

APPENDIX D

Special-Status Plants and Species

APPENDIX D
SPECIAL-STATUS SPECIES CONSIDERED FOR THE
SOQUEL CREEK WELL MASTER PLAN EIR PROJECT AREA

Common Name <i>Scientific Name</i>	Listing Status USFWS/ CDFG/CNPS ^b	Habitat Requirements	Potential to Occur in Project Area	Period of Identification / Flowering Period
Invertebrates				
Ohlonge tiger beetle <i>Cicindela ohlonge</i>	FE/--	Coastal terraces supporting remnant patches of native grassland habitat with California oatgrass and purple needlegrass in Santa Cruz County.	Low Potential. Recorded in Moore Creek north of Santa Cruz northwest of O'Neill Ranch Site (CDFG, 2008); project area does not provide suitable habitat.	January-April
Smith's blue butterfly <i>Euphilotes enoptes smithi</i>	FE/--	Coastal dune and sage scrub habitats; <i>Erigeron latifolium</i> and <i>Erigeron parvifolium</i> used as host and food plants.	Low Potential. Suitable habitat not present in project area.	June-September
Mount Hermon june beetle <i>Polyphylla barbata</i>	FE/--	Sand hills in the vicinity of Mount Hermon.	Low Potential. Suitable habitat not present in project area.	Summer
Zayante band-winged grasshopper <i>Trimerotropis infantilis</i> Critical habitat designated	FE/--	Zayante Sand Hill System	Low Potential. No occurrences in project area, not likely to occur in project area.	--
Fish				
Tidewater goby <i>Eucyclogobius newberryi</i>	FE/CSC	Occurs in shallow waters of bays and estuaries.	Moderate Potential. Recorded in Moore Creek, Woods Lagoon, Rodeo Gulch, Aptos Creek, Soquel Creek, all from mouth to 1 mi upstream (CDFG, 2008); may occur in Granite Way – Aptos Village project area.	Year-round
Central California coast coho salmon ESU ^c <i>Oncorhynchus kisutch</i>	--/CE	Rivers and creeks from Punta Gorda south to the San Lorenzo River ^d .	Low Potential. Last reported in Aptos Creek in 1973 (Hagar Environmental Science, 2003) and in Soquel Creek in 1992 (Alley and Associates, 2003); currently believed to be absent but creeks adjacent to Granite Way – Aptos Village and Polo Grounds project areas provide potential habitat.	Winter
Central California coast steelhead ESU <i>Oncorhynchus mykiss</i>	FT/CSC	Coastal rivers and creeks from Russian River to Aptos Creek.	High Potential. Recorded in Aptos Creek, Soquel Creek, and Valencia Creek watersheds (CDFG, 2008); may occur in O'Neill Ranch, Cunnison Lane, Granite Way, Aptos Village, and Polo Grounds project areas.	Year-round
South/Central California coast steelhead ESU <i>Oncorhynchus mykiss irideus</i>	FT/CSC	Coastal rivers and creeks from the Pajaro river to, but not including, the Santa Maria river.	Low Potential. No records in project area; not likely to occur in project area.	Year-round

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Amphibians				
California tiger salamander <i>Ambystoma californiense</i>	FT/CSC	Annual grasslands and grassy understory of valley-foothill hardwood habitats in central and Northern California. Needs underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	Low Potential. No records in project area; no suitable habitat in project area.	November-May
Santa Cruz long-toed salamander <i>Ambystoma macrodactylum croceum</i>	FE/CE	Wet meadows near sea level in a few restricted locales in Santa Cruz and Monterey counties. Aquatic larvae prefer shallow (<12 inches) freshwater, using clumps of vegetation or debris for cover. Adults use mammal burrows.	Low Potential. No records in project area; no suitable habitat in project area.	November-May
California red-legged frog <i>Rana draytonii</i>	FT/CSC	Mostly in lowlands and foothills in/near permanent sources of deep freshwater, but will disperse far during and after rain. Prefers shorelines with extensive vegetation. Requires 11-20 weeks of permanent water for larval development.	Moderate Potential. Recorded in Soquel Creek, (CDFG, 2008); may occur in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	May-November
Reptiles				
San Francisco garter snake <i>Thamnophis sirtalis tetrataenia</i>	FE/CE	Freshwater ponds and slow streams with emergent vegetation; nearby grasslands with rodent burrows may provide habitat.	Low Potential. Suitable habitat not present in project area.	Year-round
Birds				
Marbled murrelet <i>Brachyramphus marmoratus</i> Critical habitat designated	FT/CE	Nests in dense, old growth forests along coast.	Low Potential. Suitable habitat not present in project area.	Year-round
yellow-billed cuckoo <i>Coccyzus americanus</i>	FC/CE	Nests in dense willow and cottonwood riparian areas along lower areas of large rivers.	Low Potential. Suitable habitat not present in project area.	Spring-Summer
Plants				
Ben Lomond spineflower <i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	FE /--/List 1B.1	Endemic to coarse sands in maritime ponderosa pine sandhills habitat.	Low Potential. Suitable habitat does not occur in the project area.	April-July
Monterey spineflower <i>Chorizanthe pungens</i> var. <i>pungens</i> Critical habitat designated	FT/--/ List 1B.2	Sandy soils in coastal dunes or openings in coastal scrub that are relatively free of other vegetation.	Low Potential. Suitable habitat does not occur in the project area.	April-June

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Plants (cont.)				
Robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i> Critical habitat designated	FE/--/ List 1B.1	Sandy soils or loose sand in coastal dunes, or openings in coastal scrub with little or no cover of non-native species in the herb layer.	Low Potential. Suitable habitat does not occur in the project area.	April-September
Scott's Valley spineflower <i>Chorizanthe robusta</i> var. <i>hartwegii</i> Critical habitat designated	FT/--/ List 1B.1	Sandy soils or mudstone and Purisima outcrops in meadows and seeps or valley and foothill grassland.	Not Present. Suitable habitat does not occur in the project area. Endemic to Scott's Valley.	April-July
Santa Cruz cypress <i>Cupressus abramsiana</i>	FE/--/ List 1B.2	Sandstone or granitic soils in closed-cone coniferous forest, chaparral, or lower montane coniferous forest.	Not present. Suitable habitat does not occur in the project area. Generally occurs at higher elevations in the project region. Not observed within project footprint during ESA's 2006 site surveys.	Year-around
Ben Lomond wallflower <i>Erysimum teretifolium</i>	FE/--/ List 1B.1	Inland marine sands in chaparral or lower montane coniferous forest.	Low Potential. Endemic to Santa Cruz sandhills habitat. Suitable habitat does not occur at the project sites.	March- July
Sand gilia <i>Gilia tenuiflora</i> ssp. <i>arenaria</i>	FE/CT/ List 1B.2	Coastal dunes, coastal scrub, in sand.	Low Potential. Suitable habitat does not occur in the project area.	April-May
Santa Cruz tarplant <i>Holocarpha macradenia</i> Critical habitat designated	FT/CE/ List 1B.1	Coastal prairie, valley and foothill grassland, in sandy or sandy clay and seasonally saturated soils. May occur with nonnatives associates but requires an open herb layer, with little competition for light.	Low to Moderate Potential. Marginally suitable habitat present at Cunnison Lane and Austrian Way Tank sites. Documented locations within 0.25 mile of O'Neill Ranch Site and within 0.5 mile of Cunnison Lane.	June-October
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE/--/List 1B.1	Coastal dunes	Low Potential. Suitable habitat not present at any of the project sites.	April-June
Dudley's lousewort <i>Pedicularis dudleyi</i>	FSC/CR/ List 1B.2	Chaparral, north coast coniferous forest, valley and foothill grassland.	Low Potential. Only historic occurrences in project area. Grassland habitat is highly disturbed at all project sites and only marginally suitable.	April-June
White-rayed pentachaeta <i>Pentachaeta bellidiflora</i>	FE/CE/List 1B.1	Open dry rocky slopes and grassy areas – often on soils derived from serpentine.	Low Potential. No serpentine soils onsite. Nearest reported occurrence for this species is on hillsides located above San Lorenzo Creek.	March-May
San Francisco popcorn-flower <i>Plagiobothrys diffusus</i>	FSC/CE/List 1B.1	Coastal prairie and grasslands.	Low Potential. Nearest known location is at the western edge of the City of Santa Cruz, north of Highway 1. Grassland habitat at project sites only marginally suitable	March-June

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Plants (cont.)				
Scott's Valley polygonum <i>Polygonum hickmanii</i> Critical habitat designated	FE/CE/List 1B.1	Mudstone and sandstone in valley and foothill grassland	Not Present. Suitable habitat does not occur in the project area. Endemic to Scott's Valley.	May-August
Invertebrates				
Monarch butterfly (wintering) <i>Danaus plexippus</i>	--/*	Roosts in groves of eucalyptus, Monterey pine, and cypress where protected from wind and where sources of water and nectar are near.	Low Potential. No records of wintering in the project area.	Winter
California linderiella <i>Linderiella occidentalis</i>	FSC/--	Vernal pools and other small freshwater water bodies, typically inhabits grass-bottomed swales underlain by hardpan or sandstone depressions.	Low Potential. Recorded in Valencia Lagoon (CDFG, 2008), suitable habitat not present in project area.	Winter
Mimic tryonia (= California brackishwater snail) <i>Tryonia imitator</i>	FSC/--	Coastal lagoons, estuaries, and salt marshes.	Low Potential. Recorded at Soquel Marsh (CDFG, 2008); suitable habitat not present in project area.	--
Amphibians				
Foothill yellow-legged frog <i>Rana boylei</i>	FSC/CSC	Streams with quiet pools absent of predatory fish.	Moderate Potential. Recorded in Soquel Creek and upstream reaches of Aptos Creek (CDFG, 2008); may occur in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	April-June
Reptiles				
Black legless lizard <i>Anniella pulchra nigra</i>	--/CSC	Sand dunes and sandy soils in the Monterey Bay and Morro Bay regions. Inhabits sandy soil/dune areas with bush lupine and mock heather as dominant plants.	Low Potential. Suitable habitat not present in project area.	Year-round
Southwestern pond turtle <i>Actinemys marmorata marmorata</i>	FSC/CSC	Thoroughly aquatic turtle of freshwater ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Need basking sites and sandy banks or grassy open fields for egg-laying.	Moderate Potential. Recorded in Soquel Creek upstream from the project area (CDFG, 2008), may occur in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	Year-round
Birds				
Cooper's hawk <i>Accipiter cooperii</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands.	Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	March-July

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Birds (cont.)				
Sharp-shinned hawk <i>Accipiter striatus</i>	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands.	Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	March-July
Tricolored blackbird <i>Agelaius tricolor</i>	--/CSC	Nest in tule, sedges, or willows. Thistles, large enough to provide cover from predators, have also been used in upland areas. A site large enough for a minimum number of 50 pairs is required.	Low Potential. Suitable habitat not present in project area.	Spring
Long-eared owl <i>Asio otis</i>	--/CSC	Riparian habitats and oak woodlands.	Low to Moderate Potential. Potential habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	March-July
Burrowing owl <i>Athene cunicularia</i>	FSC/CSC	Low vegetation in grasslands, scrublands, and deserts. Nests in small mammal burrows, esp. those of California ground squirrel.	Low Potential. Suitable habitat not present in project area.	Year-round
Vaux's swift <i>Chaetura vauxi</i>	FSC/CSC	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out stubs.	Low to Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	Year-round
Northern harrier <i>Circus cyaneus</i>	--/CSC	Mostly nests in emergent vegetation, wet meadows or near rivers and lakes, but may nest in grasslands away from water.	Low Potential. Suitable habitat not present in project area.	Year-round
Black swift <i>Cypseloides niger</i>	FSC/CSC	Builds nest in moist location on sea cliff above surf, or on cliff behind, or adjacent to, waterfall in deep canyon.	Low Potential. Suitable habitat not present in project area.	April-October
Yellow warbler <i>Dendroica petechia brewsteri</i>	--/CSC	Nests in riparian woodlands and forests, consisting of cottonwoods, willows, and/or alders, as well as in montane chaparral habitats with substantial amounts of brush or understory.	Low to Moderate Potential. May occur in Granite Way – Aptos Village and Polo Grounds project areas.	April-October
White-tailed kite <i>Elanus leucurus</i>	FSC/CSC	Nests near wet meadows and open grasslands in dense oak, willow or other large tree stands.	Low to Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	March-July

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Mammals				
Pallid bat <i>Antrozous pallidus</i>	--/CSC	Grasslands, shrublands, woodlands, and forests, usually in open, dry habitats with rocky areas for roosting.	Low to Moderate Potential. Observed along Soquel Creek north of project area (CDFG, 2008). Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	February-August
Pacific western big-eared bat <i>Corynorhinus townsendii townsendii</i>	FSC/CSC	Inhabits oak and conifer woodlands, broad-leaved forests, arid grasslands, deserts, and high mountain meadow.	Low to Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	February-August
Greater western mastiff bat <i>Eumops perotis californicus</i>	FSC/CSC	Breeds in rugged, rocky canyons and forages in a variety of habitats.	Low Potential. May forage in project area.	February-August
Small-footed myotis <i>Myotis ciliolabrum</i>	FSC/--	Forages over grasslands and roosts in caves and rock crevices.	Low Potential. May forage in project area.	February-August
Long-eared myotis <i>Myotis evotis</i>	FSC/--	Brush, woodland, and forest habitats, around buildings or trees and occasionally caves.	Low to Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	February-August
Fringed myotis <i>Myotis thysanodes</i>	FSC/--	Inhabits a variety of habitats including pinyon-juniper woodland, valley-foothill hardwood, hardwood-conifer forests, and desert scrub.	Low Potential. Suitable habitat not present in project area.	February-August
Long-legged myotis <i>Myotis volans</i>	FSC/--	Inhabits forests and woodland habitats, primarily oak and juniper woodlands.	Low to Moderate Potential. Suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	February-August
Yuma myotis <i>Myotis yumanensis</i>	FSC/--	Open forests and woodlands below 8,000 feet in close association with water bodies.	Low Potential. Suitable habitat not present in project area.	February-August
San Francisco dusky-footed woodrat <i>Neotoma fuscipes annectens</i>	FSC/CSC	Riparian, oak woodland and redwood forest habitats. Builds stick nests on ground, under or in hollow trees.	Low to Moderate Potential. Not observed on the project site during ESA surveys, though suitable habitat occurs in O'Neill Ranch, Cunnison Lane, Granite Way – Aptos Village, and Polo Grounds project areas.	Year-round

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Mammals (cont.)				
American badger <i>Taxidea taxus</i>	--/CSC	Abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Low Potential. Suitable habitat not present in project area.	Year-round
Plants				
Bent-flowered fiddleneck <i>Amsinkia lunaris</i>	--/ --/List 1B.2	Coastal bluff scrub, cismontane woodland, and grasslands below 500 meters in elevation.	Low Potential. Grassland habitat is highly disturbed and does not support native annual forbs.	March-June
Santa Cruz manzanita <i>Arctostaphylos andersonii</i>	FSC/--/ List 1B.2	Openings, edges, hardwood and conifer forests, chaparral.	Not present. No manzanitas noted within project footprint during ESA's 2006 site reconnaissance surveys.	November-April (year-around)
Hooker's manzanita <i>Arctostaphylos hookeri</i> ssp. <i>hookeri</i>	--/--/List 1B.2	Sandy soils, coastal scrub, chaparral, closed-cone conifer forests.	Not present. No manzanitas noted during ESA's 2006 site reconnaissance surveys	February-April (year-around)
Pajaro manzanita <i>Arctostaphylos pajaroensis</i>	FSC/--/ List 1B.1	Sandy soils in chaparral.	Not present. No manzanitas noted during ESA's 2006 site reconnaissance surveys	December-March (year-around)
Coast wallflower <i>Erysimum ammodendrum</i>	FSC/--/ List 1B.2	Sandy openings in maritime chaparral, coastal dunes, coastal scrub.	Low Potential. Potentially suitable habitat (coastal scrub) present only at Polo Grounds, however suitable soils not present.	Feb-June
Loma Prieta hoita <i>Hoita strobilina</i>	--/--/List 1B.1	Chaparral, cismontane woodland and riparian woodlands – generally associated with mesic serpentine sites.	Low Potential. Serpentine substrate does not occur at any of the project sites.	May-October
Kellogg's horkelia <i>Horkelia cuneata</i> ssp. <i>sericea</i>	FSC/--/1B.1	Old dunes and coastal sandhills in coastal scrub and closed-cone pine forests.	Low Potential. Suitable habitat not present at the project sites. Species believed to be extirpated from the area.	April-September
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	--/--/ List 1B.2	Sandy or serpentine soils in coastal bluff scrub, coastal scrub, valley and foothill grassland	Low Potential. Species presence unconfirmed in project area (CNPS, 2008). Potentially suitable habitat (coastal scrub) present only at Polo Grounds, however suitable soils not present.	June-September
Arcuate bush mallow <i>Malacothamnus arcuatus</i>	--/--/ List 1B.2	Chaparral or oak-madrone woodland on east side of Santa Cruz mountains.	Not Present. Suitable habitat not present at project sites.	April-September (year-around)

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Plants (cont.)				
Santa Cruz Mountains beardtongue <i>Penstemon rattanii</i> var. <i>kleei</i>	FSC/--/List 1B	Chaparral and lower montane coniferous forest, sometimes in transition zone, sandy shale slopes.	Low Potential. Occurs at headwaters of Aptos Creek. However, suitable habitat not present at project sites.	April-September
Monterey pine <i>Pinus radiata</i>	--/--/List 1B	Mesic places within broadleaved upland forests, chaparral, and grasslands.	Not Present (as local native). Only 3 native stands occur in California at Ano Nuevo, Cambria, and the Monterey Peninsula. While the species may occur in the project area they would not be considered native.	Year-round
Mount Diablo cottonweed <i>Micropus amphibolus</i>	--/--/List 3	Coastal bluffs, grasslands and cismontane woodlands.	Low Potential. Marginally suitable habitat grassland habitat, however not documented from project area.	March-May
Choris' popcorn flower <i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	--/--/List 1B.2	Low boggy ground in chaparral, coastal scrub, and coastal prairie.	Low Potential. Known from Scott's Valley, Watsonville airport, west of Santa Cruz. Suitable habitat does not occur within project sites.	March-June

NOTES:

^a Abbreviations are as follows: ssp. = subspecies; var. = variety.

