

Appendix C

Air Quality Technical Data

Year	Umitigated					Mitigated				
	ROG	CO	NOx	SOx	PM10	ROG	CO	NOx	SOx	PM10
2010	174	1,720	237	1	215	173	1,711	236	1	214
2011	161	1,585	219	1	215	160	1,577	217	1	214
2012	148	1,450	200	1	215	148	1,442	199	1	214
2013	136	1,315	181	1	215	135	1,308	180	1	214
2014	123	1,180	162	1	215	122	1,173	162	1	214
2015	110	1,045	144	1	215	109	1,039	143	1	214

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Winter)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	71.17	107.10	763.51	0.56	98.26
Apartments low rise	13.38	20.08	143.12	0.11	18.42
Condo/townhouse general	27.76	41.61	296.65	0.22	38.18
Elementary school	11.54	12.52	94.53	0.06	11.09
City park	0.08	0.10	0.73	0.00	0.09
Regnl shop. center	49.20	54.73	412.37	0.28	48.27
TOTAL EMISSIONS (lbs/day)	173.13	236.14	1,710.91	1.23	214.31
PERCENTAGE REDUCTION %	7	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school (Worker Trip Rate: 0.89)		1.22 trips/students	900.00	1,096.98
City park (Worker Trip Rate: 1.09)		1.50 trips/acres	5.00	7.51
Regnl shop. center (Worker Trip Rate: 54.1)		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips			16,330.75	
Total Vehicle Miles Traveled			140,907.95	

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
City park	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected
The 'Carpool Matching Programs' measure was selected
The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	58.30	83.22	687.47	0.58	98.26
Apartments low rise	11.37	15.60	128.87	0.11	18.42
Condo/townhouse general	24.04	32.33	267.11	0.22	38.18
Elementary school	14.14	9.74	84.06	0.07	11.09
City park	0.09	0.08	0.65	0.00	0.09
Regnl shop. center	34.97	42.60	362.55	0.32	48.27
TOTAL EMISSIONS (lbs/day)	142.92	183.57	1,530.71	1.30	214.31
PERCENTAGE REDUCTION %	6	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school		1.22 trips/students	900.00	1,096.98
(Worker Trip Rate: 0.89)				
City park		1.50 trips/acres	5.00	7.51
(Worker Trip Rate: 1.09)				
Regnl shop. center		74.47 trips/1000 sq. ft.	65.34	4,866.10
(Worker Trip Rate: 54.1)				
		Sum of Total Trips		16,330.75
		Total Vehicle Miles Traveled		140,907.95

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
City park	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Carpool Matching Programs' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	11.42	16.64	130.09	0.10	17.93
Apartments low rise	2.20	3.12	24.39	0.02	3.36
Condo/townhouse general	4.61	6.47	50.54	0.04	6.97
Elementary school	2.42	1.95	15.98	0.01	2.02
City park	0.02	0.02	0.12	0.00	0.02
Regnl shop. center	7.25	8.51	69.20	0.06	8.81
TOTAL EMISSIONS (tons/yr)	27.92	36.70	290.32	0.23	39.11
PERCENTAGE REDUCTION %	6	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.57 trips/dwelling unit	727.00	6,957.39
Apartments low rise	12.44	6.72 trips/dwelling unit	199.00	1,337.28
Condo/townhouse general	29.94	5.86 trips/dwelling unit	479.00	2,806.94
Elementary school		1.29 trips/students	900.00	1,161.00
City park		1.59 trips/acres	5.00	7.95
Regnl shop. center		78.82 trips/1000 sq. ft.	65.34	5,150.10
Sum of Total Trips				17,420.66
Total Vehicle Miles Traveled				151,231.11

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Carpool Matching Programs' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	44.68	64.67	463.71	0.56	98.09
Apartments low rise	8.41	12.12	86.92	0.10	18.39
Condo/townhouse general	17.47	25.13	180.17	0.22	38.11
Elementary school	7.46	7.62	57.41	0.06	11.07
City park	0.05	0.06	0.44	0.00	0.09
Regnl shop. center	31.00	33.32	250.38	0.28	48.16
TOTAL EMISSIONS (lbs/day)	109.07	142.92	1,039.04	1.22	213.90
PERCENTAGE REDUCTION %	7	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school (Worker Trip Rate: 0.89)		1.22 trips/students	900.00	1,096.98
City park (Worker Trip Rate: 1.09)		1.50 trips/acres	5.00	7.51
Regnl shop. center (Worker Trip Rate: 54.1)		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips			16,330.75	
Total Vehicle Miles Traveled			140,907.95	

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
City park	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Carpool Matching Programs' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Summer)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	37.22	50.32	428.54	0.57	98.09
Apartments low rise	7.33	9.43	80.33	0.11	18.39
Condo/townhouse general	15.56	19.55	166.51	0.22	38.11
Elementary school	9.86	5.93	52.35	0.07	11.07
City park	0.06	0.05	0.40	0.00	0.09
Regnl shop. center	21.83	25.98	225.51	0.31	48.16
TOTAL EMISSIONS (lbs/day)	91.86	111.26	953.64	1.29	213.90
PERCENTAGE REDUCTION %	6	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school (Worker Trip Rate: 0.89)		1.22 trips/students	900.00	1,096.98
City park (Worker Trip Rate: 1.09)		1.50 trips/acres	5.00	7.51
Regnl shop. center (Worker Trip Rate: 54.1)		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips			16,330.75	
Total Vehicle Miles Traveled			140,907.95	

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			

% of Trips - Commercial (by land use)

Elementary school	20.0	10.0	70.0
City park	5.0	2.5	92.5
Regnl shop. center	2.0	1.0	97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Carpool Matching Programs' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Tons/Year)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	7.25	10.06	80.35	0.10	17.90
Apartments low rise	1.40	1.89	15.06	0.02	3.36
Condo/townhouse general	2.96	3.91	31.22	0.04	6.96
Elementary school	1.65	1.19	9.86	0.01	2.02
City park	0.01	0.01	0.08	0.00	0.02
Regnl shop. center	4.54	5.19	42.67	0.05	8.79
TOTAL EMISSIONS (tons/yr)	17.81	22.23	179.23	0.23	39.04
PERCENTAGE REDUCTION %	6	7	7	7	7

