1.965	0	2.092	25.001	1.73
10	21.238	2.678	0	2.73	22.05	3.858	0	3.935	22.139	3.401
20	16.394	5.167	0	5.193	17.021	7.427	0	7.411	17.09	6.564
30	12.414	7.468	0	7.472	12.889	10.71	0	10.61	12.941	9.491
40	9.298	9.581	0	9.566	9.653	13.7	0	13.53	9.692	12.18
50	7.045	11.51	0	11.48	7.314	16.4	0	16.17	7.344	14.63
60	5.656	13.24	0	13.2	5.872	18.81	0	18.53	5.896	16.85
120	24.029	16.52	0	16.52	24.947	19.85	0	19.67	25.048	20.65
180	37.967	8.508	0	8.585	39.419	11.7	0	11.76	39.578	10.87
240	50.429	8.97	0	9.083	52.356	12.24	0	12.37	52.567	11.47
300	61.413	9.398	0	9.543	63.76	12.74	0	12.94	64.017	12.03
360	70.919	9.793	0	9.965	73.631	13.23	0	13.48	73.927	12.54
420	78.949	10.15	0	10.35	81.967	13.68	0	13.98	82.298	13
480	85.501	10.48	0	10.7	88.77	14.11	0	14.44	89.128	13.42
540	90.576	10.78	0	11	94.039	14.51	0	14.87	94.418	13.8
600	94.174	11.04	0	11.27	97.774	14.89	0	15.26	98.168	14.13
660	96.295	11.26	0	11.51	99.976	15.24	0	15.62	100.379	14.42
720	96.938	11.46	0	11.7	100.644	15.56	0	15.94	101.049	14.66

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	1.793	41.407	2.159	0	2.24	41.599	4.03	0	3.994	41.599
0	3.439	36.667	4.241	0	4.262	36.837	7.924	0	7.539	36.837
0	6.555	28.305	8.174	0	8.085	28.436	15.302	0	14.26	28.436
0	9.44	21.434	11.8	0	11.611	21.533	22.133	0	20.49	21.533
0	12.093	16.053	15.118	0	14.84	16.127	28.419	0	26.228	16.127
0	14.514	12.163	18.129	0	17.774	12.22	34.158	0	31.475	12.22
0	16.704	9.765	20.832	0	20.411	9.81	39.351	0	36.23	9.81
0	20.527	41.486	24.75	0	24.342	41.678	30.272	0	28.109	41.678
0	10.892	65.551	13.182	0	13.099	65.854	15.05	0	14.29	65.854
0	11.528	87.066	13.846	0	13.815	87.468	15.957	0	15.275	87.468
0	12.116	106.03	14.467	0	14.481	106.52	16.787	0	16.17	106.52
0	12.653	122.443	15.047	0	15.099	123.009	17.54	0	16.977	123.009
0	13.141	136.306	15.585	0	15.668	136.936	18.216	0	17.695	136.936
0	13.58	147.619	16.081	0	16.188	148.301	18.814	0	18.325	148.301
0	13.969	156.381	16.535	0	16.66	157.104	19.336	0	18.866	157.104
0	14.308	162.593	16.948	0	17.082	163.344	19.781	0	19.318	163.344
0	14.598	166.254	17.318	0	17.456	167.022	20.149	0	19.682	167.022
0	14.839	167.365	17.647	0	17.781	168.138	20.44	0	19.957	168.138

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
6.722	0	5.246	62.398	22.326	0	7.984	257.11	73.555	0	31.905
13.192	0	10.291	55.255	43.745	0	14.384	227.676	144.122	0	55.944
25.373	0	19.79	42.654	83.862	0	26.385	175.753	276.289	0	101.046
36.546	0	28.502	32.299	120.35	0	37.321	133.087	396.501	0	142.176
46.708	0	36.427	24.191	153.209	0	47.193	99.678	504.759	0	179.335
55.861	0	43.565	18.329	182.44	0	56	75.526	601.062	0	212.524
64.005	0	49.915	14.715	208.042	0	63.742	60.631	685.411	0	241.741
36.765	0	28.675	62.516	66.68	0	21.517	257.597	208.091	0	79.083
25.577	0	19.952	98.781	68.629	0	22.793	407.023	214.174	0	84.771
26.681	0	20.815	131.202	70.643	0	24.017	540.612	220.458	0	90.152
27.741	0	21.642	159.779	72.72	0	25.188	658.365	226.942	0	95.227
28.755	0	22.434	184.514	74.862	0	26.306	760.282	233.627	0	99.995
29.723	0	23.191	205.404	77.068	0	27.372	846.361	240.512	0	104.457
30.646	0	23.912	222.452	79.339	0	28.385	916.604	247.598	0	108.613
31.524	0	24.597	235.656	81.674	0	29.345	971.011	254.884	0	112.461
32.356	0	25.246	245.016	84.073	0	30.253	1009.58	262.37	0	116.004
33.142	0	25.86	250.533	86.536	0	31.108	1032.313	270.057	0	119.24
33.884	0	26.438	252.207	89.063	0	31.911	1039.21	277.945	0	122.169

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	72.15	20.621	0	8.97	6.404	6.008	0
0	0	0	0	63.891	40.405	0	16.249	5.671	11.772	0
0	0	0	0	49.32	77.458	0	29.898	4.377	22.568	0
0	0	0	0	37.347	111.159	0	42.334	3.315	32.387	0
0	0	0	0	27.972	141.509	0	53.558	2.483	41.23	0
0	0	0	0	21.194	168.508	0	63.569	1.881	49.096	0
0	0	0	0	17.014	192.155	0	72.367	1.51	55.985	0
0	0	0	0	72.287	62.108	0	24.534	6.416	41.514	0
0	0	0	0	114.219	63.924	0	25.933	10.138	14.67	0
0	0	0	0	151.707	65.8	0	27.278	13.465	15.101	0
0	0	0	0	184.751	67.735	0	28.569	16.398	15.545	0
0	0	0	0	213.35	69.73	0	29.807	18.936	16.003	0
0	0	0	0	237.506	71.785	0	30.992	21.08	16.474	0
0	0	0	0	257.218	73.9	0	32.122	22.83	16.96	0
0	0	0	0	272.485	76.074	0	33.199	24.185	17.459	0
0	0	0	0	283.309	78.309	0	34.223	25.145	17.972	0
0	0	0	0	289.688	80.603	0	35.193	25.712	18.498	0
0	0	0	0	291.623	82.957	0	36.109	25.883	19.038	0

APPENDIX D-4—EMFAC OUTPUT FILES

MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
6.25	62.398	25.9	0	3.991	62.398	20.59	0	19.889	31.612	2.227
8.045	55.255	50.747	0	6.947	55.255	40.343	0	37.659	27.993	4.372
11.457	42.654	97.284	0	12.495	42.654	77.34	0	70.956	21.609	8.42
14.629	32.299	139.613	0	17.554	32.299	110.991	0	101.262	16.363	12.144
17.562	24.191	177.731	0	22.127	24.191	141.295	0	128.579	12.255	15.544
20.256	18.329	211.641	0	26.212	18.329	168.253	0	152.906	9.286	18.62
22.71	14.715	241.341	0	29.81	14.715	191.864	0	174.242	7.455	21.372
20.075	62.516	75.828	0	10.12	62.516	43.306	0	40.487	31.671	20.264
11.902	98.781	78.045	0	10.864	98.781	44.572	0	42.344	50.043	11.537
14.102	131.202	80.335	0	11.567	131.202	45.88	0	44.164	66.468	12.107
16.066	159.779	82.697	0	12.229	159.779	47.229	0	45.947	80.946	12.643
17.795	184.514	85.133	0	12.85	184.514	48.621	0	47.692	93.477	13.145
19.288	205.404	87.642	0	13.43	205.404	50.053	0	49.4	104.06	13.611
20.545	222.452	90.224	0	13.969	222.452	51.528	0	51.071	112.696	14.043
21.567	235.656	92.879	0	14.467	235.656	53.044	0	52.704	119.386	14.441
22.354	245.016	95.607	0	14.923	245.016	54.602	0	54.3	124.128	14.803
22.904	250.533	98.409	0	15.339	250.533	56.202	0	55.858	126.923	15.131
23.219	252.207	101.283	0	15.714	252.207	57.844	0	57.379	127.771	15.425

ALL  
DSL      ALL  
ALL

0	2.313
0	4.321
0	8.114
0	11.607
0	14.8
0	17.694
0	20.289
0	19.396
0	11.249
0	11.896
0	12.497
0	13.053
0	13.563
0	14.028
0	14.448
0	14.822
0	15.151
0	15.434

**Pollutant Name: Oxides of Nitrogen**  
**Temperature: 35F**  
**Relative Humidity: ALL**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	1.436	0.267	0	0.27	1.402	0.268	0	0.272	1.419	0.516
10	1.561	0.307	0	0.31	1.524	0.319	0	0.323	1.543	0.585
20	1.788	0.378	0	0.382	1.746	0.408	0	0.412	1.767	0.707
30	1.985	0.437	0	0.441	1.938	0.482	0	0.486	1.962	0.808
40	2.151	0.483	0	0.488	2.101	0.54	0	0.545	2.126	0.889
50	2.287	0.518	0	0.522	2.234	0.583	0	0.587	2.261	0.949
60	2.393	0.54	0	0.545	2.337	0.609	0	0.614	2.366	0.989
120	2.537	0.574	0	0.579	2.478	0.654	0	0.659	2.508	1.061
180	2.476	0.64	0	0.644	2.418	0.715	0	0.718	2.448	1.177
240	2.396	0.635	0	0.64	2.34	0.71	0	0.713	2.368	1.169
300	2.296	0.629	0	0.633	2.242	0.703	0	0.705	2.27	1.156
360	2.177	0.62	0	0.624	2.126	0.694	0	0.695	2.152	1.139
420	2.038	0.609	0	0.612	1.99	0.682	0	0.683	2.014	1.118
480	1.879	0.595	0	0.598	1.835	0.668	0	0.668	1.857	1.092
540	1.701	0.579	0	0.582	1.661	0.651	0	0.651	1.681	1.062
600	1.503	0.561	0	0.563	1.467	0.633	0	0.631	1.485	1.027
660	1.285	0.541	0	0.542	1.255	0.612	0	0.609	1.27	0.988
720	1.048	0.518	0	0.519	1.023	0.588	0	0.585	1.036	0.944

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0.515	2.168	0.569	0	0.563	0.7	1.681	0	1.55	0.7
0	0.584	2.356	0.657	0	0.65	0.761	1.926	0	1.775	0.761
0	0.706	2.699	0.812	0	0.803	0.872	2.361	0	2.175	0.872
0	0.807	2.996	0.941	0	0.93	0.968	2.721	0	2.507	0.968
0	0.887	3.247	1.043	0	1.03	1.049	3.006	0	2.77	1.049
0	0.947	3.453	1.118	0	1.105	1.115	3.218	0	2.965	1.115
0	0.987	3.613	1.167	0	1.152	1.167	3.355	0	3.091	1.167
0	1.059	3.83	1.252	0	1.237	1.237	3.585	0	3.303	1.237
0	1.173	3.738	1.38	0	1.362	1.207	3.623	0	3.338	1.207
0	1.165	3.617	1.371	0	1.352	1.168	3.598	0	3.315	1.168
0	1.152	3.466	1.357	0	1.338	1.119	3.56	0	3.28	1.119
0	1.135	3.286	1.338	0	1.319	1.061	3.509	0	3.232	1.061
0	1.114	3.076	1.313	0	1.295	0.993	3.445	0	3.173	0.993
0	1.087	2.836	1.284	0	1.265	0.916	3.368	0	3.101	0.916
0	1.057	2.567	1.251	0	1.231	0.829	3.277	0	3.017	0.829
0	1.022	2.268	1.212	0	1.192	0.733	3.173	0	2.921	0.733
0	0.982	1.94	1.168	0	1.149	0.627	3.056	0	2.813	0.627
0	0.938	1.582	1.119	0	1.1	0.511	2.926	0	2.692	0.511

APPENDIX D-4—EMFAC OUTPUT FILES

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
1.733	0	1.351	1.05	1.745	0	0.552	4.342	5.86	0	2.158
2.173	0	1.695	1.141	2.63	0	0.824	4.72	8.829	0	3.208
2.95	0	2.301	1.308	4.183	0	1.301	5.406	14.044	0	5.052
3.588	0	2.798	1.451	5.448	0	1.689	6.002	18.293	0	6.556
4.086	0	3.186	1.573	6.427	0	1.99	6.505	21.577	0	7.719
4.444	0	3.466	1.673	7.117	0	2.203	6.917	23.895	0	8.542
4.664	0	3.637	1.75	7.52	0	2.327	7.237	25.248	0	9.024
4.906	0	3.826	1.855	7.782	0	2.409	7.671	26.126	0	9.342
4.925	0	3.841	1.811	7.753	0	2.399	7.488	26.031	0	9.304
4.895	0	3.817	1.752	7.71	0	2.385	7.245	25.884	0	9.247
4.85	0	3.782	1.679	7.651	0	2.366	6.943	25.687	0	9.171
4.791	0	3.736	1.592	7.577	0	2.341	6.582	25.438	0	9.075
4.718	0	3.679	1.49	7.488	0	2.312	6.162	25.14	0	8.96
4.631	0	3.612	1.374	7.384	0	2.278	5.682	24.79	0	8.826
4.53	0	3.533	1.244	7.265	0	2.24	5.142	24.39	0	8.673
4.415	0	3.443	1.099	7.13	0	2.196	4.544	23.939	0	8.501
4.286	0	3.343	0.94	6.981	0	2.147	3.886	23.438	0	8.31
4.143	0	3.231	0.766	6.817	0	2.094	3.169	22.886	0	8.099

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	1.351	2.443	0	0.94	0.349	0.102	0
0	0	0	0	1.469	3.681	0	1.406	0.379	0.154	0
0	0	0	0	1.683	5.855	0	2.225	0.434	0.245	0
0	0	0	0	1.868	7.627	0	2.893	0.482	0.319	0
0	0	0	0	2.024	8.996	0	3.409	0.522	0.377	0
0	0	0	0	2.153	9.963	0	3.774	0.555	0.417	0
0	0	0	0	2.252	10.527	0	3.987	0.581	0.441	0
0	0	0	0	2.387	10.891	0	4.126	0.616	0.445	0
0	0	0	0	2.33	10.851	0	4.11	0.601	0.455	0
0	0	0	0	2.255	10.79	0	4.086	0.582	0.452	0
0	0	0	0	2.161	10.708	0	4.053	0.557	0.449	0
0	0	0	0	2.048	10.604	0	4.013	0.528	0.444	0
0	0	0	0	1.918	10.48	0	3.964	0.495	0.439	0
0	0	0	0	1.768	10.334	0	3.907	0.456	0.433	0
0	0	0	0	1.6	10.167	0	3.841	0.413	0.426	0
0	0	0	0	1.414	9.98	0	3.767	0.365	0.418	0
0	0	0	0	1.209	9.77	0	3.686	0.312	0.409	0
0	0	0	0	0.986	9.54	0	3.595	0.254	0.4	0



MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0.253	1.05	1.79	0	0.233	1.05	0.952	0	0.884	1.12	0.433
0.291	1.141	2.696	0	0.346	1.141	1.435	0	1.323	1.217	0.514
0.361	1.308	4.289	0	0.543	1.308	2.282	0	2.095	1.395	0.659
0.419	1.451	5.587	0	0.705	1.451	2.973	0	2.724	1.548	0.778
0.466	1.573	6.589	0	0.829	1.573	3.507	0	3.21	1.678	0.872
0.502	1.673	7.297	0	0.917	1.673	3.883	0	3.554	1.784	0.94
0.526	1.75	7.71	0	0.969	1.75	4.103	0	3.754	1.867	0.984
0.549	1.855	7.98	0	1.003	1.855	4.252	0	3.891	1.979	1.044
0.544	1.811	7.95	0	0.999	1.811	4.236	0	3.876	1.932	1.119
0.531	1.752	7.906	0	0.993	1.752	4.212	0	3.853	1.869	1.111
0.515	1.679	7.845	0	0.985	1.679	4.18	0	3.823	1.791	1.1
0.496	1.592	7.77	0	0.974	1.592	4.14	0	3.784	1.698	1.086
0.473	1.49	7.678	0	0.962	1.49	4.091	0	3.738	1.589	1.067
0.447	1.374	7.572	0	0.947	1.374	4.034	0	3.684	1.466	1.045
0.418	1.244	7.449	0	0.93	1.244	3.969	0	3.623	1.326	1.019
0.386	1.099	7.312	0	0.912	1.099	3.896	0	3.554	1.172	0.99
0.35	0.94	7.158	0	0.891	0.94	3.814	0	3.476	1.002	0.957
0.311	0.766	6.99	0	0.868	0.766	3.724	0	3.392	0.817	0.92

ALL  
DSL      ALL  
ALL

0	0.417
0	0.495
0	0.633
0	0.747
0	0.837
0	0.902
0	0.944
0	1.001
0	1.072
0	1.065
0	1.054
0	1.039
0	1.021
0	0.999
0	0.974
0	0.945
0	0.913
0	0.877

**Pollutant Name: Carbon Dioxide**  
**Temperature: 35F**  
**Relative Humidity: ALL**

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	111.902	10.87	0	11.16	112.394	13.18	0	13.68	112.412	13.57
10	121.432	12.96	0	13.28	121.965	15.91	0	16.42	121.985	16.15
20	139.927	17.55	0	17.9	140.542	21.83	0	22.36	140.564	21.79
30	157.671	22.66	0	23.04	158.364	28.37	0	28.91	158.389	28.1
40	174.663	28.3	0	28.71	175.431	35.53	0	36.06	175.458	35.06
50	190.904	34.47	0	34.89	191.743	43.32	0	43.82	191.773	42.69
60	206.393	41.16	0	41.6	207.3	51.73	0	52.18	207.332	50.98
120	279.289	89.5	0	89.94	280.517	111.2	0	111.1	280.561	111.2
180	279.509	102.4	0	102.8	280.738	127.4	0	127	280.782	127.1
240	279.728	115.1	0	115.4	280.958	143.3	0	142.7	281.002	142.9
300	279.948	127.6	0	127.8	281.178	158.9	0	158	281.222	158.3
360	280.167	139.9	0	140.1	281.399	174.2	0	173.1	281.443	173.6
420	280.387	152	0	152.1	281.619	189.3	0	187.9	281.663	188.6
480	280.606	163.8	0	164	281.84	204	0	202.4	281.884	203.4
540	280.826	175.5	0	175.6	282.06	218.5	0	216.6	282.104	217.9
600	281.045	187	0	187	282.281	232.7	0	230.5	282.325	232.2
660	281.265	198.3	0	198.3	282.501	246.5	0	244.2	282.545	246.2
720	281.484	209.4	0	209.3	282.722	260.1	0	257.5	282.766	260.1

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	13.801	132.404	17.874	0	17.895	170.667	20.136	0	19.696	170.667
0	16.381	143.68	21.679	0	21.653	185.2	25.604	0	24.822	185.2
0	22.03	165.564	29.915	0	29.778	213.408	37.167	0	35.645	213.408
0	28.331	186.559	38.985	0	38.717	240.47	49.566	0	47.228	240.47
0	35.285	206.664	48.889	0	48.469	266.386	62.8	0	59.57	266.386
0	42.891	225.88	59.628	0	59.034	291.155	76.87	0	72.673	291.155
0	51.149	244.207	71.2	0	70.413	314.778	91.777	0	86.536	314.778
0	110.973	330.459	152.363	0	150.085	425.955	188.674	0	176.357	425.955
0	126.791	330.719	174.643	0	171.883	426.29	217.316	0	202.68	426.29
0	142.37	330.979	196.505	0	193.273	426.625	245.203	0	228.309	426.625
0	157.712	331.238	217.95	0	214.255	426.96	272.335	0	253.244	426.96
0	172.815	331.498	238.979	0	234.829	427.295	298.712	0	277.486	427.295
0	187.68	331.758	259.59	0	254.995	427.629	324.335	0	301.035	427.629
0	202.306	332.018	279.785	0	274.753	427.964	349.203	0	323.889	427.964
0	216.695	332.277	299.562	0	294.103	428.299	373.316	0	346.051	428.299
0	230.845	332.537	318.923	0	313.045	428.633	396.674	0	367.518	428.633
0	244.757	332.797	337.866	0	331.58	428.968	419.278	0	388.292	428.968
0	258.431	333.056	356.392	0	349.706	429.303	441.126	0	408.372	429.303

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
17.549	0	13.7	170.667	9.546	0	6.12	170.667	9.546	0	7.407
24	0	18.732	185.2	19.039	0	9.289	185.2	19.039	0	11.081
37.338	0	29.136	213.408	37.866	0	15.563	213.408	37.866	0	18.353
51.256	0	39.992	240.47	56.482	0	21.751	240.47	56.482	0	25.523
65.753	0	51.3	266.386	74.887	0	27.853	266.386	74.887	0	32.592
80.831	0	63.06	291.155	93.081	0	33.868	291.155	93.081	0	39.56
96.489	0	75.273	314.778	111.063	0	39.798	314.778	111.063	0	46.427
188.729	0	147.216	425.955	188.899	0	65.633	425.955	188.899	0	76.36
218.746	0	170.625	426.29	223.17	0	76.094	426.29	223.17	0	88.383
247.699	0	193.204	426.625	255.419	0	85.938	426.625	255.419	0	99.697
275.587	0	214.952	426.96	285.644	0	95.165	426.96	285.644	0	110.302
302.41	0	235.871	427.294	313.847	0	103.775	427.294	313.847	0	120.198
328.169	0	255.959	427.629	340.027	0	111.768	427.629	340.027	0	129.384
352.863	0	275.217	427.964	364.184	0	119.144	427.964	364.184	0	137.861
376.493	0	293.645	428.299	386.319	0	125.902	428.299	386.319	0	145.629
399.058	0	311.242	428.633	406.43	0	132.044	428.633	406.43	0	152.688
420.558	0	328.009	428.968	424.519	0	137.568	428.968	424.519	0	159.038
440.994	0	343.947	429.303	440.586	0	142.476	429.303	440.586	0	164.679

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	170.667	9.546	0	6.502	34.7	1.786	0
0	0	0	0	185.2	19.039	0	10.312	37.655	3.562	0
0	0	0	0	213.408	37.866	0	17.857	43.39	7.084	0
0	0	0	0	240.47	56.482	0	25.303	48.892	10.566	0
0	0	0	0	266.386	74.887	0	32.65	54.161	14.01	0
0	0	0	0	291.155	93.081	0	39.898	59.197	17.413	0
0	0	0	0	314.778	111.063	0	47.047	64	20.777	0
0	0	0	0	425.956	188.899	0	78.147	86.605	35.338	0
0	0	0	0	426.29	223.17	0	91.007	86.673	41.75	0
0	0	0	0	426.625	255.419	0	103.109	86.741	47.782	0
0	0	0	0	426.96	285.644	0	114.452	86.809	53.437	0
0	0	0	0	427.295	313.847	0	125.037	86.877	58.713	0
0	0	0	0	427.629	340.027	0	134.862	86.945	63.61	0
0	0	0	0	427.964	364.184	0	143.929	87.013	68.13	0
0	0	0	0	428.299	386.319	0	152.237	87.081	72.27	0
0	0	0	0	428.634	406.43	0	159.787	87.15	76.033	0
0	0	0	0	428.968	424.519	0	166.578	87.218	79.417	0
0	0	0	0	429.303	440.586	0	172.61	87.286	82.422	0

APPENDIX D-4—EMFAC OUTPUT FILES

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MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
21.891	170.667	9.546	0	3.394	170.667	9.546	0	11.994	101	12.528
24.387	185.2	19.039	0	4.748	185.2	19.039	0	20.885	109.601	15.215
29.261	213.408	37.866	0	7.426	213.408	37.866	0	38.507	126.294	21.026
33.977	240.47	56.482	0	10.063	240.47	56.482	0	55.915	142.309	27.42
38.535	266.386	74.887	0	12.659	266.386	74.887	0	73.109	157.646	34.397
42.936	291.155	93.081	0	15.214	291.155	93.081	0	90.089	172.304	41.956
47.179	314.778	111.063	0	17.729	314.778	111.063	0	106.855	186.284	50.099
66.653	425.955	188.899	0	28.729	425.955	188.899	0	179.601	252.078	107.079
69.19	426.29	223.17	0	32.939	426.29	223.17	0	210.679	252.276	122.754
71.579	426.625	255.419	0	36.901	426.625	255.419	0	239.924	252.475	138.132
73.822	426.96	285.644	0	40.615	426.96	285.644	0	267.334	252.673	153.214
75.916	427.294	313.847	0	44.08	427.294	313.847	0	292.911	252.871	167.998
77.864	427.629	340.027	0	47.297	427.629	340.027	0	316.654	253.069	182.485
79.664	427.964	364.184	0	50.267	427.964	364.184	0	338.563	253.267	196.675
81.317	428.299	386.319	0	52.987	428.299	386.318	0	358.637	253.465	210.568
82.823	428.633	406.43	0	55.46	428.633	406.43	0	376.878	253.663	224.164
84.182	428.968	424.519	0	57.684	428.968	424.519	0	393.285	253.861	237.463
85.393	429.303	440.586	0	59.66	429.303	440.585	0	407.858	254.059	250.464