^b Listing status codes are as follows:

FEDERAL: (U.S. Fish and Wildlife Service)

FE = Listed as Endangered (in danger of extinction) by the Federal Government

FT = Listed as Threatened (likely to become Endangered within the foreseeable future) by the Federal Government.

FSC = Former Federal Species of Concern. The USFWS no longer lists Species of Concern but recommends that species considered to be at potential risk by a number of organizations and agencies be addressed during project environmental review. NMFS, however, still lists Species of Concern.

STATE: (California Department of Fish and Game)

CE = Listed as Endangered by the State of California

CT = Listed as Threatened by the State of California

CR = Listed as Rare by the State of California (plants only)

CSC = California Species of Special Concern

* = CDFG considers wintering monarch butterfly roosts sensitive.

California Native Plant Society

List 1A=Plants presumed extinct in California

List 1B=Plants rare, Threatened, or Endangered in California and elsewhere

List 2= Plants rare, Threatened, or Endangered in California but more common elsewhere

List 3= Plants about which more information is needed

An extension reflecting the level of threat to each species is appended to each rarity category as follows:

.1 – Seriously endangered in California

.2 – Fairly endangered in California

.3 – Not very endangered in California

^c ESU=Evolutionarily Significant Unit

^d Although the southern limits of the federal listing for central California coast coho are at the San Lorenzo River, the State listing covers this species 'south of San Francisco Bay' as well.

SOURCE: Alley and Associates, 2003; CDFG, 2008; CNPS, 2008; Hagar Environmental Science, 2003; Thomas, 1961; University of California, 2006; USFWS, 2008.

APPENDIX E

Draft EIR Distribution List

Draft EIR Distribution List

Name	Title	Affiliation	Street Address	City	State	Zip Code	Distribution
Honorable	State Senator, 15th District	15th District	State Capital, Room 4082	Sacramento	CA	95814	NOA
Mr. John Doughty	Executive Director	AMBAG	P.O. Box 809	Marina	CA	93933	NOA
Mr. Joe Appenrodt		Appenrodt Commercial Properties	4375 Capitola Rd., Ste. C	Capitola	CA	95010	NOA
ATTN: Reference Librarian		Aptos Branch Library	7695 Soquel Dr.	Aptos	CA	95003	NOA+Hardcopy
Ms. Karen Hibble	Executive Director	Aptos Chamber of Commerce	7605-A Old Dominion Ct.	Aptos	CA	95003	NOA
Mr. Murray Schekman	Assistant Superintendent	Aptos High School	100 Mariner Way	Aptos	CA	95003	NOA
Mr. Casey O'Brien	Principal	Aptos High School	100 Mariner Way	Aptos	CA	95003	NOA
Mr. Alan Brown		Aptos Ridge Water Company	388 Aptos Ridge Circle Dr.	Watsonville	CA	95076	NOA
Mr. Tom Crosser	Fire Chief	Aptos/La Selva Fire District	6934 Soquel Dr.	Aptos	CA	95003-3604	NOA
Mr. Robert Bailey		Bailey Properties	9119 Soquel Dr.	Aptos	CA	95003	NOA
Mr. Jesse Nickell	VP of Development & Const.	Barry Swenson Builders	2400 Chanticleer Ave., Suite H	Santa Cruz	CA	95062	NOA
Ms. Debbie Parsons	General Manager	Best Western Seaciff Inn	7500 Old Dominion Ct.	Aptos	CA	95003	NOA
Robert Bosso		Bosso Williams, A Professional Corporation	133 Mission Street	Santa Cruz	CA	95060	NOA+Hardcopy
Mr. Joe Nugent		Cabrillo College	6500 Soquel Drive	Aptos	CA	95003	NOA
Mr. Dan Carl	District Manager, Central Coast	California Coastal Commission	725 Front St., Ste. 300	Santa Cruz	CA	95060-4508	NOA
Marija Vojkovich	Regional Manager	California Department of Fish & Game	20 Lower Ragsdale, Ste 100	Monterey	CA	93940	NOA
Mr. Richard Krumholz	District 5 Director	California Department of Transportation	50 Higuera St.	San Luis Obispo	CA	93401	NOA
Mr. Dave Todd	Chief, Office of Water Use Efficiency & Transfers	California Department of Water Resources	901 P St., 3rd Floor	Sacramento	CA	95814	NOA
Mr. Thomas Sutfin	Forest Manager/Soquel Demonstration State Forest	California Dept. of Forestry and Fire Protection	4750 Old San Jose Road	Soquel	CA	95073	NOA
Ms. Kelly Shaeffer	President	California Landscape Contractors Association	P.O. Box 46	Redwood Estates	CA	95044	NOA
Mr. Brett Hall	President	California Native Plant Society - Santa Cruz Chapter	P.O. Box 1622	Santa Cruz	CA	95061	NOA
Ms. Trish Chapman	Central Coast Program Manager	California State Coastal Conservancy	1330 Broadway, 13th Floor	Oakland	CA	94612-2530	NOA
Ms. Kate Goodnight	Project Manager	California State Coastal Conservancy	P.O. Box 1380	Santa Cruz	CA	95061	NOA
Mr. Chet Bardo	District Superintendent	California State Parks, Santa Cruz District	303 Big Trees Park Road	Felton	CA	95018	NOA
Brother William Regner		Camp St. Francis	2320 Sumner Ave.	Aptos	CA	95003	NOA
ATTN: Reference Librarian		Capitola Branch Library	2005 Wharf Road	Capitola	CA	95010	NOA+Hardcopy
Ms. Toni Castro	Executive Director	Capitola-Soquel Chamber of Commerce	716-G Capitola Ave.	Capitola	CA	95010	NOA
Ms. Kaitilin Gaffney		Center for Marine Conservation	55C Municipal Wharf	Santa Cruz	CA	95060	NOA
Mr. Jeff Badger		Central CA Conference Center SDA	1931 Old San Jose Road	Soquel	CA	95073	NOA
Mr. Jeff Maxwell	Fire Chief	Central Fire Protection District	930 17th Ave.	Santa Cruz	CA	95062	NOA
Mr. Ralph Bracamonte	General Manager	Central Water District	P.O. Box 1869	Aptos	CA	95001-1869	NOA+Hardcopy
Mr. Jamie Goldstein	City Manager	City of Capitola	420 Capitola Ave.	Capitola	CA	95010	NOA
Mr. Derek Johnson	Community Development Director	City of Capitola	420 Capitola Ave.	Capitola	CA	95010	NOA
Mr. Sam Storey	Mayor	City of Capitola City Council	420 Capitola Ave.	Capitola	CA	95010	NOA
Mr. Steve Jesberg	Director	City of Capitola Public Works Department	420 Capitola Ave.	Capitola	CA	95010	NOA
Ms. Rebagliati Juliana	Director	City of Santa Cruz Planning Department	809 Center St., Room 107	Santa Cruz	CA	95060	NOA
Mr. Bill Kocher	Director	City of Santa Cruz Water Department	212 Locust St.	Santa Cruz	CA	95060	NOA+CD+Hardcopy
Ms. Marcela Tavantzis	Interim Community Development Director	City of Watsonville	P.O. Box 50000	Watsonville	CA	95077-5000	NOA
Mr. David Koch	Director	City of Watsonville Public Works & Utilities	P.O. Box 50000	Watsonville	CA	95077-5000	NOA
Mr. Greg Pepping		Coastal Watershed Council	P.O. Box 1459	Santa Cruz	CA	95061	NOA
	Channels 25, 26, 27	Community Television of Santa Cruz County	816 Pacific Avenue	Santa Cruz	CA	95060	NOA
Mr. Andy Schiffrin		County of Santa Cruz	701 Ocean St., Ste. 500	Santa Cruz	CA	95060	NOA
Ms. Susan Mauriello	J.D., Administrative Officer	County of Santa Cruz	701 Ocean St., Suite 5200	Santa Cruz	CA	95060	NOA
Ms. Ellen Pirie	Supervisor	County of Santa Cruz Board of Supervisors	701 Ocean St., Room 500	Santa Cruz	CA	95060	NOA+CD
Mr. John Leopold	Supervisor	County of Santa Cruz Board of Supervisors	701 Ocean St., Room 500	Santa Cruz	CA	95060	NOA+CD
Ms. Stephanie Camacho	Analyst	County of Santa Cruz Board of Supervisors	701 Ocean St., Room 500	Santa Cruz	CA	95060	NOA
Mr. Neal Coonerty	Supervisor	County of Santa Cruz Board of Supervisors	701 Ocean St., Room 500	Santa Cruz	CA	95060	NOA
Mr. John Ricker	Director, Water Resources Division	County of Santa Cruz Environmental Health Services	701 Ocean St., Room 312	Santa Cruz	CA	95060	NOA+Hardcopy
Mr. Mike Cloud	Hydrologist	County of Santa Cruz Environmental Health Services	701 Ocean St., Room 312	Santa Cruz	CA	95060	NOA+CD
Mr. Steve Schneider	Director	County of Santa Cruz Environmental Health Services	701 Ocean St., Room 312	Santa Cruz	CA	95060	NOA
Mr. Joe Schultz	Director	County of Santa Cruz Parks, Open Space & Cultural Services	979 17th Ave.	Santa Cruz	CA	95062	NOA+CD
Ms. Kathleen Previsich	Director	County of Santa Cruz Planning Department	701 Ocean St., Room 410	Santa Cruz	CA	95060	NOA+CD+Hardcopy
Mr. Mark Deming	Principal Planner	County of Santa Cruz Planning Department	701 Ocean St., 4th Floor	Santa Cruz	CA	95060	NOA
Mr. John J. Presleigh	Director	County of Santa Cruz Public Works Dept.	701 Ocean St., Room 410	Santa Cruz	CA	95060	NOA+CD
Rachel Fatoohi	Sr. Civil Engineer, Drainage Division	County of Santa Cruz Public Works Dept.	701 Ocean St., Room 410	Santa Cruz	CA	95060	NOA+CD
Ms. Betsy Lynberg		County of Santa Cruz Redevelopment Agency	701 Ocean St., Room 510	Santa Cruz	CA	95060	NOA+CD
Mr. Russ Bateson	Sanitation Operations Manager	County of Santa Cruz Sanitation District	2750 Lode St.	Santa Cruz	CA	95062	NOA+CD
Ms. Rachel Lather-Hidalgo	Sanitation Engineer	County of Santa Cruz Sanitation District	701 Ocean St., Room 410	Santa Cruz	CA	95060	NOA
Ms. Karen Christensen	Executive Director	County Resources Conservation District	820 Bay Ave., Ste. 128	Capitola	CA	95010	NOA+CD
Mr. Don Alley		D.W. Alley & Associates	P.O. Box 200	Brookdale	CA	95007	NOA
Mr. Frank Brommenschenkel		DBA Frank B & Associates	134 Davis St.	Santa Paula	CA	93060	NOA

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Ms. Stephanie Harlan		Democratic Women's Club of Santa Cruz County	P.O. Box 7763	Santa Cruz	CA	95061	NOA
Ms. Paula Landis	District Chief, San Joaquin District	Department of Water Resources	3374 East Shields Ave.	Fresno	CA	93726	NOA
Mr. Steve Leinaw		Earthlinks	519 Seabright Ave., Suite 794	Santa Cruz	CA	95062	NOA
Ms. Kirsten Liske	Vice President	Ecology Action	P.O. Box 1188	Santa Cruz	CA	95061	NOA
		Environmental Council of Santa Cruz County, Inc.	9032 Soquel Drive	Aptos	CA	95003	NOA
Mr. Stephen Erlach		Erlach Law Offices	2959 Park Ave.	Soquel	CA	95073	NOA
		Friends of Soquel Creek	P.O. Box 851	Soquel	CA	95073	NOA
Mr. Gary Archer	Editor	Good Times	1205 Pacific Ave., Suite 301	Santa Cruz	CA	95060	NOA
Mr. Tom Griffin		Grunsky, Ebey, Farrar & Howell	240 Westgate Drive	Watsonville	CA	95076	NOA
Mr. Bill Schmidt	Project Manager	Holcomb Corporation	19 Seascope Village	Aptos	CA	95003	NOA
Ms. Traciann Zervica	News Director	KION News - Channel 46	1550 Moffett St.	Salinas	CA	93905	NOA
Ms. Theresa Wright	Public Service Director	KSBW TV 8 - NBC	238 John St.	Salinas	CA	93901	NOA
Ms. Rosemary Chalmers	Program Director	KSCO -1080 AM	2300 Portola Dr.	Santa Cruz	CA	95062	NOA
Mr. Michael Lewis	Operations Manager	KUSP - 88.9 FM	203 8th Avenue	Santa Cruz	CA	95062	NOA
	PSA Director	KWAV - 97 FM	P.O. Box 1391	Monterey	CA	93942	NOA
	PSA Director	KZSC - 88.1 FM	1156 High St.	Santa Cruz	CA	95064	NOA
ATTN: Reference Librarian		La Selva Beach Branch Library	316 Estrella Avenue	La Selva Beach	CA	95076	NOA+Hardcopy
Mr. Elliot Crowder	President	La Selva Beach Improvement Association	314 Estrella Ave.	La Selva Beach	CA	95076	NOA
Mr. Ron Manabe	Chairman	La Selva Beach Recreation District	314 Estrella Ave.	La Selva Beach	CA	95076	NOA
Mr. Jim Morley		La Selva Environmental Concerns	320 Vista Dr.	La Selva Beach	CA	95076	NOA
Mr. Patrick McCormick	Executive Director	LAFCO	701 Ocean St., Room 318-D	Santa Cruz	CA	95060	NOA
Mr. Ray Krulicki		Larkin Ridge Mutual Water Company	273 Larkin Ridge Road	Watsonville	CA	95076	NOA
		League of Women Voters	P.O. Box 1745	Capitola	CA	95010	NOA
Mr. Doug Kaplan		Lomax Property Group, Inc.	820 Bay Avenue, #220	Capitola	CA	95010	NOA
Mr. Jimmy Smith	Owner/President	Mar Vista Water Corp.	P.O. Box 1627	Aptos	CA	95001	NOA
Mr. Mike McNellis		McNellis Partners - Sacramento	419 Waverley St.	Palo Alto	CA	94301	NOA
Ms. Traci Hukill	News Writer	Metro Santa Cruz Newspaper	115 Cooper St.	Santa Cruz	CA	95060	NOA
Ms. Mary Bryant	Owner/Publisher	Mid County Post	831 Bay Ave.	Capitola	CA	95010	NOA
Mr. Paul Michel	Superintendent	Monterey Bay National Marine Sanctuary	299 Foam St.	Monterey	CA	93940	NOA
Ms. Bridget Hoover	WQPP Director	Monterey Bay National Marine Sanctuary	110 Shaffer Rd., Room 228	Santa Cruz	CA	95060	NOA
Mr. Allen Smith	Board Chairmanr	Monterey Bay Salmon & Trout Project	P.O. Box 417	Davenport	CA	95017	NOA
Mr. Richard Stedman	Air Pollution Control Officer	Monterey Bay Unified Air Pollution Control District	24580 Silver Cloud Ct.	Monterey	CA	93940	NOA
	Santa Cruz Laboratory	National Marine Fisheries Service	110 Shaffer Rd.	Santa Cruz	CA	95060	NOA
Ms. Joyce Ambrosius		National Marine Fishery Service	777 Sonoma Ave., Room 325	Santa Rosa	CA	95404	NOA
Ms. Kathryn H. Britton	Esq., Committee Member	Nisene to the Sea Open Space Alliance	1649 Cheryl Way	Aptos	CA	95003	NOA
Mr. John Nelson		Olive Springs Quarry	P.O. Box 747	Soquel	CA	95073	NOA
Ms. Mary Bannister	General Manager	Pajaro Valley Water Management Agency	36 Brennan St.	Watsonville	CA	95076-4303	NOA+CD
Mr. Richard Ross		Pine Tree Lane Mutual Water Company	935 Pine Tree Lane	Aptos	CA	95003	NOA
ATTN: Reference Librarian		Porter Memorial Library	3050 Porter St.	Soquel	CA	95073	NOA+Hardcopy
Mr. Carl Sprague		Pot Belly Beach Club Water System	135 New Brighton Rd.	Aptos	CA	95003	NOA
Mr. Michael Mills		Pure Source Water	P.O. Box 1958	Aptos	CA	95001	NOA
Ms. Nancy Schmitt	General Manager	Rancho Del Mar Shopping Center	140 Rancho Del Mar Shopping Center	Aptos	CA	95003	NOA
Mr. Roger Briggs	Executive Director	Regional Water Quality Control Board	895 Aerovista Place, Suite 101	San Luis Obispo	CA	93401	NOA
Mr. Bill Comfort	President	Rio Del Mar Improvement Association	P.O. Box 274	Aptos	CA	95001	NOA
Mr. Skip Fehr	Board President	San Andreas Mutual Water Company	P.O. Box 326	Aptos	CA	95001	NOA
Mr. Owen Sharp	Board Treasurer	San Andreas Mutual Water Company	P.O. Box 326	Aptos	CA	95001	NOA
Ms. Kathy Hartman	Chief Executive Officer	Santa Cruz Association of Realtors	2525 South Main St.	Soquel	CA	95073-2407	NOA
Ms. Judy Doering-Nielsen	Executive Director	Santa Cruz County Business Council	740 Front St., Ste. 375	Santa Cruz	CA	95060	NOA
Ms. Maggie Ivy	CEO	Santa Cruz County Conference and Visitors Council	1211 Ocean St.	Santa Cruz	CA	95060	NOA
		Santa Cruz County Democratic Central Committee	P.O. Box 7763	Santa Cruz	CA	95061	NOA
		Santa Cruz County Regional Transportation Commission	1523 Pacific Ave.	Santa Cruz	CA	95060	NOA
		Santa Cruz County Republican Central Committee	P.O. Box 3086	Santa Cruz	CA	95063-3086	NOA
Mr. Phil Wowack	Sheriff	Santa Cruz County Sheriff's Dept.	701 Ocean St., Room 340	Santa Cruz	CA	95060	NOA
		Santa Cruz METRO Planning Department	110 Vernon St.	Santa Cruz	CA	95060	NOA
Mr. Michael Jung	Publisher	Santa Cruz Sentinel	1800 Green Hills Road, Suite 210	Scotts Valley	CA	95066	NOA
Ms. Laura Kasa	Executive Director	Save Our Shores	345 Lake Ave., Suite A	Santa Cruz	CA	95062	NOA
Mr. Tom Mader		Save the Habitat	415 Riverview Ave.	Capitola	CA	95010	NOA
Mr. Charles McNiesh	General Manager	Scotts Valley Water District	P.O. Box 66006	Scotts Valley	CA	95067-0006	NOA
Mr. Terry Winston		Seacliff Improvement Association	P.O. Box 533	Aptos	CA	95001-0533	NOA
Mr. Mike McCraw	Superintendent	Seascope Golf Course	610 Clubhouse Drive	Aptos	CA	95003	NOA
Mr. Bruce Pine	PGA General Mgr.	Seascope Golf Course	610 Clubhouse Dr.	Aptos	CA	95003	NOA
Mr. Steve W. Byrd		Seascope Improvement Association	19 Seascope Village	Aptos	CA	95003	NOA
Mr. Mike Staley		Seascope Resort	1 Seascope Resort Dr.	Aptos	CA	95003	NOA
Ms. Robin Atwood	Water Resources Committee	Sierra Club - Ventana Chapter	P.O. Box 604	Santa Cruz	CA	95061-0604	NOA
Thomas LaHue	President	Soquel Creek Water District Board of Directors	5180 Soquel Drive	Soquel	CA	95073	NOA+Hardcopy