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.57 trips/dwelling unit	727.00	6,957.39
Apartments low rise	12.44	6.72 trips/dwelling unit	199.00	1,337.28
Condo/townhouse general	29.94	5.86 trips/dwelling unit	479.00	2,806.94
Elementary school		1.29 trips/students	900.00	1,161.00
City park		1.59 trips/acres	5.00	7.95
Regnl shop. center		78.82 trips/1000 sq. ft.	65.34	5,150.10
Sum of Total Trips				17,420.66
Total Vehicle Miles Traveled				151,231.11

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Telecommuting Mitigation

Percent Reduction in Trips is 25%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The Employee Telecommuting Program was selected with 25% of the employees participating an average of 5 Days/Week

Non-Residential Other Transportation Demand Measures Mitigation

Percent Reduction in Trips is 2.35%
Note that the above percent is applied ONLY to worker trips.
Inputs Selected:
The 'Secure Bike Parking' measure was selected
The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

The 'Carpool Matching Programs' measure was selected

The 'Preferential Carpool/Vanpool Parking' measure was selected

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.
The Res and Non-Res Trans Demand Mgmt Measures Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	71.17	107.10	763.51	0.56	98.26
Apartments low rise	13.38	20.08	143.12	0.11	18.42
Condo/townhouse general	27.76	41.61	296.65	0.22	38.18
Elementary school	12.31	13.38	101.11	0.07	11.85
City park	0.08	0.10	0.74	0.00	0.09
Regnl shop. center	49.54	55.10	415.21	0.28	48.59
TOTAL EMISSIONS (lbs/day)	174.24	237.36	1,720.33	1.23	215.40
PERCENTAGE REDUCTION %	6	6	6	6	6

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school		1.22 trips/students	900.00	1,096.98
City park		1.50 trips/acres	5.00	7.51
Regnl shop. center		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips				16,330.75
Total Vehicle Miles Traveled				141,619.45

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	58.30	83.22	687.47	0.58	98.26
Apartments low rise	11.37	15.60	128.87	0.11	18.42
Condo/townhouse general	24.04	32.33	267.11	0.22	38.18
Elementary school	14.68	10.40	90.10	0.08	11.85
City park	0.09	0.08	0.66	0.00	0.09
Regnl shop. center	35.21	42.89	365.14	0.32	48.59
TOTAL EMISSIONS (lbs/day)	143.70	184.51	1,539.35	1.30	215.40
PERCENTAGE REDUCTION %	6	6	6	6	6

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school		1.22 trips/students	900.00	1,096.98
City park		1.50 trips/acres	5.00	7.51
Regnl shop. center		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips				16,330.75
Total Vehicle Miles Traveled				141,619.45

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	11.42	16.64	130.09	0.10	17.93
Apartments low rise	2.20	3.12	24.39	0.02	3.36
Condo/townhouse general	4.61	6.47	50.54	0.04	6.97
Elementary school	2.54	2.08	17.11	0.01	2.16
City park	0.02	0.02	0.13	0.00	0.02
Regnl shop. center	7.30	8.57	69.68	0.06	8.87
TOTAL EMISSIONS (tons/yr)	28.08	36.89	291.94	0.23	39.31
PERCENTAGE REDUCTION %	6	6	6	6	6

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2010 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.57 trips/dwelling unit	727.00	6,957.39
Apartments low rise	12.44	6.72 trips/dwelling unit	199.00	1,337.28
Condo/townhouse general	29.94	5.86 trips/dwelling unit	479.00	2,806.94
Elementary school		1.29 trips/students	900.00	1,161.00
City park		1.59 trips/acres	5.00	7.95
Regnl shop. center		78.82 trips/1000 sq. ft.	65.34	5,150.10
Sum of Total Trips				17,420.66
Total Vehicle Miles Traveled				151,231.11

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.70	1.10	98.70	0.20
Light Truck < 3,750 lbs	15.20	2.00	96.00	2.00
Light Truck 3,751- 5,750	16.20	1.20	98.10	0.70
Med Truck 5,751- 8,500	7.30	1.40	95.90	2.70
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.90	0.00	11.10	88.90
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	68.80	31.20	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.40	7.10	85.70	7.20

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2010.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
 (Pounds/Day - Winter)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	44.68	64.67	463.71	0.56	98.09
Apartments low rise	8.41	12.12	86.92	0.10	18.39
Condo/townhouse general	17.47	25.13	180.17	0.22	38.11
Elementary school	7.94	8.14	61.42	0.07	11.83
City park	0.05	0.06	0.45	0.00	0.09
Regnl shop. center	31.21	33.54	252.10	0.28	48.49
TOTAL EMISSIONS (lbs/day)	109.77	143.66	1,044.77	1.22	214.99
PERCENTAGE REDUCTION %	6	6	6	6	6

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 50 Season: Winter

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school		1.22 trips/students	900.00	1,096.98
City park		1.50 trips/acres	5.00	7.51
Regnl shop. center		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips			16,330.75	
Total Vehicle Miles Traveled			141,619.45	

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Pounds/Day - Summer)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	37.22	50.32	428.54	0.57	98.09
Apartments low rise	7.33	9.43	80.33	0.11	18.39
Condo/townhouse general	15.56	19.55	166.51	0.22	38.11
Elementary school	10.20	6.34	56.13	0.08	11.83
City park	0.06	0.05	0.41	0.00	0.09
Regnl shop. center	21.97	26.16	227.13	0.32	48.49
TOTAL EMISSIONS (lbs/day)	92.35	111.84	959.05	1.30	214.99
PERCENTAGE REDUCTION %	5	6	6	6	6

Includes correction for passby trips.
Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Temperature (F): 75 Season: Summer

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.04 trips/dwelling unit	727.00	6,573.73
Apartments low rise	12.44	6.19 trips/dwelling unit	199.00	1,232.26
Condo/townhouse general	29.94	5.33 trips/dwelling unit	479.00	2,554.16
Elementary school		1.22 trips/students	900.00	1,096.98
City park		1.50 trips/acres	5.00	7.51
Regnl shop. center		74.47 trips/1000 sq. ft.	65.34	4,866.10
Sum of Total Trips				16,330.75
Total Vehicle Miles Traveled				141,619.45

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

URBEMIS 2002 For Windows 8.7.0

File Name: C:\Documents and Settings\gormanjr\Desktop\Urbemis\URBEMIS 2002 Version 8.7\Projects2k2\Mahoney_
 Project Name: Mahoney Ranch
 Project Location: Santa Barbara County
 On-Road Motor Vehicle Emissions Based on EMFAC2002 version 2.2

DETAIL REPORT
(Tons/Year)

MITIGATED OPERATIONAL EMISSIONS

	ROG	NOx	CO	SO2	PM10
Single family housing	7.25	10.06	80.35	0.10	17.90
Apartments low rise	1.40	1.89	15.06	0.02	3.36
Condo/townhouse general	2.96	3.91	31.22	0.04	6.96
Elementary school	1.72	1.27	10.56	0.01	2.16
City park	0.01	0.01	0.08	0.00	0.02
Regnl shop. center	4.57	5.22	42.97	0.06	8.85
TOTAL EMISSIONS (tons/yr)	17.91	22.35	180.24	0.23	39.24
PERCENTAGE REDUCTION %	6	6	6	6	6

Includes correction for passby trips.
 Does not include double counting adjustment for internal trips.