ALL DSL	ALL ALL
0	12.517
0	15.118
0	20.729
0	26.888
0	33.594
0	40.848
0	48.65
0	103.037
0	117.884
0	132.449
0	146.733
0	160.735
0	174.456
0	187.896
0	201.054
0	213.932
0	226.527
0	238.842

Pollutant Name: Sulfur Dioxide  
 Temperature: 35F  
 Relative Humidity: ALL

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	DSL			LDT2 CAT
5	0.002	0	0	0	0.002	0				0
10	0.002	0	0	0	0.002	0				0
20	0.002	0	0	0	0.002	0	0	0	0.002	0
30	0.002	0	0	0	0.002	0	0	0	0.002	0
40	0.002	0	0	0	0.002	0.001	0	0.001	0.002	0.001
50	0.003	0.001	0	0.001	0.003	0.001	0	0.001	0.003	0.001
60	0.003	0.001	0	0.001	0.003	0.001	0	0.001	0.003	0.001
120	0.003	0.001	0	0.001	0.003	0.001	0	0.001	0.003	0.001
180	0.004	0.001	0	0.001	0.004	0.001	0	0.001	0.004	0.001
240	0.004	0.001	0	0.001	0.004	0.002	0	0.002	0.004	0.002
300	0.004	0.001	0	0.001	0.004	0.002	0	0.002	0.004	0.002
360	0.004	0.002	0	0.002	0.004	0.002	0	0.002	0.004	0.002
420	0.004	0.002	0	0.002	0.004	0.002	0	0.002	0.004	0.002
480	0.005	0.002	0	0.002	0.005	0.002	0	0.002	0.005	0.002
540	0.005	0.002	0	0.002	0.005	0.002	0	0.002	0.005	0.002
600	0.005	0.002	0	0.002	0.005	0.003	0	0.003	0.005	0.003
660	0.005	0.002	0	0.002	0.005	0.003	0	0.003	0.005	0.003
720	0.005	0.002	0	0.002	0.005	0.003	0	0.003	0.005	0.003

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0	0.003	0	0	0	0.003	0	0	0	0.003
0	0	0.003	0	0	0	0.003	0	0	0	0.003
0	0	0.003	0	0	0	0.003	0.001	0	0.001	0.003
0	0	0.003	0.001	0	0.001	0.004	0.001	0	0.001	0.004
0	0.001	0.003	0.001	0	0.001	0.004	0.001	0	0.001	0.004
0	0.001	0.003	0.001	0	0.001	0.004	0.001	0	0.001	0.004
0	0.001	0.003	0.001	0	0.001	0.004	0.002	0	0.002	0.004
0	0.001	0.004	0.002	0	0.002	0.005	0.002	0	0.002	0.005
0	0.001	0.005	0.002	0	0.002	0.006	0.002	0	0.002	0.006
0	0.002	0.005	0.002	0	0.002	0.006	0.003	0	0.003	0.006
0	0.002	0.005	0.002	0	0.002	0.006	0.003	0	0.003	0.006
0	0.002	0.006	0.003	0	0.003	0.007	0.003	0	0.003	0.007
0	0.002	0.006	0.003	0	0.003	0.007	0.004	0	0.003	0.007
0	0.002	0.006	0.003	0	0.003	0.007	0.004	0	0.004	0.007
0	0.002	0.006	0.003	0	0.003	0.007	0.004	0	0.004	0.007
0	0.002	0.006	0.003	0	0.003	0.008	0.004	0	0.004	0.008
0	0.003	0.006	0.004	0	0.004	0.008	0.004	0	0.004	0.008
0	0.003	0.007	0.004	0	0.004	0.008	0.005	0	0.004	0.008

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
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APPENDIX D-4—EMFAC OUTPUT FILES

0	0	0	0.004	0	0	0	0.008	0.001	0	0.001
0	0	0	0.004	0.001	0	0	0.007	0.003	0	0.001
0.001	0	0.001	0.004	0.002	0	0.001	0.007	0.005	0	0.002
0.001	0	0.001	0.004	0.003	0	0.001	0.007	0.008	0	0.003
0.002	0	0.001	0.004	0.003	0	0.001	0.007	0.01	0	0.004
0.002	0	0.001	0.005	0.004	0	0.001	0.007	0.012	0	0.004
0.002	0	0.002	0.005	0.005	0	0.002	0.007	0.013	0	0.005
0.003	0	0.002	0.006	0.003	0	0.001	0.009	0.006	0	0.002
0.003	0	0.002	0.006	0.003	0	0.001	0.012	0.006	0	0.003
0.003	0	0.002	0.007	0.004	0	0.001	0.014	0.007	0	0.003
0.003	0	0.003	0.008	0.004	0	0.001	0.016	0.007	0	0.003
0.004	0	0.003	0.008	0.004	0	0.002	0.017	0.008	0	0.003
0.004	0	0.003	0.008	0.005	0	0.002	0.019	0.008	0	0.003
0.004	0	0.003	0.009	0.005	0	0.002	0.02	0.008	0	0.003
0.004	0	0.003	0.009	0.005	0	0.002	0.021	0.009	0	0.004
0.005	0	0.004	0.009	0.006	0	0.002	0.022	0.009	0	0.004
0.005	0	0.004	0.009	0.006	0	0.002	0.022	0.009	0	0.004
0.005	0	0.004	0.01	0.006	0	0.002	0.022	0.01	0	0.004

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0.062	0	0	0	0.004	0	0	0	0.001	0	0.009
0.062	0	0	0	0.004	0.001	0	0	0.001	0	0.009
0.062	0	0	0	0.004	0.002	0	0.001	0.001	0.001	0.009
0.062	0	0	0	0.005	0.003	0	0.001	0.001	0.001	0.009
0.062	0	0	0	0.005	0.003	0	0.001	0.001	0.001	0.009
0.062	0	0	0	0.005	0.004	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.005	0.005	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.006	0.003	0	0.001	0.001	0.001	0.009
0.062	0	0	0	0.007	0.003	0	0.001	0.001	0.001	0.009
0.062	0	0	0	0.008	0.004	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.008	0.004	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.009	0.004	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.009	0.005	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.01	0.005	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.01	0.005	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.01	0.005	0	0.002	0.001	0.001	0.009
0.062	0	0	0	0.01	0.006	0	0.002	0.002	0.001	0.009
0.062	0	0	0	0.011	0.006	0	0.002	0.002	0.001	0.009



Pollutant Name: PM10  
 Temperature: 35F  
 Relative Humidity: ALL

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	0.011	0.001	0	0.001	0.011	0.001	0	0.001	0.012	0.001
10	0.01	0.001	0	0.001	0.01	0.001	0	0.001	0.01	0.003
20	0.008	0.002	0	0.003	0.007	0.003	0	0.003	0.008	0.006
30	0.006	0.004	0	0.004	0.006	0.004	0	0.004	0.006	0.008
40	0.004	0.005	0	0.005	0.004	0.005	0	0.005	0.004	0.01
50	0.003	0.006	0	0.006	0.003	0.006	0	0.006	0.003	0.012
60	0.003	0.007	0	0.006	0.003	0.007	0	0.007	0.003	0.014
120	0.007	0.01	0	0.01	0.007	0.011	0	0.01	0.007	0.022
180	0.011	0.011	0	0.011	0.011	0.011	0	0.011	0.012	0.024
240	0.015	0.011	0	0.011	0.014	0.012	0	0.012	0.015	0.025
300	0.018	0.012	0	0.012	0.018	0.013	0	0.012	0.019	0.027
360	0.021	0.013	0	0.013	0.02	0.013	0	0.013	0.022	0.028
420	0.023	0.013	0	0.013	0.023	0.014	0	0.014	0.024	0.029
480	0.025	0.014	0	0.014	0.024	0.014	0	0.014	0.026	0.03
540	0.027	0.014	0	0.014	0.026	0.015	0	0.014	0.028	0.031
600	0.028	0.014	0	0.014	0.027	0.015	0	0.015	0.029	0.032
660	0.029	0.014	0	0.014	0.028	0.015	0	0.015	0.029	0.032
720	0.029	0.015	0	0.015	0.028	0.015	0	0.015	0.03	0.032

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0.001	0.012	0.001	0	0.001	0.011	0.001	0	0.001	0.011
0	0.003	0.01	0.003	0	0.003	0.01	0.002	0	0.002	0.01
0	0.005	0.008	0.006	0	0.006	0.008	0.004	0	0.003	0.008
0	0.008	0.006	0.008	0	0.008	0.006	0.005	0	0.005	0.006
0	0.01	0.004	0.01	0	0.01	0.004	0.007	0	0.006	0.004
0	0.012	0.003	0.013	0	0.012	0.003	0.008	0	0.008	0.003
0	0.014	0.003	0.015	0	0.014	0.003	0.009	0	0.009	0.003
0	0.022	0.007	0.022	0	0.021	0.007	0.014	0	0.013	0.007
0	0.023	0.012	0.023	0	0.023	0.011	0.015	0	0.014	0.011
0	0.025	0.015	0.025	0	0.024	0.015	0.016	0	0.014	0.015
0	0.026	0.019	0.026	0	0.025	0.018	0.016	0	0.015	0.018
0	0.028	0.022	0.027	0	0.027	0.021	0.017	0	0.016	0.021
0	0.029	0.024	0.028	0	0.028	0.023	0.018	0	0.016	0.023
0	0.03	0.026	0.029	0	0.029	0.025	0.018	0	0.017	0.025
0	0.031	0.028	0.03	0	0.029	0.027	0.019	0	0.017	0.027
0	0.031	0.029	0.031	0	0.03	0.028	0.019	0	0.018	0.028
0	0.032	0.029	0.031	0	0.031	0.029	0.02	0	0.018	0.029
0	0.032	0.03	0.032	0	0.031	0.029	0.02	0	0.018	0.029



LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0.001	0	0.001	0.011	0.001	0	0.001	0.011	0.002	0	0.001
0.002	0	0.002	0.01	0.003	0	0.001	0.01	0.003	0	0.001
0.004	0	0.003	0.008	0.005	0	0.002	0.008	0.007	0	0.003
0.006	0	0.005	0.006	0.007	0	0.002	0.006	0.01	0	0.004
0.008	0	0.006	0.004	0.009	0	0.003	0.004	0.012	0	0.004
0.01	0	0.008	0.003	0.011	0	0.003	0.003	0.015	0	0.005
0.011	0	0.009	0.003	0.012	0	0.004	0.003	0.017	0	0.006
0.016	0	0.012	0.007	0.017	0	0.005	0.007	0.023	0	0.008
0.017	0	0.013	0.011	0.017	0	0.005	0.011	0.023	0	0.008
0.017	0	0.014	0.015	0.018	0	0.006	0.015	0.024	0	0.009
0.018	0	0.014	0.018	0.018	0	0.006	0.018	0.025	0	0.009
0.019	0	0.015	0.021	0.019	0	0.006	0.021	0.026	0	0.009
0.019	0	0.015	0.023	0.019	0	0.006	0.023	0.026	0	0.01
0.02	0	0.016	0.025	0.02	0	0.007	0.025	0.027	0	0.01
0.021	0	0.016	0.027	0.02	0	0.007	0.027	0.028	0	0.01
0.021	0	0.017	0.028	0.021	0	0.007	0.028	0.029	0	0.011
0.022	0	0.017	0.029	0.022	0	0.007	0.029	0.03	0	0.011
0.022	0	0.017	0.029	0.022	0	0.007	0.029	0.03	0	0.011

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	0.011	0.001	0	0.001	0.02	0	0
0	0	0	0	0.01	0.003	0	0.001	0.017	0	0
0	0	0	0	0.008	0.006	0	0.002	0.013	0.001	0
0	0	0	0	0.006	0.008	0	0.003	0.01	0.001	0
0	0	0	0	0.004	0.01	0	0.004	0.008	0.001	0
0	0	0	0	0.003	0.012	0	0.005	0.006	0.002	0
0	0	0	0	0.003	0.014	0	0.005	0.005	0.002	0
0	0	0	0	0.007	0.019	0	0.007	0.013	0.002	0
0	0	0	0	0.011	0.02	0	0.008	0.02	0.002	0
0	0	0	0	0.015	0.02	0	0.008	0.026	0.002	0
0	0	0	0	0.018	0.021	0	0.008	0.032	0.003	0
0	0	0	0	0.021	0.021	0	0.008	0.037	0.003	0
0	0	0	0	0.023	0.022	0	0.009	0.041	0.003	0
0	0	0	0	0.025	0.023	0	0.009	0.045	0.003	0
0	0	0	0	0.027	0.023	0	0.009	0.047	0.003	0
0	0	0	0	0.028	0.024	0	0.01	0.049	0.003	0
0	0	0	0	0.029	0.025	0	0.01	0.05	0.003	0
0	0	0	0	0.029	0.026	0	0.01	0.051	0.003	0

MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0.012	0.011	0.001	0	0	0.011	0	0	0.001	0.014	0.001
0.011	0.01	0.002	0	0	0.01	0.001	0	0.001	0.012	0.002
0.009	0.008	0.004	0	0.001	0.008	0.001	0	0.001	0.009	0.003
0.007	0.006	0.006	0	0.001	0.006	0.002	0	0.002	0.007	0.005
0.005	0.004	0.008	0	0.001	0.004	0.002	0	0.002	0.005	0.006
0.004	0.003	0.01	0	0.001	0.003	0.003	0	0.003	0.004	0.008
0.004	0.003	0.011	0	0.001	0.003	0.003	0	0.003	0.003	0.009
0.009	0.007	0.015	0	0.002	0.007	0.004	0	0.004	0.009	0.013
0.013	0.011	0.016	0	0.002	0.011	0.005	0	0.004	0.014	0.014
0.017	0.015	0.016	0	0.002	0.015	0.005	0	0.005	0.018	0.015
0.021	0.018	0.017	0	0.002	0.018	0.005	0	0.005	0.022	0.016
0.024	0.021	0.017	0	0.002	0.021	0.005	0	0.005	0.026	0.017
0.026	0.023	0.018	0	0.002	0.023	0.005	0	0.005	0.029	0.017
0.028	0.025	0.018	0	0.003	0.025	0.005	0	0.005	0.031	0.018
0.03	0.027	0.019	0	0.003	0.027	0.005	0	0.006	0.033	0.018
0.031	0.028	0.019	0	0.003	0.028	0.006	0	0.006	0.035	0.019
0.032	0.029	0.02	0	0.003	0.029	0.006	0	0.006	0.035	0.019
0.032	0.029	0.02	0	0.003	0.029	0.006	0	0.006	0.036	0.019

ALL  
DSL    ALL  
ALL

0	0.001
0	0.002
0	0.003
0	0.005
0	0.006
0	0.007
0	0.008
0	0.013
0	0.013
0	0.014
0	0.015
0	0.016
0	0.017
0	0.017
0	0.018
0	0.018
0	0.018
0	0.019

Title : Bay Area AQMD Avg 2013 Winter Default Title  
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 Scen Year: 2013 -- Model Years: 1968 to 2013  
 Season : Winter  
 Area : Bay Area AQMD Dis

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Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases  
 Temperature: 35F  
 Relative Humidity: ALL

Time min	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
5	0.796	0.013	0	0.015	0.826	0.017	0	0.022	0.835	0.013
10	1.468	0.024	0	0.029	1.522	0.033	0	0.042	1.537	0.026
20	2.497	0.045	0	0.053	2.583	0.061	0	0.076	2.608	0.048
30	3.195	0.063	0	0.073	3.297	0.086	0	0.105	3.33	0.067
40	3.451	0.072	0	0.082	3.557	0.097	0	0.118	3.592	0.076

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0.016	0.469	0.015	0	0.016	0.358	0.007	0	0.009	0.358
0	0.03	0.865	0.028	0	0.03	0.659	0.014	0	0.018	0.659
0	0.056	1.467	0.052	0	0.056	1.119	0.027	0	0.033	1.119
0	0.077	1.873	0.073	0	0.078	1.428	0.04	0	0.047	1.429
0	0.087	2.02	0.083	0	0.088	1.541	0.047	0	0.054	1.541

LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0.016		0	0.013	0.206	0.015	0	0.008	0.206	0.035	0
0.032		0	0.025	0.38	0.029	0	0.016	0.38	0.07	0
0.063		0	0.049	0.644	0.056	0	0.029	0.644	0.138	0
0.093		0	0.072	0.822	0.082	0	0.041	0.822	0.204	0
0.107		0	0.084	0.887	0.095	0	0.046	0.887	0.237	0

LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	0.859	0.047	0	0.032	0.059	0.056	0
0	0	0	0	1.583	0.089	0	0.06	0.11	0.107	0
0	0	0	0	2.686	0.159	0	0.106	0.191	0.197	0
0	0	0	0	3.429	0.215	0	0.139	0.25	0.276	0
0	0	0	0	3.699	0.239	0	0.153	0.274	0.311	0

APPENDIX D-4—EMFAC OUTPUT FILES

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MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0.058	0.206	0.028	0	0.006	0.206	0.029	0	0.03	0.45	0.013
0.109	0.38	0.054	0	0.012	0.379	0.053	0	0.056	0.83	0.026
0.193	0.644	0.1	0	0.021	0.643	0.094	0	0.098	1.411	0.048
0.26	0.822	0.142	0	0.028	0.821	0.125	0	0.129	1.805	0.068
0.288	0.887	0.162	0	0.031	0.885	0.138	0	0.142	1.949	0.077

ALL ALL  
DSL ALL

0	0.016
0	0.03
0	0.055
0	0.076
0	0.086

Title : Bay Area AQMD Avg 2013 Winter Default Title  
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 Area : Bay Area AQMD Dis

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Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases  
 Temperature: ALL  
 Relative Humidity: ALL

Temp	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
degF	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
35	0	0	0	0	0	0	0	0	0	0
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0	0	0	0	0	0	0	0	0	0	0
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	0	0	0	0	0	0	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
0	0	0	0	0	0	0	0	0	0	0
				ALL	ALL					
				DSL	ALL					
				0	0					

Title : Bay Area AQMD Avg 2013 Winter Default Title  
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 Season : Winter  
 Area : Bay Area AQMD Dis

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Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases

Temperature: ALL

Relative Humidity: ALL

Temp	LDA	LDA	LDA	LDA	LDT1	LDT1	LDT1	LDT1	LDT2	LDT2
degF	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
35	0	0	0	0	0	0	0	0	0	0
LDT2	LDT2	MDV	MDV	MDV	MDV	LHD1	LHD1	LHD1	LHD1	LHD2
DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT
0	0	0	0	0	0	0	0	0	0	0
LHD2	LHD2	LHD2	MHD	MHD	MHD	MHD	HHD	HHD	HHD	HHD
CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL
0	0	0	0	0	0	0	0	0	0	0
LHV	LHV	LHV	LHV	UBUS	UBUS	UBUS	UBUS	MCY	MCY	MCY
NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL
0	0	0	0	0	0	0	0	0	0	0
MCY	SBUS	SBUS	SBUS	SBUS	MH	MH	MH	MH	ALL	ALL
ALL	NCAT	CAT	DSL	ALL	NCAT	CAT	DSL	ALL	NCAT	CAT
0	0	0	0	0	0	0	0	0	0	0
				ALL	ALL					
				DSL	ALL					
				0	0					

Title : Bay Area AQMD Avg 2013 Winter Default Title  
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 Season : Winter  
 Area : Bay Area AQMD Dis

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Table 6a: Partial Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases  
 Temperature: ALL  
 Relative Humidity: ALL

Temp degF	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
35	0	0	0	0	0	0	0	0	0	0
LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0	0	0	0	0	0	0	0	0	0
LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0	0	0	0	0	0	0	0	0	0	0
LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	0	0	0	0	0	0	0
MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0	0	0	0	0	0	0	0	0	0	0
				ALL DSL	ALL ALL					
				0	0					

Title : Bay Area AQMD Avg 2013 Winter Default Title  
 Version : Emfac2002 V2.2 Apr 23 2003  
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 Scen Year: 2013 -- Model Years: 1968 to 2013  
 Season : Winter  
 Area : Bay Area AQMD Dis

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Table 6b: Multi-Day Resting Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases  
 Temperature: ALL  
 Relative Humidity: ALL

Temp degF	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
35	0	0	0	0	0	0	0	0	0	0
LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0	0	0	0	0	0	0	0	0	0	0
LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0	0	0	0	0	0	0	0	0	0	0
LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	0	0	0	0	0	0	0
MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0	0	0	0	0	0	0	0	0	0	0
				ALL DSL	ALL ALL					
				0	0					



Title : Bay Area AQMD Avg 2013 Winter Default Title  
 Version : Emfac2002 V2.2 Apr 23 2003  
 Run Date : 02/22/05 07:59:32  
 Scen Year: 2013 -- Model Years: 1968 to 2013  
 Season : Winter  
 Area : Bay Area AQMD Dis

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Table 7: Estimated Travel Fractions

Pollutant Name:  
 Temperature: ALL  
 Relative Humidity: ALL

	LDA NCAT	LDA CAT	LDA DSL	LDA ALL	LDT1 NCAT	LDT1 CAT	LDT1 DSL	LDT1 ALL	LDT2 NCAT	LDT2 CAT
%VMT	0.001	0.561	0.001	0.562	0.001	0.12	0.001	0.121	0	0.154
%TRIP	0.002	0.54	0.001	0.543	0.001	0.116	0.001	0.118	0	0.149
%VEH	0.003	0.569	0.001	0.573	0.001	0.123	0.001	0.126	0.001	0.157
LDT2 DSL	LDT2 ALL	MDV NCAT	MDV CAT	MDV DSL	MDV ALL	LHD1 NCAT	LHD1 CAT	LHD1 DSL	LHD1 ALL	LHD2 NCAT
0.001	0.155	0	0.084	0.001	0.085	0	0.01	0.002	0.012	0
0.001	0.151	0	0.081	0.002	0.083	0	0.033	0.003	0.036	0
0.001	0.159	0	0.086	0.002	0.088	0	0.007	0.001	0.008	0
LHD2 CAT	LHD2 DSL	LHD2 ALL	MHD NCAT	MHD CAT	MHD DSL	MHD ALL	HHD NCAT	HHD CAT	HHD DSL	HHD ALL
0.002	0.002	0.004	0	0.003	0.012	0.015	0	0.001	0.028	0.029
0.009	0.002	0.011	0.001	0.014	0.031	0.046	0	0.003	0.004	0.007
0.002	0.001	0.003	0	0.002	0.007	0.009	0	0	0.006	0.006
LHV NCAT	LHV CAT	LHV DSL	LHV ALL	UBUS NCAT	UBUS CAT	UBUS DSL	UBUS ALL	MCY NCAT	MCY CAT	MCY DSL
0	0	0	0	0	0.003	0.004	0.007	0.001	0.001	0
0	0	0	0	0	0	0.001	0.001	0.002	0.001	0
0	0	0	0	0	0.001	0.001	0.002	0.007	0.004	0
MCY ALL	SBUS NCAT	SBUS CAT	SBUS DSL	SBUS ALL	MH NCAT	MH CAT	MH DSL	MH ALL	ALL NCAT	ALL CAT
0.002	0	0	0.001	0.001	0	0.005	0	0.006	0.004	0.943
0.003	0	0	0.001	0.001	0	0	0	0	0.006	0.947
0.011	0	0	0.001	0.001	0	0.013	0.001	0.014	0.012	0.964
				ALL DSL		ALL ALL				
				0.054		1				
				0.046		1				
				0.024		1				

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**APPENDIX D-5**

**CALINE Output Files**

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CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Dougherty Rd/Dublin Blvd, 2013 AM Peak  
 RUN: Hour 1  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S	Z0= 100. CM	ALT= 0. (M)
BRG= 90.0 DEGREES	VD= .0 CM/S	
CLAS= 7 (G)	VS= .0 CM/S	
MIXH= 1000. M	AMB= 3.5 PPM	
SIGTH= 20. DEGREES	TEMP= 5.0 DEGREE (C)	

II. LINK VARIABLES

LINK	*	LINK COORDINATES (M)				*	EF	H	W	
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	(G/MI)	(M)	(M)	
-----*										
A. EB Approach	*	-200	-6	0	-6	* AG	1986	6.5	.0	24.0
B. WB Approach	*	-200	9	0	9	* AG	2359	6.5	.0	24.0
C. SB Approach	*	-11	-200	-11	0	* AG	2099	6.5	.0	24.0
D. NB Approach	*	12	-200	12	0	* AG	2550	6.5	.0	24.0
E. EB Depart	*	0	-6	200	-6	* AG	2427	6.5	.0	24.0
F. WB Depart	*	0	9	200	9	* AG	2141	6.5	.0	24.0
G. SB Depart	*	12	0	12	200	* AG	3107	6.5	.0	24.0
H. NB Depart	*	-11	0	-11	200	* AG	1319	6.5	.0	24.0