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Bruce Daniels	Vice President	Soquel Creek Water District Board of Directors	5180 Soquel Drive	Soquel	CA	95073	NOA+Hardcopy
Dr. Bruce Jaffe	Board Member	Soquel Creek Water District Board of Directors	5180 Soquel Drive	Soquel	CA	95073	NOA+Hardcopy
Dr. Don Hoernschemeyer	Board Member	Soquel Creek Water District Board of Directors	5180 Soquel Drive	Soquel	CA	95073	NOA+Hardcopy
Daniel F. Kriege	Board Member	Soquel Creek Water District Board of Directors	5180 Soquel Drive	Soquel	CA	95073	NOA+Hardcopy
Mr. Steve Kennedy		Soquel Neighbors Alliance	4445 Esta Lane	Soquel	CA	95073	NOA
		State Clearinghouse	1400 Tenth Street	Sacramento	CA	95814	Summary+CD
Mr. Gary Hoffman	Drinking Water Field Operations Branch	State Department of Health Services	1 Lower Ragsdale, Bldg. 1, Ste. 120	Monterey	CA	93940	NOA
Ms. Jen Brackett	Santa Cruz Chapter	Surfrider Foundation	2222 East Cliff Dr. #234	Santa Cruz	CA	95062	NOA
Ms. Patrice Edwards	Publisher	Times Publishing Group	9601 Soquel Dr.	Aptos	CA	95003	NOA
Mr. Jimmy Brownson		Trout Gulch Mutual Water Company	P.O. Box 1467	Aptos	CA	95001-1467	NOA
Mr. Cameron Johnson	San Francisco District, Regulatory Branch	U.S. Army Corps of Engineers	1455 Market St., 16th Floor	San Francisco	CA	94103	NOA
Mr. Doug Weinrich	Chief, Habitat Conservation District	U.S. Fish & Wildlife Service	2800 Cottage Way W-2605	Sacramento	CA	95825	NOA
Mr. Rich Casale	District Conservationist	USDA Natural Resources Conservation Service	5161 Soquel Dr., Suite F	Soquel	CA	95073	NOA
Mr. Larry Freeman	Field Office Chief	USGS California Water Science Center	3239 Imjin Rd.	Marina	CA	93933	NOA
Ms. Kris Beall		Watsonville Wetlands Watch	P.O. Box 1239	Freedom	CA	95019-1239	NOA
Mr. Jon Chown	Editor	Watsonville-Pajaronian	100 Westridge Dr.	Watsonville	CA	95076	NOA
Ms. Barbara Graves		WAVE	P.O. Box 1640	Capitola	CA	95010	NOA
Mr. Joseph Hayes		Weber, Hayes & Associates	120 Westgate Dr.	Watsonville	CA	95076	NOA
Mr. William Parkin		Wittwer & Parkin, LLP	147 South River Street, Suite 221	Santa Cruz	CA	95060	NOA
Mr. Doug Dietch			501 Mission St.	Santa Cruz	CA	95060	NOA
Mr. James Victory			245 Via Lantana	Aptos	CA	95003	NOA
Lester & Holly Ma			3273 Greenbrae Lane	Soquel	CA	95073	NOA
Ms. Catherine L. Walls			3901 Cherryvale Ave.	Soquel	CA	95073	NOA
Ms. Kate Minott			745 Oak Hill Road	Aptos	CA	95003	NOA
Mr. Robert Vatuone			182 Via Lantana	Aptos	CA	95003	NOA
Mr. Randall Leonard			4155 Nova Dr.	Santa Cruz	CA	95062	NOA
Mr. David A. Balogh			3833 Cherryvale Ave.	Soquel	CA	95073	NOA
Ms. Cherie L. Bobbe			775 Seaciff Dr.	Aptos	CA	95003	NOA
Mr. V. Ricardo de la Cruz			745 Oak Hill Road	Aptos	CA	95003	NOA
Mr. Gary Hazelton			548 St. Andrews Dr.	Aptos	CA	95003	NOA
Mr. David Chamberlain			4526 Soquel Wharf Rd.	Soquel	CA	95073	NOA
Mr. Adam Bayer			3400 Maplethorpe Ln	Soquel	CA	95073	NOA
Ms. Gail Penniman			5455 Entrance Dr.	Soquel	CA	95073	NOA
Mr. Michael Shaw			16 Escuela Rd.	La Selva Beach	CA	95076	NOA
Ms. Deborah Chirco-MacDonald			225 Shoreview Dr.	Aptos	CA	95003	NOA
Mr. Anthony J. "Bud" Carney			347 Arthur Ave.	Aptos	CA	95003	NOA
Mr. Dale Bridenbaugh			723 Seaciff Dr.	Aptos	CA	95003	NOA
Mr. Charles M. Carlson			724 Clubhouse Dr.	Aptos	CA	95003	NOA
Ms. Gabriele Erlach			139 Bay Heights	Soquel	CA	95073	NOA
Mr. Ludwig P. Breiling			100 Las Lomas Dr.	Aptos	CA	95003	NOA
Ms. Jean Graham			920 Capitola Ave., Space 34	Capitola	CA	95010	NOA
Ms. Kathleen Carroll			1575 Lincoln	Capitola	CA	95010	NOA
Ms. Adele Eberhart			1997 Seascape	Aptos	CA	95003	NOA
Ms. Joan Roberts			220 Mar Vista Dr., Space 51	Aptos	CA	95003	NOA
Mr. Dick English			227 Sand St.	Aptos	CA	95003	NOA
Ms. Lynn Larson			285 McDonald Road	Aptos	CA	95003	NOA
Mr. Sergio Cardosa			6119 Abbey Road	Aptos	CA	95003	NOA
Mr. Jon Sagen			3395 N. Polo Dr.	Aptos	CA	95003	NOA
PD Knecht			308 Loyola Dr.	Aptos	CA	95003	NOA
Mr. Chris Perry			135 Baltusrol Drive	Aptos	CA	95003	NOA
Ms. Anne O'Donnell			2856 Linsay Lane	Soquel	CA	95073	NOA
Ms. Sue Rudolph			3019 Twin Palms Dr.	Aptos	CA	95003	NOA
Ms. Esther Triple			201 Hollister	Capitola	CA	95010	NOA
Mr. Cliff Nichols			534 Robin Dr.	Aptos	CA	95003	NOA
Ms. Cathie Pereira			5095 Chiquita Way	Soquel	CA	95073	NOA
Mr. Peter A. Twilight			1055 Hazel Dell Road	Watsonville	CA	95076	NOA
Ms. Thea Wiles			2711 Lafayette St.	Soquel	CA	95073	NOA
Mr. Mike Rhoden			P.O. Box 961	Aptos	CA	95001	NOA
Mr. Bill Mork			2776 Gary	Soquel	CA	95073	NOA
Mr. Robert Pehrson			508 Sea Horse Drive	La Selva Beach	CA	95076	NOA
Mr. Dwight Dillen			4980 Jewel St.	Capitola	CA	95010	NOA
Mr. Jason Christie			1405 38th Avenue, #A	Santa Cruz	CA	95062	NOA
Mr. Jerry Walters			4000 Greenbrae Lane	Soquel	CA	95073	NOA
Mr. Rich Everett			P.O. Box 308	Soquel	CA	95073	NOA
Mr. Brandon Johnson			4479 Ranchero Drive	Soquel	CA	95073	NOA
Mr. William B. Wigginton			150 Via Trinita	Aptos	CA	95003	NOA
Mr. Steven Zigman			144 Loraine Lane	Soquel	CA	95073	NOA
Ms. Jane Simpson			4002 Greenbrae Lane	Soquel	CA	95073	NOA
Ms. Nancy Abramson			660 Baker Road	Aptos	CA	95003	NOA
Mr. Murray Nass			3900 Coyote Canyon	Soquel	CA	95073-3011	NOA
Mr. Don Heichel			3311 Maplethorpe Lane	Soquel	CA	95073	NOA
Ms. Michelle Thomsen			3245 Cunnison Lane	Soquel	CA	95073	NOA
Ned & Kim Spencer			4778 Soquel Creek Rd.	Soquel	CA	95073	NOA

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Ms. Judy Parsons			4453 Fairway Drive	Soquel	CA	95073	NOA
Ms. Katherine Sweet			3989 Glen Haven Rd.	Soquel	CA	95073	NOA
Mr. Dick Nutter			2788 Borregas Dr.	Aptos	CA	95003	NOA
Honorable Bill Monning	Assemblymember, 27th District		701 Ocean St., Room 318-B	Santa Cruz	CA	95060	NOA
Honorable Sam Farr	Congressman, 17th District		701 Ocean St., Room 318	Santa Cruz	CA	95060	NOA
Honorable Joe Simitian	State Senator, 11th District		701 Ocean St., Room 318-A	Santa Cruz	CA	95060	NOA
GAILEY JUDY & JEFF TRUSTEES ET			327 CABRILLO AVE	SANTA CRUZ	CA	95065	NOA
ATTN: Office Manager			4150 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #1	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #2	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #3	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #4	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #5	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #6	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #7	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #8	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #9	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #10	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #11	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #12	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #14	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #15	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #16	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #17	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #18	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #19	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #20	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Space #21	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Apt. A	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Apt. B	Soquel	CA	95073	NOA
ATTN: Occupant			4150, Soquel Dr, Apt. C	Soquel	CA	95073	NOA
BEI-SCOTT COMPANY LLC			410 MAY ST	SANTA CRUZ	CA	95060	NOA
ATTN: Panda Express			2740 41st Avenue	Soquel	CA	95073	NOA
ATTN: Subway			2740 41st Avenue	Soquel	CA	95073	NOA
ATTN: Starbucks			2740 41st Avenue	Soquel	CA	95073	NOA
ATTN: Parrot Cellular			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: Tan			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: Fantastic Sams			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: Escape Nails & Day Spa			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: Monterey Credit Union			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: Scott Trade			2750 41st Avenue	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3912 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3931 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4105 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: Mohler & Sons Vacuum			4109 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4101 Soquel Dr.	Soquel	CA	95073	NOA
BEVERLY FABRICS			9019 SOQUEL DR #175	APTOS	CA	95003	NOA
BEVERLY FABRICS			100 Cotton Lane	Soquel	CA	95073	NOA
SAFEWAY INC			5918 STONERIDGE MALL RD	PLEASANTON	CA	94588	NOA
SAFEWAY INC			2720 41st Avenue	Soquel	CA	95073	NOA
KING RONALD G M/M S/S ETAL			2851 41ST AVE	SOQUEL	CA	95073	NOA
SCOTTS VALLEY PROPERTY INVESTO			2541 SOQUEL AVE	SANTA CRUZ	CA	95062	NOA
ATTN: OCCUPANT			3921 Soquel Dr.	Soquel	CA	95073	NOA
CAUDLE CLAUDIA J & DANA W/H CP			1135 HARPER CT	SANTA CRUZ	CA	95062	NOA
ATTN: OCCUPANT			3100 Greenbrae Lane	Soquel	CA	95073	NOA
SILVERBERG KANE M/M SS ETAL			4612 FAIRWAY RANCH RD	SOQUEL	CA	95073	NOA
GOLDSTONE PAUL JOEL TRUSTEE			6001 SHELLMOUND ST #825	EMERYVILLE	CA	94608	NOA
Maxine & Cathy France, Managers			4300 Soquel Dr., Office	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #1	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #2	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #3	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #4	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #5	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #7	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #8	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #9	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #11	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #12	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #13	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #14	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #16	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #17	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #18	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #19	Soquel	CA	95073	NOA

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Honorable	State Senator, 15th District	15th District	State Capital, Room 4082	Sacramento	CA	95814	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #225	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #227	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #228	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #229	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #230	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #231	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #232	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #234	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #235	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #236	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #237	Soquel	CA	95073	NOA
ATTN: OCCUPANT			4300 Soquel Dr., #238	Soquel	CA	95073	NOA
MERCY HOUSING CALIFORNIA			1360 MISSION ST #300	SAN FRANCISCO	CA	94103	NOA
ATTN:Osocales Community Manager			4151 Soquel Dr.	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #1	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #2	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #3	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #4	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #5	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #6	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #7	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #8	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #9	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #10	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #11	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #12	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #13	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #14	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #15	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #16	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #17	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #18	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #19	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #20	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #21	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #22	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #23	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #24	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #25	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #26	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #27	Soquel	CA	95073	NOA
ATTN: Osocales Community Occupant			4151 Soquel Dr., Unit #28	Soquel	CA	95073	NOA
VAN CLEVE GRADY S & MARLA H H/			5530 TEE ST	SOQUEL	CA	95073	NOA
LIU TRISHA U/W ETAL			5520 TEE ST	SOQUEL	CA	95073	NOA
ERLACH OLGA E TRUSTEE ETAL TC			387 ATHENS ST	SAN FRANCISCO	CA	94112	NOA
ATTN: OCCUPANT			3250 Cunnison Lane	Soquel	CA	95073	NOA
CARLTON ROBERT B & DONNA TRUST			5529 TEE ST	SOQUEL	CA	95073	NOA
ROBINSON LINDA JOANNE U/W			5519 TEE ST	SOQUEL	CA	95073	NOA
STRAUHAL CHARLES B JR M/M			3210 CUNNISON LN	SOQUEL	CA	95073	NOA
MARGUERITE H ROESNER LIMITED F			3725 FALCONER DR	SOQUEL	CA	95073	NOA
ATTN: OCCUPANT			3240 Hardin Way	Soquel	CA	95073	NOA

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GONZALES RALPH E & SUSAN R H/W			5520 BOGEY DR	SOQUEL	CA	95073	NOA
MASSION CHARLEA TARMAS TRUSTEE			3235 CUNNISON LN	SOQUEL	CA	95073	NOA
KRISTENSEN MICHELLE L TRUSTEE			3245 CUNNISON LN	SOQUEL	CA	95073	NOA
LEREK GEORGE NICHOLAS TRUSTEES			3315 CUNNISON LN	SOQUEL	CA	95073	NOA
WICKMAN KENNETH & LAURA H/W JT			3200 HARDIN WAY	SOQUEL	CA	95073	NOA
GRADY DENNIS U/M			3361 CUNNISON LN	SOQUEL	CA	95073	NOA
ATTN: OCCUPANT			3337 Cunnison Lane	Soquel	CA	95073	NOA
BARBIN JULIE A TRUSTEE			P O BOX 3852	SANTA CRUZ	CA	95063	NOA
ATTN: OCCUPANT			3220 Hardin Way	Soquel	CA	95073	NOA
ERLACH GREGORY J U/M			3420 CUNNISON LN	SOQUEL	CA	95073	NOA
BOURNE CHRISTOPHER F & DONNA M			3305 CUNNISON LN	SOQUEL	CA	95073	NOA
BROOKS MICHAEL W U/M			3200 CUNNISON LN	SOQUEL	CA	95073	NOA
FARM ASSOCIATES THE			303 VINTAGE PARK DR #250	FOSTER CITY	CA	94404	NOA
Head Start Day Care			3060 Cunnison Lane	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3080 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3080 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3090 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3090 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3100 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3100 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #C	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #D	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #E	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3110 Cunnison Lane #F	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3120 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: Manager			3120 Cunnison Lane	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3130 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3130 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3140 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3140 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3150 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3150 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3160 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3160 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #C	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #D	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #E	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3170 Cunnison Lane #F	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #C	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #D	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #E	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3220 Cunnison Lane #F	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #A	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #B	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #C	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #D	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #E	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3230 Cunnison Lane #F	Soquel	CA	95073	NOA
ATTN: OCCUPANT			3310 Cunnison Lane	Soquel	CA	95073	NOA
HOWARD GEORGE G & BEATA P H/W			5530 BOGEY DR	SOQUEL	CA	95073	NOA
OLSON HUGH III & MARGARET A H/			3327 CUNNISON LN	SOQUEL	CA	95073	NOA
KENEZ PETER & PENELOPE H/W CP			1830 JENNIFER DR	APTOS	CA	95003	NOA
DUECK LEONARD W & LORETTA J H/			1831 JENNIFER DR	APTOS	CA	95003	NOA
SCANLON JOHN F JR & JOAN C TRU			1810 JENNIFER DR	APTOS	CA	95003	NOA
SHAPIRO STEPHEN G & CAROL R H/			1815 JENNIFER DR	APTOS	CA	95003	NOA
VAN DER NAALD ANJE C TRUSTEE			116 AUSTRIAN WAY	APTOS	CA	95003	NOA
ISAACS ALBERT T & ANNE J TRUST			1850 JENNIFER DR	APTOS	CA	95003	NOA
ASHWORTH SHIRLEY H TRUSTEE ETA			1771 JENNIFER DR	APTOS	CA	95003	NOA
HALE WILLIAM B H/W ALL AS JT E			1770 JENNIFER DR	APTOS	CA	95003	NOA
BURKLIN RALPH W JR & PAULA R H			3509 VIENNA DR	APTOS	CA	95003	NOA
WENDLING CHRISTOPHER D & MARTI			1741 JENNIFER DR	APTOS	CA	95003	NOA
VIDNOVIC JONATHAN D & CHRISTINE			1740 JENNIFER DR	APTOS	CA	95003	NOA