OPERATIONAL (Vehicle) EMISSION ESTIMATES

Analysis Year: 2015 Season: Annual

EMFAC Version: EMFAC2002 (9/2002)

Summary of Land Uses:

Unit Type	Acreage	Trip Rate	No. Units	Total Trips
Single family housing	242.33	9.57 trips/dwelling unit	727.00	6,957.39
Apartments low rise	12.44	6.72 trips/dwelling unit	199.00	1,337.28
Condo/townhouse general	29.94	5.86 trips/dwelling unit	479.00	2,806.94
Elementary school		1.29 trips/students	900.00	1,161.00
City park		1.59 trips/acres	5.00	7.95
Regnl shop. center		78.82 trips/1000 sq. ft.	65.34	5,150.10
Sum of Total Trips				17,420.66
Total Vehicle Miles Traveled				151,231.11

Vehicle Assumptions:

Fleet Mix:

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	54.40	0.40	99.40	0.20
Light Truck < 3,750 lbs	15.30	0.70	98.00	1.30
Light Truck 3,751- 5,750	16.40	0.60	98.80	0.60
Med Truck 5,751- 8,500	7.30	0.00	98.60	1.40
Lite-Heavy 8,501-10,000	1.10	0.00	81.80	18.20
Lite-Heavy 10,001-14,000	0.30	0.00	66.70	33.30
Med-Heavy 14,001-33,000	1.00	0.00	20.00	80.00
Heavy-Heavy 33,001-60,000	0.80	0.00	0.00	100.00
Line Haul > 60,000 lbs	0.00	0.00	0.00	100.00
Urban Bus	0.20	0.00	50.00	50.00
Motorcycle	1.60	50.00	50.00	0.00
School Bus	0.10	0.00	0.00	100.00
Motor Home	1.50	0.00	93.30	6.70

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.5	9.6	11.3	12.5	10.2	10.2
Rural Trip Length (miles)	15.0	15.0	15.0	15.0	10.0	10.0
Trip Speeds (mph)	25.0	30.0	35.0	25.0	25.0	25.0
% of Trips - Residential	20.6	18.0	61.4			
% of Trips - Commercial (by land use)						
Elementary school				20.0	10.0	70.0
City park				5.0	2.5	92.5

Regnl shop. center

2.0

1.0

97.0

MITIGATION OPTIONS SELECTED

Residential Mitigation Measures
=====

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24% (calculated as a % of 9.57 trips/day)
Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Non-Residential Mitigation Measures
=====

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%
Inputs Selected:
The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0.27%
Inputs Selected:
The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 24
The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0
The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 3.24%
Inputs Selected:
The Number of Intersections per Square Mile is 40
The Percent of Streets with Sidewalks on One Side is 70%
The Percent of Streets with Sidewalks on Both Sides is 20%
The Percent of Arterials/Collectors with Bike Lanes or where Suitable, Direct Parallel Routes Exist is 50%

Changes made to the default values for Land Use Trip Percentages

The Trip Rate and/or Acreage values for Apartments low rise
have changed from the defaults 6.9/12.44 to 6.72/12.44
The Trip Rate and/or Acreage values for Condominium/townhouse general
have changed from the defaults 6.9/29.94 to 5.86/29.94

Changes made to the default values for Operations

The pass by trips option switch changed from off to on.
The mitigation option switch changed from off to on.
The operational emission year changed from 2005 to 2015.
The Res and Non-Res Local-Serving Retail Mitigation changed from off to on.
The Res and Non-Res Transit Service Mitigation changed from off to on.
The Res and Non-Res Ped/Bike Mitigation changed from off to on.

Appendix D

Biological Resources
(SAIC 2007)

1 **BIOLOGICAL RESOURCES**

2 This technical appendix includes supporting background and data related to the Mahoney
3 Ranch South Project biological resources impact analysis, section 4.3.

4 **Regulatory Setting**

5 *Federal Laws, Regulations, and Executive Orders*

6 *Clean Water Act (33 U.S.C. 1252 et seq.)*

7 The Clean Water Act (CWA) was enacted to restore and maintain the chemical, physical, and
8 biological integrity of the Nation’s waters through the elimination of discharges of pollutants.
9 Among other things, the CWA provided that continuing (point-source) pollutant discharges
10 could not occur unless specifically authorized by permit, and established permit programs for
11 various forms of discharges, including the discharge of dredged materials.

12 **CWA Section 401.** Section 401 Certification is required to demonstrate that discharges of
13 dredged or fill material into waters of the U.S. comply with state water quality standards for
14 actions within state waters. Compliance with Section 401 is provided by approval of a Water
15 Quality Certification or waiver from the State Water Resources Control Board or Regional
16 Water Quality Control Board (SWRCB and RWQCB, respectively), and is a condition for
17 issuance of a Section 404 permit discussed below.

18 **CWA Section 402.** Section 402 requires that permitted projects comply with National Pollutant
19 Elimination Discharge System (NPDES) requirements. The state is required to establish waste
20 discharge standards for all state waters, under Section 301 of the CWA. Compliance with
21 Section 402 is provided by approval of a NPDES permit from the SWRCB and RWQCB.

22 **CWA Section 404.** Section 404 addresses permits required for discharge of dredged or fill
23 material. It establishes guidelines for the discharge of dredged or fill materials and for the
24 prevention of such discharges, individually or in combination with other activities, from having
25 unacceptable adverse impacts on the ecosystem.