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
-----*				
1. Recpt 1	*	15	-12	1.8
2. Recpt 2	*	15	18	1.8
3. Recpt 3	*	-18	15	1.8
4. Recpt 4	*	-18	-12	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Dougherty Rd/Dublin Blvd, 2013 AM Peak  
 RUN: Hour 1  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	* PRED *		CONC/LINK								
	* CONC *	* (PPM) *	A	B	C	D	E	F	G	H	
1. Recpt 1	* 4.9 *	* .0	.0	.0	.0	.2	.9	.2	.0	.0	
2. Recpt 2	* 4.7 *	* .0	.0	.0	.0	.0	.2	.7	.3	.0	
3. Recpt 3	* 5.3 *	* .0	.3	.0	.0	.3	.5	.4	.2		
4. Recpt 4	* 5.3 *	* .3	.0	.4	.3	.6	.2	.0	.0		

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 1

JOB: Dougherty Rd/Dublin Blvd, 2013 PM Peak  
 RUN: Hour 1  
 POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S                      Z0= 100. CM                      ALT= 0. (M)  
 BRG= 90.0 DEGREES              VD= .0 CM/S  
 CLAS= 7 (G)                      VS= .0 CM/S  
 MIXH= 1000. M                    AMB= 3.5 PPM  
 SIGTH= 20. DEGREES              TEMP= 5.0 DEGREE (C)

II. LINK VARIABLES

LINK	*	LINK COORDINATES (M)				*			EF	H	W
DESCRIPTION	*	X1	Y1	X2	Y2	* TYPE	VPH	(G/MI)	(M)	(M)	
A. EB Approach	*	-200	-6	0	-6	* AG	2398	6.5	.0	24.0	
B. WB Approach	*	-200	9	0	9	* AG	2770	6.5	.0	24.0	
C. SB Approach	*	-11	-200	-11	0	* AG	1670	6.5	.0	24.0	
D. NB Approach	*	12	-200	12	0	* AG	3065	6.5	.0	24.0	
E. EB Depart	*	0	-6	200	-6	* AG	2473	6.5	.0	24.0	
F. WB Depart	*	0	9	200	9	* AG	2830	6.5	.0	24.0	
G. SB Depart	*	12	0	12	200	* AG	2912	6.5	.0	24.0	
H. NB Depart	*	-11	0	-11	200	* AG	1688	6.5	.0	24.0	

III. RECEPTOR LOCATIONS

RECEPTOR	*	COORDINATES (M)		
	*	X	Y	Z
1. Recpt 1	*	15	-12	1.8
2. Recpt 2	*	15	18	1.8
3. Recpt 3	*	-18	15	1.8
4. Recpt 4	*	-18	-12	1.8

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL  
 JUNE 1989 VERSION  
 PAGE 2

JOB: Dougherty Rd/Dublin Blvd, 2013 PM Peak  
 RUN: Hour 1  
 POLLUTANT: Carbon Monoxide

IV. MODEL RESULTS (PRED. CONC. INCLUDES AMB.)

RECEPTOR	* PRED *		CONC/LINK							
	* CONC *	* (PPM) *	A	B	C	D	E	F	G	H
1. Recpt 1	*	5.0 *	.0	.0	.0	.2	1.0	.3	.0	.0
2. Recpt 2	*	4.9 *	.0	.0	.0	.0	.2	1.0	.2	.0
3. Recpt 3	*	5.5 *	.0	.4	.0	.0	.3	.7	.4	.3
4. Recpt 4	*	5.4 *	.3	.0	.3	.4	.6	.3	.0	.0



**APPENDIX D-6**

**Record of Non-Applicability (RONA) for General Conformity**

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**RECORD OF NON-APPLICABILITY (RONA) FOR GENERAL CONFORMITY**

NAME OF PROJECT: Master Planned Redevelopment at Camp Parks

PROJECT ID NUMBER: RPX-2010

PHONE/EMAIL: 831-386-2727/Todd.A.Dirmeyer@us.army.mil

START DATE: 08 / 2010

General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the project described above according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this project/action because:

- The project/action qualifies as an exempt action under. The applicable exemption citation is 40 CFR 93.153: \_\_\_\_\_ (specific citation)

**OR**

- Total direct and indirect emissions from this project/action have been estimated at (only include information for applicable pollutants) :

8 tons/yr of NOx

11 tons/yr of VOC

9 tons/yr of PM10

53 tons/yr of CO (specify pollutant)

\_\_\_\_\_ tons/yr of \_\_\_\_\_ (specify pollutant)

These levels are below the conformity threshold values established at 40 CFR 93.153 (b), AND this project/action is not considered regionally significant under 40 CFR 93.153(i).

Supporting documentation and emission estimates are:

- Attached
- Appear in NEPA Documentation Final Environmental Impact Statement (cite reference)
- Other \_\_\_\_\_ (cite reference)

Environmental Protection Specialist  5/29/09  
ENVIRONMENTAL COORDINATOR (title and signature) DATE

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## **APPENDIX E: SPECIAL STATUS SPECIES**

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**DEPARTMENT OF THE ARMY**  
US ARMY GARRISON WEST COAST (Provisional)  
790 US ARMY  
DUBLIN CALIFORNIA 94568-5201

REPLY TO  
ATTENTION OF:

February 2, 2004

Environmental Office

Mr. Wayne S. White  
U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825-1846

Dear Mr. White:

The U.S. Army, West Coast Garrison would like to request a list of sensitive species from your office. These species would be considered as part of the National Environmental Policy Act (NEPA) analysis and Endangered Species Act Section 7 consultation for the Camp Parks Redevelopment Project located on Parks Reserve Forces Training Area (RFTA). The proposed project would occur primarily in Alameda County although the Parks RFTA also extends into Contra Costa County. Most of the installation and all of the Cantonment Area are on the Dublin 7.5 Minute Quad, with a portion of the training area on the Livermore Quad.

The proposed action would involve the redevelopment of the portion of the cantonment area with new military facilities that would be received in exchange for 182 acres in the southern portion of the cantonment area. The 182 acres (also called Dublin Crossing) would be transferred into private ownership and developed with residential or mixed use.

Parks RFTA is beginning the development of an Environmental Impact Statement (EIS), and requires the list of sensitive species to evaluate potential impacts of the proposed redevelopment on these species and development of any needed mitigation measures. This species list would also be used to meet the Army's Section 7 requirements.

We would appreciate receipt of the list of sensitive species within 15 days, so that our initiation of consultation can be timely and in line with our EIS schedule. If you have any questions please contact Ms. Megan Chen at [megan.chen.eeinc@usarc-emh2.army.mil](mailto:megan.chen.eeinc@usarc-emh2.army.mil) or (925) 875-4274.

Sincerely,

A handwritten signature in black ink, appearing to read "James H. Doty, Jr.", is positioned above the typed name.

James H. Doty, Jr.  
Lieutenant Colonel, U.S. Army  
Commanding



**United States Department of the Interior**  
**FISH AND WILDLIFE SERVICE**  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825



1-1-04-SP-893

February 11, 2004

Mr. James H. Doty, Jr.  
Lieutenant Colonel, U.S. Army  
U.S. Army Garrison West Coast  
790 U.S. Army  
Dublin, California 94568-5201

**Subject:** Species List for Camp Parks Redevelopment, Located on Parks Reserve  
Forces Training Area, Contra Costa County, California

Dear Mr. Doty:

We are sending the enclosed list in response to your February 2, 2004, request for information about endangered and threatened species (Enclosure A). This list fulfills the requirement of the Fish and Wildlife Service (Service) to provide species lists under section 7(c) of the Endangered Species Act of 1973, as amended (Act).

The animal species on the Enclosure A quad list are those species we believe may occur within, *or be affected by projects within*, the following USGS quads, where your project is planned: Livermore and Dublin Quads.

Any plants on the quad list are ones *that have actually been observed* in the project quad(s). Plants may occur in a quad without having been observed there. Therefore we have included a species list for the whole county in which your project occurs. We recommend that you survey for any relevant plants shown on this list.

Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them. Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.





Executive Order 13186, January 17, 2001, directs Federal agencies to take specific steps to conserve migratory birds. *Species of Concern* (see below) are specifically included in this Executive Order. (The Order can be found at [www.nara.gov/fedreg/eo.html](http://www.nara.gov/fedreg/eo.html)) Birds are shown on our species lists regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern.

*However you must contact the California Department of Fish and Game for official information about these species.* Call (916) 322-2493 or write Marketing Manager, California Department of Fish and Game, Natural Diversity Data Base, 1416 Ninth Street, Sacramento, California 95814.

Some of the species listed in Enclosure A may not be affected by the proposed action. A trained biologist or botanist, familiar with the habitat requirements of the listed species, should determine whether these species or habitats suitable for them may be affected. For plants, we recommend using the enclosed Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Species (Enclosure C).

Some pertinent information concerning the distribution, life history, habitat requirements, and published references for the listed species is available upon request. This information may be helpful in preparing the biological assessment for this project, if one is required. Please see Enclosure B for a discussion of the responsibilities Federal agencies have under section 7(c) of the Act and the conditions under which a biological assessment must be prepared by the lead Federal agency or its designated non-Federal representative.

Formal consultation, under 50 CFR § 402.14, should be initiated if you determine that a listed species may be affected by the proposed project. If you determine that a proposed species may be adversely affected, you should consider requesting a conference with our office under 50 CFR § 402.10. Informal consultation may be utilized prior to a written request for formal consultation to exchange information and resolve conflicts with respect to a listed species. If a biological assessment is required, and it is not initiated within 90 days of your receipt of this letter, you should informally verify the accuracy of this list with our office.

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as *critical habitat*. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal. Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, this will be noted on the species list. Maps and boundary descriptions of the critical habitat may be found in the *Federal Register*. The information is also reprinted in the *Code of Federal Regulations* (50 CFR 17.95).

*Candidate species* are being reviewed for possible listing. Contact our office if your biological assessment reveals any candidate species that might be adversely affected. Although they currently have no protection under the Endangered Species Act, one or more of them could be proposed and listed before your project is completed. By considering them from the beginning, you could avoid problems later.

Your list may contain a section called *Species of Concern*. This term includes former *category 2 candidate species* and other plants and animals of concern to the Service and other Federal, State and private conservation agencies and organizations. Some of these species may become candidate species in the future.

If the proposed project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by the U.S. Army Corps of Engineers (Corps), a Corps permit will be required, under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act. Impacts to wetland habitats require site specific mitigation and monitoring. You may request a copy of the Service's General Mitigation and Monitoring Guidelines or submit a detailed description of the proposed impacts for specific comments and recommendations. If you have any questions regarding wetlands, contact Mark Littlefield at (916) 414-6580.

Please contact Dan Buford at (916) 414-6625, if you have any questions about the attached list or your responsibilities under the Endangered Species Act. For the fastest response to species list requests, address them to the attention of Species Lists at this address. You may fax requests to 414-6712 or 414-6713. You may also email them to [harry\\_mossman@fws.gov](mailto:harry_mossman@fws.gov).

Sincerely,



For

Catrina Martin  
Deputy Assistant Field Supervisor

Enclosures

ENCLOSURE A

Endangered and Threatened Species that May Occur in or be Affected by  
Projects in the Area of the Following California Counties  
Reference File No. 1-1-04-SP-893  
February 11, 2004

CONTRA COSTA COUNTY

*Listed Species*

Mammals

San Joaquin kit fox, *Vulpes macrotis mutica* (E)  
riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) \*  
riparian brush rabbit, *Sylvilagus bachmani riparius* (E) \*  
salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

Birds

California brown pelican, *Pelecanus occidentalis californicus* (E)  
California clapper rail, *Rallus longirostris obsoletus* (E)  
California least tern, *Sterna antillarum (=albifrons) browni* (E)  
bald eagle, *Haliaeetus leucocephalus* (T)  
western snowy plover, *Charadrius alexandrinus nivosus* (T)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)  
Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)  
giant garter snake, *Thamnophis gigas* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

Central California Coastal steelhead, *Oncorhynchus mykiss* (T) NMFS  
Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T) NMFS  
Critical habitat, delta smelt, *Hypomesus transpacificus* (T)  
Critical habitat, winter-run chinook salmon, *Oncorhynchus tshawytscha* (E) NMFS  
coho salmon - central CA coast, *Oncorhynchus kisutch* (T) NMFS  
delta smelt, *Hypomesus transpacificus* (T)  
tidewater goby, *Eucyclogobius newberryi* (E)  
winter-run chinook salmon, *Oncorhynchus tshawytscha* (E) NMFS

Invertebrates

Conservancy fairy shrimp, *Branchinecta conservatio* (E)  
Critical habitat, vernal pool invertebrates, (X)  
Lange's metalmark butterfly, *Apodemia mormo langei* (E)

callippe silverspot butterfly, *Speyeria callippe callippe* (E)  
 longhorn fairy shrimp, *Branchinecta longiantenna* (E)  
 valley elderberry longhorn beetle, *Desmocerus californicus dimorphus* (T)  
 vernal pool fairy shrimp, *Branchinecta lynchi* (T)  
 vernal pool tadpole shrimp, *Lepidurus packardi* (E)

#### Plants

Antioch Dunes evening-primrose, *Oenothera deltoides ssp. howellii* (E)  
 Contra Costa goldfields, *Lasthenia conjugens* (E)  
 Contra Costa wallflower, *Erysimum capitatum ssp. angustatum* (E)  
 Critical Habitat, Contra Costa wallflower, *Erysimum capitatum ssp. angustatum* (E)  
 Critical habitat, Antioch Dunes evening-primrose, *Oenothera deltoides ssp. howellii* (E)  
 Critical habitat, Santa Cruz tarplant, *Holocarpha macradenia* (T)  
 Critical habitat, vernal pool plants, (X)  
 Santa Cruz tarplant, *Holocarpha macradenia* (T)  
 large-flowered fiddleneck, *Amsinckia grandiflora* (E)  
 pallid manzanita (=Alameda or Oakland Hills manzanita), *Arctostaphylos pallida* (T)  
 soft bird's-beak, *Cordylanthus mollis ssp. mollis* (E)

#### **Proposed Species**

##### Amphibians

California tiger salamander, *Ambystoma californiense* (PT)

#### **Candidate Species**

##### Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C) NMFS  
 Critical habitat, Central Valley fall/late fall-run chinook, *Oncorhynchus tshawytscha* (C) NMFS  
 green sturgeon, *Acipenser medirostris* (C)

#### **Species of Concern**

##### Mammals

Berkeley kangaroo rat, *Dipodomys heermanni berkeleyensis* (SC) \*  
 Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)  
 San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)  
 San Joaquin pocket mouse, *Perognathus inornatus* (SC)  
 Suisun ornate shrew, *Sorex ornatus sinuosus* (SC)  
 Yuma myotis bat, *Myotis yumanensis* (SC)  
 fringed myotis bat, *Myotis thysanodes* (SC)  
 greater western mastiff-bat, *Eumops perotis californicus* (SC)  
 long-eared myotis bat, *Myotis evotis* (SC)

long-legged myotis bat, *Myotis volans* (SC)  
salt marsh vagrant shrew, *Sorex vagrans halicoetes* (SC)  
small-footed myotis bat, *Myotis ciliolabrum* (SC)

#### Birds

Alameda (South Bay) song sparrow, *Melospiza melodia pusillula* (SC)  
Aleutian Canada goose, *Branta canadensis leucopareia* (D)  
Allen's hummingbird, *Selasphorus sasin* (SC)  
American bittern, *Botaurus lentiginosus* (SC)  
American peregrine falcon, *Falco peregrinus anatum* (D)  
Bell's sage sparrow, *Amphispiza belli belli* (SC)  
California thrasher, *Toxostoma redivivum* (SC)  
Costa's hummingbird, *Calypte costae* (SC)  
Lawrence's goldfinch, *Carduelis lawrencei* (SC)  
Lewis' woodpecker, *Melanerpes lewis* (SC)  
San Pablo song sparrow, *Melospiza melodia samuelis* (SC)  
Suisun song sparrow, *Melospiza melodia maxillaris* (SC)  
Swainson's hawk, *Buteo Swainsoni* (CA)  
Vaux's swift, *Chaetura vauxi* (SC)  
bank swallow, *Riparia riparia* (CA)  
black rail, *Laterallus jamaicensis coturniculus* (CA)  
ferruginous hawk, *Buteo regalis* (SC)  
little willow flycatcher, *Empidonax traillii brewsteri* (CA)  
loggerhead shrike, *Lanius ludovicianus* (SC)  
long-billed curlew, *Numenius americanus* (SC)  
marbled godwit, *Limosa fedoa* (SC)  
mountain plover, *Charadrius montanus* (SC)  
oak titmouse, *Baeolophus inornatus* (SLC)  
olive-sided flycatcher, *Contopus cooperi* (SC)  
red knot, *Calidris canutus* (SC)  
red-breasted sapsucker, *Sphyrapicus ruber* (SC)  
rufous hummingbird, *Selasphorus rufus* (SC)  
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)  
tricolored blackbird, *Agelaius tricolor* (SC)  
western burrowing owl, *Athene cunicularia hypugaea* (SC)  
whimbrel, *Numenius phaeopus* (SC)  
white-faced ibis, *Plegadis chihi* (SC)  
white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

## Reptiles

- California horned lizard, *Phrynosoma coronatum frontale* (SC)
- San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)
- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
- silvery legless lizard, *Anniella pulchra pulchra* (SC)
- southwestern pond turtle, *Clemmys marmorata pallida* (SC)

## Amphibians

- foothill yellow-legged frog, *Rana boylei* (SC)
- western spadefoot toad, *Spea hammondi* (SC)

## Fish

- Pacific lamprey, *Lampetra tridentata* (SC)
- Sacramento splittail, *Pogonichthys macrolepidotus* (SC)
- longfin smelt, *Spirinchus thaleichthys* (SC)
- river lamprey, *Lampetra ayresi* (SC)

## Invertebrates

- Antioch Dunes anthicid beetle, *Anthicus antiochensis* (SC)
- Antioch andrenid bee, *Perdita scitula antiochensis* (SC)
- Antioch cophuran robberfly, *Cophura hurdi* (SC)
- Antioch efferian robberfly, *Efferia antiochi* (SC)
- Antioch mutillid wasp, *Myrmosula pacifica* (SC)
- Antioch sphecid wasp, *Philanthus nasilis* (SC)
- Bridges' Coast Range shoulderband snail, *Helminthoglypta nickliniana bridgesi* (SC)
- California linderiella fairy shrimp, *Linderiella occidentalis* (SC)
- Ciervo aegialian scarab beetle, *Aegialia concinna* (SC)
- Hurd's metapogon robberfly, *Metapogon hurdi* (SC)
- Marin elfin butterfly, *Incisalia mossii marinensis* (SC)
- Middlekauf's shieldback katydid, *Idiostatus middlekaufi* (SC)
- Midvalley fairy shrimp, *Branchinecta mesovallensis* (SC)
- Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)
- Sacramento anthicid beetle, *Anthicus sacramento* (SC)
- San Francisco lacewing, *Nothochrysa californica* (SC)
- San Joaquin dune beetle, *Coelus gracilis* (SC)
- curved-foot hygrotus diving beetle, *Hygrotus curvipes* (SC)
- molestan blister beetle, *Lytta molesta* (SC)
- yellow-banded andrenid bee, *Perdita hirticeps luteocincta* (SC)

## Plants

- Ben Lomond buckwheat (= naked buckwheat), *Eriogonum nudum var. decurrens* (SC)

Brewer's dwarf-flax (=western flax), *Hesperolinon breweri* (SC)  
California croton, *Croton californicus* (SLC)  
California triquetrella moss, *Triquetrella californica* (SLC)  
Carquinez goldenbush, *Isocoma arguta* (SC)  
Congdon's tarplant, *Hemizonia parryi* ssp. *congdonii* (SC)  
Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)  
Franciscan thistle, *Cirsium andrewsii* (SC)  
Gairdner's yampah, *Perideridia gairdneri* ssp. *gairdneri* (SC)  
Hall's bush mallow, *Malacothamnus hallii* (=M. *fasciculatus*) (SLC)  
Hoover's cryptantha, *Cryptantha hooveri* (SLC)  
Livermore tarplant, *Deinandra bacigalupii* (SC)  
Loma Prieta hoita, *Hoita strobilina* (SC) \*  
Mason's lilaopsis, *Lilaeopsis masonii* (SC)  
Mt. Diablo bird's-beak, *Cordylanthus nidularius* (SC)  
Mt. Diablo fairy-lantern, *Calochortus pulchellus* (SLC)  
Mt. Diablo jewelflower, *Streptanthus hispidus* (SC)  
Mt. Diablo phacelia, *Phacelia phacelioides* (SC)  
Northern California black walnut, *Juglans californica* var. *hindsii* (SC)  
Oregon meconella (=white fairypoppy), *Meconella oregana* (SC)  
Pacific cordgrass (=California cordgrass), *Spartina foliosa* (SLC)  
San Joaquin spearscale (=saltbush), *Atriplex joaquiniana* (SC)  
Suisun Marsh aster, *Aster lentus* (SC)  
Tiburon buckwheat, *Eriogonum caninum* (SLC)  
alkali milk-vetch, *Astragalus tener* var. *tener* (SC) \*  
bent-flowered fiddleneck, *Amsinckia lunaris* (SLC)  
big tarplant, *Blepharizonia plumosa* ssp. *plumosa* (SC)  
brittlescale, *Atriplex depressa* (SC)  
caper-fruited tropidocarpum, *Tropidocarpum capparideum* (SC) \*  
chaparral harebell (=bellflower), *Campanula exigua* (SLC)  
coast rock-cress, *Arabis blepharophylla* (SLC)  
delta coyote-thistle (=button-celery), *Eryngium racemosum* (CA)  
delta tule-pea, *Lathyrus jepsonii* var. *jepsonii* (SC)  
diamond-petaled California poppy, *Eschscholzia rhombipetala* (SC) \*  
fragrant fritillary (= prairie bells), *Fritillaria liliacea* (SC)  
heartscale, *Atriplex cordulata* (SC)  
interior California (Hospital Canyon) larkspur, *Delphinium californicum* ssp. *interius* (SC)  
little mousetail, *Myosurus minimus* ssp. *apus* (SC)

most beautiful (uncommon) jewelflower, *Streptanthus albidus* ssp. *peramoenus* (SC)  
 recurved larkspur, *Delphinium recurvatum* (SC)  
 robust monardella (=robust coyote mint), *Monardella villosa* ssp. *globosa* (SLC)  
 rock sanicle, *Sanicula saxatilis* (SC)  
 salt marsh owl's clover (=johnny-nip), *Castilleja ambigua* ssp. *ambigua* (SLC)  
 serpentine bedstraw, *Galium andrewsii* ssp. *gatense* (SLC)  
 showy (=golden) madia, *Madia radiata* (SC) \*  
 stinkbells, *Fritillaria agrestis* (SLC)  
 western leatherwood, *Dirca occidentalis* (SLC)

## KEY:

(E)	<i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T)	<i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P)	<i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
	<i>Proposed</i>	Proposed as an area essential to the conservation of the species.
	<i>Critical Habitat</i>	
(C)	<i>Candidate</i>	Candidate to become a <i>proposed</i> species.
	<i>Species of Concern</i>	Other species of concern to the Service.
	<i>Species of Local Concern</i>	Species of local or regional concern or conservation significance.
(D)	<i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA)	<i>State-Listed</i>	Listed as threatened or endangered by the State of California.
NMFS	NMFS species	Under jurisdiction of the National Marine Fisheries Service. Contact them directly.
	<i>Extirpated</i>	Possibly extirpated from the area.
	<i>Extinct</i>	Possibly extinct
	<i>Critical Habitat</i>	Area essential to the conservation of a species.