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EMMONS GARY L TRUSTEE			3515 VIENNA DR	APTOS	CA	95003	NOA
KITTOE W KIRBY JR & JOAN KAY T			1725 JENNIFER DR	APTOS	CA	95003	NOA
BLACK JOHN W & CAROL A H/W JT			1730 JENNIFER DR	APTOS	CA	95003	NOA
ALLEN SANDRA C TRUSTEE			1713 JENNIFER DR	APTOS	CA	95003	NOA
PERKINS DOUG U/M			1710 JENNIFER DR	APTOS	CA	95003	NOA
WILLIAMS TANIA M U/W			1703 JENNIFER DR	APTOS	CA	95003	NOA
ANDERSON CRAIG A & SHARON L TR			1708 JENNIFER DR	APTOS	CA	95003	NOA
MC ADAM ROBERT B III & BEVERLY			3506 HILLCREST DR	BELMONT	CA	94002	NOA
ATTN: OCCUPANT			1670 Jennifer Dr.	Aptos	CA	95003	NOA
ALDERSON LINDA TRUSTEE			1706 JENNIFER DR	APTOS	CA	95003	NOA
MAULDIN MICHAEL L & CAROL H/W			15345 BOHLMAN RD	SARATOGA	CA	95070	NOA
ATTN: OCCUPANT			445 Granite Way	Aptos	C	95003	NOA
MEYER SANDI & CHARLES AARON W/			447 GRANITE WAY	APTOS	CA	95003	NOA
MAULDIN MICHAEL & CAROL H/W CP			200 QUAIL RUN RD	APTOS	CA	95003	NOA
ATTN: OCCUPANT			449 Granite Way	Aptos	CA	95003	NOA
ATTN: OCCUPANT			1 Easy St.	Aptos	CA	95003	NOA
BUSH PEGGY A U/W			112 VISTA MAR, UNIT A	APTOS	CA	95003	NOA
ATTN: OCCUPANT			453 Granite Way	Aptos	CA	95003	NOA
ZLATUNICH RICHARD H/W JT ETAL			517 CATHEDRAL DR	APTOS	CA	95003	NOA
CICHOLAS STERLING ANDREW U/M			P O BOX 756	CAPITOLA	CA	95010	NOA
ATTN: OCCUPANT			519 Cathedral	Aptos	CA	95003	NOA
BROADWELL JAMES G & NIKKI H/W			10666 S W COLLINA AVE	PORTLAND	OR	97219	NOA
??Multi stores							NOA
SOUTHERN PACIFIC RAILROAD			P O BOX 2500	BROOMFIELD	CO	80038	NOA
TROUT GULCH CROSSING			415 TROUT GULCH RD	APTOS	CA	95003	NOA
Norma Jean's Coffee			403 Trout Gulch Rd., #8043	Aptos	CA	95003	NOA
ATTN: OCCUPANT			403 Trout Gulch Rd., #8045	Aptos	CA	95003	NOA
Print Smith			403 Trout Gulch Rd., #8047	Aptos	CA	95003	NOA
Jet Set Bohemian			403 Trout Gulch Rd., #8049	Aptos	CA	95003	NOA
APTOS VENTURES LLC			4375 CAPITOLA RD	CAPITOLA	CA	95010	NOA
Shelley's Fitness			8037 Soquel Dr.	Aptos	CA	95003	NOA
Vapor Cleaners			415 Trout Gulch Road	Aptos	CA	95003	NOA
LOCKE CHRISTINA M U/W			8041 SOQUEL DR	APTOS	CA	95003	NOA
SILVEAR ANNIE TRUSTEE			75 ROGGE LN	WATSONVILL E	CA	95076	NOA
ATTN: OCCUPANT			416 Trout Gulch Rd.	Aptos	CA	95003	NOA
CARLSON KENNETH G U/M			P O BOX 998	SANTA CRUZ	CA	95061	NOA
ATTN: OCCUPANT			420 Trout Gulch Rd.	Aptos	CA	95003	NOA
PREVISICH JOHN U/M			280 RANCHITOS DEL SOL	APTOS	CA	95003	NOA
ATTN: OCCUPANT			100 Village Dr., Unit A	Aptos	CA	95003	NOA
ATTN: OCCUPANT			100 Village Dr., Unit B	Aptos	CA	95003	NOA
ATTN: OCCUPANT			100 Village Dr., Unit C	Aptos	CA	95003	NOA
SCARPELLI CONSTANCE LOBUE & CR			1275 LINCOLN AVE #10A	SAN JOSE	CA	95125	NOA
ATTN: OCCUPANT			448 Granite Way	Aptos	CA	95003	NOA
XUEREB CHARLES E & CARMELA A T			602 N BAYVIEW AVE	SUNNYVALE	CA	94085	NOA
ATTN: OCCUPANT			106 Village Dr., Unit A	Aptos	CA	95003	NOA
ATTN: OCCUPANT			106 Village Dr., Unit B	Aptos	CA	95003	NOA
ATTN: OCCUPANT			106 Village Dr., Unit C	Aptos	CA	95003	NOA
EREDIA BARNEY TRUSTEE ETAL			170 CAROL WAY	APTOS	CA	95003	NOA
ATTN: OCCUPANT			112 Village Drive, Unit A	Aptos	CA	95003	NOA
ATTN: OCCUPANT			112 Village Drive, Unit B	Aptos	CA	95003	NOA
CARLSON GEORGE U/M			P O BOX 305	SANTA CRUZ	CA	95061	NOA
ATTN: OCCUPANT			420 Trout Gulch Rd.	Aptos	CA	95003	NOA
MATTISON COURT HOMEOWNERS ASSOC.			19 SEASCAPE VILLAGE	APTOS	CA	95003	NOA
HOCHLER RICHARD S TRUSTEE ETAL			325 CANHAM RD	SCOTTS VALLEY	CA	95066	NOA
VILLAGE DRIVE TOWNHOUSES HOA			103 VILLAGE DR	APTOS	CA	95003	NOA
MATTISON LANE LLC			19 SEASCAPE VILLAGE	APTOS	CA	95003	NOA
APTOS STATION			P O BOX 1019	WATSONVILL E	CA	95077	NOA
Epicenter Cycling			8035 Soquel Dr., #23	Aptos	CA	95003	NOA
Salon Aptos			8035 Soquel Dr., #25	Aptos	CA	95003	NOA
Yoga Within			8035 Soquel Dr., #27	Aptos	CA	95003	NOA
Wiider Associates			8035 Soquel Dr., #29	Aptos	CA	95003	NOA
Joy of Movement			8035 Soquel Dr., #31	Aptos	CA	95003	NOA
Village Liquors			8035 Soquel Dr., #33	Aptos	CA	95003	NOA
Warmboard Radiant Subfloors			8035 Soquel Dr., #35	Aptos	CA	95003	NOA

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Aptos Village Skin & Body Care			8035 Soquel Dr., #39	Aptos	CA	95003	NOA
Sunsational Tanning & Yogurt Sensations			8035 Soquel Dr., #43	Aptos	CA	95003	NOA
Nancy's Bridgehouse			8035 Soquel Dr., #45	Aptos	CA	95003	NOA
LESSARD PAUL M/M SS			124 MATTISON CT	APTOS	CA	95003	NOA
LUCAS KEVIN D & CARA L H/W JT			106 VISTA MAR CT	APTOS	CA	95003	NOA
WYKLE JOHN G & HELEN H JT T			41 EDMONT RD	ASHVILLE	NC	28801	NOA
ATTN: OCCUPANT			110 Vista Mar Ct.	Aptos	CA	95003	NOA
DEVALES AMAURI F JR & JEANETTE			104 VISTA MAR CT	APTOS	CA	95001	NOA
SCP WOODLAND LLC			775 N 1ST ST 5TH FLOOR	SAN JOSE	CA	95112	NOA
ATTN: OCCUPANT			417 Trout Gulch Rd.	Aptos	CA	95003	NOA
ATTN: OCCUPANT			146 Mattison Ct.	Aptos	CA	95003	NOA
SMITH CHRISTOPHER U/M			108 VISTA MAR CT	APTOS	CA	95003	NOA
MC CULLOUGH ROBERT L & JO ANN			116 VISTA MAR CT	APTOS	CA	95003	NOA
COLLINS JEFFERY A TRUSTEE			138 MATTISON CT	APTOS	CA	95003	NOA
ATTN: OCCUPANT			112 Vista Mar, Unit B	Aptos	CA	95003	NOA
FRANICH JOHN ANTHONY & NANCY K			29 CASA WAY	SCOTTS VALLEY	CA	95066	NOA
ATTN: OCCUPANT			111 Vista Mar Ct.	Aptos	CA	95003	NOA
HOGAN LAYNE I JOINT VENTURE			777 N FIRST ST #600	SAN JOSE	CA	95112	NOA
ATTN: OCCUPANT			160 Mattison Ct.	Aptos	CA	95003	NOA
FRANICH BESS L TRUSTEE			107 VISTA MAR CT	APTOS	CA	95003	NOA
JEANRENAUD HENRI & BARBARA O H			106 PONDEROSA DR	SANTA CRUZ	CA	95060	NOA
ATTN: OCCUPANT			8024 Soquel Dr.	Aptos	CA	95003	NOA
ATTN: OCCUPANT			8028 Soquel Dr.	Aptos	CA	95003	NOA
MC PHEE KATHY L U/W			145 ZINFANDEL CIR	SCOTTS VALLEY	CA	95066	NOA
ATTN: OCCUPANTS			105 Village Dr.	Aptos	CA	95003	NOA
INGRAHAM LONA TRUSTEE ETAL			3133 ATHERTON DR	SANTA CLARA	CA	95051	NOA
ATTN: OCCUPANTS			107 Village Dr.	Aptos	CA	95003	NOA
BEDFORD LAURENCE U/M			P O BOX 737	APTOS	CA	95001	NOA
ATTN: OCCUPANTS			103 Village Dr.	Aptos	CA	95003	NOA
MCKENNA THOMAS L & ALISON D TR			1400 VALENCIA RD	APTOS	CA	95003	NOA
LATTANZIO FREDERIC L TRUSTEE			19 SEASCAPE VLG	APTOS	CA	95003	NOA
ATTN: OCCUPANT			3420 South Polo Dr.	Aptos	CA	95003	NOA
BURNS PAUL JOE & BETTY H/W JT			P O BOX 420	RIPON	CA	95366	NOA
DINYARI NAMVAR & SHIRIN H/W			299 VISTA DR	LA SELVA BEACH	CA	95076	NOA
ANDERSON ARLOS W H/W ETAL JT			3361 N POLO DR	APTOS	CA	95003	NOA
GINGERICH FREEMAN A & ROBERTA			195 GINGER LN	SOQUEL	CA	95073	NOA
ATTN: OCCUPANT			3451 North Polo Dr.	Aptos	CA	95003	NOA
PAYNE BAYARD A U/M			3461 N POLO DR	APTOS	CA	95003	NOA
STRAUMANN WENDY U/W JT ETAL			3473 N POLO DR	APTOS	CA	95003	NOA
ROBERTSON STEVEN MAX U/M			3517 N POLO	APTOS	CA	95003	NOA
MC GUIRE BRUCE R & PENELOPE L			3505 HILLTOP RD	SOQUEL	CA	95073	NOA
ATTN: OCCUPANT			3375 North Polo Dr.	Aptos	CA	95003	NOA
SMITH CLINTON & NICOLE H/W CP			3387 N POLO DR	APTOS	CA	95003	NOA
GERKEY DEAN PAUL TRUSTEE TC ET			3417 N POLO DR	APTOS	CA	95003	NOA
WHITE DAVID C & CATHERINE A H/			3421 N POLO DR	APTOS	CA	95003	NOA
MOSHE DAVID N & FELICIA ORAH R			7890 PALACIO DEL MAR DR	BOCA RATON	FL	33433	NOA
ATTN: OCCUPANT			3358 South Polo Dr.	Aptos	CA	95003	NOA
FRANKLIN HARRY S & MICHELLE C			3350 SOUTH DR	APTOS	CA	95003	NOA
WADDELL KATHLEEN E TRUSTEE			3407 N POLO DR	APTOS	CA	95003	NOA
PLAYER NICOLIE ANNE TRUSTEE			3519 N POLO DR	APTOS	CA	95003	NOA
SHARP MELODY A H/W ETAL JT			3395 N POLO DR	APTOS	CA	95003	NOA
JUAREZ RUBEN			5802 SINGING HILLS AVE	LIVERMORE	CA	94550	NOA
SKOGNES GRANT S/M ETAL			3400 S POLO DR	APTOS	CA	95003	NOA
LASKOWICZ GEORGE M M/M SS			3340 S POLO DR	APTOS	CA	95003	NOA

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RICHTER JOHN WILLIAM & JOY JUL			519 FALL CREEK RD	FELTON	CA	95018	NOA
ATTN: OCCUPANT			3308 Polo Drive	Aptos	CA	95003	NOA
HOPF MARY LOUISE TRUSTEE			3414 S POLO DR	APTOS	CA	95003	NOA
LOCKE-PADDON KENNETH & THERESA			88 NUNES RD	WATSONVILL E	CA	95076	NOA
ATTN: OCCUPANT			3521 North Polo Dr.	Aptos	CA	95003	NOA
BOESEN JOHN P U/M			3372 S POLO DR	APTOS	CA	95003	NOA
MC MULLEN JERRY U/M			3410 S POLO DR	APTOS	CA	95003	NOA
MALOON GEOFFREY D & SHANNON H/			3357 N POLO DR	APTOS	CA	95003	NOA
LOCKE-PADDON KENNETH & THERESA			88 NUNES RD	WATSONVILL E	CA	95076	NOA
ATTN: OCCUPANT			3525 North Polo Dr.	Aptos	CA	95003	NOA
REID SCOTT & TRACI H/W CP RS			3380 S POLO DR	APTOS	CA	95003	NOA
MORRIS NANCY HOPE TRUSTEE			3366 S POLO DR	APTOS	CA	95003	NOA
ASHLEY ALAN D U/M			3386 S POLO DR	APTOS	CA	95003	NOA
BARANOV JUDITH L S/W			3390 S POLO DR	APTOS	CA	95003	NOA

APPENDIX F

Air Quality Emission Calculations

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CRITERIA POLLUTANT CONSTRUCTION EMISSIONS

ASR Wells												
Off Road Equipment	MaxHP	Number	Hour/Day	Emission Factor (pounds/hour)				Emissions (pounds/day)				
				ROG	CO	NOX	PM	ROG	CO	NOX	PM10	PM2.5
Drill Rig	218	1	24	0.102	0.533	1.176	0.046	2.45	12.79	28.24	1.09	1.01
Crane	190	1	8	0.128	0.465	1.049	0.055	1.03	3.72	8.39	0.44	0.41
Backhoe	79	1	8	0.122	0.367	0.436	0.043	0.98	2.94	3.49	0.34	0.32
Forklift	255	1	8	0.174	0.732	1.370	0.079	1.39	5.86	10.96	0.63	0.58
Air Compressor	190	1	8	0.128	0.594	1.113	0.058	1.02	4.75	8.90	0.46	0.43
Total =								6.87	30.06	59.98	2.97	2.74

Other Construction Equipment

Off Road Equipment	MaxHP	Number	Hour/Day	Emission Factor (pounds/hour)				Emissions (pounds/day)				
				ROG	CO	NOX	PM	ROG	CO	NOX	PM10	PM2.5
Drill Rig	218	1	24	0.102	0.533	1.176	0.046	2.45	12.79	28.24	1.09	1.01
TOTAL =								2.45		28.24		

Total Construction Emissions Soquel WMP

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>PM10</u>	<u>PM2.5</u>
Off-road Exhaust	6.9	30.1	60.0	3.0	2.7
Onroad Exhaust	0.8	6.4	7.1	0.2	0.2
Total	7.6	36.5	67.1	3.2	2.9
Significance Criteria	---	---	---	82	---
Significant Impact?	No	No	No	no	NO

ONROAD CRITERIA POLLUTANT EMISSIONS

Emission Factors

Vehicle Type	Running Exhaust Emission Factors (pounds/mile)					Starting Emission Factors (pounds/trip)				
	ROG	NOx	CO	PM10	PM2.5	ROG	NOx	CO	PM10	PM2.5
Light duty truck	0.0003	0.0012	0.0084	8.3E-05	5.0E-05	0.0031	0.0016	0.0319	4.409E-05	3.968E-05
Heavy duty truck	0.0031	0.0389	0.0181	1.5E-03	1.3E-03	0.0195	0.0305	0.2057	2.646E-05	2.205E-05

Note: used EMFAC 2007, for model years 1989 through 2009; average of speeds 25 mph and 55 mph.