26 The U.S. Army Corps of Engineers (USACE) has the legal authority to regulate, through the
27 issuance of a Section 404 permit, the discharge of dredged or fill material in waters of the U.S.

28 *Endangered Species Act (16 U.S.C. 1531 et seq.)*

29 The Endangered Species Act (ESA) protects federally listed threatened and endangered species.
30 Consultation with the U.S. Fish and Wildlife Service (USFWS) is required under ESA Section 7 if a
31 listed species would be adversely affected by a federal action. ESA Section 9 prohibits the taking of
32 a listed species without authorization from the USFWS. ESA Section 10 provides an exception to
33 the “take” prohibition for private parties, provided a USFWS incidental take permit is obtained.
34 USFWS defines “take” to include the harassment, harming, pursuing, hunting, shooting, wounding,
35 killing, trapping, capturing, or collecting, or the attempt to engage in such conduct. Harm can
36 include habitat modification or degradation that kills or injures wildlife.

1 The ESA Section 10 process provides protection and habitat conservation of listed species from
2 non-Federal development and activities where a Federal permit is not required. It provides a
3 mechanism for ensuring that economic development does not “appreciably reduce the
4 likelihood of the survival and recovery of species in the wild.” The Section 10 process requires
5 submittal of a Habitat Conservation Plan (HCP) that includes:

- 6 • Impacts likely to result from the proposed taking of species for which permit coverage is
7 requested;
- 8 • Measures the applicant will undertake to monitor, minimize, and mitigate such impacts;
- 9 • Funding that will be made available to undertake such measures and for procedures to
10 deal with unforeseen circumstances;
- 11 • Alternative actions which the applicant considered that would not result in take, and the
12 reasons why such alternatives are not being utilized; and
- 13 • Additional measures USFWS may require as necessary or appropriate for purposes of
14 the plan.

15 The purpose of an HCP is designed to offset any harmful effects a proposed activity might have
16 on a federally listed species. The HCP process allows development to proceed while promoting
17 listed species conservation.

18 *Migratory Bird Treaty Act (16 U.S.C. 703 et seq.) and Executive Order 13186*

19 The Migratory Bird Treaty Act (MBTA) governs the taking, killing, possession, transportation,
20 and importation of migratory birds, their eggs, parts, and nests. The take of all migratory birds
21 is governed by the MBTA’s regulation of taking migratory birds for educational, scientific, and
22 recreational purposes and requiring harvest to be limited to levels that prevent overuse. The
23 MBTA also prohibits the take, possession, import, export, transport, selling, purchase, barter, or
24 offering for sale, purchase or barter, any migratory bird, their eggs, parts, and nests, except as
25 authorized under a valid permit (50 CFR 21.11). Certain individuals, including Department of
26 the Interior employees enforcing the MBTA, employees of federal agencies, state game
27 department staff, municipal game farms or parks employees, public museum, public zoological
28 park, accredited institutional members of the American Association of Zoological Parks and
29 Aquariums (now called the American Zoo and Aquarium Association), and public scientific or
30 educational institution staff are exempted from this statute.

31 Executive Order 13186 (effective January 10, 2001), outlines the responsibilities of federal
32 agencies to protect migratory birds, in accordance with the MBTA, the Bald and Golden Eagle
33 Protection Acts, the Fish and Wildlife Coordination Act, ESA, and NEPA. This order specifies
34 the following:

- 35 • USFWS as the lead for coordinating and implementing EO 13186;
- 36 • Requires federal agencies to incorporate migratory bird protection measures into their
37 activities; and
- 38 • Requires federal agencies to obtain permits from USFWS before any “take” occurs, even
39 when the agency intent is not to kill or injure migratory birds.

1 *Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.)*

2 This Act requires the federal lead agency to consult with and consider the recommendations of
3 the USFWS and the CDFG and, for projects affecting steelhead or managed fish species, the
4 National Marine Fisheries Service.

5 *Executive Order 11988 – Floodplain Management*

6 This order directs federal agencies to avoid to the extent possible the long and short-term
7 adverse impacts associated with the occupancy and modification of floodplains and to avoid
8 direct or indirect support of floodplain development wherever there is a practicable alternative.
9 Specifically, federal agencies are directed to:

- 10 • Provide leadership and take action to reduce the risk of flood loss, to minimize the impact of
11 floods on human safety, health and welfare, and to restore and preserve the natural and
12 beneficial values served by floodplains in carrying out its responsibilities for acquiring,
13 managing, and disposing of federal lands and facilities; and providing federally sponsored,
14 financed, or assisted construction and improvements and conducting federal activities and
15 programs affecting land use.

16 *Executive Order 13112 – Invasive Species*

17 The National Invasive Species Management Plan was developed in response to this order in
18 1997. This order established the National Invasive Species Council (Council) as the leaders in
19 development of the plan, and directs the Council to provide leadership and oversight on
20 invasive species issues to ensure that federal activities are coordinated and effective. In
21 addition, the Council has specific responsibilities including: promoting action at local, state,
22 tribal, and ecosystem levels; identifying recommendations for international cooperation;
23 facilitating a coordinated network to document, evaluate, and monitor invasive species' effects;
24 developing a web-based information network on invasive species; and developing guidance on
25 invasive species for federal agencies. The Council has developed nine plan priorities that
26 provide direction for federal agencies. The plan priorities are as follows:

- Leadership and coordination of state and federal entities;
- Prevention (a risk based approach);
- Early detection and rapid response;
- Control and management;
- Restoration;
- International cooperation;
- Research;
- Information management; and
- Education and public awareness.

27 Additional details are available at: <http://www.invasivespecies.gov/council/>.

28 *State Laws, Regulations and Policies*

29 *California Environmental Quality Act (P.R.C. 21000-21177)*

30 The California Environmental Quality Act (CEQA) contains requirements similar to NEPA and
31 requires the preparation of an Environmental Impact Report (EIR) prior to implementation of

1 applicable projects. CEQA requires significant impacts to be mitigated to a level of insignificance or
2 to the maximum extent feasible, and that less damaging alternatives be considered. The state or
3 local lead agency is responsible for CEQA compliance.

4 *Porter-Cologne Water Quality Control Act (C.W.C. Section 13000 et seq.; C.C.R. Title 23, Chapter 3,*
5 *Chapter 15)*

6 This Act is the primary state regulation addressing water quality and waste discharges (including
7 dredged material) on land; all permitted discharges must be in compliance with the regional Basin
8 Plan. The Act's requirements are implemented by the Central Coast RWQCB.