ENCLOSURE A  
Endangered and Threatened Species that May Occur in  
or be Affected by Projects in the Selected Quads Listed Below  
Reference File No. 1-1-04-SP-893  
February 11, 2004

QUAD: 446A LIVERMORE

**Listed Species**

Mammals

riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) \*

riparian brush rabbit, *Sylvilagus bachmani riparius* (E) \*

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

Is

bald eagle, *Haliaeetus leucocephalus* (T)

California least tern, *Sterna antillarum (=albifrons) browni* (E)

Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

Fish

delta smelt, *Hypomesus transpacificus* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T) NMFS

Central Valley steelhead, *Oncorhynchus mykiss* (T) NMFS

Invertebrates

Critical habitat, vernal pool invertebrates, (X)

longhorn fairy shrimp, *Branchinecta longiantenna* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

its

Critical habitat, vernal pool plants, (X)

palmate-bracted bird's-beak, *Cordylanthus palmatus* (E)

**Proposed Species**

Amphibians

California tiger salamander, *Ambystoma californiense* (PT)

**Candidate Species**

Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C) NMFS

**Species of Concern****Mammals**

- Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)
- Berkeley kangaroo rat, *Dipodomys heermanni berkeleyensis* (SC) \*
- greater western mastiff-bat, *Eumops perotis californicus* (SC)
- small-footed myotis bat, *Myotis ciliolabrum* (SC)
- long-eared myotis bat, *Myotis evotis* (SC)
- fringed myotis bat, *Myotis thysanodes* (SC)
- long-legged myotis bat, *Myotis volans* (SC)
- Yuma myotis bat, *Myotis yumanensis* (SC)
- San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

**Birds**

- tricolored blackbird, *Agelaius tricolor* (SC)
- Bell's sage sparrow, *Amphispiza belli belli* (SC)
- western burrowing owl, *Athene cunicularia hypugaea* (SC)
- oak titmouse, *Baeolophus inornatus* (SLC)
- ferruginous hawk, *Buteo regalis* (SC)
- Costa's hummingbird, *Calypte costae* (SC)
- Lawrence's goldfinch, *Carduelis lawrencei* (SC)
- Vaux's swift, *Chaetura vauxi* (SC)
- mountain plover, *Charadrius montanus* (SC)
- black swift, *Cypseloides niger* (SC)
- white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)
- little willow flycatcher, *Empidonax traillii brewsteri* (CA)
- prairie falcon, *Falco mexicanus* (SC)
- American peregrine falcon, *Falco peregrinus anatum* (D)
- loggerhead shrike, *Lanius ludovicianus* (SC)
- Lewis' woodpecker, *Melanerpes lewis* (SC)
- long-billed curlew, *Numenius americanus* (SC)
- rufous hummingbird, *Selasphorus rufus* (SC)
- Allen's hummingbird, *Selasphorus sasin* (SC)
- California thrasher, *Toxostoma redivivum* (SC)

**Reptiles**

- silvery legless lizard, *Anniella pulchra pulchra* (SC)
- northwestern pond turtle, *Clemmys marmorata marmorata* (SC)
- southwestern pond turtle, *Clemmys marmorata pallida* (SC)

San Joaquin coachwhip (=whipsnake), *Masticophis flagellum ruddocki* (SC)  
California horned lizard, *Phrynosoma coronatum frontale* (SC)

#### Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Sacramento splittail, *Pogonichthys macrolepidotus* (SC)

longfin smelt, *Spirinchus thaleichthys* (SC)

#### Invertebrates

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)

curved-foot hygrotus diving beetle, *Hygrotus curvipes* (SC)

California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

#### Plants

alkali milk-vetch, *Astragalus tener* var. *tener* (SC) \*

San Joaquin spearscale (=saltbush), *Atriplex joaquiniana* (SC)

big-scale (=California) balsamroot, *Balsamorhiza macrolepis* var. *macrolepis* (SLC)

big tarplant, *Blepharizonia plumosa* ssp. *plumosa* (SC)

Livermore tarplant, *Deinandra bacigalupii* (SC) ?

Congdon's tarplant, *Hemizonia parryi* ssp. *congdonii* (SC)

water sack (=saline) clover, *Trifolium depauperatum* var. *hydrophilum* (SC)

QUAD: 446B DUBLIN

#### Listed Species

##### Mammals

riparian (San Joaquin Valley) woodrat, *Neotoma fuscipes riparia* (E) \*

salt marsh harvest mouse, *Reithrodontomys raviventris* (E)

riparian brush rabbit, *Sylvilagus bachmani riparius* (E) \*

San Joaquin kit fox, *Vulpes macrotis mutica* (E)

##### Is

bald eagle, *Haliaeetus leucocephalus* (T)

California least tern, *Sterna antillarum* (=albifrons) *browni* (E)

##### Reptiles

Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

Critical habitat, Alameda whipsnake, *Masticophis lateralis euryxanthus* (T)

##### Amphibians

California red-legged frog, *Rana aurora draytonii* (T)

delta smelt, *Hypomesus transpacificus* (T)

Central California Coastal steelhead, *Oncorhynchus mykiss* (T) NMFS

Central Valley steelhead, *Oncorhynchus mykiss* (T) NMFS

winter-run chinook salmon, *Oncorhynchus tshawytscha* (E) NMFS

Central Valley spring-run chinook salmon, *Oncorhynchus tshawytscha* (T) NMFS

#### Invertebrates

longhorn fairy shrimp, *Branchinecta longiantenna* (E)

vernal pool fairy shrimp, *Branchinecta lynchi* (T)

#### **Proposed Species**

##### Amphibians

California tiger salamander, *Ambystoma californiense* (PT)

#### **Candidate Species**

##### Fish

Central Valley fall/late fall-run chinook salmon, *Oncorhynchus tshawytscha* (C) NMFS

#### **Species of Concern**

##### Mammals

Pacific western big-eared bat, *Corynorhinus (=Plecotus) townsendii townsendii* (SC)

greater western mastiff-bat, *Eumops perotis californicus* (SC)

small-footed myotis bat, *Myotis ciliolabrum* (SC)

long-eared myotis bat, *Myotis evotis* (SC)

fringed myotis bat, *Myotis thysanodes* (SC)

long-legged myotis bat, *Myotis volans* (SC)

Yuma myotis bat, *Myotis yumanensis* (SC)

San Francisco dusky-footed woodrat, *Neotoma fuscipes annectens* (SC)

##### Is

tricolored blackbird, *Agelaius tricolor* (SC)

Bell's sage sparrow, *Amphispiza belli belli* (SC)

western burrowing owl, *Athene cunicularia hypugaea* (SC)

ferruginous hawk, *Buteo regalis* (SC)

Costa's hummingbird, *Calypte costae* (SC)

Lawrence's goldfinch, *Carduelis lawrencei* (SC)

Vaux's swift, *Chaetura vauxi* (SC)

black swift, *Cypseloides niger* (SC)

white-tailed (=black shouldered) kite, *Elanus leucurus* (SC)

little willow flycatcher, *Empidonax traillii brewsteri* (CA)

prairie falcon, *Falco mexicanus* (SC)

American peregrine falcon, *Falco peregrinus anatum* (D)  
saltmarsh common yellowthroat, *Geothlypis trichas sinuosa* (SC)  
loggerhead shrike, *Lanius ludovicianus* (SC)  
Lewis' woodpecker, *Melanerpes lewis* (SC)  
long-billed curlew, *Numenius americanus* (SC)  
bank swallow, *Riparia riparia* (CA)  
rufous hummingbird, *Selasphorus rufus* (SC)  
Allen's hummingbird, *Selasphorus sasin* (SC)

Reptiles

northwestern pond turtle, *Clemmys marmorata marmorata* (SC)  
southwestern pond turtle, *Clemmys marmorata pallida* (SC)  
California horned lizard, *Phrynosoma coronatum frontale* (SC)

Amphibians

foothill yellow-legged frog, *Rana boylei* (SC)

Fish

Sacramento splittail, *Pogonichthys macrolepidotus* (SC)  
longfin smelt, *Spirinchus thaleichthys* (SC)

Invertebrates

Ricksecker's water scavenger beetle, *Hydrochara rickseckeri* (SC)  
curved-foot hygrotus diving beetle, *Hygrotus curvipes* (SC)  
California linderiella fairy shrimp, *Linderiella occidentalis* (SC)

Plants

Diablo helianthella (=rock-rose), *Helianthella castanea* (SC)  
Congdon's tarplant, *Hemizonia parryi* ssp. *congdonii* (SC)

## KEY:

(E)	<i>Endangered</i>	Listed (in the Federal Register) as being in danger of extinction.
(T)	<i>Threatened</i>	Listed as likely to become endangered within the foreseeable future.
(P)	<i>Proposed</i>	Officially proposed (in the Federal Register) for listing as endangered or threatened.
(PX)	<i>Proposed Critical Habitat</i>	Proposed as an area essential to the conservation of the species.
(C)	<i>Candidate</i>	Candidate to become a <i>proposed</i> species.
(SC)	<i>Species of Concern</i>	May be endangered or threatened. Not enough biological information has been gathered to support listing at this time.
(SLC)	<i>Species of Local Concern</i>	Species of local or regional concern or conservation significance.
(MB)	<i>Migratory Bird</i>	Migratory bird
NMFS	NMFS species	Under the jurisdiction of the National Marine Fisheries Service. Contact them directly.
(D)	<i>Delisted</i>	Delisted. Status to be monitored for 5 years.
(CA)	<i>State-Listed</i>	Listed as threatened or endangered by the State of California.
(*)	<i>Extirpated</i>	Possibly extirpated from this quad.
(**)	<i>Extinct</i>	Possibly extinct.
	<i>Critical Habitat</i>	Area essential to the conservation of a species.

## Enclosure B

### FEDERAL AGENCIES' RESPONSIBILITIES UNDER SECTIONS 7(a) and (c) OF THE ENDANGERED SPECIES ACT

#### SECTION 7(a) Consultation/Conference

Requires: (1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species; (2) Consultation with FWS when a Federal action may affect a listed endangered or threatened species to insure that any action authorized, funded, or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. The process is initiated by the Federal agency after determining the action may affect a listed species; and (3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed critical habitat.

#### SECTION 7(c) Biological Assessment-Major Construction Activity<sup>1</sup>

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for major construction activities. The BA analyzes the effects of the action<sup>2</sup> on listed and proposed species. The process begins with a Federal agency requesting from FWS a list of proposed and listed threatened and endangered species. The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may proceed; however, no construction may begin.

We recommend the following for inclusion in the BA: an on-site inspection of the area affected by the proposal which may include a detailed survey of the area to determine if the species or suitable habitat is present; a review of literature and scientific data to determine species' distribution, habitat needs, and other biological requirements; interviews with experts, including those within FWS, State conservation departments, universities and others who may have data not yet published in scientific literature; an analysis of the effects of the proposal on the species in terms of individuals and populations, including consideration of indirect effects of the proposal on the species and its habitat; an analysis of alternative actions considered. The BA should document the results, including a discussion of study methods used, and problems encountered, and other relevant information. The BA should conclude whether or not a

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<sup>1</sup>A construction project (or other undertaking having similar physical impacts) which is a major federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332(2)C).

<sup>2</sup>"Effects of the action" refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action.

Mr James H. Doty, Jr

listed or proposed species will be affected. Upon completion, the BA should be forward to our office.



## Enclosure C

### GUIDELINES FOR CONDUCTING AND REPORTING BOTANICAL INVENTORIES FOR FEDERALLY LISTED, PROPOSED AND CANDIDATE PLANTS

(September 23, 1996)

These guidelines describe protocols for conducting botanical inventories for federally listed, proposed and candidate plants, and describe minimum standards for reporting results. The Service will use, in part, the information outlined below in determining whether the project under consideration may affect any listed, proposed or candidate plants, and in determining the direct, indirect, and cumulative effects.

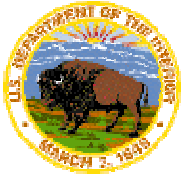
Field inventories should be conducted in a manner that will locate listed, proposed, or candidate species (target species) that may be present. The entire project area requires a botanical inventory, except developed agricultural lands. The field investigator(s) should:

- 1 Conduct inventories at the appropriate times of year when target species are present and identifiable. Inventories will include all potential habitats. Multiple site visits during a field season may be necessary to make observations during the appropriate phenological stage of all target species.
2. If available, use a regional or local reference population to obtain a visual image of the target species and associated habitat(s). If access to reference populations(s) is not available, investigators should study specimens from local herbaria.
- 3 List every species observed and compile a comprehensive list of vascular plants for the entire project site. Vascular plants need to be identified to a taxonomic level which allows rarity to be determined.
4. Report results of botanical field inventories that include:
  - a. a description of the biological setting, including plant community, topography, soils, potential habitat of target species, and an evaluation of environmental conditions, such as timing or quantity of rainfall, which may influence the performance and expression of target species.
  - b. a map of project location showing scale, orientation, project boundaries, parcel size, and map quadrangle name.
  - c. survey dates and survey methodology(ies).
  - d. if a reference population is available, provide a written narrative describing the target species reference population(s) used, and date(s) when observations were made.
  - e. a comprehensive list of all vascular plants occurring on the project site for each habitat type.

- f. current and historic land uses of the habitat(s) and degree of site alteration.
  - g. presence of target species off-site on adjacent parcels, if known.
  - h. an assessment of the biological significance or ecological quality of the project site in a local and regional context.
5. If target species is(are) found, report results that additionally include:
- a. a map showing federally listed, proposed and candidate species distribution as they relate to the proposed project.
  - b. if target species is (are) associated with wetlands, a description of the direction and integrity of flow of surface hydrology. If target species is (are) affected by adjacent off-site hydrological influences, describe these factors.
  - c. the target species phenology and microhabitat, an estimate of the number of individuals of each target species per unit area; identify areas of high, medium and low density of target species over the project site, and provide acres of occupied habitat of target species. Investigators could provide color slides, photos or color copies of photos of target species or representative habitats to support information or descriptions contained in reports.
  - d. the degree of impact(s), if any, of the proposed project as it relates to the potential unoccupied habitat of target habitat.
6. Document findings of target species by completing California Native Species Field Survey Form(s) and submit form(s) to the Natural Diversity Data Base. Documentation of determinations and/or voucher specimens may be useful in cases of taxonomic ambiguities, habitat or range extensions.
7. Report as an addendum to the original survey, any change in abundance and distribution of target plants in subsequent years. Project sites with inventories older than 3 years from the current date of project proposal submission will likely need additional survey. Investigators need to assess whether an additional survey(s) is (are) needed.
8. Adverse conditions may prevent investigator(s) from determining presence or identifying some target species in potential habitat(s) of target species. Disease, drought, predation, or herbivory may preclude the presence or identification of target species in any year. An additional botanical inventory(ies) in a subsequent year(s) may be required if adverse conditions occur in a potential habitat(s). Investigator(s) may need to discuss such conditions.

9. Guidance from California Department of Fish and Game (CDFG) regarding plant and plant community surveys can be found in Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities, 1984. Please contact the CDFG Regional Office for questions regarding the CDFG guidelines and for assistance in determining any applicable State regulatory requirements.

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United States Department of the Interior  
FISH AND WILDLIFE SERVICE  
Sacramento Fish and Wildlife Office  
2800 Cottage Way, Room W-2605  
Sacramento, California 95825



August 13, 2004

Document Number: 040813070537

Mr. James H. Doty, Jr.  
Lieutenant Colonel, U.S. Army  
U.S. Army Garrison West Coast (Provisional)  
Building 790, Fifth Street, RAFTA  
Dublin, CA 94568

Subject: Species List for Camp Parks Redevelopment

Dear: Dear Mr. Doty

We are sending this official species list in response to your August 13, 2004 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested. You have stated that this list is for consultation with the Fish & Wildlife Service.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 11, 2004.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found at [sacramento.fws.gov/es/branches.htm](http://sacramento.fws.gov/es/branches.htm).

Endangered Species Division



**Federal Endangered and Threatened Species that Occur in  
or may be Affected by Projects in the Counties and/or  
U.S.G.S. 7 1/2 Minute Quads you requested**

**Document Number: 040813070537**

**Database Last Updated: July 19, 2004**

**Quad Lists**

**LIVERMORE (446A)**

**Listed Species**

**Invertebrates**

- - Critical habitat, vernal pool invertebrates (X)
- Branchinecta longiantenna - longhorn fairy shrimp (E)
- Branchinecta lynchi - Critical habitat, vernal pool fairy shrimp (X)
- Branchinecta lynchi - vernal pool fairy shrimp (T)

**Fish**

- Hypomesus transpacificus - delta smelt (T)
- Oncorhynchus mykiss - Central California Coastal steelhead (T) (NMFS)
- Oncorhynchus mykiss - Central Valley steelhead (T) (NMFS)

**Amphibians**

- Ambystoma californiense - California tiger salamander (T)
- Rana aurora draytonii - California red-legged frog (T)

**Reptiles**

- Masticophis lateralis euryxanthus - Alameda whipsnake (T)
- Masticophis lateralis euryxanthus - Critical habitat, Alameda whipsnake (T)

**Birds**

- Haliaeetus leucocephalus - bald eagle (T)
- Sterna antillarum (=albifrons) browni - California least tern (E)

**Mammals**

- Neotoma fuscipes riparia - riparian (San Joaquin Valley) woodrat (E)
- Sylvilagus bachmani riparius - riparian brush rabbit (E)
- Vulpes macrotis mutica - San Joaquin kit fox (E)

**Plants**

- - Critical habitat, vernal pool plants (X)

- *Cordylanthus palmatus* - palmate-bracted bird's-beak (E)

## Proposed Species

### Amphibians

- *Ambystoma californiense* - Critical habitat, CA tiger salamander - Central Valley population (PX)
- *Rana aurora draytonii* - Critical habitat, California red-legged frog (Proposed) (PX)

### Candidate Species

#### Fish

- *Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C) (NMFS)

### Species of Concern

#### Invertebrates

- *Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)
- *Hygrotus curvipes* - curved-foot hygrotus diving beetle (SC)
- *Linderiella occidentalis* - California linderiella fairy shrimp (SC)

#### Fish

- *Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- *Spirinchus thaleichthys* - longfin smelt (SC)

#### Amphibians

- *Rana boylei* - foothill yellow-legged frog (SC)

#### Reptiles

- *Anniella pulchra pulchra* - silvery legless lizard (SC)
- *Clemmys marmorata marmorata* - northwestern pond turtle (SC)
- *Clemmys marmorata pallida* - southwestern pond turtle (SC)
- *Masticophis flagellum ruddocki* - San Joaquin coachwhip (=whipsnake) (SC)
- *Phrynosoma coronatum frontale* - California horned lizard (SC)

#### Birds

- *Agelaius tricolor* - tricolored blackbird (SC)
- *Amphispiza belli belli* - Bell's sage sparrow (SC)
- *Athene cunicularia hypugaea* - western burrowing owl (SC)
- *Baeolophus inornatus* - oak titmouse (SLC)
- *Buteo regalis* - ferruginous hawk (SC)
- *Calypte costae* - Costa's hummingbird (SC)
- *Carduelis lawrencei* - Lawrence's goldfinch (SC)
- *Chaetura vauxi* - Vaux's swift (SC)
- *Charadrius montanus* - mountain plover (SC)
- *Cypseloides niger* - black swift (SC)

- *Elanus leucurus* - white-tailed (=black shouldered) kite (SC)
- *Empidonax traillii brewsteri* - little willow flycatcher (CA)
- *Falco peregrinus anatum* - American peregrine falcon (D)
- *Lanius ludovicianus* - loggerhead shrike (SC)
- *Melanerpes lewis* - Lewis' woodpecker (SC)
- *Numenius americanus* - long-billed curlew (SC)
- *Selasphorus rufus* - rufous hummingbird (SC)
- *Selasphorus sasin* - Allen's hummingbird (SC)
- *Toxostoma redivivum* - California thrasher (SC)

## **Mammals**

- *Corynorhinus* (=Plecotus) *townsendii townsendii* - Pacific western big-eared bat (SC)
- *Dipodomys heermanni berkeleyensis* - Berkeley kangaroo rat (SC)
- *Eumops perotis californicus* - greater western mastiff-bat (SC)
- *Myotis ciliolabrum* - small-footed myotis bat (SC)
- *Myotis evotis* - long-eared myotis bat (SC)
- *Myotis thysanodes* - fringed myotis bat (SC)
- *Myotis volans* - long-legged myotis bat (SC)
- *Myotis yumanensis* - Yuma myotis bat (SC)
- *Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)

## **Plants**

- *Astragalus tener* var. *tener* - alkali milk-vetch (SC)
- *Atriplex joaquiniana* - San Joaquin spearscale (=saltbush) (SC)
- *Balsamorhiza macrolepis* var. *macrolepis* - big-scale (=California) balsamroot (SLC)
- *Blepharizonia plumosa* ssp. *plumosa* - big tarplant (SC)
- *Deinandra bacigalupii* - Livermore tarplant (SC)
- *Hemizonia parryi* ssp. *congdonii* - Congdon's tarplant (SC)
- *Trifolium depauperatum* var. *hydrophilum* - water sack (=saline) clover (SC)

## **DUBLIN (446B)**

### **Listed Species**

#### **Invertebrates**

- *Branchinecta longiantenna* - longhorn fairy shrimp (E)
- *Branchinecta lynchi* - vernal pool fairy shrimp (T)

#### **Fish**

- *Hypomesus transpacificus* - delta smelt (T)
- *Oncorhynchus mykiss* - Central California Coastal steelhead (T) (NMFS)
- *Oncorhynchus mykiss* - Central Valley steelhead (T) (NMFS)
- *Oncorhynchus tshawytscha* - Central Valley spring-run chinook salmon (T) (NMFS)
- *Oncorhynchus tshawytscha* - winter-run chinook salmon (E) (NMFS)



## **Amphibians**

- *Ambystoma californiense* - California tiger salamander (T)
- *Rana aurora draytonii* - California red-legged frog (T)

## **Reptiles**

- *Masticophis lateralis euryxanthus* - Alameda whipsnake (T)
- *Masticophis lateralis euryxanthus* - Critical habitat, Alameda whipsnake (T)

## **Birds**

- *Haliaeetus leucocephalus* - bald eagle (T)
- *Sterna antillarum* (=albifrons) browni - California least tern (E)

## **Mammals**

- *Neotoma fuscipes riparia* - riparian (San Joaquin Valley) woodrat (E)
- *Reithrodontomys raviventris* - salt marsh harvest mouse (E)
- *Sylvilagus bachmani riparius* - riparian brush rabbit (E)
- *Vulpes macrotis mutica* - San Joaquin kit fox (E)

## **Proposed Species**

### **Amphibians**

- *Ambystoma californiense* - Critical habitat, CA tiger salamander - Central Valley population (PX)
- *Rana aurora draytonii* - Critical habitat, California red-legged frog (Proposed) (PX)

### **Candidate Species**

#### **Fish**

- *Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C) (NMFS)

### **Species of Concern**

#### **Invertebrates**

- *Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)
- *Hygrotus curvipes* - curved-foot hygrotus diving beetle (SC)
- *Linderiella occidentalis* - California linderiella fairy shrimp (SC)

#### **Fish**

- *Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- *Spirinchus thaleichthys* - longfin smelt (SC)

#### **Amphibians**

- *Rana boylei* - foothill yellow-legged frog (SC)

## Reptiles

- *Clemmys marmorata marmorata* - northwestern pond turtle (SC)
- *Clemmys marmorata pallida* - southwestern pond turtle (SC)
- *Phrynosoma coronatum frontale* - California horned lizard (SC)

## Birds

- *Agelaius tricolor* - tricolored blackbird (SC)
- *Amphispiza belli belli* - Bell's sage sparrow (SC)
- *Athene cunicularia hypugaea* - western burrowing owl (SC)
- *Buteo regalis* - ferruginous hawk (SC)
- *Calypte costae* - Costa's hummingbird (SC)
- *Carduelis lawrencei* - Lawrence's goldfinch (SC)
- *Chaetura vauxi* - Vaux's swift (SC)
- *Cypseloides niger* - black swift (SC)
- *Elanus leucurus* - white-tailed (=black shouldered) kite (SC)
- *Empidonax traillii brewsteri* - little willow flycatcher (CA)
- *Falco peregrinus anatum* - American peregrine falcon (D)
- *Geothlypis trichas sinuosa* - saltmarsh common yellowthroat (SC)
- *Lanius ludovicianus* - loggerhead shrike (SC)
- *Melanerpes lewis* - Lewis' woodpecker (SC)
- *Numenius americanus* - long-billed curlew (SC)
- *Riparia riparia* - bank swallow (CA)
- *Selasphorus rufus* - rufous hummingbird (SC)
- *Selasphorus sasin* - Allen's hummingbird (SC)

## Mammals

- *Corynorhinus* (=Plecotus) *townsendii townsendii* - Pacific western big-eared bat (SC)
- *Eumops perotis californicus* - greater western mastiff-bat (SC)
- *Myotis ciliolabrum* - small-footed myotis bat (SC)
- *Myotis evotis* - long-eared myotis bat (SC)
- *Myotis thysanodes* - fringed myotis bat (SC)
- *Myotis volans* - long-legged myotis bat (SC)
- *Myotis yumanensis* - Yuma myotis bat (SC)
- *Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)

## Plants

- *Helianthella castanea* - Diablo helianthella (=rock-rose) (SC)
- *Hemizonia parryi* ssp. *congdonii* - Congdon's tarplant (SC)