Daily Construction Emissions (pounds/day)

Soquel WMP							
Vehicle Type	Trips/day	miles/trip	ROG	NOx	CO	PM10	PM2.5
Light duty truck	20	10	0.11	0.27	2.33	0.02	0.01
Heavy duty truck	10	15	0.66	6.14	4.77	0.22	0.19
Total	30	NA	0.77	6.40	7.10	0.24	0.21

Equipment	MaxHP	ROG EF	CO EF	NOX EF	CO2 EF	SO2 EF	PM EF	N2O EF	CH4 EF
Pavers	25	2.93E-02	8.70E-02	1.64E-01	1.86E+01	2.37E-04	1.00E-02	0.00E+00	2.65E-03
Pavers	50	1.71E-01	3.95E-01	3.15E-01	2.80E+01	3.62E-04	3.71E-02	0.00E+00	1.54E-02
Pavers	120	1.73E-01	5.28E-01	1.02E+00	6.91E+01	8.11E-04	8.87E-02	0.00E+00	1.56E-02
Pavers	132	1.82E-01	5.88E-01	1.16E+00	8.20E+01	9.49E-04	8.98E-02	0.00E+00	1.64E-02
Pavers	175	2.14E-01	8.03E-01	1.68E+00	1.28E+02	1.44E-03	9.38E-02	0.00E+00	1.94E-02
Pavers	250	2.55E-01	7.38E-01	2.45E+00	1.94E+02	2.19E-03	1.01E-01	0.00E+00	2.30E-02
Pavers	500	2.75E-01	1.27E+00	2.66E+00	2.33E+02	2.29E-03	1.08E-01	0.00E+00	2.48E-02
Plate Compactors	15	5.08E-03	2.63E-02	3.21E-02	4.31E+00	6.71E-05	#NAME?	0.00E+00	4.59E-04
Rollers	15	7.37E-03	3.86E-02	4.62E-02	6.31E+00	9.83E-05	2.32E-03	0.00E+00	6.65E-04
Rollers	25	1.68E-02	5.54E-02	1.08E-01	1.33E+01	1.69E-04	5.98E-03	0.00E+00	1.52E-03
Rollers	50	1.35E-01	3.26E-01	2.79E-01	2.60E+01	3.36E-04	3.07E-02	0.00E+00	1.22E-02
Rollers	114	1.28E-01	4.13E-01	7.35E-01	5.61E+01	6.61E-04	6.40E-02	0.00E+00	1.16E-02
Rollers	120	1.28E-01	4.22E-01	7.78E-01	5.89E+01	6.91E-04	6.71E-02	0.00E+00	1.15E-02
Rollers	175	1.56E-01	6.30E-01	1.27E+00	1.08E+02	1.22E-03	6.86E-02	0.00E+00	1.41E-02
Rollers	250	1.64E-01	4.80E-01	1.71E+00	1.53E+02	1.72E-03	6.42E-02	0.00E+00	1.48E-02
Rollers	500	2.11E-01	8.42E-01	2.21E+00	2.19E+02	2.15E-03	8.30E-02	0.00E+00	1.90E-02
Scrapers	120	2.36E-01	7.25E-01	1.37E+00	9.38E+01	1.10E-03	1.23E-01	0.00E+00	2.13E-02
Scrapers	175	2.51E-01	9.36E-01	1.92E+00	1.48E+02	1.66E-03	1.10E-01	0.00E+00	2.26E-02
Scrapers	250	2.75E-01	7.75E-01	2.61E+00	2.09E+02	2.35E-03	1.07E-01	0.00E+00	2.48E-02
Scrapers	500	3.81E-01	1.65E+00	3.61E+00	3.21E+02	3.15E-03	1.46E-01	0.00E+00	3.44E-02
Scrapers	750	6.61E-01	2.85E+00	6.35E+00	5.55E+02	5.58E-03	2.54E-01	0.00E+00	5.97E-02
Paving Equipment	25	1.59E-02	5.24E-02	1.02E-01	1.26E+01	1.60E-04	5.66E-03	0.00E+00	1.44E-03
Paving Equipment	50	1.45E-01	3.35E-01	2.69E-01	2.39E+01	3.09E-04	3.15E-02	0.00E+00	1.31E-02
Paving Equipment	111	1.36E-01	4.03E-01	7.28E-01	5.05E+01	5.96E-04	6.45E-02	0.00E+00	1.23E-02
Paving Equipment	120	1.35E-01	4.13E-01	7.96E-01	5.45E+01	6.39E-04	6.94E-02	0.00E+00	1.22E-02
Paving Equipment	175	1.67E-01	6.26E-01	1.32E+00	1.01E+02	1.14E-03	7.31E-02	0.00E+00	1.51E-02
Paving Equipment	250	1.59E-01	4.60E-01	1.53E+00	1.22E+02	1.37E-03	6.28E-02	0.00E+00	1.43E-02
Surfacing Equipment	50	6.28E-02	1.56E-01	1.47E-01	1.41E+01	1.82E-04	1.49E-02	0.00E+00	5.67E-03
Surfacing Equipment	120	1.27E-01	4.38E-01	8.09E-01	6.37E+01	7.47E-04	6.54E-02	0.00E+00	1.15E-02
Surfacing Equipment	175	1.13E-01	4.81E-01	9.68E-01	8.57E+01	9.64E-04	4.93E-02	0.00E+00	1.02E-02
Surfacing Equipment	250	1.34E-01	4.09E-01	1.45E+00	1.35E+02	1.52E-03	5.24E-02	0.00E+00	1.20E-02
Surfacing Equipment	500	1.97E-01	8.39E-01	2.17E+00	2.21E+02	2.17E-03	7.82E-02	0.00E+00	1.78E-02
Surfacing Equipment	750	3.14E-01	1.32E+00	3.47E+00	3.47E+02	3.49E-03	1.24E-01	0.00E+00	2.84E-02
Signal Boards	15	7.18E-03	3.76E-02	4.49E-02	6.16E+00	9.59E-05	1.84E-03	0.00E+00	6.47E-04
Signal Boards	50	1.58E-01	3.91E-01	3.74E-01	3.62E+01	4.67E-04	3.80E-02	0.00E+00	1.43E-02
Signal Boards	119	1.57E-01	5.38E-01	9.84E-01	7.95E+01	9.32E-04	8.16E-02	0.00E+00	1.42E-02
Signal Boards	120	1.59E-01	5.42E-01	9.92E-01	8.01E+01	9.40E-04	8.23E-02	0.00E+00	1.43E-02
Signal Boards	175	2.01E-01	8.46E-01	1.71E+00	1.54E+02	1.74E-03	8.77E-02	0.00E+00	1.82E-02
Signal Boards	250	2.20E-01	6.52E-01	2.64E+00	2.55E+02	2.87E-03	8.43E-02	0.00E+00	1.98E-02
Trenchers	15	9.84E-03	5.16E-02	6.16E-02	8.46E+00	1.32E-04	2.52E-03	0.00E+00	8.88E-04
Trenchers	25	4.02E-02	1.35E-01	2.58E-01	3.29E+01	4.17E-04	1.41E-02	0.00E+00	3.63E-03
Trenchers	50	1.93E-01	4.46E-01	3.66E-01	3.29E+01	4.25E-04	4.21E-02	0.00E+00	1.74E-02
Trenchers	82	1.77E-01	4.66E-01	6.33E-01	4.75E+01	5.78E-04	5.97E-02	0.00E+00	1.60E-02
Trenchers	120	1.59E-01	4.90E-01	9.51E-01	6.48E+01	7.61E-04	8.05E-02	0.00E+00	1.43E-02
Trenchers	175	2.36E-01	8.93E-01	1.88E+00	1.44E+02	1.62E-03	1.03E-01	0.00E+00	2.13E-02
Trenchers	250	2.92E-01	8.58E-01	2.81E+00	2.23E+02	2.51E-03	1.16E-01	0.00E+00	2.63E-02
Trenchers	500	3.64E-01	1.77E+00	3.57E+00	3.11E+02	3.05E-03	1.44E-01	0.00E+00	3.28E-02
Trenchers	750	6.93E-01	3.34E+00	6.84E+00	1.69E+06	5.90E-03	2.74E-01	0.00E+00	6.25E-02
Bore/Drill Rigs	15	1.21E-02	6.31E-02	7.56E-02	1.03E+01	1.61E-04	3.80E-03	0.00E+00	1.09E-03
Bore/Drill Rigs	25	2.01E-02	6.64E-02	1.30E-01	1.60E+01	2.03E-04	7.17E-03	0.00E+00	1.82E-03
Bore/Drill Rigs	50	6.68E-02	2.61E-01	2.85E-01	3.10E+01	4.01E-04	2.22E-02	0.00E+00	6.03E-03
Bore/Drill Rigs	120	8.57E-02	4.86E-01	6.80E-01	7.71E+01	9.04E-04	5.21E-02	0.00E+00	7.73E-03
Bore/Drill Rigs	175	1.05E-01	7.53E-01	1.02E+00	1.41E+02	1.59E-03	5.27E-02	0.00E+00	9.47E-03
Bore/Drill Rigs	218	1.02E-01	5.33E-01	1.18E+00	1.66E+02	1.87E-03	4.55E-02	0.00E+00	9.21E-03
Bore/Drill Rigs	250	9.98E-02	3.48E-01	1.31E+00	1.88E+02	2.11E-03	3.95E-02	0.00E+00	9.00E-03
Bore/Drill Rigs	500	1.52E-01	5.59E-01	1.84E+00	3.11E+02	3.05E-03	6.24E-02	0.00E+00	1.37E-02
Bore/Drill Rigs	750	3.08E-01	1.10E+00	3.79E+00	6.15E+02	6.18E-03	1.26E-01	0.00E+00	2.77E-02
Bore/Drill Rigs	1000	5.74E-01	1.73E+00	8.75E+00	9.27E+02	9.33E-03	2.16E-01	0.00E+00	5.18E-02
Excavators	25	2.00E-02	6.76E-02	1.27E-01	1.64E+01	2.08E-04	6.64E-03	0.00E+00	1.80E-03
Excavators	50	1.25E-01	3.26E-01	2.68E-01	2.50E+01	3.23E-04	2.97E-02	0.00E+00	1.13E-02
Excavators	120	1.52E-01	5.37E-01	8.98E-01	7.36E+01	8.63E-04	8.39E-02	0.00E+00	1.37E-02
Excavators	175	1.56E-01	6.71E-01	1.20E+00	1.12E+02	1.26E-03	7.02E-02	0.00E+00	1.41E-02
Excavators	180	1.56E-01	6.54E-01	1.22E+00	1.15E+02	1.30E-03	6.92E-02	0.00E+00	1.41E-02
Excavators	250	1.53E-01	4.14E-01	1.60E+00	1.59E+02	1.78E-03	5.55E-02	0.00E+00	1.38E-02
Excavators	500	2.07E-01	6.60E-01	2.06E+00	2.34E+02	2.29E-03	7.54E-02	0.00E+00	1.87E-02
Excavators	750	3.46E-01	1.09E+00	3.52E+00	3.87E+02	3.89E-03	1.27E-01	0.00E+00	3.12E-02
Concrete/Industrial Saws	25	2.01E-02	6.78E-02	1.29E-01	1.65E+01	2.09E-04	7.05E-03	0.00E+00	1.82E-03
Concrete/Industrial Saws	50	1.32E-01	3.31E-01	3.12E-01	3.02E+01	3.90E-04	3.17E-02	0.00E+00	1.19E-02
Concrete/Industrial Saws	120	1.44E-01	5.02E-01	9.10E-01	7.41E+01	8.69E-04	7.54E-02	0.00E+00	1.30E-02
Concrete/Industrial Saws	175	2.05E-01	8.82E-01	1.75E+00	1.60E+02	1.80E-03	9.02E-02	0.00E+00	1.85E-02
Cement and Mortar Mixers	15	8.24E-03	3.91E-02	5.31E-02	6.31E+00	9.83E-05	3.28E-03	0.00E+00	7.43E-04
Cement and Mortar Mixers	25	3.75E-02	9.91E-02	1.68E-01	1.75E+01	2.23E-04	1.16E-02	0.00E+00	3.38E-03