9 *California Endangered Species Act (Fish and Game Code Section 2050 et seq.)*

10 This Act provides recognition and protection of rare, threatened, and endangered plants and animal
11 species. The Act requires state agencies to coordinate with the CDFG to ensure that state
12 authorized/funded projects do not jeopardize a listed species. The Act prohibits the taking of a
13 listed species without authorization from the CDFG.

14 *California Lake and Stream Alteration (Fish and Game Code Section 1600 et seq.)*

15 This program governs projects that involve lake and streambed alteration in California, and
16 requires that such alterations are evaluated under CEQA and authorized via a Streambed Alteration
17 Agreement by regional CDFG staff. Section 1601 governs activities undertaken by public agencies
18 and Section 1603 governs activities undertaken by private parties.

19 *Executive Order W-59-93 – California Wetlands Conservation Policy*

20 In August 1993, the Governor announced the California Wetlands Conservation Policy. The
21 goals of the policy are to establish a framework and strategy that:

- 22 • Ensures no overall net loss and achieves a long-term net gain in the quantity, quality, and
23 permanence of wetlands acreage and values in California in a manner that fosters creativity,
24 stewardship, and respect for private property;
- 25 • Reduces procedural complexity in the administration of state and federal wetlands
26 conservation programs; and
- 27 • Encourages partnerships to make landowner incentive programs and cooperative planning
28 efforts the primary focus of wetlands conservation and restoration.

29 The Executive Order also directed the California Resources Agency to establish an Interagency
30 Task Force to direct and coordinate administration and implementation of the policy.

31 The Resources Agency and departments within that agency generally do not authorize or approve
32 projects that fill or harm any type of wetlands. Exceptions may be granted for projects meeting all
33 the following conditions: the project is water dependent; there is no other feasible alternative; the
34 public trust is not adversely affected; and the project adequately compensates the loss.

Environmental Setting

Plant names used in this analysis follow the *Jepson Manual for Higher Plants of California* (Hickman 1993). Bird names follow standardized English nomenclature used in the American Ornithologist's Union (AOU) *Checklist of North American Birds*.

Vegetation and Wildlife Habitats

Figure 4.3-1 in EIR section 4.3 depicts the habitat types present on the proposed project site. Most of the property site supports agricultural, ruderal (disturbed or weed dominated), and non-native annual grassland habitats with some areas of native habitat associated with the on-site drainages. The native habitats include coastal and dune scrub, small areas of native grasses, riparian scrub and wetlands. The native habitats, including riparian scrub and wetlands, are primarily associated with the two main drainages that traverse the property (identified as Drainage B and C) (Rincon Consultants 2004). Drainage A lies adjacent to the northern project site boundary.

Figure 4.3-1 also includes information on a proposed sensitive species mitigation site located south of the property (proposed Conservation Area 2 as defined in the project Habitat Conservation Plan [HCP]). Habitats present in the Mahoney Ranch South Project site are described below.

Agriculture, Ruderal and Grassland Habitats

The majority of the property consists of agricultural and ruderal habitat types that are a result of past and present agricultural practices, in addition to human occupation (approximately 211 acres [Rincon Consultants 2006]). Agricultural areas include those that are currently in production, such as row crops or fallow fields. Much of the agricultural fields between Drainages A and B were converted from open space in the late 1990's. Habitat between the Tanglewood Development and Drainage B was still open grazing lands as late as 1997 (Hunt 2004). Ruderal areas on the project site are primarily open areas near the drainages that are vegetated with non-native grasses or weedy species, and other areas dominated by weedy species such as along roadsides and adjacent to fields or developed areas. Areas that were planted with windrows, such as eucalyptus (*Eucalyptus* spp.) and landscaping around structures, are included in the agriculture/ruderal plant community on Figure 4.3-1 (Rincon Consultants 2004).

Non-native grassland habitats are areas dominated by non-native annual grasses found primarily adjacent to the drainages on the project site. The most extensive areas of non-native grassland are found along Drainage B, including a large area of irrigated pasture at the northern end of the drainage. Patches of non-native annual grassland are also found interspersed with the coastal, dune and riparian scrub habitats described below. Non-native grassland on the project site is dominated by species of bromes (*Bromus diandrus*, *B. madritensis* ssp. *rubens*, and *B. hordaceus*) slender wild oats (*Avena barbata*), barnyard foxtail (*Hordeum murinum* ssp. *leporinum*), and Italian ryegrass (*Lolium multiflorum*). Kikuyu grass (*Pennisetum clandestinum*), a non-native perennial grass rated as a limited invader in wildland habitats by Cal IPC (2006), was also observed in this habitat. Other annual herbaceous species were also found in this habitat types including non-native wild radish (*Raphanus sativus*), white-stemmed fillarree (*Erodium moschatum*), native lupines (*Lupinus* spp.), and fiddleneck (*Amsinkia menziesii* ssp. *intermedia*) (Rincon Consultants 2004). Species within the irrigated pasture included non-native perennial grasses such as Bermuda grass

1 (*Cynodon dactylon*), reed fescue (*Festuca arundinaceae*), red fescue (*F. rubra*), annual blue grass (*Poa*
2 *annua*), and non-native forbs including white clover (*Trifolium repens*) and birdsfoot trefoil
3 (*Lotus corniculatus*) (Rincon Consultants 2004).

4 Small areas of native grassland habitat (estimated to be 0.3 acres [Rincon Consultants 2006]) were
5 identified on the southern slope of Drainage B (see Figure 4.3-1). Other native grassland including
6 coyote brush (*Baccharis pilularis* ssp. *consanguinea*) and creeping wild rye have been identified at the
7 northern boundary of the property along the southern bank of Drainage A. Two occurrences of
8 purple needle grass (*Nassalla pulchra*), a native perennial bunchgrass, were identified during the
9 2004 surveys along the southern bank of Drainage B. These areas were determined to support at
10 least 10 percent cover of purple needlegrass, and therefore met the CDFG definition for plant
11 community of special concern (Rincon Consultants 2004). The areas of native grassland were each
12 less than 0.5 acres, but it is not known if they are greater than 0.25 acres. For the purpose of this
13 analysis, the native grassland habitats as described in the Rincon Consultants 2004 report are
14 assumed to be greater than 0.25 acres and will, therefore, be considered a sensitive habitat type.