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## County Lists

### Alameda County

#### Listed Species

#### Invertebrates

- - Critical habitat, vernal pool invertebrates (X)
- *Branchinecta longiantenna* - longhorn fairy shrimp (E)
- *Branchinecta lynchi* - Critical habitat, vernal pool fairy shrimp (X)
- *Branchinecta lynchi* - vernal pool fairy shrimp (T)
- *Euphydryas editha bayensis* - bay checkerspot butterfly (T)
- *Lepidurus packardi* - Critical habitat, vernal pool tadpole shrimp (X)
- *Lepidurus packardi* - vernal pool tadpole shrimp (E)
- *Speyeria callippe callippe* - callippe silverspot butterfly (E)

## **Fish**

- *Eucyclogobius newberryi* - tidewater goby (E)
- *Hypomesus transpacificus* - delta smelt (T)
- *Oncorhynchus kisutch* - coho salmon - central CA coast (T) (NMFS)
- *Oncorhynchus mykiss* - Central California Coastal steelhead (T) (NMFS)
- *Oncorhynchus tshawytscha* - Central Valley spring-run chinook salmon (T) (NMFS)
- *Oncorhynchus tshawytscha* - Critical habitat, winter-run chinook salmon (E) (NMFS)
- *Oncorhynchus tshawytscha* - winter-run chinook salmon (E) (NMFS)

## **Amphibians**

- *Ambystoma californiense* - California tiger salamander (T)
- *Rana aurora draytonii* - California red-legged frog (T)

## **Reptiles**

- *Masticophis lateralis euryxanthus* - Alameda whipsnake (T)
- *Masticophis lateralis euryxanthus* - Critical habitat, Alameda whipsnake (T)

## **Birds**

- *Haliaeetus leucocephalus* - bald eagle (T)
- *Pelecanus occidentalis californicus* - California brown pelican (E)
- *Rallus longirostris obsoletus* - California clapper rail (E)
- *Sterna antillarum* (=albifrons) browni - California least tern (E)

## **Mammals**

- *Neotoma fuscipes riparia* - riparian (San Joaquin Valley) woodrat (E)
- *Reithrodontomys raviventris* - salt marsh harvest mouse (E)
- *Sylvilagus bachmani riparius* - riparian brush rabbit (E)
- *Vulpes macrotis mutica* - San Joaquin kit fox (E)

## **Plants**

- - Critical habitat, vernal pool plants (X)
- *Amsinckia grandiflora* - large-flowered fiddleneck (E)
- *Arctostaphylos pallida* - pallid manzanita (=Alameda or Oakland Hills manzanita) (T)
- *Chorizanthe robusta* var. *robusta* - robust spineflower (E)
- *Clarkia franciscana* - Presidio clarkia (E)
- *Cordylanthus palmatus* - palmate-bracted bird's-beak (E)

- *Holocarpha macradenia* - Santa Cruz tarplant (T)
- *Lasthenia conjugens* - Contra Costa goldfields (E)
- *Suaeda californica* - California sea blite (E)
- *Trifolium amoenum* - showy Indian clover (E)

## **Proposed Species**

### **Amphibians**

- *Ambystoma californiense* - Critical habitat, CA tiger salamander - Central Valley population (PX)
- *Rana aurora draytonii* - Critical habitat, California red-legged frog (Proposed) (PX)

### **Candidate Species**

#### **Fish**

- *Acipenser medirostris* - green sturgeon (C)
- *Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C) (NMFS)
- *Oncorhynchus tshawytscha* - Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)

## **Species of Concern**

### **Invertebrates**

- *Adela oplerella* - Opler's longhorn moth (SC)
- *Helminthoglypta nickliniana bridgesi* - Bridges' Coast Range shoulderband snail (SC)
- *Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)
- *Hygrotus curvipes* - curved-foot hygrotus diving beetle (SC)
- *Linderiella occidentalis* - California linderiella fairy shrimp (SC)
- *Microcina lumi* - Fairmont (=Lum's) microblind harvestman (SC)
- *Nothochrysa californica* - San Francisco lacewing (SC)

#### **Fish**

- *Lampetra ayresi* - river lamprey (SC)
- *Lampetra tridentata* - Pacific lamprey (SC)
- *Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- *Spirinchus thaleichthys* - longfin smelt (SC)

### **Amphibians**

- *Rana boylei* - foothill yellow-legged frog (SC)
- *Spea hammondi* - western spadefoot toad (SC)

### **Reptiles**

- *Anniella pulchra pulchra* - silvery legless lizard (SC)
- *Clemmys marmorata marmorata* - northwestern pond turtle (SC)
- *Clemmys marmorata pallida* - southwestern pond turtle (SC)
- *Masticophis flagellum ruddocki* - San Joaquin coachwhip (=whipsnake) (SC)
- *Phrynosoma coronatum frontale* - California horned lizard (SC)

## Birds

- *Agelaius tricolor* - tricolored blackbird (SC)
- *Amphispiza belli belli* - Bell's sage sparrow (SC)
- *Athene cunicularia hypugaea* - western burrowing owl (SC)
- *Baeolophus inornatus* - oak titmouse (SLC)
- *Botaurus lentiginosus* - American bittern (SC)
- *Branta canadensis leucopareia* - Aleutian Canada goose (D)
- *Buteo regalis* - ferruginous hawk (SC)
- *Calidris canutus* - red knot (SC)
- *Calypte costae* - Costa's hummingbird (SC)
- *Carduelis lawrencei* - Lawrence's goldfinch (SC)
- *Chaetura vauxi* - Vaux's swift (SC)
- *Charadrius montanus* - mountain plover (SC)
- *Contopus cooperi* - olive-sided flycatcher (SC)
- *Elanus leucurus* - white-tailed (=black shouldered) kite (SC)
- *Empidonax traillii brewsteri* - little willow flycatcher (CA)
- *Falco peregrinus anatum* - American peregrine falcon (D)
- *Geothlypis trichas sinuosa* - saltmarsh common yellowthroat (SC)
- *Lanius ludovicianus* - loggerhead shrike (SC)
- *Laterallus jamaicensis coturniculus* - black rail (CA)
- *Limosa fedoa* - marbled godwit (SC)
- *Melanerpes lewis* - Lewis' woodpecker (SC)
- *Melospiza melodia pusillula* - Alameda (South Bay) song sparrow (SC)
- *Numenius americanus* - long-billed curlew (SC)
- *Plegadis chihi* - white-faced ibis (SC)
- *Riparia riparia* - bank swallow (CA)
- *Rynchops niger* - black skimmer (SC)
- *Selasphorus rufus* - rufous hummingbird (SC)
- *Selasphorus sasin* - Allen's hummingbird (SC)
- *Sphyrapicus ruber* - red-breasted sapsucker (SC)
- *Toxostoma redivivum* - California thrasher (SC)

## Mammals

- *Corynorhinus* (=Plecotus) *townsendii townsendii* - Pacific western big-eared bat (SC)
- *Dipodomys heermanni berkeleyensis* - Berkeley kangaroo rat (SC)
- *Eumops perotis californicus* - greater western mastiff-bat (SC)
- *Myotis ciliolabrum* - small-footed myotis bat (SC)
- *Myotis evotis* - long-eared myotis bat (SC)
- *Myotis thysanodes* - fringed myotis bat (SC)
- *Myotis volans* - long-legged myotis bat (SC)
- *Myotis yumanensis* - Yuma myotis bat (SC)
- *Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)
- *Perognathus inornatus* - San Joaquin pocket mouse (SC)
- *Scapanus latimanus parvus* - Alameda Island mole (SC)
- *Sorex vagrans halicoetes* - salt marsh vagrant shrew (SC)

## Plants

- *Allium sharsmithae* - Sharsmith's onion (SC)

- *Amsinckia lunaris* - bent-flowered fiddleneck (SLC)
- *Astragalus tener* var. *tener* - alkali milk-vetch (SC)
- *Atriplex cordulata* - heartscale (SC)
- *Atriplex depressa* - brittlescale (SC)
- *Atriplex joaquiniana* - San Joaquin spearscale (=saltbush) (SC)
- *Balsamorhiza macrolepis* var. *macrolepis* - big-scale (=California) balsamroot (SLC)
- *Blepharizonia plumosa* ssp. *plumosa* - big tarplant (SC)
- *Campanula exigua* - chaparral harebell (=bellflower) (SLC)
- *Castilleja ambigua* ssp. *ambigua* - salt marsh owl's clover (=johnny-nip) (SLC)
- *Caulanthus coulteri* var. *lemmonii* - Lemmon's jewelflower (SLC)
- *Chorizanthe cuspidata* var. *cuspidata* - San Francisco Bay spineflower (SC)
- *Cirsium fontinale* var. *campylon* - Mt. Hamilton thistle (SC)
- *Clarkia concinna* ssp. *automixa* - South Bay clarkia (=Santa Clara red ribbons) (SC)
- *Cordylanthus maritimus* ssp. *palustris* - northcoast (=Point Reyes) bird's-beak (SC)
- *Cordylanthus mollis* ssp. *hispidus* - hispid bird's-beak (SC)
- *Coreopsis hamiltonii* - Mt. Hamilton coreopsis (SC)
- *Cryptantha hooveri* - Hoover's cryptantha (SLC)
- *Deinandra bacigalupii* - Livermore tarplant (SC)
- *Delphinium californicum* ssp. *interius* - interior California (Hospital Canyon) larkspur (SC)
- *Delphinium recurvatum* - recurved larkspur (SC)
- *Dirca occidentalis* - western leatherwood (SLC)
- *Eriogonum caninum* - Tiburon buckwheat (SLC)
- *Eriogonum nudum* var. *decurrens* - Ben Lomond buckwheat (=naked buckwheat) (SC)
- *Eryngium aristulatum* var. *hooveri* - Hoover's button-celery (SC)
- *Eschscholzia rhombipetala* - diamond-petaled California poppy (SC)
- *Fritillaria agrestis* - stinkbells (SLC)
- *Fritillaria falcata* - talus fritillary (SC)
- *Fritillaria liliacea* - fragrant fritillary (=prairie bells) (SC)
- *Galium andrewsii* ssp. *gatense* - serpentine bedstraw (SLC)
- *Helianthella castanea* - Diablo helianthella (=rock-rose) (SC)
- *Hemizonia parryi* ssp. *congdonii* - Congdon's tarplant (SC)
- *Hesperolinon serpentinum* - Napa western flax (SC)
- *Hoita strobilina* - Loma Prieta hoita (SC)
- *Horkelia cuneata* ssp. *sericea* - Kellogg's horkelia (SC)
- *Lathyrus jepsonii* var. *jepsonii* - delta tule-pea (SC)
- *Lilaeopsis masonii* - Mason's lilaeopsis (SC)
- *Linanthus grandiflorus* - large-flowered (=flower) linanthus (SC)
- *Malacothamnus hallii* (=M. *fasciculatus*) - Hall's bush mallow (SLC)
- *Monardella villosa* ssp. *globosa* - robust monardella (=robust coyote mint) (SLC)
- *Myosurus minimus* ssp. *apus* - little mousetail (SC)
- *Navarretia prostrata* - prostrate navarretia (=prostrate pincushionplant) (SC)
- *Plagiobothrys chorisianus* var. *chorisianus* - Choris's (=artist's) popcorn-flower (SLC)
- *Plagiobothrys diffusus* - San Francisco popcornflower (CA)
- *Plagiobothrys glaber* - hairless allocarya (=popcornflower) (SC)
- *Sanicula maritima* - adobe sanicle (SC)
- *Spartina foliosa* - Pacific cordgrass (=California cordgrass) (SLC)
- *Streptanthus albidus* ssp. *peramoenus* - most beautiful (uncommon) jewelflower (SC)
- *Trifolium depauperatum* var. *hydrophilum* - water sack (=saline) clover (SC)
- *Tropidocarpum capparideum* - caper-fruited tropidocarpum (SC)

## Contra Costa County

### Listed Species

#### Invertebrates

- - Critical habitat, vernal pool invertebrates (X)
- *Apodemia mormo langei* - Lange's metalmark butterfly (E)
- *Branchinecta conservatio* - Conservancy fairy shrimp (E)
- *Branchinecta longiantenna* - longhorn fairy shrimp (E)
- *Branchinecta lynchi* - Critical habitat, vernal pool fairy shrimp (X)
- *Branchinecta lynchi* - vernal pool fairy shrimp (T)
- *Desmocerus californicus dimorphus* - valley elderberry longhorn beetle (T)
- *Lepidurus packardi* - vernal pool tadpole shrimp (E)
- *Speyeria callippe callippe* - callippe silverspot butterfly (E)

#### Fish

- *Eucyclogobius newberryi* - tidewater goby (E)
- *Hypomesus transpacificus* - Critical habitat, delta smelt (T)
- *Hypomesus transpacificus* - delta smelt (T)
- *Oncorhynchus kisutch* - coho salmon - central CA coast (T) (NMFS)
- *Oncorhynchus mykiss* - Central California Coastal steelhead (T) (NMFS)
- *Oncorhynchus tshawytscha* - Central Valley spring-run chinook salmon (T) (NMFS)
- *Oncorhynchus tshawytscha* - Critical habitat, winter-run chinook salmon (E) (NMFS)
- *Oncorhynchus tshawytscha* - winter-run chinook salmon (E) (NMFS)

#### Amphibians

- *Ambystoma californiense* - California tiger salamander (T)
- *Rana aurora draytonii* - California red-legged frog (T)

#### Reptiles

- *Masticophis lateralis euryxanthus* - Alameda whipsnake (T)
- *Masticophis lateralis euryxanthus* - Critical habitat, Alameda whipsnake (T)
- *Thamnophis gigas* - giant garter snake (T)

#### Birds

- *Charadrius alexandrinus nivosus* - western snowy plover (T)
- *Haliaeetus leucocephalus* - bald eagle (T)
- *Pelecanus occidentalis californicus* - California brown pelican (E)
- *Rallus longirostris obsoletus* - California clapper rail (E)
- *Sterna antillarum* (=albifrons) browni - California least tern (E)

#### Mammals

- *Neotoma fuscipes riparia* - riparian (San Joaquin Valley) woodrat (E)
- *Reithrodontomys raviventris* - salt marsh harvest mouse (E)
- *Sylvilagus bachmani riparius* - riparian brush rabbit (E)
- *Vulpes macrotis mutica* - San Joaquin kit fox (E)

## Plants

- - Critical habitat, vernal pool plants (X)
- *Amsinckia grandiflora* - large-flowered fiddleneck (E)
- *Arctostaphylos pallida* - pallid manzanita (=Alameda or Oakland Hills manzanita) (T)
- *Cordylanthus mollis* ssp. *mollis* - soft bird's-beak (E)
- *Erysimum capitatum* ssp. *angustatum* - Contra Costa wallflower (E)
- *Erysimum capitatum* ssp. *angustatum* - Critical Habitat, Contra Costa wallflower (E)
- *Holocarpha macradenia* - Critical habitat, Santa Cruz tarplant (T)
- *Holocarpha macradenia* - Santa Cruz tarplant (T)
- *Lasthenia conjugens* - Contra Costa goldfields (E)
- *Oenothera deltooides* ssp. *howellii* - Antioch Dunes evening-primrose (E)
- *Oenothera deltooides* ssp. *howellii* - Critical habitat, Antioch Dunes evening-primrose (E)

## Proposed Species

### Amphibians

- *Ambystoma californiense* - Critical habitat, CA tiger salamander - Central Valley population (PX)
- *Rana aurora draytonii* - Critical habitat, California red-legged frog (Proposed) (PX)

### Candidate Species

### Fish

- *Acipenser medirostris* - green sturgeon (C)
- *Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C) (NMFS)
- *Oncorhynchus tshawytscha* - Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)

## Species of Concern

### Invertebrates

- *Aegialia concinna* - Ciervo aegialian scarab beetle (SC)
- *Anthicus antiochensis* - Antioch Dunes anthicid beetle (SC)
- *Anthicus sacramento* - Sacramento anthicid beetle (SC)
- *Branchinecta mesovallensis* - Midvalley fairy shrimp (SC)
- *Coelus gracilis* - San Joaquin dune beetle (SC)
- *Cophura hurdi* - Antioch cophuran robberfly (SC)
- *Efferia antiochi* - Antioch efferian robberfly (SC)
- *Helminthoglypta nickliniana bridgesi* - Bridges' Coast Range shoulderband snail (SC)
- *Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)
- *Hygrotus curvipes* - curved-foot hygrotus diving beetle (SC)
- *Idiostatus middlekaufi* - Middlekauf's shieldback katydid (SC)
- *Incisalia mossii marinensis* - Marin elfin butterfly (SC)
- *Linderiella occidentalis* - California linderiella fairy shrimp (SC)
- *Lytta molesta* - molestan blister beetle (SC)
- *Metapogon hurdi* - Hurd's metapogon robberfly (SC)
- *Myrmosula pacifica* - Antioch mutillid wasp (SC)
- *Nothochrysa californica* - San Francisco lacewing (SC)
- *Perdita hirticeps luteocincta* - yellow-banded andrenid bee (SC)



- *Perdita scitula antiochensis* - Antioch andrenid bee (SC)
- *Philanthus nasilis* - Antioch sphecid wasp (SC)

## **Fish**

- *Lampetra ayresi* - river lamprey (SC)
- *Lampetra tridentata* - Pacific lamprey (SC)
- *Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- *Spirinchus thaleichthys* - longfin smelt (SC)

## **Amphibians**

- *Rana boylei* - foothill yellow-legged frog (SC)
- *Spea hammondi* - western spadefoot toad (SC)

## **Reptiles**

- *Anniella pulchra pulchra* - silvery legless lizard (SC)
- *Clemmys marmorata marmorata* - northwestern pond turtle (SC)
- *Clemmys marmorata pallida* - southwestern pond turtle (SC)
- *Masticophis flagellum ruddocki* - San Joaquin coachwhip (=whipsnake) (SC)
- *Phrynosoma coronatum frontale* - California horned lizard (SC)

## **Birds**

- *Agelaius tricolor* - tricolored blackbird (SC)
- *Amphispiza belli belli* - Bell's sage sparrow (SC)
- *Athene cunicularia hypugaea* - western burrowing owl (SC)
- *Baeolophus inornatus* - oak titmouse (SLC)
- *Botaurus lentiginosus* - American bittern (SC)
- *Branta canadensis leucopareia* - Aleutian Canada goose (D)
- *Buteo regalis* - ferruginous hawk (SC)
- *Buteo Swainsoni* - Swainson's hawk (CA)
- *Calidris canutus* - red knot (SC)
- *Calypte costae* - Costa's hummingbird (SC)
- *Carduelis lawrencei* - Lawrence's goldfinch (SC)
- *Chaetura vauxi* - Vaux's swift (SC)
- *Charadrius montanus* - mountain plover (SC)
- *Contopus cooperi* - olive-sided flycatcher (SC)
- *Elanus leucurus* - white-tailed (=black shouldered) kite (SC)
- *Empidonax traillii brewsteri* - little willow flycatcher (CA)
- *Falco peregrinus anatum* - American peregrine falcon (D)
- *Geothlypis trichas sinuosa* - saltmarsh common yellowthroat (SC)
- *Lanius ludovicianus* - loggerhead shrike (SC)
- *Laterallus jamaicensis coturniculus* - black rail (CA)
- *Limosa fedoa* - marbled godwit (SC)
- *Melanerpes lewis* - Lewis' woodpecker (SC)
- *Melospiza melodia maxillaris* - Suisun song sparrow (SC)
- *Melospiza melodia pusillula* - Alameda (South Bay) song sparrow (SC)
- *Melospiza melodia samuelis* - San Pablo song sparrow (SC)
- *Numenius americanus* - long-billed curlew (SC)

- *Numenius phaeopus* - whimbrel (SC)
- *Plegadis chihi* - white-faced ibis (SC)
- *Riparia riparia* - bank swallow (CA)
- *Selasphorus rufus* - rufous hummingbird (SC)
- *Selasphorus sasin* - Allen's hummingbird (SC)
- *Sphyrapicus ruber* - red-breasted sapsucker (SC)
- *Toxostoma redivivum* - California thrasher (SC)

## Mammals

- *Corynorhinus* (=Plecotus) *townsendii townsendii* - Pacific western big-eared bat (SC)
- *Dipodomys heermanni berkeleyensis* - Berkeley kangaroo rat (SC)
- *Eumops perotis californicus* - greater western mastiff-bat (SC)
- *Myotis ciliolabrum* - small-footed myotis bat (SC)
- *Myotis evotis* - long-eared myotis bat (SC)
- *Myotis thysanodes* - fringed myotis bat (SC)
- *Myotis volans* - long-legged myotis bat (SC)
- *Myotis yumanensis* - Yuma myotis bat (SC)
- *Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)
- *Perognathus inornatus* - San Joaquin pocket mouse (SC)
- *Sorex ornatus sinuosus* - Suisun ornate shrew (SC)
- *Sorex vagrans halicoetes* - salt marsh vagrant shrew (SC)

## Plants

- *Amsinckia lunaris* - bent-flowered fiddleneck (SLC)
- *Arabis blepharophylla* - coast rock-cress (SLC)
- *Aster lentus* - Suisun Marsh aster (SC)
- *Astragalus tener* var. *tener* - alkali milk-vetch (SC)
- *Atriplex cordulata* - heartscale (SC)
- *Atriplex depressa* - brittlescale (SC)
- *Atriplex joaquiniana* - San Joaquin spearscale (=saltbush) (SC)
- *Blepharizonia plumosa* ssp. *plumosa* - big tarplant (SC)
- *Calochortus pulchellus* - Mt. Diablo fairy-lantern (SLC)
- *Campanula exigua* - chaparral harebell (=bellflower) (SLC)
- *Castilleja ambigua* ssp. *ambigua* - salt marsh owl's clover (=johnny-nip) (SLC)
- *Cirsium andrewsii* - Franciscan thistle (SC)
- *Cordylanthus nidularius* - Mt. Diablo bird's-beak (SC)
- *Croton californicus* - California croton (SLC)
- *Cryptantha hooveri* - Hoover's cryptantha (SLC)
- *Deinandra bacigalupii* - Livermore tarplant (SC)
- *Delphinium californicum* ssp. *interius* - interior California (Hospital Canyon) larkspur (SC)
- *Delphinium recurvatum* - recurved larkspur (SC)
- *Dirca occidentalis* - western leatherwood (SLC)
- *Eriogonum caninum* - Tiburon buckwheat (SLC)
- *Eriogonum nudum* var. *decurrens* - Ben Lomond buckwheat (= naked buckwheat) (SC)
- *Eryngium racemosum* - delta coyote-thistle (=button-celery) (CA)
- *Eschscholzia rhombipetala* - diamond-petaled California poppy (SC)
- *Fritillaria agrestis* - stinkbells (SLC)
- *Fritillaria liliacea* - fragrant fritillary (= prairie bells) (SC)
- *Galium andrewsii* ssp. *gatense* - serpentine bedstraw (SLC)

- *Helianthella castanea* - Diablo *helianthella* (=rock-rose) (SC)
- *Hemizonia parryi* ssp. *congdonii* - Congdon's tarplant (SC)
- *Hesperolinon breweri* - Brewer's dwarf-flax (=western flax) (SC)
- *Hoita strobilina* - Loma Prieta *hoita* (SC)
- *Isocoma arguta* - Carquinez goldenbush (SC)
- *Juglans californica* var. *hindsii* - Northern California black walnut (SC)
- *Lathyrus jepsonii* var. *jepsonii* - delta tule-pea (SC)
- *Lilaeopsis masonii* - Mason's *lilaeopsis* (SC)
- *Madia radiata* - showy (=golden) *madia* (SC)
- *Malacothamnus hallii* (=M. *fasciculatus*) - Hall's bush mallow (SLC)
- *Meconella oregana* - Oregon *meconella* (=white fairypoppy) (SC)
- *Monardella villosa* ssp. *globosa* - robust *monardella* (=robust coyote mint) (SLC)
- *Myosurus minimus* ssp. *apus* - little mousetail (SC)
- *Perideridia gairdneri* ssp. *gairdneri* - Gairdner's yampah (SC)
- *Phacelia phacelioides* - Mt. Diablo *phacelia* (SC)
- *Sanicula saxatilis* - rock sanicle (SC)
- *Spartina foliosa* - Pacific cordgrass (=California cordgrass) (SLC)
- *Streptanthus albidus* ssp. *peramoenus* - most beautiful (uncommon) jewelflower (SC)
- *Streptanthus hispidus* - Mt. Diablo jewelflower (SC)
- *Triquetrella californica* - California *triquetrella* moss (SLC)
- *Tropidocarpum capparideum* - caper-fruited *tropidocarpum* (SC)

Key:

(E) Endangered - Listed (in the Federal Register) as being in danger of extinction.

(T) Threatened - Listed as likely to become endangered within the foreseeable future.

(P) Proposed - Officially proposed (in the Federal Register) for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Marine Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.

(C) Candidate - Candidate to become a proposed species.

(CA) Listed by the State of California but not by the Fish & Wildlife Service.

(D) Delisted - Species will be monitored for 5 years.