Cranes	50	1.37E-01	3.26E-01	2.58E-01	2.32E+01	2.99E-04	3.04E-02	0.00E+00	1.24E-02
Cranes	120	1.19E-01	3.76E-01	6.89E-01	5.01E+01	5.88E-04	6.32E-02	0.00E+00	1.07E-02
Cranes	175	1.27E-01	4.90E-01	9.84E-01	8.03E+01	9.03E-04	5.63E-02	0.00E+00	1.15E-02
Cranes	190	1.28E-01	4.65E-01	1.05E+00	8.66E+01	9.75E-04	5.50E-02	0.00E+00	1.16E-02
Cranes	250	1.31E-01	3.66E-01	1.31E+00	1.12E+02	1.26E-03	5.01E-02	0.00E+00	1.19E-02
Cranes	500	1.91E-01	7.16E-01	1.88E+00	1.80E+02	1.77E-03	7.27E-02	0.00E+00	1.73E-02
Cranes	750	3.24E-01	1.21E+00	3.23E+00	3.03E+02	3.04E-03	1.24E-01	0.00E+00	2.92E-02
Cranes	9999	1.15E+00	4.47E+00	1.26E+01	9.70E+02	9.75E-03	3.97E-01	0.00E+00	1.04E-01
Graders	50	1.51E-01	3.69E-01	3.00E-01	2.75E+01	3.56E-04	3.42E-02	0.00E+00	1.36E-02
Graders	120	1.66E-01	5.51E-01	9.81E-01	7.49E+01	8.79E-04	8.96E-02	0.00E+00	1.50E-02
Graders	174	1.84E-01	7.40E-01	1.43E+00	1.23E+02	1.38E-03	8.22E-02	0.00E+00	1.66E-02
Graders	175	1.84E-01	7.44E-01	1.44E+00	1.24E+02	1.39E-03	8.21E-02	0.00E+00	1.66E-02
Graders	250	1.86E-01	5.19E-01	1.90E+00	1.72E+02	1.93E-03	7.05E-02	0.00E+00	1.67E-02
Graders	500	2.25E-01	8.12E-01	2.25E+00	2.29E+02	2.25E-03	8.53E-02	0.00E+00	2.03E-02
Graders	750	4.79E-01	1.72E+00	4.88E+00	4.85E+02	4.88E-03	1.83E-01	0.00E+00	4.33E-02
Off-Highway Trucks	175	1.84E-01	7.64E-01	1.37E+00	1.25E+02	1.41E-03	8.15E-02	0.00E+00	1.66E-02
Off-Highway Trucks	250	1.72E-01	4.53E-01	1.73E+00	1.66E+02	1.87E-03	6.14E-02	0.00E+00	1.56E-02
Off-Highway Trucks	417	2.31E-01	6.92E-01	2.23E+00	2.37E+02	2.41E-03	8.21E-02	0.00E+00	2.08E-02
Off-Highway Trucks	500	2.60E-01	8.10E-01	2.48E+00	2.72E+02	2.67E-03	9.24E-02	0.00E+00	2.35E-02
Off-Highway Trucks	750	4.25E-01	1.31E+00	4.14E+00	4.41E+02	4.44E-03	1.52E-01	0.00E+00	3.83E-02
Off-Highway Trucks	1000	6.76E-01	2.23E+00	7.65E+00	6.24E+02	6.28E-03	2.33E-01	0.00E+00	6.10E-02
Crushing/Proc. Equipment	50	2.40E-01	5.72E-01	4.76E-01	4.40E+01	5.69E-04	5.43E-02	0.00E+00	2.17E-02
Crushing/Proc. Equipment	120	1.86E-01	6.00E-01	1.09E+00	8.31E+01	9.74E-04	9.97E-02	0.00E+00	1.68E-02
Crushing/Proc. Equipment	154	2.24E-01	8.32E-01	1.63E+00	1.35E+02	1.53E-03	1.06E-01	0.00E+00	2.02E-02
Crushing/Proc. Equipment	175	2.48E-01	9.76E-01	1.96E+00	1.67E+02	1.88E-03	1.11E-01	0.00E+00	2.24E-02
Crushing/Proc. Equipment	250	2.39E-01	6.61E-01	2.68E+00	2.44E+02	2.75E-03	9.00E-02	0.00E+00	2.15E-02
Crushing/Proc. Equipment	500	3.27E-01	1.15E+00	3.65E+00	3.73E+02	3.66E-03	1.26E-01	0.00E+00	2.95E-02
Crushing/Proc. Equipment	750	5.23E-01	1.77E+00	5.94E+00	5.88E+02	5.92E-03	2.01E-01	0.00E+00	4.72E-02
Crushing/Proc. Equipment	9999	1.46E+00	5.20E+00	1.66E+01	1.31E+03	1.31E-02	5.03E-01	0.00E+00	1.32E-01
Rough Terrain Forklifts	50	1.73E-01	4.32E-01	3.61E-01	3.38E+01	4.37E-04	4.01E-02	0.00E+00	1.56E-02
Rough Terrain Forklifts	120	1.30E-01	4.49E-01	7.79E-01	6.24E+01	7.32E-04	7.15E-02	0.00E+00	1.18E-02
Rough Terrain Forklifts	175	1.74E-01	7.32E-01	1.37E+00	1.25E+02	1.40E-03	7.86E-02	0.00E+00	1.57E-02
Rough Terrain Forklifts	250	1.62E-01	4.54E-01	1.78E+00	1.71E+02	1.92E-03	6.11E-02	0.00E+00	1.47E-02
Rough Terrain Forklifts	500	2.22E-01	7.49E-01	2.35E+00	2.56E+02	2.52E-03	8.43E-02	0.00E+00	2.00E-02
Rubber Tired Loaders	25	2.07E-02	6.96E-02	1.33E-01	1.69E+01	2.15E-04	7.25E-03	0.00E+00	1.87E-03
Rubber Tired Loaders	50	1.68E-01	4.13E-01	3.38E-01	3.11E+01	4.02E-04	3.83E-02	0.00E+00	1.52E-02
Rubber Tired Loaders	120	1.29E-01	4.31E-01	7.65E-01	5.89E+01	6.90E-04	6.97E-02	0.00E+00	1.16E-02
Rubber Tired Loaders	175	1.56E-01	6.35E-01	1.22E+00	1.06E+02	1.20E-03	6.97E-02	0.00E+00	1.41E-02
Rubber Tired Loaders	250	1.58E-01	4.43E-01	1.63E+00	1.49E+02	1.67E-03	5.99E-02	0.00E+00	1.42E-02
Rubber Tired Loaders	500	2.28E-01	8.22E-01	2.30E+00	2.37E+02	2.32E-03	8.67E-02	0.00E+00	2.05E-02
Rubber Tired Loaders	750	4.70E-01	1.68E+00	4.83E+00	4.85E+02	4.88E-03	1.80E-01	0.00E+00	4.24E-02
Rubber Tired Loaders	1000	6.51E-01	2.41E+00	7.42E+00	5.93E+02	5.97E-03	2.26E-01	0.00E+00	5.88E-02
Rubber Tired Dozers	175	2.49E-01	8.77E-01	1.87E+00	1.29E+02	1.46E-03	1.08E-01	0.00E+00	2.25E-02
Rubber Tired Dozers	250	2.89E-01	8.11E-01	2.56E+00	1.83E+02	2.06E-03	1.12E-01	0.00E+00	2.61E-02
Rubber Tired Dozers	500	3.76E-01	1.86E+00	3.35E+00	2.65E+02	2.60E-03	1.43E-01	0.00E+00	3.39E-02
Rubber Tired Dozers	750	5.67E-01	2.81E+00	5.12E+00	3.98E+02	4.01E-03	2.17E-01	0.00E+00	5.12E-02
Rubber Tired Dozers	1000	8.83E-01	4.49E+00	8.76E+00	5.91E+02	5.95E-03	3.16E-01	0.00E+00	7.96E-02
Tractors/Loaders/Backhoes	25	2.24E-02	6.96E-02	1.35E-01	1.58E+01	2.01E-04	7.91E-03	0.00E+00	2.02E-03
Tractors/Loaders/Backhoes	50	1.39E-01	3.68E-01	3.16E-01	3.03E+01	3.92E-04	3.36E-02	0.00E+00	1.25E-02
Tractors/Loaders/Backhoes	79	1.22E-01	3.67E-01	4.36E-01	3.92E+01	4.81E-04	4.26E-02	0.00E+00	1.10E-02
Tractors/Loaders/Backhoes	120	9.90E-02	3.66E-01	6.06E-01	5.17E+01	6.06E-04	5.53E-02	0.00E+00	8.93E-03
Tractors/Loaders/Backhoes	175	1.30E-01	5.88E-01	1.04E+00	1.01E+02	1.14E-03	5.96E-02	0.00E+00	1.18E-02
Tractors/Loaders/Backhoes	250	1.50E-01	4.23E-01	1.66E+00	1.72E+02	1.93E-03	5.57E-02	0.00E+00	1.35E-02
Tractors/Loaders/Backhoes	500	2.75E-01	9.00E-01	2.92E+00	3.45E+02	3.88E-03	1.04E-01	0.00E+00	2.48E-02
Tractors/Loaders/Backhoes	750	4.17E-01	1.35E+00	4.51E+00	5.17E+02	5.82E-03	1.58E-01	0.00E+00	3.76E-02
Crawler Tractors	50	1.54E-01	3.61E-01	2.81E-01	2.49E+01	3.21E-04	3.36E-02	0.00E+00	1.39E-02
Crawler Tractors	120	1.64E-01	5.07E-01	9.51E-01	6.58E+01	7.71E-04	8.58E-02	0.00E+00	1.48E-02
Crawler Tractors	175	2.04E-01	7.66E-01	1.56E+00	1.21E+02	1.36E-03	8.94E-02	0.00E+00	1.84E-02
Crawler Tractors	250	2.15E-01	6.04E-01	2.05E+00	1.66E+02	1.87E-03	8.31E-02	0.00E+00	1.94E-02
Crawler Tractors	500	3.04E-01	1.30E+00	2.87E+00	2.59E+02	2.54E-03	1.16E-01	0.00E+00	2.74E-02
Crawler Tractors	750	5.47E-01	2.32E+00	5.25E+00	4.64E+02	4.67E-03	2.10E-01	0.00E+00	4.94E-02
Crawler Tractors	1000	8.40E-01	3.68E+00	8.91E+00	6.58E+02	6.61E-03	2.95E-01	0.00E+00	7.58E-02
Skid Steer Loaders	25	2.70E-02	7.36E-02	1.28E-01	1.38E+01	1.75E-04	8.58E-03	0.00E+00	2.43E-03
Skid Steer Loaders	50	8.91E-02	2.61E-01	2.50E-01	2.55E+01	3.30E-04	2.37E-02	0.00E+00	8.04E-03
Skid Steer Loaders	120	6.76E-02	2.85E-01	4.47E-01	4.27E+01	5.01E-04	3.87E-02	0.00E+00	6.10E-03
Off-Highway Tractors	120	2.57E-01	7.52E-01	1.48E+00	9.37E+01	1.10E-03	1.30E-01	0.00E+00	2.32E-02
Off-Highway Tractors	175	2.42E-01	8.64E-01	1.85E+00	1.30E+02	1.47E-03	1.05E-01	0.00E+00	2.19E-02
Off-Highway Tractors	250	1.96E-01	5.60E-01	1.78E+00	1.30E+02	1.47E-03	7.73E-02	0.00E+00	1.77E-02
Off-Highway Tractors	255	2.02E-01	5.93E-01	1.84E+00	1.35E+02	1.51E-03	7.95E-02	0.00E+00	1.82E-02
Off-Highway Tractors	750	7.71E-01	3.83E+00	7.15E+00	5.68E+02	5.71E-03	2.99E-01	0.00E+00	6.96E-02
Off-Highway Tractors	1000	1.17E+00	5.95E+00	1.18E+01	8.14E+02	8.18E-03	4.20E-01	0.00E+00	1.06E-01
Dumpers/Tenders	25	1.14E-02	3.45E-02	6.61E-02	7.62E+00	9.67E-05	3.94E-03	0.00E+00	1.02E-03
Other Construction Equipment	15	1.18E-02	6.17E-02	7.39E-02	1.01E+01	1.57E-04	3.72E-03	0.00E+00	1.06E-03

Other Construction Equipment	25	1.67E-02	5.49E-02	1.07E-01	1.32E+01	1.68E-04	5.93E-03	0.00E+00	1.50E-03
Other Construction Equipment	50	1.13E-01	3.03E-01	2.83E-01	2.80E+01	3.62E-04	2.82E-02	0.00E+00	1.02E-02
Other Construction Equipment	120	1.44E-01	5.47E-01	9.23E-01	8.08E+01	9.48E-04	7.88E-02	0.00E+00	1.30E-02
Other Construction Equipment	175	1.25E-01	5.91E-01	1.06E+00	1.06E+02	1.20E-03	5.72E-02	0.00E+00	1.13E-02
Other Construction Equipment	190	1.28E-01	5.94E-01	1.11E+00	1.13E+02	1.26E-03	5.79E-02	0.00E+00	1.16E-02
Other Construction Equipment	500	1.81E-01	6.53E-01	2.12E+00	2.54E+02	2.49E-03	7.21E-02	0.00E+00	1.64E-02

Title : Onroad Monterey County
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/10/16 10:21:02
Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
Season : Annual
Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.15	0.126	1.801	0	0	0.287
55	0	0.08	0.066	1	0	0	0.156
40		0.115	0.096	1.4005			

Pollutant Name: Methane Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.048	0.048	0.087	0	0	0.052
55	0	0.034	0.035	0.052	0	0	0.036
40		0.041	0.0415	0.0695			

Pollutant Name: Carbon Monoxide Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	4.646	3.715	10.347	0	0	4.789
55	0	3.013	2.394	6.075	0	0	3.044
40		3.8295	3.0545	8.211			

Pollutant Name: Oxides of Nitrogen Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.545	0.683	17.991	0	0	2.145
55	0	0.513	0.607	17.292	0	0	2.036
40		0.529	0.645	17.6415			

Pollutant Name: Carbon Dioxide Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	474.531	659.381	1953.146	0	0	677.434
55	0	380.641	524.083	1586.187	0	0	543.246
40		427.586	591.732	1769.667			

Pollutant Name: PM10 Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.021	0.033	0.656	0	0.082
55		0	0.012	0.019	0.579	0	0.065
40			0.0165	0.026	0.6175		

Pollutant Name: PM10 - Tire Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.008	0.008	0.034	0	0.01
55		0	0.008	0.008	0.034	0	0.01
40			0.008	0.008	0.034		

Pollutant Name: PM10 - Break Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.013	0.013	0.028	0	0.014
55		0	0.013	0.013	0.028	0	0.014
40			0.013	0.013	0.028		

Pollutant Name: PM2.5 Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.02	0.031	0.603	0	0.076
55		0	0.011	0.018	0.533	0	0.06
40			0.0155	0.0245	0.568		

Pollutant Name: PM2.5 - Tire Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.002	0.002	0.009	0	0.003
55		0	0.002	0.002	0.009	0	0.003
40			0.002	0.002	0.009		

Pollutant Name: PM2.5 - Break Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.005	0.005	0.012	0	0.006
55		0	0.005	0.005	0.012	0	0.006
40			0.005	0.005	0.012		

Title : Onroad Monterey County
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/10/16 10:21:02
Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
Season : Annual
Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Monterey County Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.105	0.104	1.07	0	0	0.132
10	0	0.206	0.204	2.085	0	0	0.257
20	0	0.392	0.392	3.953	0	0	0.491
30	0	0.559	0.563	5.604	0	0	0.701
40	0	0.707	0.717	7.037	0	0	0.887
50	0	0.836	0.856	8.253	0	0	1.049
60	0	0.945	0.977	9.252	0	0	1.188
120	0	1.162	1.332	8.823	0	0	1.441
180	0	0.934	1.051	9.362	0	0	1.214
240	0	0.988	1.114	9.883	0	0	1.284
300	0	1.041	1.175	10.388	0	0	1.353
360	0	1.092	1.236	10.875	0	0	1.42
420	0	1.142	1.296	11.346	0	0	1.485
480	0	1.19	1.354	11.799	0	0	1.549
540	0	1.237	1.412	12.235	0	0	1.611
600	0	1.283	1.468	12.654	0	0	1.671
660	0	1.328	1.523	13.056	0	0	1.73
720	0	1.371	1.577	13.441	0	0	1.787

Pollutant Name: Methane Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.006	0.006	0.06	0	0	0.007
10	0	0.012	0.012	0.118	0	0	0.015
20	0	0.022	0.022	0.223	0	0	0.028
30	0	0.032	0.032	0.316	0	0	0.04
40	0	0.04	0.04	0.397	0	0	0.05
50	0	0.047	0.048	0.465	0	0	0.059
60	0	0.053	0.055	0.522	0	0	0.067
120	0	0.065	0.075	0.497	0	0	0.081
180	0	0.053	0.059	0.528	0	0	0.068
240	0	0.056	0.063	0.557	0	0	0.072
300	0	0.059	0.066	0.586	0	0	0.076
360	0	0.062	0.07	0.613	0	0	0.08
420	0	0.064	0.073	0.64	0	0	0.084

480	0	0.067	0.076	0.665	0	0	0.087
540	0	0.07	0.08	0.69	0	0	0.091
600	0	0.072	0.083	0.713	0	0	0.094
660	0	0.075	0.086	0.736	0	0	0.098
720	0	0.077	0.089	0.758	0	0	0.101

Pollutant Name: Carbon Monoxide Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	1.285	1.177	11.816	0	0	1.535
10	0	2.524	2.315	23.153	0	0	3.015
20	0	4.864	4.477	44.385	0	0	5.809
30	0	7.02	6.484	63.697	0	0	8.382
40	0	8.992	8.337	81.088	0	0	10.735
50	0	10.78	10.035	96.559	0	0	12.868
60	0	12.384	11.58	110.11	0	0	14.78
120	0	16.262	16.197	93.303	0	0	18.374
180	0	11.891	11.609	96.03	0	0	14.115
240	0	12.481	12.311	98.847	0	0	14.811
300	0	13.035	12.953	101.755	0	0	15.465
360	0	13.553	13.535	104.752	0	0	16.077
420	0	14.035	14.058	107.839	0	0	16.647
480	0	14.48	14.52	111.016	0	0	17.175
540	0	14.89	14.923	114.283	0	0	17.661
600	0	15.263	15.265	117.64	0	0	18.105
660	0	15.601	15.548	121.086	0	0	18.507
720	0	15.902	15.771	124.623	0	0	18.868

Pollutant Name: Oxides of Nitrogen Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.358	0.741	3.16	0	0	0.586
10	0	0.417	0.818	4.762	0	0	0.695
20	0	0.523	0.955	7.574	0	0	0.888
30	0	0.609	1.07	9.866	0	0	1.047
40	0	0.678	1.162	11.637	0	0	1.172
50	0	0.729	1.232	12.887	0	0	1.264
60	0	0.761	1.28	13.616	0	0	1.321
120	0	0.8	1.369	13.82	0	0	1.384
180	0	0.826	1.416	13.769	0	0	1.417
240	0	0.821	1.406	13.692	0	0	1.407
300	0	0.812	1.39	13.587	0	0	1.393
360	0	0.801	1.368	13.456	0	0	1.375
420	0	0.787	1.34	13.298	0	0	1.351
480	0	0.77	1.307	13.113	0	0	1.323
540	0	0.75	1.268	12.902	0	0	1.291
600	0	0.728	1.223	12.663	0	0	1.253
660	0	0.702	1.172	12.398	0	0	1.211
720	0	0.674	1.116	12.106	0	0	1.164

Pollutant Name: Carbon Dioxide Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	11.103	18.055	4.525	0	0	13.648
10	0	14.161	21.701	9.025	0	0	16.977
20	0	20.621	29.637	17.951	0	0	24.084
30	0	27.538	38.434	26.776	0	0	31.791
40	0	34.912	48.09	35.501	0	0	40.098
50	0	42.742	58.607	44.126	0	0	49.005
60	0	51.03	69.984	52.65	0	0	58.511
120	0	104.659	151.054	89.549	0	0	122.442
180	0	120.582	172.966	105.796	0	0	140.723
240	0	136.078	194.504	121.083	0	0	158.584
300	0	151.148	215.668	135.412	0	0	176.024
360	0	165.791	236.46	148.782	0	0	193.044
420	0	180.008	256.877	161.193	0	0	209.643
480	0	193.797	276.922	172.644	0	0	225.822
540	0	207.16	296.592	183.138	0	0	241.58
600	0	220.097	315.89	192.672	0	0	256.917
660	0	232.606	334.813	201.247	0	0	271.834
720	0	244.689	353.364	208.863	0	0	286.331

Pollutant Name: PM10 Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.001	0.002	0.001	0	0	0.001
10	0	0.002	0.003	0.002	0	0	0.002
20	0	0.004	0.006	0.003	0	0	0.005
30	0	0.005	0.009	0.005	0	0	0.007
40	0	0.007	0.011	0.006	0	0	0.009
50	0	0.008	0.014	0.007	0	0	0.01
60	0	0.01	0.016	0.008	0	0	0.012
120	0	0.014	0.024	0.011	0	0	0.018
180	0	0.015	0.026	0.011	0	0	0.019
240	0	0.016	0.028	0.012	0	0	0.02
300	0	0.017	0.029	0.012	0	0	0.021
360	0	0.017	0.031	0.012	0	0	0.022
420	0	0.018	0.032	0.013	0	0	0.023
480	0	0.019	0.033	0.013	0	0	0.024
540	0	0.019	0.034	0.013	0	0	0.025
600	0	0.02	0.035	0.014	0	0	0.025
660	0	0.02	0.035	0.014	0	0	0.026
720	0	0.02	0.036	0.015	0	0	0.026

Pollutant Name: PM2.5 Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.001	0.001	0.001	0	0	0.001
10	0	0.002	0.003	0.002	0	0	0.002
20	0	0.003	0.006	0.003	0	0	0.004

30	0	0.005	0.008	0.004	0	0	0.006
40	0	0.006	0.011	0.005	0	0	0.008
50	0	0.008	0.013	0.007	0	0	0.01
60	0	0.009	0.015	0.007	0	0	0.011
120	0	0.013	0.022	0.01	0	0	0.017
180	0	0.014	0.024	0.01	0	0	0.018
240	0	0.015	0.026	0.011	0	0	0.019
300	0	0.015	0.027	0.011	0	0	0.02
360	0	0.016	0.028	0.011	0	0	0.021
420	0	0.017	0.03	0.012	0	0	0.022
480	0	0.017	0.031	0.012	0	0	0.022
540	0	0.018	0.031	0.012	0	0	0.023
600	0	0.018	0.032	0.013	0	0	0.023
660	0	0.018	0.033	0.013	0	0	0.024
720	0	0.019	0.033	0.014	0	0	0.024

Title : Onroad Monterey County
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/10/16 10:21:02
 Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
 Season : Annual
 Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Monterey County Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant	Name:	Reactive	Org	Gases	Temperatu 60F	Relative	Humidity: ALL
Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.047	0.028	0.005	0	0	0.039
10	0	0.088	0.052	0.01	0	0	0.071
20	0	0.15	0.089	0.018	0	0	0.122
30	0	0.194	0.115	0.023	0	0	0.158
40	0	0.21	0.125	0.026	0	0	0.171
21		0.1378	0.0818	0.0164			

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Onroad Monterey County
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/10/16 10:21:02
Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
Season : Annual
Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.15	0.126	1.801	0	0	0.287
55	0	0.08	0.066	1	0	0	0.156
40		0.115	0.096	1.4005			

Pollutant Name: Methane Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.048	0.048	0.087	0	0	0.052
55	0	0.034	0.035	0.052	0	0	0.036
40		0.041	0.0415	0.0695			