15 Although most of the project site consists of active agricultural fields or is otherwise directly
16 affected by agricultural activities, the open grassy areas and drainages still provides suitable
17 habitat for several common and sensitive wildlife species. "Common" species are considered
18 those that are widespread and are present on the project site on more than just rare occasions.
19 The habitat within the project boundary is also important in providing temporary foraging habitat
20 for wide-ranging species, and for allowing cover and food for animals traveling between other
21 undisturbed areas. The project site supports reptile species such as gopher snake (*Pituophis*
22 *melanoleucus*), southern alligator lizard (*Elgaria multicarinatus*), western fence lizard (*Sceloporus*
23 *occidentalis*) and side-blotched lizard (*Uta stansburiana*) (Rincon Consultants (2004). Western
24 rattlesnake (*Crotalus viridis*) is also likely to be present. Amphibian species that were reported to
25 be present include the pacific treefrog (*Hyla regilla*), western toad (*Bufo boreas*), western spadefoot
26 toad (*Scaphiopus hammondi*), California red-legged frog (*Rana aurora draytonii*), and California tiger
27 salamander (*Ambystoma Californiense*). Several of these species are considered to be sensitive and
28 are discussed in more detail below. Small mammal species reported as being present include
29 California meadow vole (*Microtus Californicus*), house mouse (*Mus musculus*), broad-footed mole
30 (*Scapanus latimanus*), ornate shrew (*Sorex ornatus*), Audubon's cottontail (*Sylvilagus audubonii*),
31 California ground squirrel (*Spermophilus beechyi*) and Botta's pocket gopher (*Thomomys bottae*)
32 (Rincon Consultants 2004). Smaller mammals provide a food supply for a variety of carnivorous
33 species such as coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), long-tailed weasel
34 (*Mustela frenata*), feral cats (*Felis catus*), and American badger (*Taxidea taxus*), identified in the
35 Draft Habitat Conservation Plan (HCP) (Rincon Consultants 2006). The project site also provides
36 food and habitat for larger mammal species such as mule deer (*Odocoileus hemionus*), raccoon
37 (*Procyon lotor*), opossum (*Didelphis virginiana*), and striped skunk (*Mephitis mephitis*).

38 Avian species that are expected or known to occur in the open grassland habitat include western
39 meadowlark, horned lark, northern mockingbird, lesser goldfinch, homed lark, lark sparrow and
40 Brewer's blackbird. American kestrel, white-tailed kite, red-tailed hawk and turkey vultures are all
41 expected to forage over the open habitat (Rincon Consultants 2004).

1 Coastal Scrub

2 Coastal scrub habitats are typically dominated by a variety of common native drought-deciduous
3 shrub species. In the project area, the approximately 3.4 acres identified as coastal scrub (Rincon
4 Consultants 2006) have a low diversity of shrub species dominated by coyote brush, with
5 scattered goldenbush (*Isocoma menziesii*). Non-native species including poison hemlock (*Conium*
6 *maculatum*), perennial mustard (*Hirschfeldia incana*), and annual grasses are also found in this
7 habitat type (Rincon Consultants 2006). The low diversity of native shrub species and high cover
8 of non-native grass and herbaceous species may indicate that the scrub is in degraded condition,
9 or has been disturbed in the past and left fallow for sufficient time for shrubs to re-establish.

10 Because the coastal scrub habitat on the project site is in close proximity to open grassland habitat,
11 wildlife species expected to utilize the coastal scrub habitat would be similar to those described for
12 the open grassland. Two notable exceptions would be the silvery legless lizard (*Anniella pulchra*
13 *pulchra*) and the coast horned lizard (*Phrynosoma coronatum frontale*), which are more commonly
14 found in coastal scrub habitats. Both of the species are California Species of Special Concern.

15 Riparian and Wetland Habitats

16 Pursuant to Section 404 of the CWA, wetlands are defined as a subset of Waters of the U.S.
17 Waters of the U.S. include bodies of water that are or could be used for interstate commerce. This
18 includes seasonally flooded areas that may be used by migratory birds, as well as other types of
19 water bodies (including creeks and streams). Wetlands are areas that exhibit wetland hydrology,
20 hydric soils, and hydrophytic vegetation. The USACE defines them as “areas that are inundated
21 or saturated by surface or groundwater at a frequency and duration sufficient to support, and that
22 under normal circumstances do support, a prevalence of vegetation typically adapted for life in
23 saturated soil conditions (USACE 1987).”

24 For an area to be considered jurisdictional by the USACE, and therefore subject to regulation
25 under the CWA, all three parameters must normally be met. The CDFG, USFWS, and local
26 agencies define wetlands as areas that exhibit only one or two of the aforementioned
27 parameters. The effect of this less conservative definition of wetlands is to extend protection to
28 areas that support hydrophytic vegetation and may be subject to periodic flooding, but may not
29 exhibit wetland hydrology or have developed hydric soils.

30 Wetland delineation surveys, in accordance with the USACE wetland delineation manual, were
31 conducted on the project site by Rincon Consultants in 2004. State and federal Jurisdictional
32 Waters of the U.S., as described in the draft HCP (Rincon Consultants 2006), are depicted in
33 Figure 4.3-2 in EIR section 4.3. Wetlands and riparian habitats on the project site were found
34 associated with Drainages B and C. Based on the results of wetland delineation surveys, both
35 the drainages onsite and Drainage A to the north contain USACE jurisdictional wetlands and
36 Waters of U.S. and CDFG Waters of the State (Rincon Consultants 2004).

37 A total of 11.4 acres of riparian habitat were identified onsite (Rincon Consultants 2006). Riparian
38 scrub habitat present on the project was found primarily in Drainage C, with small areas found in
39 Drainage B. Drainage C supports well-developed riparian scrub habitat with dense thickets of
40 arroyo willow (*Salix lasiolepis*), scattered Fremont cottonwood (*Populus fremontii*), and a wetland
41 vegetation understory including native willow herb (*Epilobium canum*), broad-leaved cattail (*Typha*

1 *latifolia*), dock species (*Rumex* spp.), and non-native poison hemlock, perennial mustard, curly dock
 2 (*Rumex crispus*), and bull thistle (*Cirsium vulgare*) (Rincon Consultants 2004). Drainage B supports
 3 individuals or small, isolated stands of willow with an understory of grasses and herbaceous
 4 species typical of the adjacent non-native annual grassland habitat. All drainages collect runoff
 5 from the project site, as well as from off site, and flow from east to west and eventually join the
 6 Santa Maria River, which empties into the Pacific Ocean. Riparian scrub and wetlands are
 7 considered sensitive plant communities by the CDFG (Rincon Consultants 2004).