(SC) Species of Concern/(SLC) Species of Local Concern - Other species of concern to the Sacramento Fish & Wildlife Office.

(X) Critical Habitat designated for this species

## Important Information About Your Species List

### How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey [7½ minute quads](#). The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.

Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.

Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

## **Plants**

Any plants on your list are ones that have actually been observed in the quad or quads covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the nine surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

## **Surveying**

Some of the species on your list may not be affected by your project. A trained biologist or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

## **State-Listed Species**

If a species has been listed as threatened or endangered by the State of California, but not by us nor by the National Marine Fisheries Service, it will appear on your list as a Species of Concern. However you should contact the California Department of Fish and Game [Wildlife and Habitat Data Analysis Branch](#) for official information about these species.

## **Your Responsibilities Under the Endangered Species Act**

All plants and animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service.

During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.

If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

### **Critical Habitat**

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [critical habitat page](#) for maps.

### **Candidate Species**

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

### **Species of Concern**

Your list may contain a section called Species of Concern. This is an informal term that refers to those species that the Sacramento Fish and Wildlife Office believes might be in need of concentrated conservation actions. Such conservation actions vary depending on the health of the populations and degree and types of threats. At one extreme, there may only need to be periodic monitoring of populations and threats to the species and its habitat. At the other extreme, a species may need to be listed as a Federal threatened or endangered species. Species of concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species.

### **Wetlands**

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

### **Updates**

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed, candidate and special concern species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be November 11, 2004.

**Federal Endangered And Threatened Species (Listed, Proposed, And  
Candidates) That Occur In Or May Be Affected  
Livermore (446A) & Dublin (446B) Quads/Alameda & Contra Costa  
Counties<sup>1</sup>**

**Listed Species**

Invertebrates

- Critical habitat, vernal pool invertebrates (X)
- *Apodemia mormo langei* - Lange's metalmark butterfly (E)
- *Branchinecta conservatio* - Conservancy fairy shrimp (E)
- *Branchinecta longiantenna* - longhorn fairy shrimp (E)
- *Branchinecta lynchi* - Critical habitat, vernal pool fairy shrimp (X)
- *Branchinecta lynchi* - vernal pool fairy shrimp (T)
- *Desmocerus californicus dimorphus* - valley elderberry longhorn beetle (T)
- *Euphydryas editha bayensis* - bay checkerspot butterfly (T)
- *Lepidurus packardi* - Critical habitat, vernal pool tadpole shrimp (X)
- *Lepidurus packardi* - vernal pool tadpole shrimp (E)
- *Speyeria callippe callippe* - callippe silverspot butterfly (E)

Fish

- *Eucyclogobius newberryi* - tidewater goby (E)
- *Hypomesus transpacificus* - Critical habitat, delta smelt (T)
- *Hypomesus transpacificus* - delta smelt (T)
- *Oncorhynchus kisutch* - coho salmon - central CA coast (T) (NMFS)
- *Oncorhynchus mykiss* - Central California Coastal steelhead (T) (NMFS)
- *Oncorhynchus mykiss* - Central Valley steelhead (T) (NMFS)
- *Oncorhynchus tshawytscha* - Central Valley spring-run chinook salmon (T) (NMFS)
- *Oncorhynchus tshawytscha* - Critical habitat, winter-run chinook salmon (E) (NMFS)
- *Oncorhynchus tshawytscha* - winter-run chinook salmon (E) (NMFS)

Amphibians

- *Ambystoma californiense* - California tiger salamander (T)
- *Rana aurora draytonii* - California red-legged frog (T)

Reptiles

- *Masticophis lateralis euryxanthus* - Alameda whipsnake (T)
- *Masticophis lateralis euryxanthus* - Critical habitat, Alameda whipsnake (T)
- *Thamnophis gigas* - giant garter snake (T)

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<sup>1</sup> Compiled from list obtained on the USFWS - Sacramento Fish and Wildlife Office website on August 28, 2004  
([http://sacramento.fws.gov/es/spp\\_lists/auto\\_list\\_form.cfm](http://sacramento.fws.gov/es/spp_lists/auto_list_form.cfm)); database last updated on August 11, 2004.

### Birds

- *Charadrius alexandrinus nivosus* - western snowy plover (T)
- *Haliaeetus leucocephalus* - bald eagle (T)
- *Pelecanus occidentalis californicus* - California brown pelican (E)
- *Rallus longirostris obsoletus* - California clapper rail (E)
- *Sterna antillarum* (=albifrons) *browni* - California least tern (E)

### Mammals

- *Neotoma fuscipes riparia* - riparian (San Joaquin Valley) woodrat (E)
- *Reithrodontomys raviventris* - salt marsh harvest mouse (E)
- *Sylvilagus bachmani riparius* - riparian brush rabbit (E)
- *Vulpes macrotis mutica* - San Joaquin kit fox (E)

### Plants

- Critical habitat, vernal pool plants (X)
- *Amsinckia grandiflora* - large-flowered fiddleneck (E)
- *Arctostaphylos pallida* - pallid manzanita (=Alameda or Oakland Hills manzanita) (T)
- *Chorizanthe robusta* var. *robusta* - robust spineflower (E)
- *Clarkia franciscana* - Presidio clarkia (E)
- *Cordylanthus mollis* ssp. *mollis* - soft bird's-beak (E)
- *Cordylanthus palmatus* - palmate-bracted bird's-beak (E)
- *Erysimum capitatum* ssp. *angustatum* - Contra Costa wallflower (E)
- *Erysimum capitatum* ssp. *angustatum* - Critical Habitat, Contra Costa wallflower (E)
- *Holocarpha macradenia* - Critical habitat, Santa Cruz tarplant (T)
- *Holocarpha macradenia* - Santa Cruz tarplant (T)
- *Lasthenia conjugens* - Contra Costa goldfields (E)
- *Oenothera deltooides* ssp. *howellii* - Antioch Dunes evening-primrose (E)
- *Oenothera deltooides* ssp. *howellii* - Critical habitat, Antioch Dunes evening-primrose (E)
- *Suaeda californica* - California sea blite (E)
- *Trifolium amoenum* - showy Indian clover (E)

### **Proposed Species**

#### Amphibians

- *Ambystoma californiense* - Critical habitat, CA tiger salamander - Central Valley population (PX)
- *Rana aurora draytonii* - Critical habitat, California red-legged frog (Proposed) (PX)

### **Candidate Species**

#### Fish

- *Acipenser medirostris* - green sturgeon (C)
- *Oncorhynchus tshawytscha* - Central Valley fall/late fall-run chinook salmon (C) (NMFS)

- *Oncorhynchus tshawytscha* - Critical habitat, Central Valley fall/late fall-run chinook (C) (NMFS)



## Species Of Concern That Occur In Or May Be Affected Livermore (446A) & Dublin (446B) Quads/Alameda & Contra Costa Counties<sup>2</sup>

### Invertebrates

- *Adela oplerella* - Opler's longhorn moth (SC)
- *Aegialia concinna* - Ciervo aegialian scarab beetle (SC)
- *Anthicus antiochensis* - Antioch Dunes anthicid beetle (SC)
- *Anthicus sacramento* - Sacramento anthicid beetle (SC)
- *Branchinecta mesovallensis* - Midvalley fairy shrimp (SC)
- *Coelus gracilis* - San Joaquin dune beetle (SC)
- *Cophura hurdi* - Antioch cophuran robberfly (SC)
- *Efferia antiochi* - Antioch efferian robberfly (SC)
- *Helminthoglypta nickliniana bridgesi* - Bridges' Coast Range shoulderband snail (SC)
- *Hydrochara rickseckeri* - Ricksecker's water scavenger beetle (SC)
- *Hygrotus curvipes* - curved-foot hygrotus diving beetle (SC)
- *Idiostatus middlekaufi* - Middlekauf's shieldback katydid (SC)
- *Incisalia mossii marinensis* - Marin elfin butterfly (SC)
- *Linderiella occidentalis* - California linderiella fairy shrimp (SC)
- *Lytta molesta* - molestan blister beetle (SC)
- *Metapogon hurdi* - Hurd's metapogon robberfly (SC)
- *Microcina lumi* - Fairmont (=Lum's) microblind harvestman (SC)
- *Myrmosula pacifica* - Antioch mutillid wasp (SC)
- *Nothochrysa californica* - San Francisco lacewing (SC)
- *Perdita hirticeps luteocincta* - yellow-banded andrenid bee (SC)
- *Perdita scitula antiochensis* - Antioch andrenid bee (SC)
- *Philanthus nasilis* - Antioch sphecid wasp (SC)

### Fish

- *Lampetra ayresi* - river lamprey (SC)
- *Lampetra tridentata* - Pacific lamprey (SC)
- *Pogonichthys macrolepidotus* - Sacramento splittail (SC)
- *Spirinchus thaleichthys* - longfin smelt (SC)

### Amphibians

- *Rana boylei* - foothill yellow-legged frog (SC)
- *Spea hammondi* - western spadefoot toad (SC)

### Reptiles

- *Anniella pulchra pulchra* - silvery legless lizard (SC)
- *Clemmys marmorata marmorata* - northwestern pond turtle (SC)

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<sup>2</sup> Compiled from list obtained on the USFWS - Sacramento Fish and Wildlife Office website on August 28, 2004 ([http://sacramento.fws.gov/es/spp\\_lists/auto\\_list\\_form.cfm](http://sacramento.fws.gov/es/spp_lists/auto_list_form.cfm)); database last updated on August 11, 2004.

- *Clemmys marmorata pallida* - southwestern pond turtle (SC)
- *Masticophis flagellum ruddocki* - San Joaquin coachwhip (=whipsnake) (SC)
- *Phrynosoma coronatum frontale* - California horned lizard (SC)

### Birds

- *Agelaius tricolor* - tricolored blackbird (SC)
- *Amphispiza belli belli* - Bell's sage sparrow (SC)
- *Athene cunicularia hypugaea* - western burrowing owl (SC)
- *Baeolophus inornatus* - oak titmouse (SLC)
- *Botaurus lentiginosus* - American bittern (SC)
- *Branta canadensis leucopareia* - Aleutian Canada goose (D)
- *Buteo regalis* - ferruginous hawk (SC)
- *Buteo Swainsoni* - Swainson's hawk (CA)
- *Calidris canutus* - red knot (SC)
- *Calypte costae* - Costa's hummingbird (SC)
- *Carduelis lawrencei* - Lawrence's goldfinch (SC)
- *Chaetura vauxi* - Vaux's swift (SC)
- *Charadrius montanus* - mountain plover (SC)
- *Contopus cooperi* - olive-sided flycatcher (SC)
- *Cypseloides niger* - black swift (SC)
- *Elanus leucurus* - white-tailed (=black shouldered) kite (SC)
- *Empidonax traillii brewsteri* - little willow flycatcher (CA)
- *Falco peregrinus anatum* - American peregrine falcon (D)
- *Geothlypis trichas sinuosa* - saltmarsh common yellowthroat (SC)
- *Lanius ludovicianus* - loggerhead shrike (SC)
- *Laterallus jamaicensis coturniculus* - black rail (CA)
- *Limosa fedoa* - marbled godwit (SC)
- *Melanerpes lewis* - Lewis' woodpecker (SC)
- *Melospiza melodia maxillaris* - Suisun song sparrow (SC)
- *Melospiza melodia pusillula* - Alameda (South Bay) song sparrow (SC)
- *Melospiza melodia samuelis* - San Pablo song sparrow (SC)
- *Numenius americanus* - long-billed curlew (SC)
- *Numenius phaeopus* - whimbrel (SC)
- *Plegadis chihi* - white-faced ibis (SC)
- *Riparia riparia* - bank swallow (CA)
- *Rynchops niger* - black skimmer (SC)
- *Selasphorus rufus* - rufous hummingbird (SC)
- *Selasphorus sasin* - Allen's hummingbird (SC)
- *Sphyrapicus ruber* - red-breasted sapsucker (SC)
- *Toxostoma redivivum* - California thrasher (SC)

### Mammals

- *Corynorhinus (=Plecotus) townsendii townsendii* - Pacific western big-eared bat (SC)

- *Dipodomys heermanni berkeleyensis* - Berkeley kangaroo rat (SC)
- *Eumops perotis californicus* - greater western mastiff-bat (SC)
- *Myotis ciliolabrum* - small-footed myotis bat (SC)
- *Myotis evotis* - long-eared myotis bat (SC)
- *Myotis thysanodes* - fringed myotis bat (SC)
- *Myotis volans* - long-legged myotis bat (SC)
- *Myotis yumanensis* - Yuma myotis bat (SC)
- *Neotoma fuscipes annectens* - San Francisco dusky-footed woodrat (SC)
- *Perognathus inornatus* - San Joaquin pocket mouse (SC)
- *Scapanus latimanus parvus* - Alameda Island mole (SC)
- *Sorex ornatus sinuosus* - Suisun ornate shrew (SC)
- *Sorex vagrans halicoetes* - salt marsh vagrant shrew (SC)

### Plants

- *Allium sharsmithae* - Sharsmith's onion (SC)
- *Amsinckia lunaris* - bent-flowered fiddleneck (SLC)
- *Arabis blepharophylla* - coast rock-cress (SLC)
- *Aster lentus* - Suisun Marsh aster (SC)
- *Astragalus tener* var. *tener* - alkali milk-vetch (SC)
- *Atriplex cordulata* - heartscale (SC)
- *Atriplex depressa* - brittlescale (SC)
- *Atriplex joaquiniana* - San Joaquin spearscale (=saltbush) (SC)
- *Balsamorhiza macrolepis* var. *macrolepis* - big-scale (=California) balsamroot (SLC)
- *Blepharizonia plumosa* ssp. *plumosa* - big tarplant (SC)
- *Campanula exigua* - chaparral harebell (=bellflower) (SLC)
- *Calochortus pulchellus* - Mt. Diablo fairy-lantern (SLC)
- *Castilleja ambigua* ssp. *ambigua* - salt marsh owl's clover (=johnny-nip) (SLC)
- *Caulanthus coulteri* var. *lemmonii* - Lemmon's jewelflower (SLC)
- *Centromadia* (= *Hemizonia*) *parryi* ssp. *congdonii* - Congdon's tarplant (SC)
- *Chorizanthe cuspidata* var. *cuspidata* - San Francisco Bay spineflower (SC)
- *Cirsium andrewsii* - Franciscan thistle (SC)
- *Cirsium fontinale* var. *campylon* - Mt. Hamilton thistle (SC)
- *Clarkia concinna* ssp. *automixa* - South Bay clarkia (=Santa Clara red ribbons) (SC)
- *Cordylanthus maritimus* ssp. *palustris* - northcoast (=Point Reyes) bird's-beak (SC)
- *Cordylanthus mollis* ssp. *hispidus* - hispid bird's-beak (SC)
- *Cordylanthus nidularius* - Mt. Diablo bird's-beak (SC)
- *Coreopsis hamiltonii* - Mt. Hamilton coreopsis (SC)
- *Croton californicus* - California croton (SLC)
- *Cryptantha hooveri* - Hoover's cryptantha (SLC)
- *Deinandra bacigalupii* - Livermore tarplant (SC)
- *Delphinium californicum* ssp. *interius* - interior California (Hospital Canyon) larkspur (SC)
- *Delphinium recurvatum* - recurved larkspur (SC)
- *Dirca occidentalis* - western leatherwood (SLC)
- *Eriogonum caninum* - Tiburon buckwheat (SLC)

- *Eriogonum nudum* var. *decurrens* - Ben Lomond buckwheat (= naked buckwheat) (SC)
- *Eryngium aristulatum* var. *hooveri* - Hoover's button-celery (SC)
- *Eryngium racemosum* - delta coyote-thistle (=button-celery) (CA)
- *Eschscholzia rhombipetala* - diamond-petaled California poppy (SC)
- *Fritillaria agrestis* - stinkbells (SLC)
- *Fritillaria falcata* - talus fritillary (SC)
- *Fritillaria liliacea* - fragrant fritillary (= prairie bells) (SC)
- *Galium andrewsii* ssp. *gatense* - serpentine bedstraw (SLC)
- *Helianthella castanea* - Diablo helianthella (=rock-rose) (SC)
- *Hesperolinon breweri* - Brewer's dwarf-flax (=western flax) (SC)
- *Hesperolinon serpentinum* - Napa western flax (SC)
- *Hoita strobilina* - Loma Prieta hoita (SC)
- *Horkelia cuneata* ssp. *sericea* - Kellogg's horkelia (SC)
- *Isocoma arguta* - Carquinez goldenbush (SC)
- *Juglans californica* var. *hindsii* - Northern California black walnut (SC)
- *Lathyrus jepsonii* var. *jepsonii* - delta tule-pea (SC)
- *Lilaeopsis masonii* - Mason's lilaeopsis (SC)
- *Linanthus grandiflorus* - large-flowered (=flower) linanthus (SC)
- *Madia radiata* - showy (=golden) madia (SC)
- *Malacothamnus hallii* (= *M. fasciculatus*) - Hall's bush mallow (SLC)
- *Meconella oregana* - Oregon meconella (=white fairypoppy) (SC)
- *Monardella villosa* ssp. *globosa* - robust monardella (=robust coyote mint) (SLC)
- *Myosurus minimus* ssp. *apus* - little mousetail (SC)
- *Navarretia prostrata* - prostrate navarretia (=prostrate pincushionplant) (SC)
- *Perideridia gairdneri* ssp. *gairdneri* - Gairdner's yampah (SC)
- *Phacelia phacelioides* - Mt. Diablo phacelia (SC)
- *Plagiobothrys chorisianus* var. *chorisianus* - Choris's (=artist's) popcorn-flower (SLC)
- *Plagiobothrys diffusus* - San Francisco popcornflower (CA)
- *Plagiobothrys glaber* - hairless allocarya (=popcornflower) (SC)
- *Sanicula maritima* - adobe sanicle (SC)
- *Sanicula saxatilis* - rock sanicle (SC)
- *Spartina foliosa* - Pacific cordgrass (=California cordgrass) (SLC)
- *Streptanthus albidus* ssp. *peramoenus* - most beautiful (uncommon) jewelflower (SC)
- *Streptanthus hispidus* - Mt. Diablo jewelflower (SC)
- *Trifolium depauperatum* var. *hydrophilum* - water sack (=saline) clover (SC)
- *Triquetrella californica* - California triquetrella moss (SLC)
- *Tropidocarpum capparideum* - caper-fruited tropidocarpum (SC)

**APPENDIX F:**  
**LOS ANALYSIS: DETAILED CALCULATIONS**

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# 1 - Dougherty Road/Amador Valley Blvd

Dougherty Road/Amador Valley Blvd - AM Peak

vphpl **1650**

		Southbound											
		Right	Thru	Left	Shared right?								
Vol		648	2238	2									
# lanes		2	4	2	2								
Saturation		3300	6600	3300	3300								
v/c		0.20	0.34	0.00	0.00								
		V/C = <b>0.515</b>											
Eastbound	Left	433	2	3300	0.13			0.00	1650	2	1	Right	
	Thru		1	1650	0.00			0.00	1650		1	Thru	Westbound
	Right	950	2	3300	0.29			0.01	3300	27	2	Left	
	Shared Rt?											Sh. Rt?	
		0.03	0.17	0.04									
Saturation		3300	6600	1650									
Vol		99	1138	72									
# lanes		2	4	1									
		Left	Thru	Right	Shared Rt?								
		Northbound											

Dougherty Road/Amador Valley Blvd - PM Peak

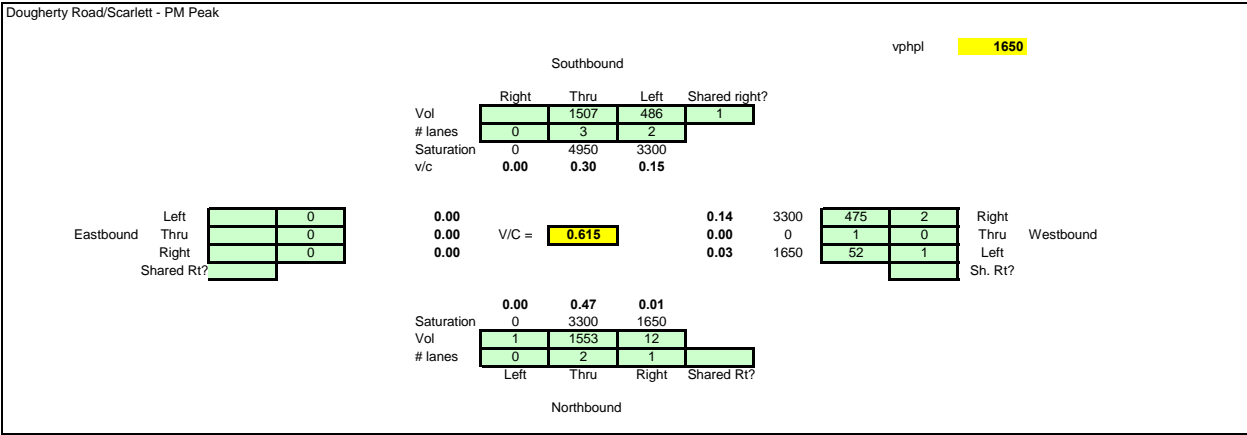
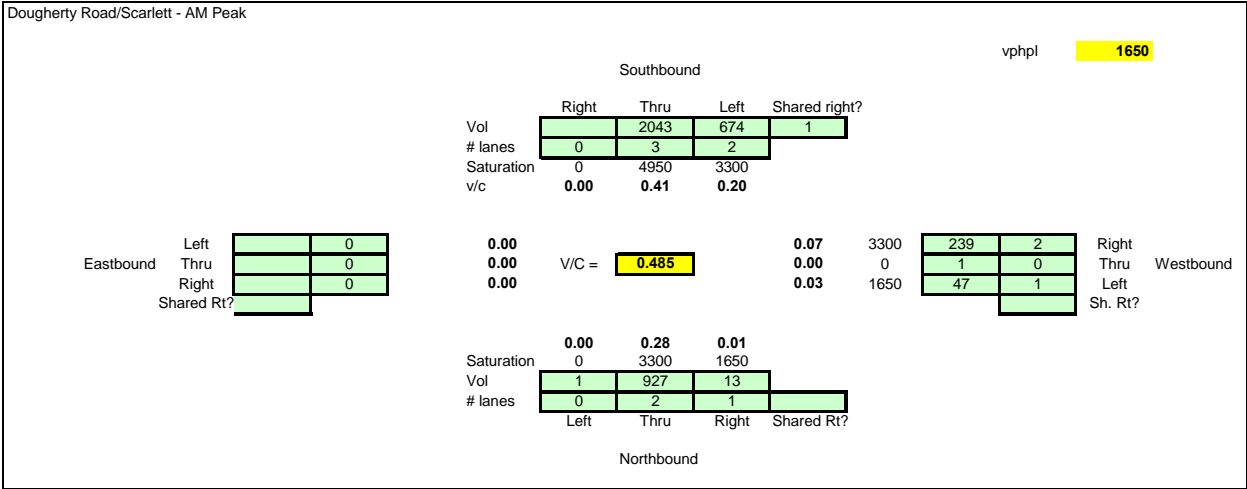
vphpl **1650**

		Southbound											
		Right	Thru	Left	Shared right?								
Vol		600	1785	8									
# lanes		2	4	2	2								
Saturation		3300	6600	3300	3300								
v/c		0.18	0.27	0.00	0.00								
		V/C = <b>0.706</b>											
Eastbound	Left	622	2	3300	0.19			0.00	1650	2	1	Right	
	Thru		1	1650	0.00			0.00	1650	0	1	Thru	Westbound
	Right	485	2	3300	0.15			0.02	3300	76	2	Left	
	Shared Rt?											Sh. Rt?	
		0.24	0.33	0.02									
Saturation		3300	6600	1650									
Vol		794	2207	27									
# lanes		2	4	1									
		Left	Thru	Right	Shared Rt?								
		Northbound											