Pollutant Name: Carbon Monoxide Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	4.646	3.715	10.347	0	0	4.789
55	0	3.013	2.394	6.075	0	0	3.044
40		3.8295	3.0545	8.211			

Pollutant Name: Oxides of Nitrogen Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	0.545	0.683	17.991	0	0	2.145
55	0	0.513	0.607	17.292	0	0	2.036
40		0.529	0.645	17.6415			

Pollutant Name: Carbon Dioxide Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25	0	474.531	659.381	1953.146	0	0	677.434
55	0	380.641	524.083	1586.187	0	0	543.246
40		427.586	591.732	1769.667			

Pollutant Name: PM10 Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.021	0.033	0.656	0	0.082
55		0	0.012	0.019	0.579	0	0.065
40			0.0165	0.026	0.6175		

Pollutant Name: PM10 - Tire Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.008	0.008	0.034	0	0.01
55		0	0.008	0.008	0.034	0	0.01
40			0.008	0.008	0.034		

Pollutant Name: PM10 - Break Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.013	0.013	0.028	0	0.014
55		0	0.013	0.013	0.028	0	0.014
40			0.013	0.013	0.028		

Pollutant Name: PM2.5 Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.02	0.031	0.603	0	0.076
55		0	0.011	0.018	0.533	0	0.06
40			0.0155	0.0245	0.568		

Pollutant Name: PM2.5 - Tire Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.002	0.002	0.009	0	0.003
55		0	0.002	0.002	0.009	0	0.003
40			0.002	0.002	0.009		

Pollutant Name: PM2.5 - Break Wear Temperatu 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
25		0	0.005	0.005	0.012	0	0.006
55		0	0.005	0.005	0.012	0	0.006
40			0.005	0.005	0.012		

Title : Onroad Monterey County
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/10/16 10:21:02
Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
Season : Annual
Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Monterey County Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.105	0.104	1.07	0	0	0.132
10	0	0.206	0.204	2.085	0	0	0.257
20	0	0.392	0.392	3.953	0	0	0.491
30	0	0.559	0.563	5.604	0	0	0.701
40	0	0.707	0.717	7.037	0	0	0.887
50	0	0.836	0.856	8.253	0	0	1.049
60	0	0.945	0.977	9.252	0	0	1.188
120	0	1.162	1.332	8.823	0	0	1.441
180	0	0.934	1.051	9.362	0	0	1.214
240	0	0.988	1.114	9.883	0	0	1.284
300	0	1.041	1.175	10.388	0	0	1.353
360	0	1.092	1.236	10.875	0	0	1.42
420	0	1.142	1.296	11.346	0	0	1.485
480	0	1.19	1.354	11.799	0	0	1.549
540	0	1.237	1.412	12.235	0	0	1.611
600	0	1.283	1.468	12.654	0	0	1.671
660	0	1.328	1.523	13.056	0	0	1.73
720	0	1.371	1.577	13.441	0	0	1.787

Pollutant Name: Methane Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.006	0.006	0.06	0	0	0.007
10	0	0.012	0.012	0.118	0	0	0.015
20	0	0.022	0.022	0.223	0	0	0.028
30	0	0.032	0.032	0.316	0	0	0.04
40	0	0.04	0.04	0.397	0	0	0.05
50	0	0.047	0.048	0.465	0	0	0.059
60	0	0.053	0.055	0.522	0	0	0.067
120	0	0.065	0.075	0.497	0	0	0.081
180	0	0.053	0.059	0.528	0	0	0.068
240	0	0.056	0.063	0.557	0	0	0.072
300	0	0.059	0.066	0.586	0	0	0.076
360	0	0.062	0.07	0.613	0	0	0.08
420	0	0.064	0.073	0.64	0	0	0.084

480	0	0.067	0.076	0.665	0	0	0.087
540	0	0.07	0.08	0.69	0	0	0.091
600	0	0.072	0.083	0.713	0	0	0.094
660	0	0.075	0.086	0.736	0	0	0.098
720	0	0.077	0.089	0.758	0	0	0.101

Pollutant Name: Carbon Monoxide Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	1.285	1.177	11.816	0	0	1.535
10	0	2.524	2.315	23.153	0	0	3.015
20	0	4.864	4.477	44.385	0	0	5.809
30	0	7.02	6.484	63.697	0	0	8.382
40	0	8.992	8.337	81.088	0	0	10.735
50	0	10.78	10.035	96.559	0	0	12.868
60	0	12.384	11.58	110.11	0	0	14.78
120	0	16.262	16.197	93.303	0	0	18.374
180	0	11.891	11.609	96.03	0	0	14.115
240	0	12.481	12.311	98.847	0	0	14.811
300	0	13.035	12.953	101.755	0	0	15.465
360	0	13.553	13.535	104.752	0	0	16.077
420	0	14.035	14.058	107.839	0	0	16.647
480	0	14.48	14.52	111.016	0	0	17.175
540	0	14.89	14.923	114.283	0	0	17.661
600	0	15.263	15.265	117.64	0	0	18.105
660	0	15.601	15.548	121.086	0	0	18.507
720	0	15.902	15.771	124.623	0	0	18.868

Pollutant Name: Oxides of Nitrogen Temperatu 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.358	0.741	3.16	0	0	0.586
10	0	0.417	0.818	4.762	0	0	0.695
20	0	0.523	0.955	7.574	0	0	0.888
30	0	0.609	1.07	9.866	0	0	1.047
40	0	0.678	1.162	11.637	0	0	1.172
50	0	0.729	1.232	12.887	0	0	1.264
60	0	0.761	1.28	13.616	0	0	1.321
120	0	0.8	1.369	13.82	0	0	1.384
180	0	0.826	1.416	13.769	0	0	1.417
240	0	0.821	1.406	13.692	0	0	1.407
300	0	0.812	1.39	13.587	0	0	1.393
360	0	0.801	1.368	13.456	0	0	1.375
420	0	0.787	1.34	13.298	0	0	1.351
480	0	0.77	1.307	13.113	0	0	1.323
540	0	0.75	1.268	12.902	0	0	1.291
600	0	0.728	1.223	12.663	0	0	1.253
660	0	0.702	1.172	12.398	0	0	1.211
720	0	0.674	1.116	12.106	0	0	1.164

Pollutant Name: Carbon Dioxide Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	11.103	18.055	4.525	0	0	13.648
10	0	14.161	21.701	9.025	0	0	16.977
20	0	20.621	29.637	17.951	0	0	24.084
30	0	27.538	38.434	26.776	0	0	31.791
40	0	34.912	48.09	35.501	0	0	40.098
50	0	42.742	58.607	44.126	0	0	49.005
60	0	51.03	69.984	52.65	0	0	58.511
120	0	104.659	151.054	89.549	0	0	122.442
180	0	120.582	172.966	105.796	0	0	140.723
240	0	136.078	194.504	121.083	0	0	158.584
300	0	151.148	215.668	135.412	0	0	176.024
360	0	165.791	236.46	148.782	0	0	193.044
420	0	180.008	256.877	161.193	0	0	209.643
480	0	193.797	276.922	172.644	0	0	225.822
540	0	207.16	296.592	183.138	0	0	241.58
600	0	220.097	315.89	192.672	0	0	256.917
660	0	232.606	334.813	201.247	0	0	271.834
720	0	244.689	353.364	208.863	0	0	286.331

Pollutant Name: PM10 Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.001	0.002	0.001	0	0	0.001
10	0	0.002	0.003	0.002	0	0	0.002
20	0	0.004	0.006	0.003	0	0	0.005
30	0	0.005	0.009	0.005	0	0	0.007
40	0	0.007	0.011	0.006	0	0	0.009
50	0	0.008	0.014	0.007	0	0	0.01
60	0	0.01	0.016	0.008	0	0	0.012
120	0	0.014	0.024	0.011	0	0	0.018
180	0	0.015	0.026	0.011	0	0	0.019
240	0	0.016	0.028	0.012	0	0	0.02
300	0	0.017	0.029	0.012	0	0	0.021
360	0	0.017	0.031	0.012	0	0	0.022
420	0	0.018	0.032	0.013	0	0	0.023
480	0	0.019	0.033	0.013	0	0	0.024
540	0	0.019	0.034	0.013	0	0	0.025
600	0	0.02	0.035	0.014	0	0	0.025
660	0	0.02	0.035	0.014	0	0	0.026
720	0	0.02	0.036	0.015	0	0	0.026

Pollutant Name: PM2.5 Temperatur 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.001	0.001	0.001	0	0	0.001
10	0	0.002	0.003	0.002	0	0	0.002
20	0	0.003	0.006	0.003	0	0	0.004

30	0	0.005	0.008	0.004	0	0	0.006
40	0	0.006	0.011	0.005	0	0	0.008
50	0	0.008	0.013	0.007	0	0	0.01
60	0	0.009	0.015	0.007	0	0	0.011
120	0	0.013	0.022	0.01	0	0	0.017
180	0	0.014	0.024	0.01	0	0	0.018
240	0	0.015	0.026	0.011	0	0	0.019
300	0	0.015	0.027	0.011	0	0	0.02
360	0	0.016	0.028	0.011	0	0	0.021
420	0	0.017	0.03	0.012	0	0	0.022
480	0	0.017	0.031	0.012	0	0	0.022
540	0	0.018	0.031	0.012	0	0	0.023
600	0	0.018	0.032	0.013	0	0	0.023
660	0	0.018	0.033	0.013	0	0	0.024
720	0	0.019	0.033	0.014	0	0	0.024

Title : Onroad Monterey County
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/10/16 10:21:02
 Scen Year: 2009 -- All model years in the range 1989 to 2009 selected
 Season : Annual
 Area : Monterey

Year: 2009 -- Model Years 1989 to 2009 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Monterey County Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant	Name:	Reactive	Org	Gases	Temperatu 60F	Relative	Humidity: ALL
Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0	0.047	0.028	0.005	0	0	0.039
10	0	0.088	0.052	0.01	0	0	0.071
20	0	0.15	0.089	0.018	0	0	0.122
30	0	0.194	0.115	0.023	0	0	0.158
40	0	0.21	0.125	0.026	0	0	0.171
21		0.1378	0.0818	0.0164			

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

CO2 Emission (from URBEMIS2007) -= 154.38 tons/yr

per CCAR Protocol, stationary combustion factors for diesel are: CCAR, GRP 3.0 Table C-6 and Table C-7 (Institutional)

<u>CO2</u>	<u>CH4</u>	<u>N2O</u>
10.15	0.0014	0.0001 kg/gal

Applying the ratio of emissions to the URBEMIS Calculated CO2 emssions results in:

	1.54E+02	2.13E-02	1.52E-03 tons/year
short tons = metic tons x	1.1023		
	1.40E+02	1.93E-02	1.38E-03 MT/Year
GWP =		25	298
AS eCO2 =	140.0526	0.48294	0.411189
Total eCO2 =	140.9467		

Diesel Generator Emissions Rev 120908

Hours of Operation = 50 hr/yr
 Size of Generator = 275 KW = 369 horsepower

Emission factors (from AP42 Section 3.3.3)

	<u>Nox</u>	<u>CO</u>	<u>PM-10</u>	<u>Sox</u>	<u>TOC</u>	
	0.03	6.68E-03	2.20E-03	2.05E-03	2.47E-03	pounds/hp-hr
Emission =	571.95	123.246	40.59	37.8225	45.5715	lbs/yr
	11.44	2.46	0.81	0.76	0.91	Lbs/day
Emissions for 4 =	45.76	9.86	3.25	3.03	3.65	pounds/day

GHG emissions:

per CCAR Protocol, stationary combustion factors for diesel are: From California Climate Action Registry general Reporting Protocol 3.0, April 2008 Tables C-6 and C-7 (Institutional)

CO2	CH4	N2O
10.15	0.0014	0.0001 kg/gal

Assumptions:

50 hr/yr
 21.5 gal/hr per www.dieselservice supply.com
 for 300 kW at full load

Annual fuel use=	1075 gal/yr			short tons = metic tons x			1.1023
Annual Emission =	CO2	CH4	N2O	CO2	CH4	N2O	
	10911.25	1.505	0.1075 kg/yr				
GWP =	10.91125	0.001505	0.000108 MT/yr				
		25	298				
AS eCO2 =	10.91125	0.037625	0.032035	12.02747	0.041474	0.035312	
Total eCO2 =	10.98091			12.10426	tons/yr		
GHG Emissions for 4 Units =	43.65	0.15	0.13 MT eCO2/year				
Total =	43.92						

Mobile Emissins Calculations Operational

rev 120908

Number of trips per day
Trip length

8 trips/day
15 miles/trip

ROG Nox PM10 CO

Emission Factors
(from EMFAC2007)
Year 2010

0.212 0.819 0.023 4.612 gm/mile

Emissions =

25.44 98.28 2.76 553.44 gm/day

0.055968 0.216216 0.006072 1.217568 pounds/day

CO2	CH4	N2O
428.3	0.05	0.05
5.14E+01	6.00E-03	6.00E-03
1.13E+02	1.32E-02	1.32E-02
5.65E-02	6.60E-06	6.60E-06
2.06E+01	2.41E-03	2.41E-03
1.87E+01	2.18E-03	2.18E-03

Emission factors for CH4 & NO2 from CCAR General Reporting Protocol 3.0, Table C5

Emission factor for CO2 from EMFAC2007 (see attached workbook)

kg/day
lb/day
ton/day
ton/yr
Metric tons/yr

GWP = 1 25 298 (GWP from IPCC 4th Assessment Report)
eCO2 = 18.71639 0.05 0.65 Metric tons/yr
eCO2 = 19.42214

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Santa Cruz County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 60F Relative Humidity: 50%

Speed	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
MPH							
30	0.147	0.202	0.166	0.613	0.543	2.353	0.212

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

Speed	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
MPH							
30	3.593	5.280	3.682	8.018	3.780	21.962	4.612

Pollutant Name: Oxides of Nitrogen Temperature: 60F Relative Humidity: 50%

Speed	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
MPH							
30	0.373	0.683	0.994	7.798	14.137	1.247	0.819

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: 50%

Speed	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
MPH							
30	343.468	422.208	572.947	1291.826	2288.889	130.310	428.353

Pollutant Name: Sulfur Dioxide Temperature: 60F Relative Humidity: 50%

Speed	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
MPH							

30	0.003	0.004	0.006	0.012	0.022	0.002	0.004
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Pollutant Name: PM10 Temperature: 60F Relative Humidity: 50%

Speed							
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
30	0.012	0.020	0.023	0.242	0.217	0.025	0.023

Pollutant Name: PM10 - Tire Wear Temperature: 60F Relative Humidity: 50%

Speed							
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
30	0.008	0.008	0.009	0.016	0.009	0.004	0.008

Pollutant Name: PM10 - Brake Wear Temperature: 60F Relative Humidity: 50%

Speed							
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
30	0.013	0.013	0.013	0.016	0.013	0.006	0.013

Pollutant Name: Gasoline - mi/gal Temperature: 60F Relative Humidity: 50%

Speed							
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
30	25.408	20.483	15.155	14.771	15.253	51.385	22.636

Pollutant Name: Diesel - mi/gal Temperature: 60F Relative Humidity: 50%

Speed							
MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
30	28.218	28.998	19.446	6.315	3.744	0.000	15.033

Run Date : 2008/11/03 11:42:46

Scen Year: 2010 -- All model years in the range 1966 to 2010 selected

Season : Annual

Area : Santa Cruz

Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual

Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average

Santa Cruz

County Average

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.152	0.168	0.226	1.110	0.163	1.586	0.246
10	0.246	0.281	0.378	1.410	0.248	1.681	0.367
20	0.423	0.491	0.662	1.981	0.407	1.892	0.595
30	0.583	0.681	0.920	2.515	0.549	2.134	0.802
40	0.727	0.850	1.152	3.011	0.676	2.404	0.990
50	0.853	0.999	1.357	3.469	0.788	2.704	1.158
60	0.958	1.123	1.529	3.810	0.876	2.882	1.294
120	1.124	1.270	1.660	3.248	0.821	2.426	1.396
180	0.920	1.072	1.549	3.469	0.873	2.468	1.236
240	0.974	1.135	1.641	3.685	0.924	2.648	1.310
300	1.027	1.196	1.731	3.896	0.973	2.827	1.382
360	1.079	1.256	1.819	4.103	1.021	3.004	1.453
420	1.129	1.315	1.905	4.305	1.067	3.180	1.522
480	1.178	1.372	1.989	4.502	1.112	3.354	1.590
540	1.226	1.427	2.070	4.695	1.156	3.527	1.655
600	1.272	1.481	2.150	4.882	1.198	3.699	1.719
660	1.318	1.533	2.228	5.066	1.239	3.869	1.782
720	1.362	1.584	2.304	5.244	1.278	4.037	1.842

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	1.330	1.702	2.516	10.757	1.482	5.167	2.242
10	2.305	3.035	4.482	15.505	2.472	5.345	3.694
20	4.149	5.553	8.195	24.464	4.333	5.733	6.439
30	5.852	7.872	11.616	32.704	6.032	6.165	8.970
40	7.414	9.994	14.743	40.226	7.571	6.642	11.287
50	8.835	11.918	17.578	47.029	8.948	7.161	13.391
60	10.115	13.644	20.121	53.115	10.164	7.725	15.280
120	13.184	16.725	20.817	44.202	8.834	9.888	17.296
180	9.882	13.061	18.183	47.649	9.259	10.196	14.413
240	10.456	13.762	19.176	50.894	9.674	12.080	15.268
300	10.989	14.419	20.106	53.937	10.078	13.762	16.066
360	11.483	15.033	20.972	56.779	10.472	15.242	16.808

420	11.937	15.603	21.774	59.419	10.855	16.521	17.493
480	12.351	16.130	22.513	61.858	11.228	17.598	18.122
540	12.724	16.612	23.189	64.095	11.591	18.473	18.694
600	13.058	17.051	23.801	66.130	11.943	19.147	19.210
660	13.352	17.447	24.349	67.963	12.285	19.618	19.669
720	13.606	17.798	24.834	69.595	12.616	19.888	20.072