8 Three isolated agricultural ponds were identified on the project site during previous surveys,
 9 with one pond within the current proposed project area identified on Figure 4.3-1. However,
 10 the Wetland Delineation report did not include these ponds as falling under the jurisdiction of
 11 the USACE or CDFG based on their hydrologic isolation and because they are man-made
 12 features constructed in upland areas (Rincon Consultants 2004).

13 A summary of the USACE and CDFG Jurisdictional Areas on the proposed Mahoney Ranch
 14 South Project site is provided in Table D-1 below.

Table D-1 Summary of the USACE and CDFG Jurisdictional Areas on Mahoney Ranch

Drainage Area	USACE Waters of the U.S		CDFG State Waters (acres)
	WETLANDS (ACRES)	NON-WETLANDS (ACRES)	
B	1.54	0.1	1.79
C	3.57	0	3.57
Total	5.11	0.1	5.36
Source: Rincon Consultants 2004.			

15 Riparian and wetland communities are important biologically because they provide habitat for a
 16 variety of wildlife species including songbirds such as common yellowthroat (*Geothlypis trichas*),
 17 ruby-crowned kinglet (*Regulus calendula*), oak titmouse (*Baeolophus inornatus*), and song sparrow
 18 (*Melospiza melodia*), as well as amphibians and reptiles. During surveys conducted for the Draft
 19 HCP (Rincon Consultants 2006), Pacific chorus frog (*Pseudacris regilla*), San Diego alligator lizard
 20 (*Gerrhonotus multicarinatus*), western fence lizard, and common king snake (*Lampropeltis getulus*)
 21 were observed in the riparian habitat. Drainages, streams and creeks with diverse and dense
 22 riparian vegetation provide valuable habitat for wildlife, which use these communities for nesting,
 23 foraging, and as travel corridors. Although portions of the riparian scrub on the proposed project
 24 site have been disturbed and are fragmented from ongoing agricultural operations, this habitat still
 25 provides wildlife movement corridors to areas east and west of the property. Despite the regular
 26 disturbance levels in areas of active agriculture and past disturbance of this habitat from human
 27 activities and cattle grazing, the onsite riparian and wetland habitat currently supports a number of
 28 sensitive species including California tiger salamander, California red-legged frog and western
 29 spadefoot toad.

30 The open water in ponded areas on the project site provides habitat for aquatic invertebrates
 31 such as water striders and boatmen, and amphibians such as the Pacific chorus frog. Although
 32 wetland habitats do not occupy a large portion of the property, the on-site emergent wetland
 33 vegetation and associated open water habitat provides water, food sources, and habitat for a

1 number of other wildlife species common to the vicinity including mammals such as opossums
2 (*Didelphis virginianus*) and birds such as red-winged blackbird (*Agelaius phoeniceus*). In addition,
3 wetlands are present on adjacent property which makes the project vicinity as a whole valuable
4 in terms of supporting wetland habitat.

5 *Rare, Threatened and Endangered or other Sensitive Species*

6 Rare, threatened, and endangered species are protected by one or more of the following statutes
7 or policies:

- 8 • California Endangered Species Act (1970);
- 9 • Federal Endangered Species Act (1973, as amended);
- 10 • California Native Plant Protection Act (1970); and
- 11 • Migratory Bird Treaty Act (1918).

12 The California Environmental Quality Act (1970) provides additional protection for unlisted
13 species that meet the “rare” or “endangered” criteria defined in Section 15380.

14 *Plants*

15 Surveys for sensitive plant species were conducted on the Mahoney Ranch South Project site by
16 Rincon Consultants (2004 and 2006). Several sensitive plant species were identified that had the
17 potential to occur on the property and surveys were conducted during winter, spring and summer
18 2004. No federal or state-listed rare, threatened or endangered plant species were identified or are
19 expected to occur on the project property. Two non-listed but regionally sensitive plant species
20 were found within the project site during 2004 surveys; Blochman’s leafy daisy (*Erigeron*
21 *blochmaniae*) and Cambria morning glory (*Calystegia subacaulis* ssp. *episcopalis*) are both included on
22 the California Native Plant Society’s List 1B (plants rare and endangered in California and
23 elsewhere). Blochman’s leafy daisy was found in the northernmost portion of the study area, which
24 is no longer included in the proposed development area. Cambria morning glory was found at one
25 location along south facing slopes associated with Drainage B (see Figure 4.3-1).

26 Cambria morning glory is a perennial herb that typically occurs in chaparral and cismontane
27 woodland habitats in coastal areas of San Luis Obispo County. It has white or cream-colored
28 flowers, purple-tinged along the mid vein, and blooms April to May. This location is outside of the
29 reported range and represents the southernmost known location for this species (CNPS 2001;
30 Hickman 1993). The area covered by Cambria morning glory was estimated to be 80-feet wide and
31 600-feet long, with an average of 1 plant per square foot (Rincon Consultants 2004).

32 *Wildlife*

33 Focused surveys were conducted on the Mahoney Ranch South property for sensitive wildlife
34 species. The locations of all sensitive amphibians that have been observed in the project vicinity are
35 shown in Figure 4.3-3 in EIR section 4.3. Sensitive wildlife species that were identified as having the
36 potential to occur on the site are listed in Table D-2 and shown in Figure 4.3-4 in EIR section 4.3.
37 Those species that were identified as occurring on the project property are discussed in detail below.

1 Two federally listed as threatened or endangered sensitive wildlife species have been identified
2 in various reports to be present in the project vicinity: California red-legged frog (*Rana aurora*
3 *draytonii*); and California tiger salamander (*Ambystoma californiense*) (see Figure 4.3-3). These
4 two species are discussed in detail below. Other sensitive species that have been recorded, or
5 are potentially present in the project vicinity, include: the western spadefoot toad (*Spea*
6 *hammondi*); several raptor species that are California species of special concern including
7 ferruginous hawk and Cooper's hawk; and other raptor species protected under the MBTA
8 including the red-tailed hawk, red shouldered hawk and American kestrel (see Table D-2).