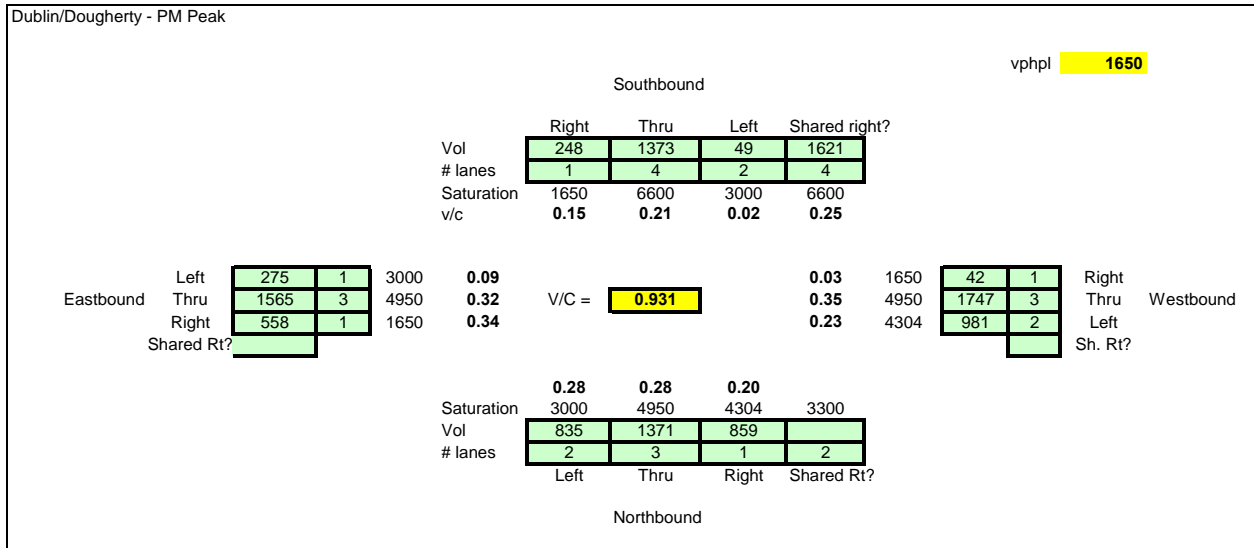
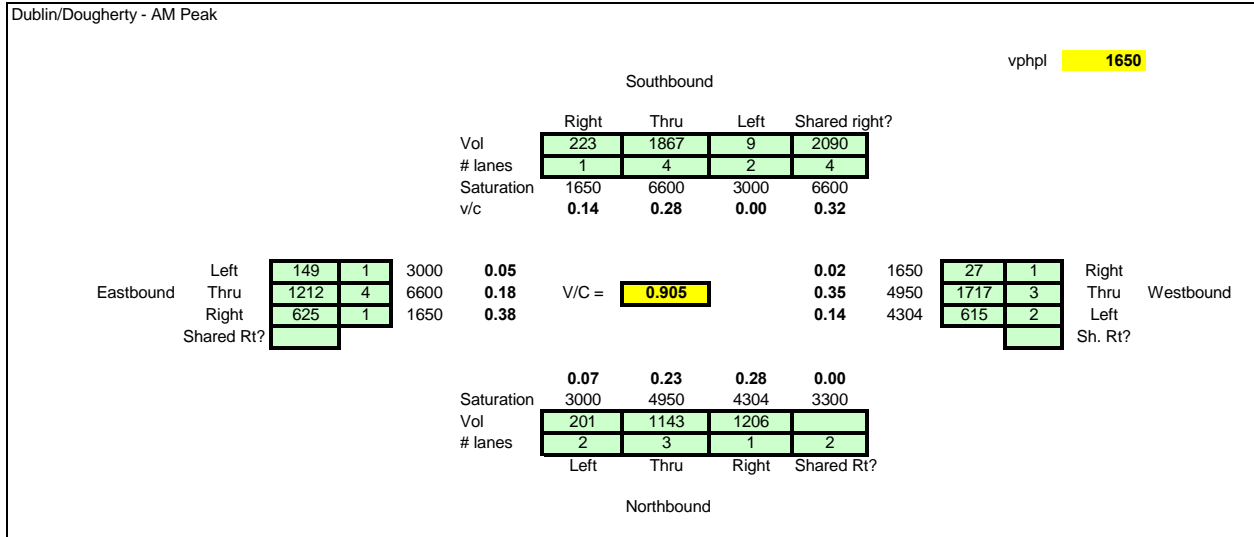




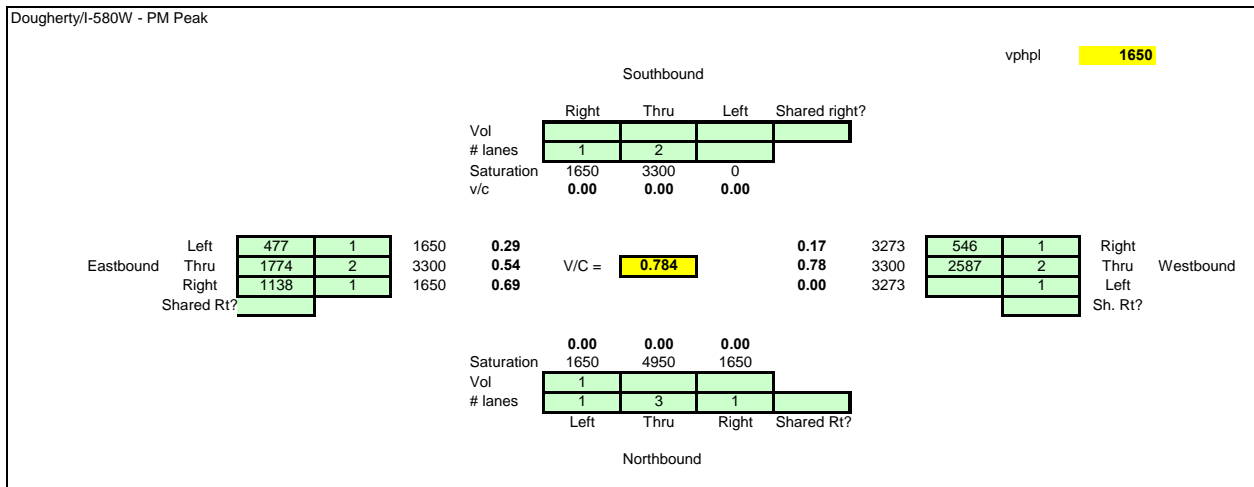
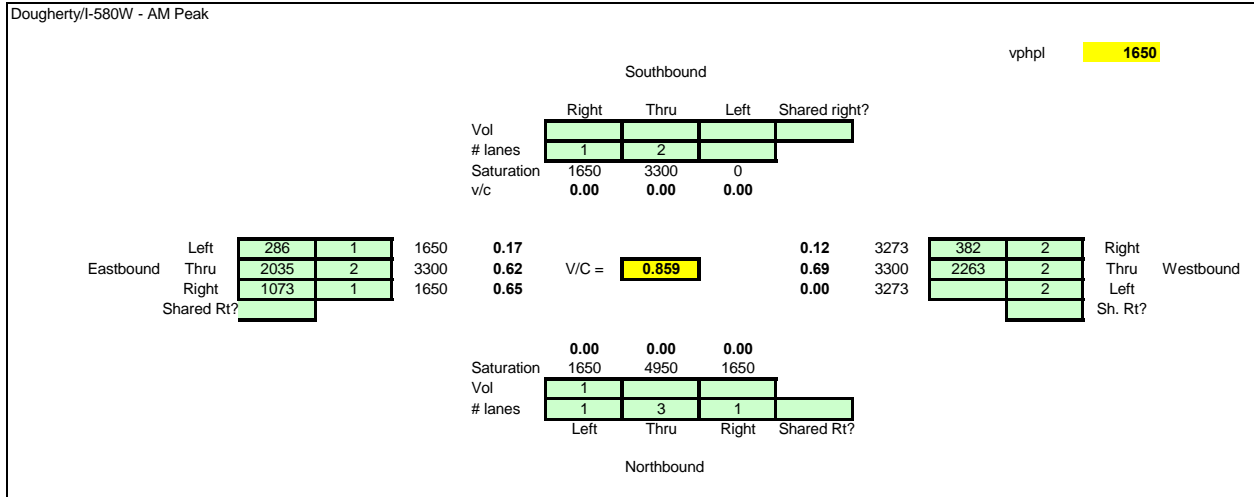
### 3 - Dougherty Road/Scarlett Drive



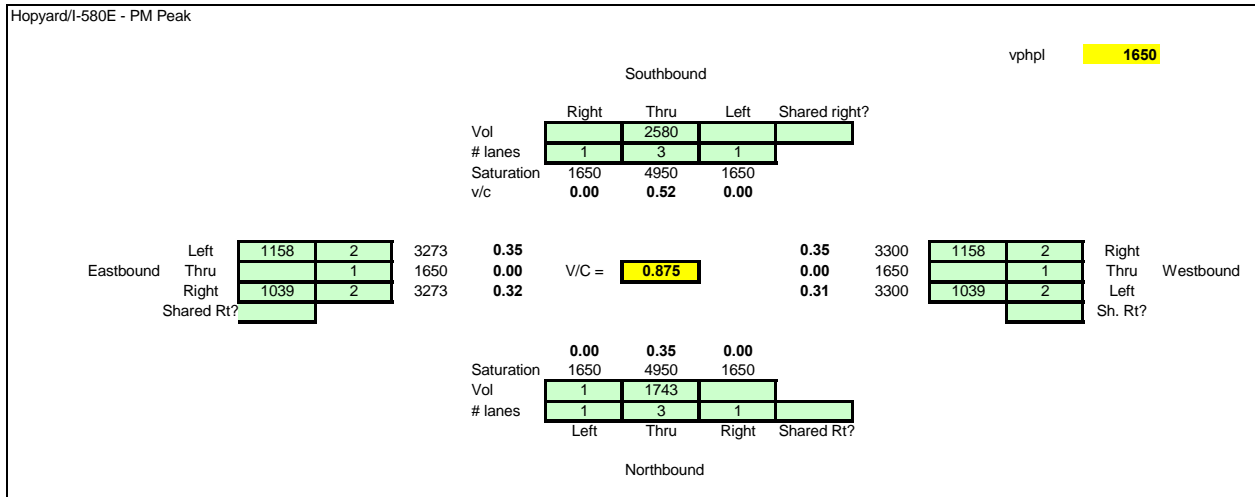
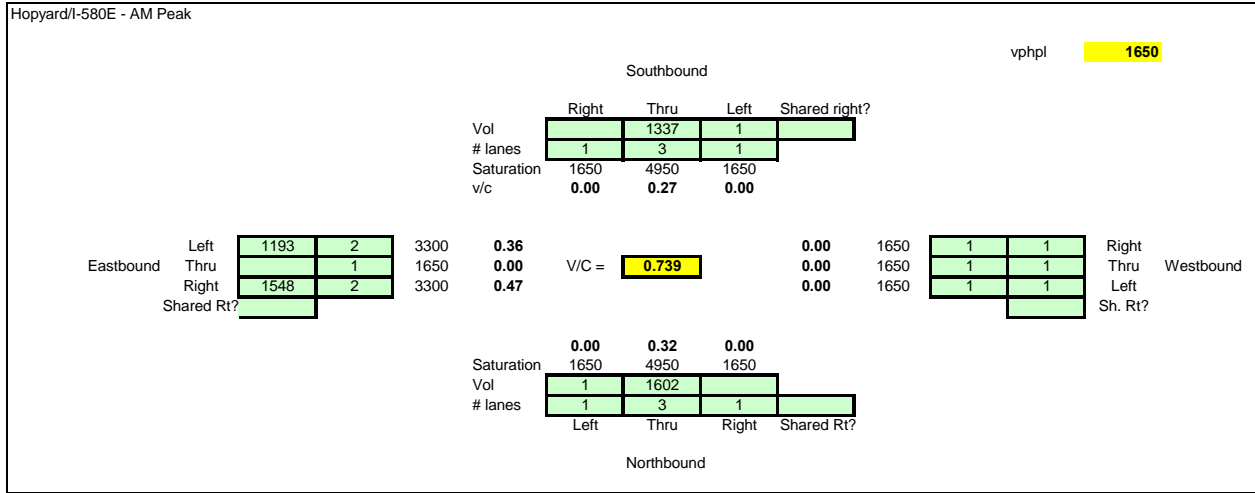
### 4 - Dougherty Road/Dublin Boulevard



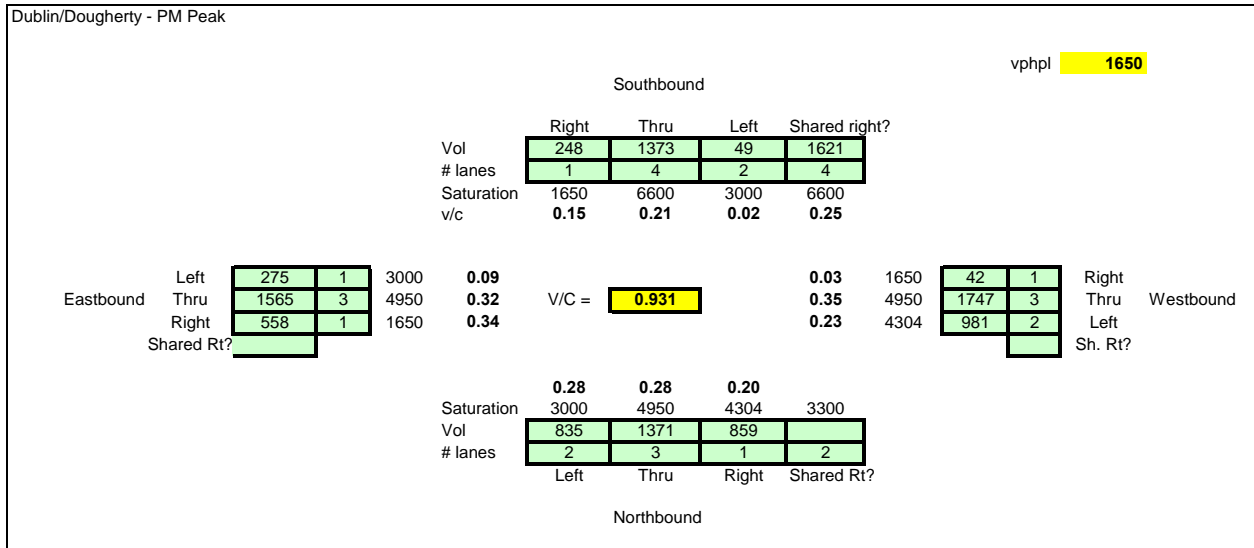
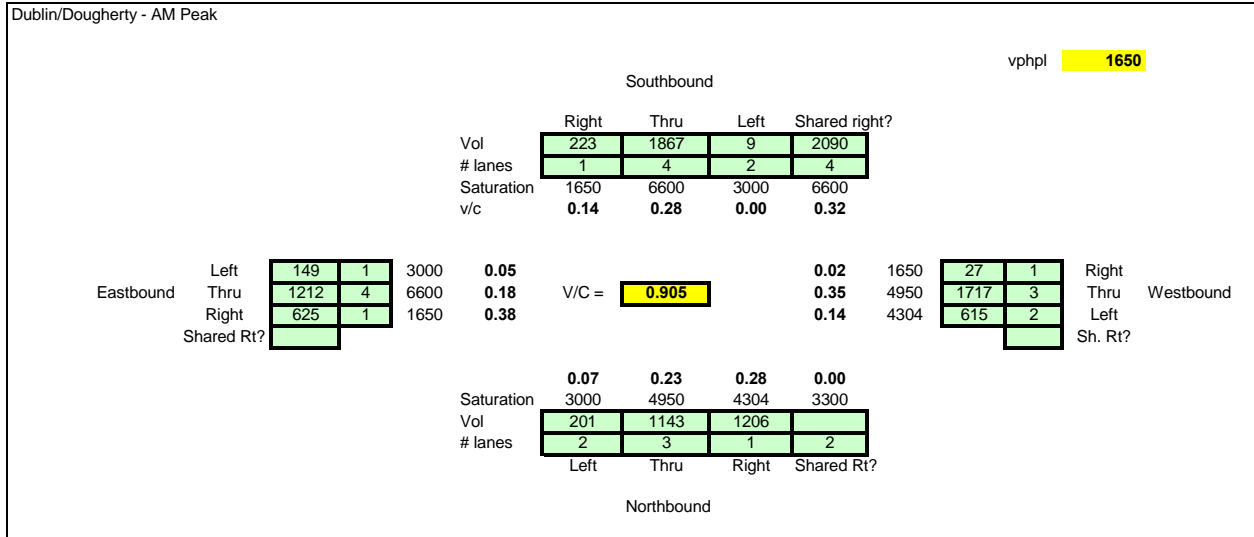
### 5 - Dougherty Road/I-580 WB ramp



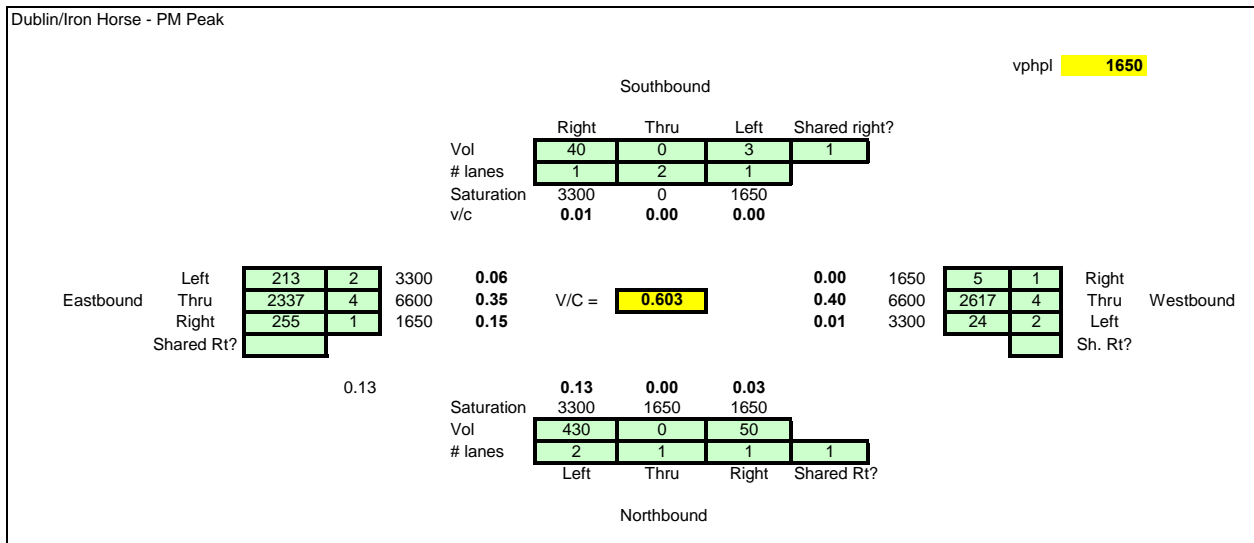
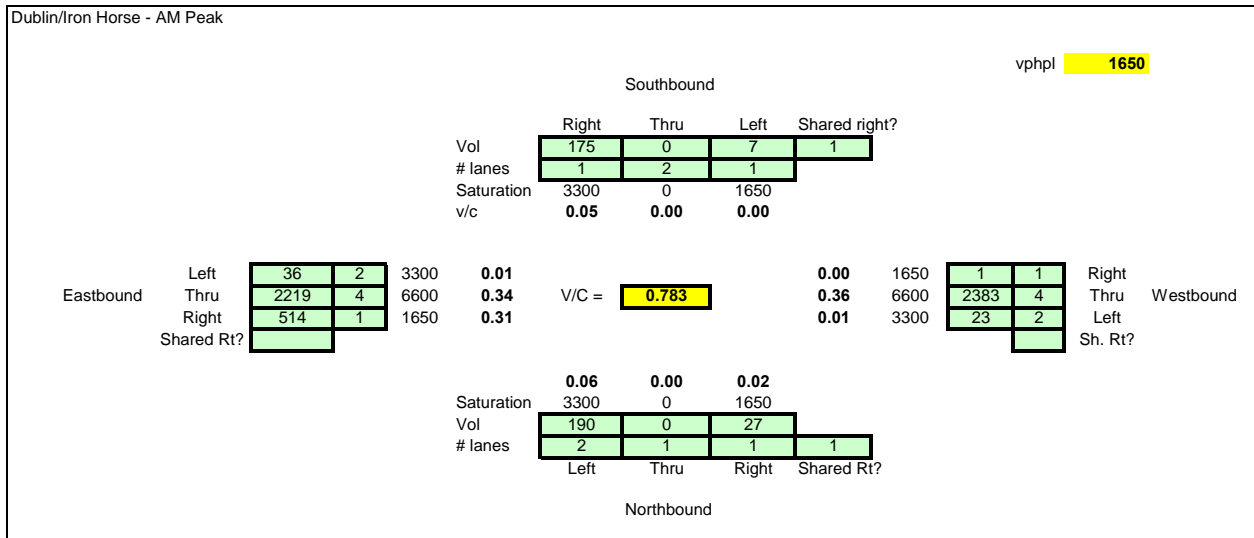
### 6 - Hopyard Road/I-580 EB ramp



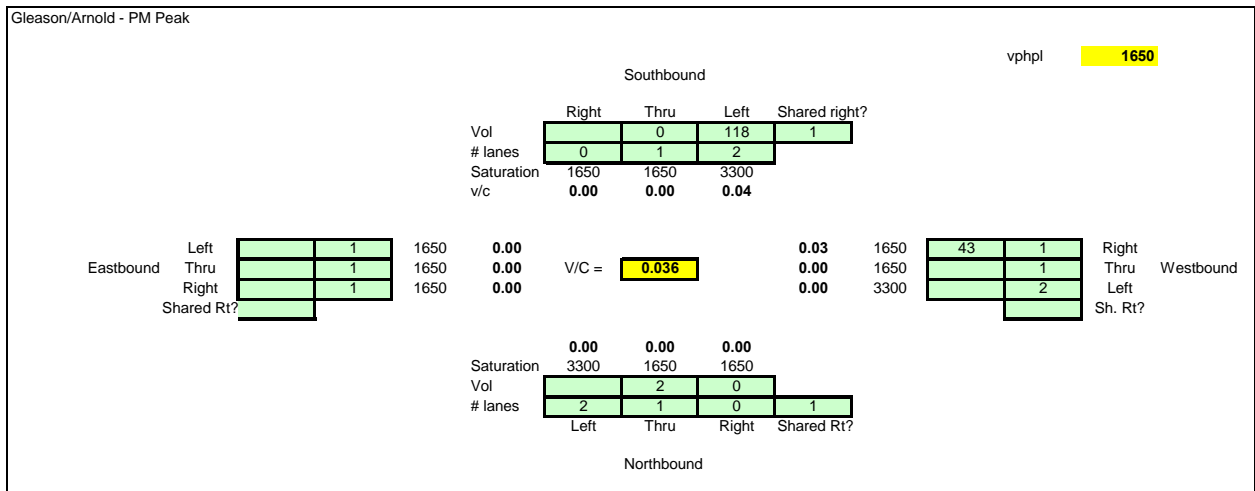
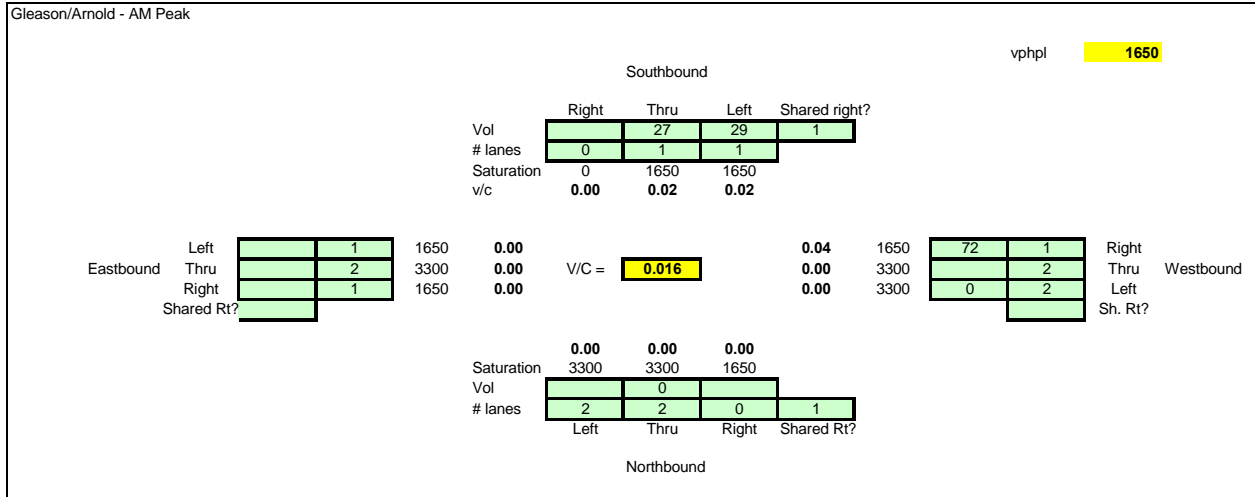
### 4 - Dougherty Road/Dublin Boulevard