Pollutant Name: Oxides of Nitrogen Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.297	0.443	0.910	0.947	0.372	0.221	0.473
10	0.352	0.522	1.085	1.396	0.558	0.251	0.576
20	0.449	0.661	1.393	2.185	0.885	0.305	0.758
30	0.528	0.776	1.647	2.828	1.151	0.351	0.908
40	0.591	0.867	1.847	3.326	1.357	0.388	1.026
50	0.637	0.934	1.993	3.679	1.502	0.417	1.111
60	0.666	0.976	2.085	3.886	1.587	0.437	1.164
120	0.696	1.024	2.182	3.946	1.611	0.446	1.211
180	0.718	1.054	2.201	3.929	1.605	0.438	1.233
240	0.713	1.047	2.186	3.903	1.595	0.427	1.224
300	0.705	1.035	2.164	3.870	1.583	0.413	1.212
360	0.695	1.021	2.135	3.827	1.567	0.397	1.195
420	0.682	1.002	2.099	3.777	1.548	0.377	1.175
480	0.667	0.980	2.055	3.718	1.526	0.355	1.150
540	0.649	0.955	2.004	3.650	1.501	0.330	1.122
600	0.629	0.925	1.946	3.575	1.472	0.302	1.090
660	0.607	0.892	1.881	3.490	1.441	0.272	1.054
720	0.582	0.856	1.808	3.398	1.406	0.238	1.014

Pollutant Name: Carbon Dioxide Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	10.976	12.850	17.597	15.817	2.714	23.919	13.055
10	13.568	16.015	22.229	20.317	4.545	26.471	16.251
20	19.056	22.705	31.971	29.197	8.171	31.449	22.960
30	24.949	29.873	42.352	37.918	11.753	36.258	30.092
40	31.248	37.519	53.372	46.478	15.289	40.897	37.646
50	37.952	45.644	65.031	54.879	18.780	45.367	45.623
60	45.062	54.247	77.329	63.120	22.225	49.668	54.022
120	91.776	110.321	155.990	99.439	37.188	69.504	107.569
180	105.099	126.514	179.186	111.911	43.504	71.586	123.091
240	118.093	142.294	201.745	123.649	49.448	73.547	138.191
300	130.761	157.660	223.668	134.652	55.019	75.389	152.868
360	143.101	172.613	244.955	144.921	60.217	77.110	167.123
420	155.113	187.154	265.606	154.455	65.042	78.711	180.955
480	166.798	201.281	285.620	163.254	69.495	80.192	194.364
540	178.156	214.995	304.998	171.318	73.575	81.553	207.351

600	189.186	228.295	323.739	178.648	77.282	82.794	219.915
660	199.889	241.183	341.844	185.242	80.617	83.914	232.057
720	210.264	253.657	359.313	191.102	83.579	84.914	243.776

Pollutant Name: Sulfur Dioxide Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.000
30	0.000	0.000	0.001	0.001	0.000	0.001	0.000
40	0.000	0.001	0.001	0.001	0.000	0.001	0.001
50	0.001	0.001	0.001	0.001	0.000	0.001	0.001
60	0.001	0.001	0.001	0.002	0.000	0.001	0.001
120	0.001	0.001	0.002	0.002	0.001	0.001	0.001
180	0.001	0.001	0.002	0.002	0.001	0.001	0.001
240	0.001	0.002	0.002	0.002	0.001	0.001	0.002
300	0.001	0.002	0.003	0.002	0.001	0.001	0.002
360	0.002	0.002	0.003	0.002	0.001	0.001	0.002
420	0.002	0.002	0.003	0.003	0.001	0.001	0.002
480	0.002	0.002	0.003	0.003	0.001	0.001	0.002
540	0.002	0.002	0.003	0.003	0.001	0.001	0.002
600	0.002	0.002	0.004	0.003	0.001	0.001	0.002
660	0.002	0.003	0.004	0.003	0.001	0.001	0.003
720	0.002	0.003	0.004	0.003	0.001	0.001	0.003

Pollutant Name: PM10 Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0.000	0.014	0.001
10	0.002	0.002	0.002	0.002	0.001	0.012	0.002
20	0.003	0.005	0.004	0.003	0.001	0.009	0.004
30	0.004	0.007	0.005	0.003	0.002	0.007	0.005
40	0.005	0.009	0.007	0.004	0.002	0.006	0.007
50	0.006	0.010	0.008	0.005	0.002	0.004	0.008
60	0.007	0.012	0.010	0.005	0.003	0.004	0.009
120	0.010	0.017	0.014	0.007	0.004	0.009	0.013
180	0.011	0.018	0.015	0.008	0.004	0.014	0.014
240	0.012	0.019	0.016	0.008	0.004	0.019	0.015
300	0.012	0.020	0.017	0.009	0.004	0.023	0.016
360	0.013	0.021	0.017	0.009	0.004	0.026	0.016
420	0.013	0.022	0.018	0.010	0.004	0.029	0.017
480	0.014	0.023	0.019	0.010	0.004	0.031	0.018
540	0.014	0.023	0.019	0.010	0.005	0.033	0.018
600	0.014	0.024	0.020	0.011	0.005	0.035	0.019
660	0.015	0.024	0.020	0.011	0.005	0.035	0.019
720	0.015	0.025	0.020	0.011	0.005	0.036	0.019

Title : Soquel Well
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/11/03 11:42:46
Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
Season : Annual
Area : Santa Cruz

Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Santa Cruz County Average

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.074	0.077	0.035	0.024	0.018	0.135	0.068
10	0.137	0.143	0.065	0.044	0.034	0.249	0.125
20	0.234	0.244	0.111	0.075	0.058	0.427	0.214
30	0.301	0.315	0.144	0.097	0.074	0.552	0.275
40	0.326	0.341	0.156	0.106	0.081	0.599	0.298

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trip)

Title : Soquel Well
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2008/11/03 11:42:46
Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
Season : Annual
Area : Santa Cruz

Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Santa Cruz County Average

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
60	0.088	0.095	0.044	0.007	0.001	0.146	0.087

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

 Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average	Santa Cruz	County Average
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Table 5b: Multi-Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
60	0.007	0.008	0.003	0.000	0.000	0.012	0.007

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

 Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average	Santa Cruz	County Average
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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	LDT	MDT	HDT	UBUS	MCY	ALL
60	0.038	0.042	0.020	0.004	0.000	0.059	0.038

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

 Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average	Santa Cruz	County Average
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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	LDT	MDT	HDT	UBUS	MCY	ALL
60	0.003	0.003	0.002	0.000	0.000	0.005	0.003

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

 Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average	Santa Cruz	County Average
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Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity: ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.459	0.392	0.106	0.028	0.003	0.012	1.000
%TRIP	0.429	0.355	0.142	0.059	0.001	0.015	1.000
%VEH	0.458	0.380	0.087	0.026	0.001	0.049	1.000

Title : Soquel Well
 Version : Emfac2007 V2.3 Nov 1 2006
 Run Date : 2008/11/03 11:42:46
 Scen Year: 2010 -- All model years in the range 1966 to 2010 selected
 Season : Annual
 Area : Santa Cruz

Year: 2010 -- Model Years 1966 to 2010 Inclusive -- Annual
 Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Santa Cruz County Average

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 60F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.036	0.662	0.331	0.478	0.118	0.093	0.325
2	0.039	0.344	0.173	0.260	0.064	0.131	0.180
3	0.044	0.240	0.123	0.188	0.047	0.150	0.134
4	0.047	0.190	0.098	0.153	0.038	0.162	0.113
5	0.050	0.161	0.084	0.132	0.033	0.170	0.101
10	0.056	0.106	0.058	0.091	0.023	0.190	0.078
15	0.058	0.092	0.052	0.078	0.020	0.200	0.073
20	0.060	0.089	0.051	0.072	0.019	0.208	0.072
25	0.062	0.089	0.052	0.069	0.018	0.214	0.073
30	0.062	0.089	0.052	0.070	0.018	0.215	0.073
35	0.062	0.089	0.052	0.070	0.018	0.215	0.073
40	0.062	0.089	0.052	0.070	0.018	0.216	0.074
45	0.062	0.090	0.052	0.070	0.018	0.216	0.074
50	0.061	0.090	0.052	0.070	0.018	0.214	0.073
55	0.060	0.090	0.052	0.070	0.018	0.211	0.073
60	0.059	0.090	0.052	0.070	0.018	0.208	0.072

Pump electricity GHG Use Rev 120908

Emission Factors CO2 CH4 N2O
 878.71 0.0067 0.0037 lb/MW-hr
 From California Climate Action Registry general Reporting Protocol 3.0, April 2008 Tables C-2 and C-3

per data request 425 Horsepower
 (plus 100 hp for granite Way)

Per data request, assume pumps operate 12 hours/day

Annual consumption = 1861500 hp-hr/year 1 hp = 0.746 kW http://whatis.techtarget.com/definition/0,,sid9_gci790194,00.html#
 1388121 kW -hr/year
 1388.121 MW -hr/year

Emissions = CO2 CH4 N2O
 1.22E+06 9.30E+00 5.14E+00 pounds/yr
 6.10E+02 4.65E-03 2.57E-03 tons/yr
 5.53E+02 4.22E-03 2.33E-03 MT/yr

 GWP = 1 25 298 (GWP from IPCC 4th Assessment Report)
 eCO2 = 553.1591 0.11 0.69 Metric tons/yr
eCO2 = 553.9586

Urbemis 2007 Version 9.2.4

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name:

Project Name: soquel well construction

Project Location: Santa Cruz County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
2009	0.49	1.65	1.03	0.00	0.19	0.09	0.28	0.04	0.09	0.13	154.38
Fine Grading 04/01/2009-	0.11	0.86	0.48	0.00	0.19	0.04	0.23	0.04	0.04	0.08	76.47
Fine Grading Dust	0.00	0.00	0.00	0.00	0.19	0.00	0.19	0.04	0.00	0.04	0.00
Fine Grading Off Road Diesel	0.10	0.86	0.42	0.00	0.00	0.04	0.04	0.00	0.04	0.04	73.04
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	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.43
Trenching 05/04/2009-06/04/2009	0.03	0.23	0.12	0.00	0.00	0.01	0.01	0.00	0.01	0.01	21.84
Trenching Off Road Diesel	0.03	0.23	0.10	0.00	0.00	0.01	0.01	0.00	0.01	0.01	20.58
Trenching Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.27
Building 07/01/2009-10/01/2009	0.05	0.34	0.26	0.00	0.00	0.02	0.02	0.00	0.02	0.02	36.42
Building Off Road Diesel	0.04	0.33	0.17	0.00	0.00	0.02	0.02	0.00	0.02	0.02	29.93
Building Vendor Trips	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.83
Building Worker Trips	0.00	0.01	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.66
Asphalt 09/01/2009-10/15/2009	0.04	0.21	0.16	0.00	0.00	0.02	0.02	0.00	0.02	0.02	19.32
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.03	0.21	0.12	0.00	0.00	0.02	0.02	0.00	0.02	0.02	16.16
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.11
Paving Worker Trips	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.05
Coating 10/15/2009-11/16/2009	0.27	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33
Architectural Coating	0.27	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	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33

Phase Assumptions

Phase: Fine Grading 4/1/2009 - 6/30/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 1.15

Maximum Daily Acreage Disturbed: 0.29

Fugitive Dust Level of Detail: Default

Page: 1

11/4/2008 10:21:57 AM

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: Trenching 5/4/2009 - 6/4/2009 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 9/1/2009 - 10/15/2009 - Default Paving Description

Acres to be Paved: 0.29

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

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2009 - 10/1/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 10/15/2009 - 11/16/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 100

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

Detail Report for Winter Construction Unmitigated Emissions (Pounds/Day)

File Name:

Project Name: soquel well construction

Project Location: Santa Cruz County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
Time Slice 4/1/2009-5/1/2009 Active	3.25	26.60	14.65	0.00	5.81	1.34	7.14	1.21	1.23	2.44	2,352.99
Fine Grading 04/01/2009-	3.25	26.60	14.65	0.00	5.81	1.34	7.14	1.21	1.23	2.44	2,352.99
Fine Grading Dust	0.00	0.00	0.00	0.00	5.80	0.00	5.80	1.21	0.00	1.21	0.00
Fine Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	2,247.32
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	0.07	0.14	1.67	0.00	0.01	0.00	0.01	0.00	0.00	0.00	105.67
Time Slice 5/4/2009-6/4/2009 Active	5.51	45.63	24.64	0.00	5.81	2.27	8.08	1.22	2.09	3.31	4,173.29
Fine Grading 04/01/2009-	3.25	26.60	14.65	0.00	5.81	1.34	7.14	1.21	1.23	2.44	2,352.99
Fine Grading Dust	0.00	0.00	0.00	0.00	5.80	0.00	5.80	1.21	0.00	1.21	0.00
Fine Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	2,247.32
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	0.07	0.14	1.67	0.00	0.01	0.00	0.01	0.00	0.00	0.00	105.67
Trenching 05/04/2009-06/04/2009	2.25	19.04	9.99	0.00	0.01	0.94	0.94	0.00	0.86	0.86	1,820.31
Trenching Off Road Diesel	2.18	18.90	8.32	0.00	0.00	0.93	0.93	0.00	0.86	0.86	1,714.64
Trenching Worker Trips	0.07	0.14	1.67	0.00	0.01	0.00	0.01	0.00	0.00	0.00	105.67
Time Slice 6/5/2009-6/30/2009 Active	3.25	26.60	14.65	0.00	5.81	1.34	7.14	1.21	1.23	2.44	2,352.99
Fine Grading 04/01/2009-	3.25	26.60	14.65	0.00	5.81	1.34	7.14	1.21	1.23	2.44	2,352.99
Fine Grading Dust	0.00	0.00	0.00	0.00	5.80	0.00	5.80	1.21	0.00	1.21	0.00
Fine Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	2,247.32
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	0.07	0.14	1.67	0.00	0.01	0.00	0.01	0.00	0.00	0.00	105.67
Time Slice 7/1/2009-8/31/2009 Active	1.43	10.17	7.76	0.00	0.01	0.64	0.65	0.00	0.59	0.60	1,087.14
Building 07/01/2009-10/01/2009	1.43	10.17	7.76	0.00	0.01	0.64	0.65	0.00	0.59	0.60	1,087.14
Building Off Road Diesel	1.30	9.79	4.94	0.00	0.00	0.63	0.63	0.00	0.58	0.58	893.39
Building Vendor Trips	0.01	0.15	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.68
Building Worker Trips	0.12	0.22	2.67	0.00	0.01	0.01	0.01	0.00	0.00	0.01	169.07
Time Slice 9/1/2009-10/1/2009 Active	3.66	23.02	17.75	0.00	0.02	1.74	1.76	0.01	1.60	1.61	2,257.89
Asphalt 09/01/2009-10/15/2009	2.24	12.85	9.99	0.00	0.01	1.10	1.11	0.00	1.01	1.01	1,170.76

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Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.08	12.55	7.05	0.00	0.00	1.09	1.09	0.00	1.00	1.00	979.23
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61
Paving Worker Trips	0.13	0.24	2.92	0.00	0.01	0.01	0.02	0.00	0.01	0.01	184.92
Building 07/01/2009-10/01/2009	1.43	10.17	7.76	0.00	0.01	0.64	0.65	0.00	0.59	0.60	1,087.14
Building Off Road Diesel	1.30	9.79	4.94	0.00	0.00	0.63	0.63	0.00	0.58	0.58	893.39
Building Vendor Trips	0.01	0.15	0.14	0.00	0.00	0.01	0.01	0.00	0.01	0.01	24.68
Building Worker Trips	0.12	0.22	2.67	0.00	0.01	0.01	0.01	0.00	0.00	0.01	169.07
Time Slice 10/2/2009-10/14/2009	2.24	12.85	9.99	0.00	0.01	1.10	1.11	0.00	1.01	1.01	1,170.76
Asphalt 09/01/2009-10/15/2009	2.24	12.85	9.99	0.00	0.01	1.10	1.11	0.00	1.01	1.01	1,170.76
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.08	12.55	7.05	0.00	0.00	1.09	1.09	0.00	1.00	1.00	979.23
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61
Paving Worker Trips	0.13	0.24	2.92	0.00	0.01	0.01	0.02	0.00	0.01	0.01	184.92
Time Slice 10/15/2009-10/15/2009	25.54	12.89	10.44	0.00	0.01	1.10	1.11	0.00	1.01	1.01	1,199.47
Asphalt 09/01/2009-10/15/2009	2.24	12.85	9.99	0.00	0.01	1.10	1.11	0.00	1.01	1.01	1,170.76
Paving Off-Gas	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.08	12.55	7.05	0.00	0.00	1.09	1.09	0.00	1.00	1.00	979.23
Paving On Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.61
Paving Worker Trips	0.13	0.24	2.92	0.00	0.01	0.01	0.02	0.00	0.01	0.01	184.92
Coating 10/15/2009-11/16/2009	23.30	0.04	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71
Architectural Coating	23.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71
Time Slice 10/16/2009-11/16/2009	23.30	0.04	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71
Coating 10/15/2009-11/16/2009	23.30	0.04	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71
Architectural Coating	23.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.02	0.04	0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	28.71

Phase Assumptions

Phase: Fine Grading 4/1/2009 - 6/30/2009 - Default Fine Site Grading Description

Total Acres Disturbed: 1.15

Maximum Daily Acreage Disturbed: 0.29

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

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1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 5/4/2009 - 6/4/2009 - Type Your Description Here

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 9/1/2009 - 10/15/2009 - Default Paving Description

Acres to be Paved: 0.29

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

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 7/1/2009 - 10/1/2009 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 10/15/2009 - 11/16/2009 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 100

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

Urbemis 2007 Version 9.2.4
Summary Report for Annual Emissions (Tons/Year)

File Name:

Project Name: soquel well construction

Project Location: Santa Cruz County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</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)	0.49	1.65	1.03	0.00	0.19	0.09	0.28	0.04	0.09	0.13	154.38