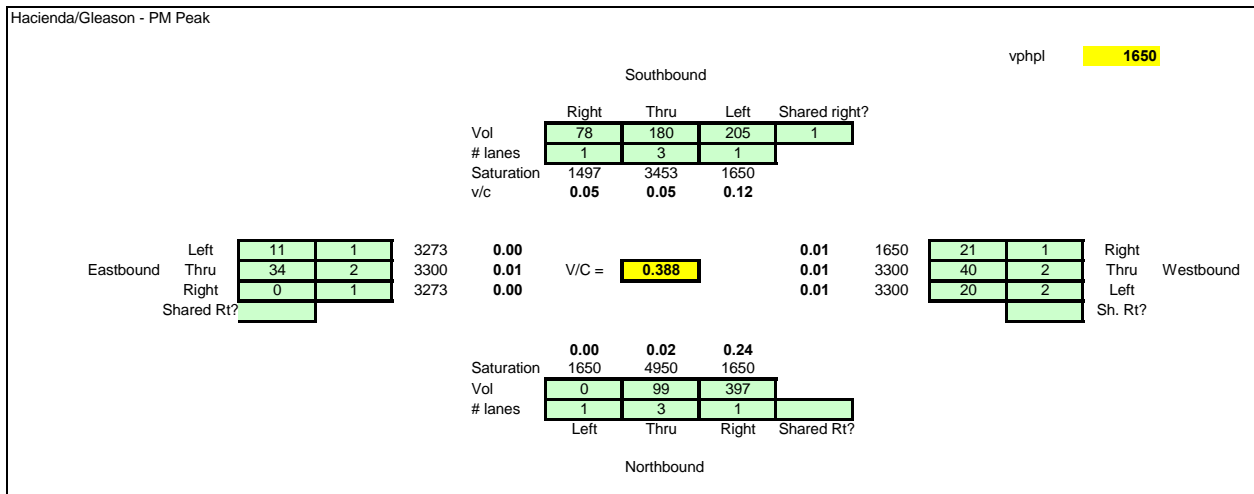
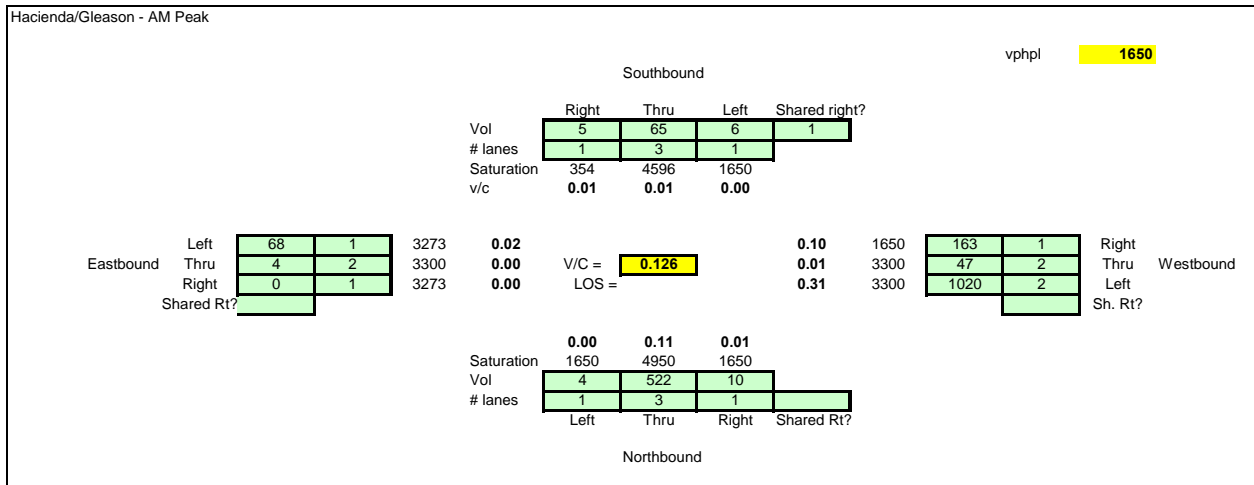
### 8 - Dublin Boulevard/Iron Horse Parkway



### 9 - Arnold Road/Gleason Drive

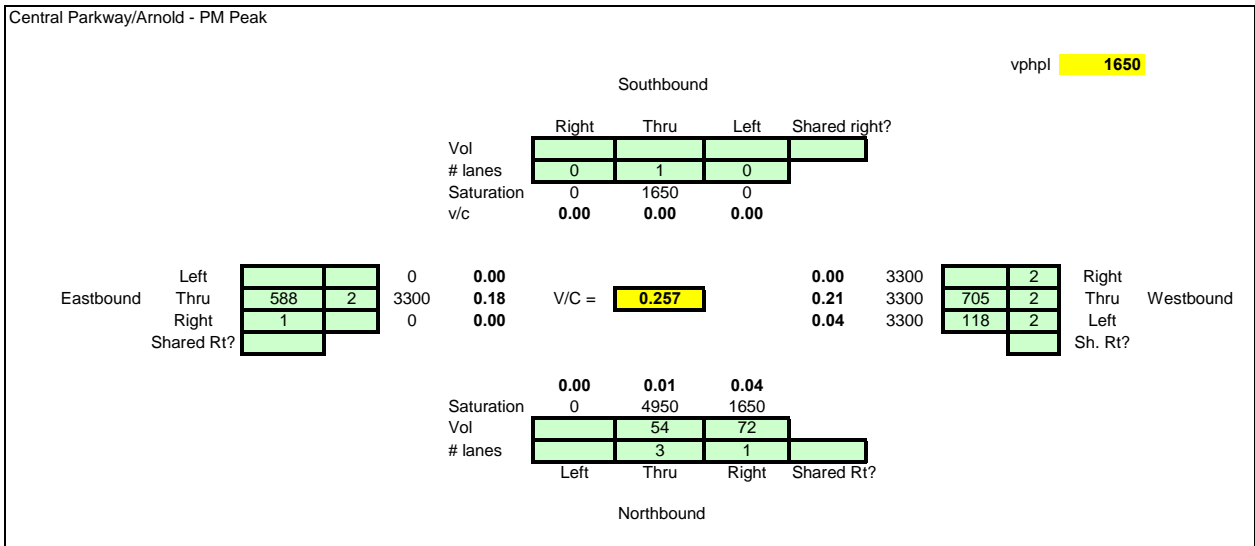
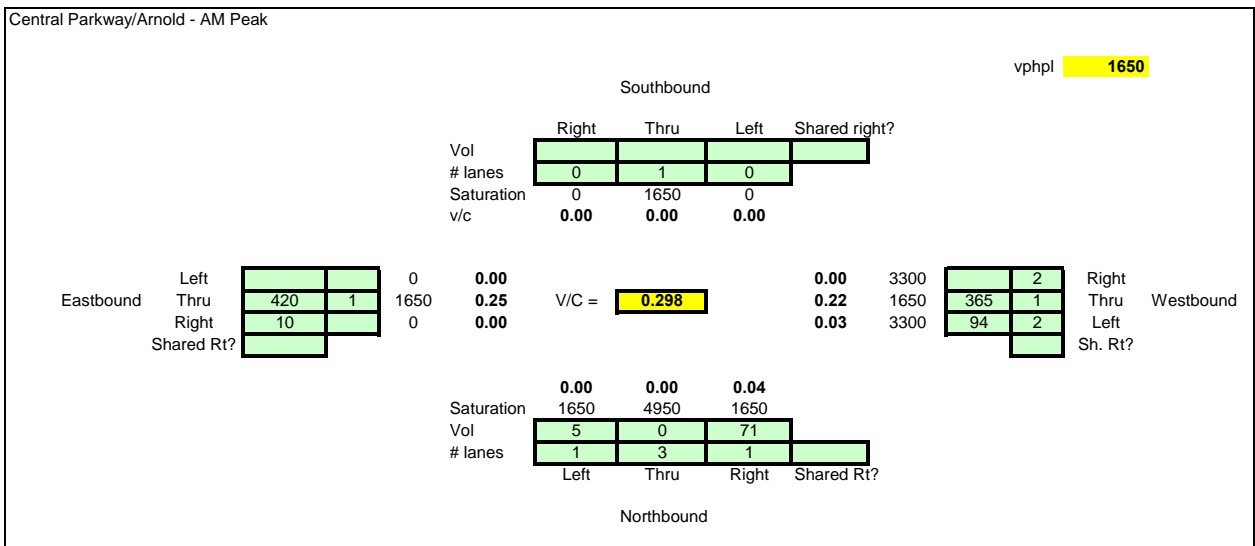


### 10 - Hacienda Drive/Gleason Drive



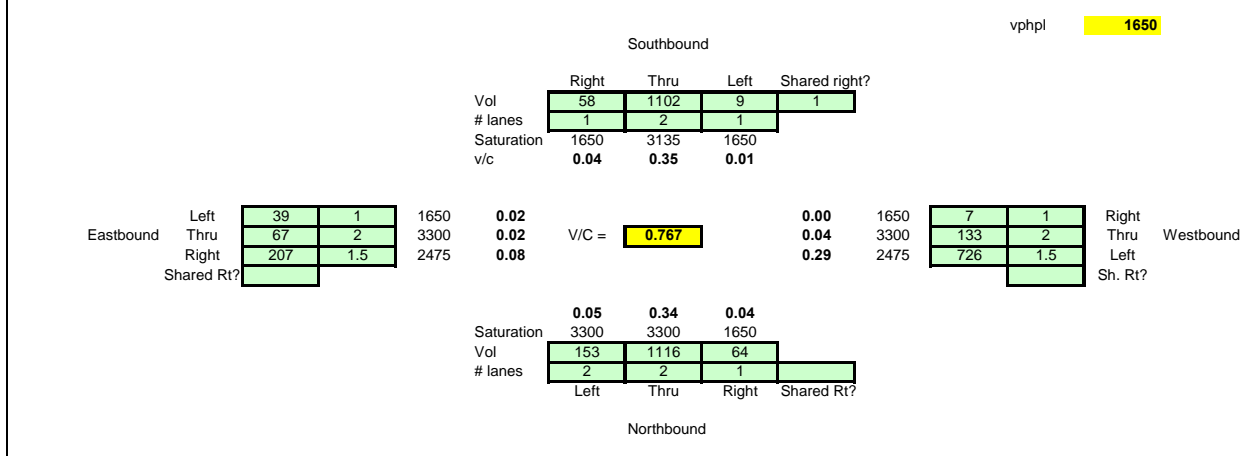


### 11 - Arnold Road/Central Parkway

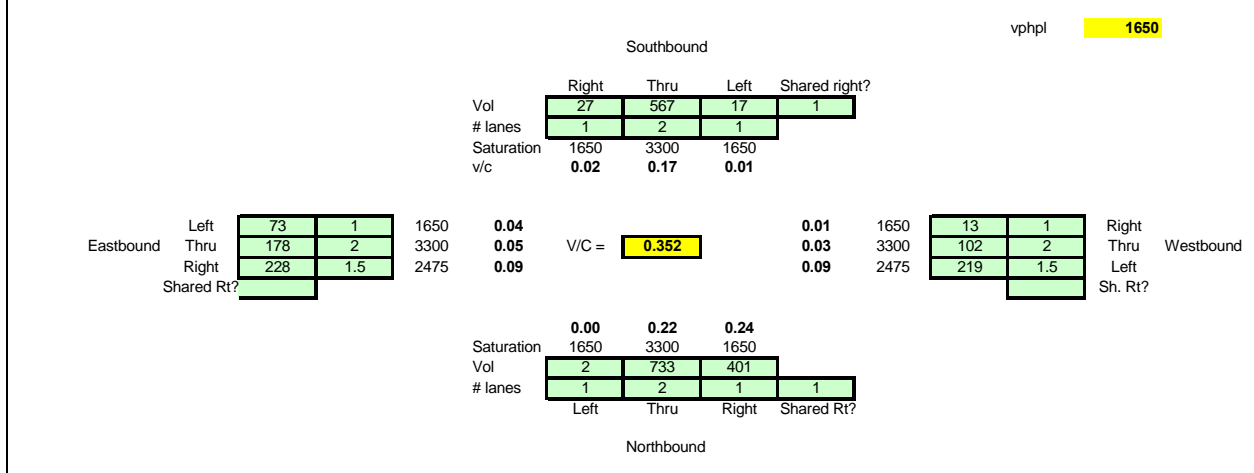


## 12 - Hacienda Drive/Central Parkway

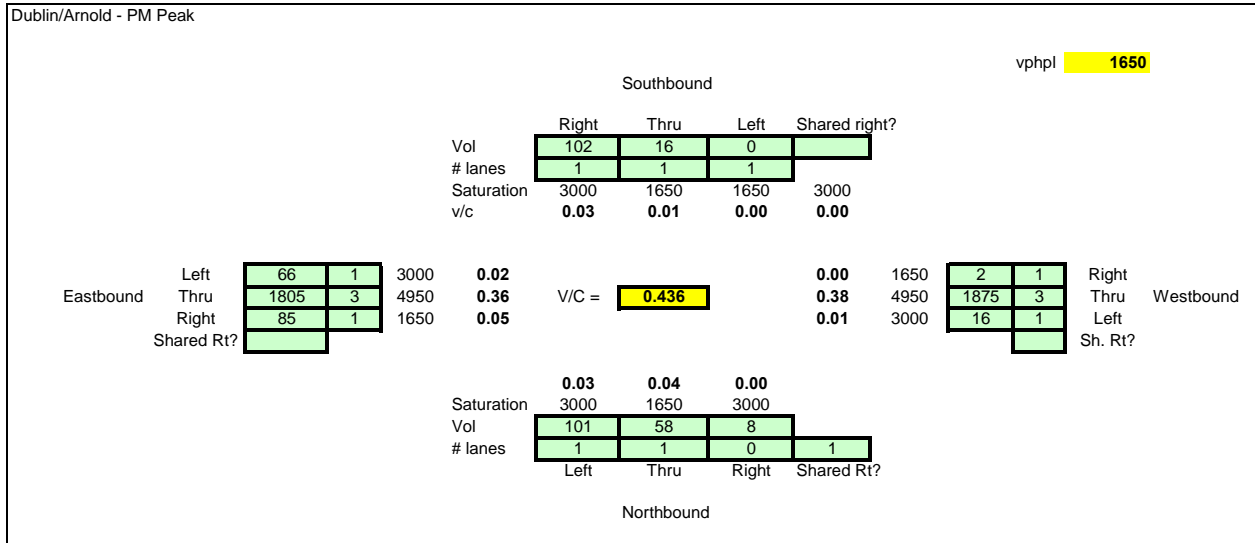
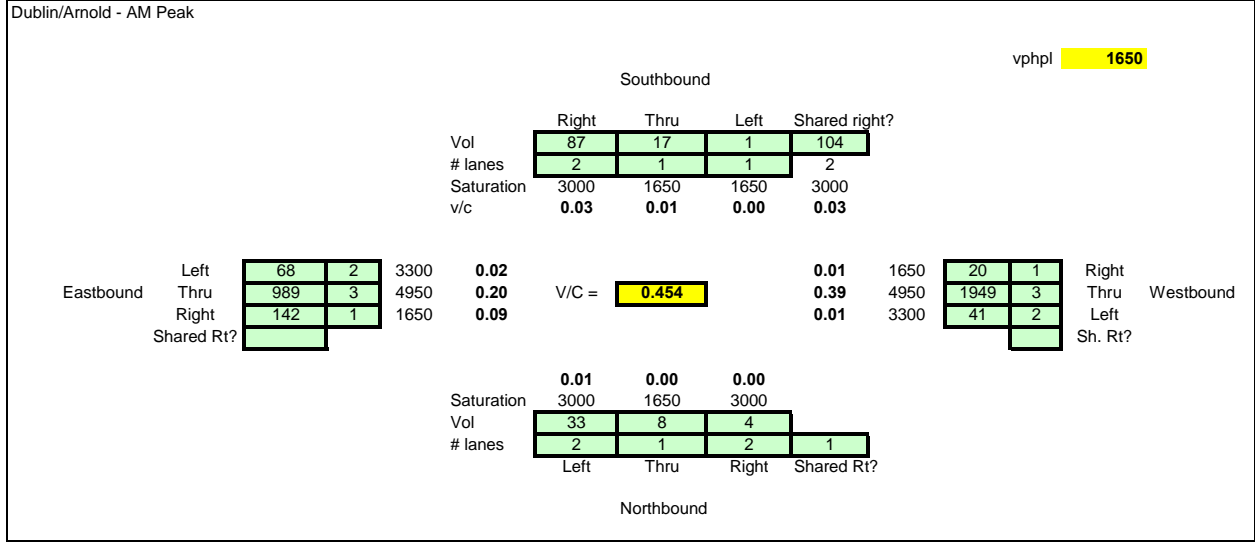
Hacienda Dr./Central Parkway - AM Peak



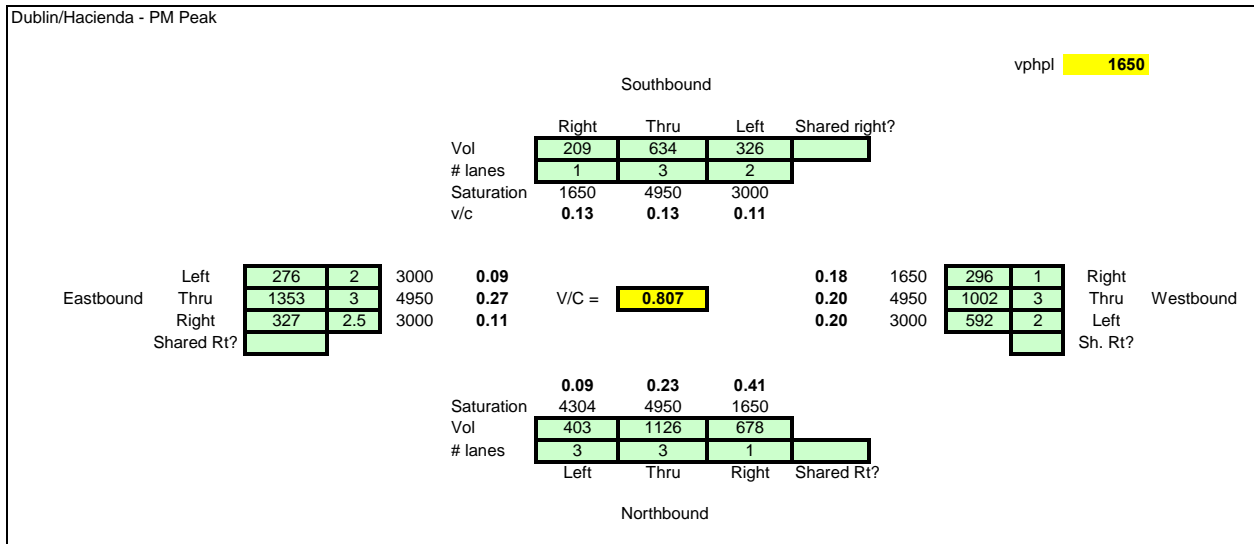
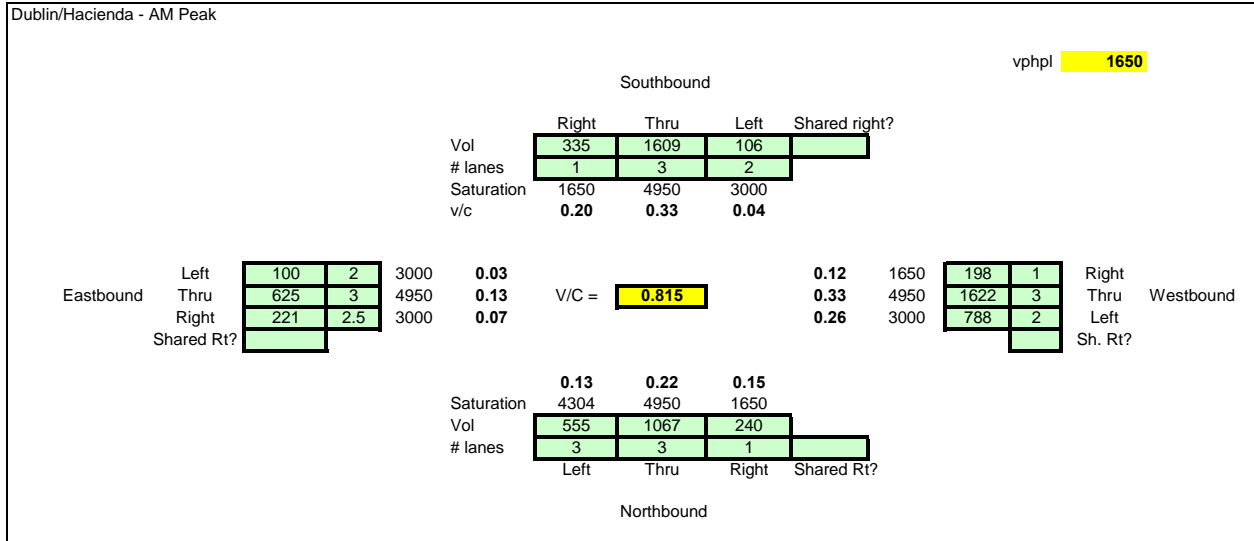
Hacienda Dr./Central Parkway - PM Peak



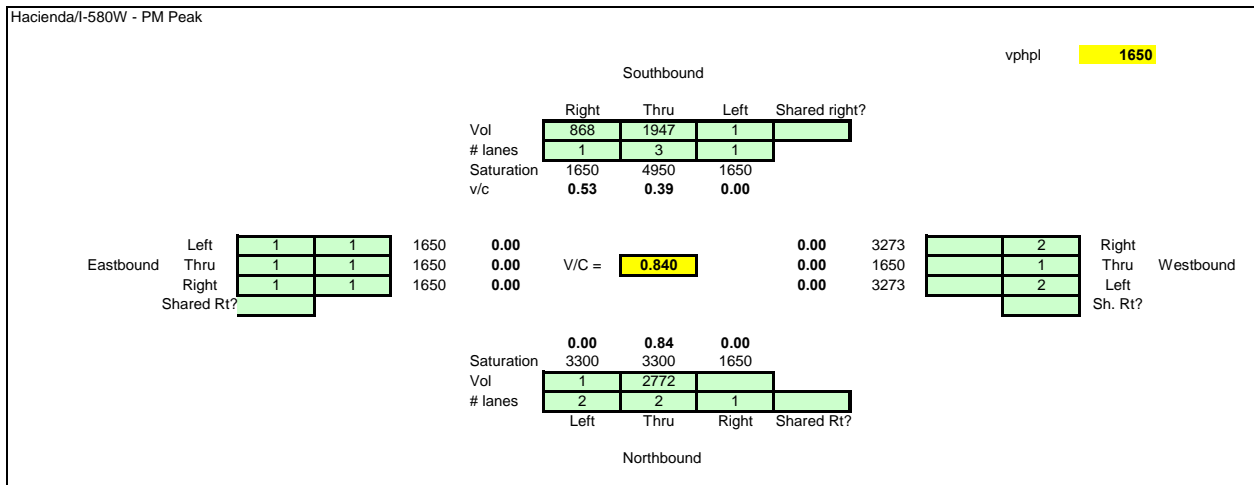
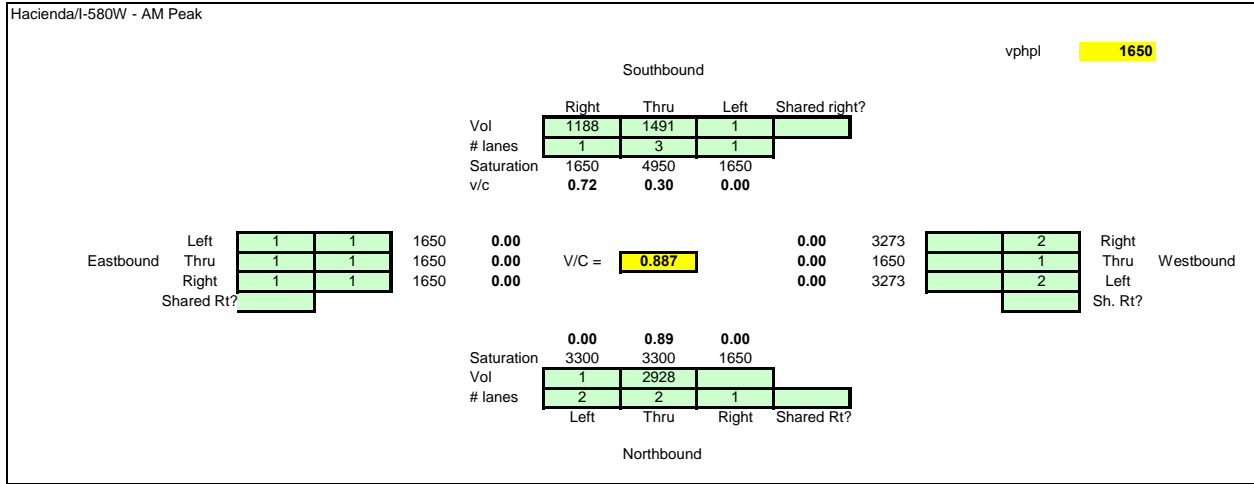
### 13 - Dublin Boulevard/Arnold Road



### 14 - Dublin Boulevard/Hacienda Drive



### 15 - Hacienda Drive/I-580 WB ramp



### 16 - Hacienda Drive/I-580 EB ramp