9 The following reports and letters were also used to assess amphibian use of the habitat in the
10 project vicinity:

- 11 • Draft HCP (Rincon Consultants, Inc. 2006);
- 12 • Mahoney Ranch Focused Biological Studies and Wetland Delineation (Rincon
13 Consultants, Inc. 2004); and
- 14 • Results of Surveys for California tiger salamander (*Ambystoma californiense*) and Other
15 Sensitive-Status Amphibians, Mahoney Ranch, Santa Maria Valley, Santa Barbara
16 County, 2003-2004 Rainy Season (Rincon Consultants, Inc. 2004).

17 *California Red-legged Frog*

18 The California red-legged frog (*Rana aurora draytonii*) is federally listed as threatened and is a
19 California Species of Special Concern. This species was proposed for listing as endangered on
20 February 2, 1994 (59 CFR 4888). The species was listed as threatened on May 23, 1996, and the
21 final rule became effective on June 24, 1996 (USFWS 1996). The historical range of the California
22 red-legged frog extended from the vicinity of Point Reyes National Seashore, Marin County,
23 California on the coast, and from the vicinity of Redding, Shasta County, California inland
24 southward to northwestern Baja California, Mexico. The species has sustained a 70 percent
25 reduction in its geographic range in California as a result of several factors acting singly or in
26 combination. Habitat loss and alteration, combined with over-exploitation, introduction of
27 exotic predators, urbanization and its associated roadways, large reservoirs, and stream
28 channelization projects were the primary factors causing population declines.

29 The California red-legged frog is one of two subspecies of the red-legged frog (*Rana aurora*)
30 found on the Pacific coast. It is a fairly large frog with adults reaching 5 inches (snout to vent
31 length). The final rule states that the species occupies a fairly distinct habitat, combining both
32 specific aquatic and riparian components. Adults prefer dense, shrubby or emergent riparian
33 vegetation closely associated with deep (more than 2.3 feet in depth), still or slowly moving
34 water. However, recent observations indicate that California red-legged frogs occur in a variety
35 of habitat types, including aquatic, riparian, and upland habitats with permanent water nearby.
36 Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering
37 habitat during winter, foraging areas, and dispersal corridors. California red-legged frogs
38 breed from November to March, with the earlier breeding records occurring in southern
39 localities. Eggs hatch in 8 to 14 days while larvae take 3.5 months or longer to metamorphose.
40 California red-legged frogs may live 8 to 10 years.

Table D-2. Sensitive Animal Species Known or Expected to Occur on or Adjacent to the Project Site

<i>Scientific Name/ Common Name</i>	<i>Status Fed/State</i>	<i>Habitat and Description</i>	<i>Distribution in Project Area</i>
<i>Rana aurora draytonii</i> California red- legged frog	FT/CSC	Occur in a variety of habitat types, including aquatic, riparian, and upland habitats with permanent water nearby.	Eleven individuals observed in the project area at Drainage B and the leaking irrigation well site (see Figure 4.3-1).
<i>Ambystoma californiense</i> California tiger salamander	FE/CSC	Grassland and open woodland areas, breeding in still or slow-moving waters of vernal pools, reservoirs, and streams.	Three individuals observed in the project area during 2003-2004 protocol surveys.
<i>Branchinecta lynchi</i> Vernal pool fairy shrimp	FT/-	Requires seasonal ponds or vernal pools	Not observed or expected on proposed development area; suitable habitat present within Conservation Area 2, south of the project site.
<i>Spea hammondii</i> Western spadefoot toad	--/CSC	Breeds in vernal pools, reservoirs, and streams, uses open grassland and upland habitats.	Observed in the project area in Drainages B and C. (see Figure 4-3.3)
<i>Anniella pulchra</i> Silvery legless lizard	FSC/CSC	Open chaparral and scrub with loose sandy soils.	Not observed in the project area.
<i>Clemmys mamorata pallida</i> South-western pond turtle	FSC/CSC	Permanent or nearly permanent water bodies with basking sites.	Not observed in the project area.
<i>Phrynosoma coronatum frontale</i> Coast horned lizard	FSC/CSC	Lowlands and foothills near water sources with emergent vegetation.	Not observed in the project area. Habitat present on site.
<i>Thamnophis hammondi</i> Two-striped garter snake	--/CSC	Riparian areas with rocky soil with permanent water source.	Not observed in the project area.
<i>Accipiter cooperii</i> Cooper's hawk	--/CSC	Open grassland, chaparral, and oak woodland.	Not observed on site, suitable foraging habitat present and marginal nesting habitat.
<i>Agelaius tricolor</i> Tricolored blackbird	FSC (nesting colony)/CSC	Wetland and marsh habitats.	Observed foraging on site and breeding in project area, no suitable nesting habitat present.
<i>Athene cucicularia</i> Western burrowing owl	FSC/CSC (Burrow sites)	Open grassland.	Observed in project area, suitable habitat present within drainages.
<i>Circus cyaneus</i> Northern harrier	-- /CSC (nesting)	Open grassland, meadows and marshes	Suitable foraging habitat present, potential nesting habitat.

Table D-2. Sensitive Animal Species Known or Expected to Occur on or Adjacent to the Project Site (continued)

<i>Scientific Name/ Common Name</i>	<i>Status Fed/State</i>	<i>Habitat and Description</i>	<i>Distribution in Project Area</i>
<i>Dendroica occidentalis</i> Yellow warbler	--/CSC (nesting)	Riparian habitats with willows, cottonwoods, aspens, sycamores and alders for foraging and breeding.	Several migrants observed on site, no suitable breeding habitat present.
<i>Elanus leucurus</i> White-tailed kite	--/CSC/ FP ¹ (nesting)	Open grassland, riparian and oak woodland.	Observed foraging over site, marginal nesting habitat present.
<i>Eremophila alpestris</i> California horned lark	--/CSC	Open grassland and forb areas.	Transients observed on site, suitable breeding habitat present.
<i>Falco mexicanus</i> Prairie falcon	--/CSC (wintering)	Dry open terrain.	Not observed on site, no suitable habitat.
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	FE (nesting)/SE	Dense riparian growth with herbaceous understory	Not observed on site, not expected to occur due to lack of suitable habitat.
<i>Lanius ludovicianus</i> Loggerhead shrike	FSC/CSC (nesting)	Valley and foothill woodland, riparian, juniper, desert riparian and Joshua Tree habitat.	Not observed on site, marginal habitat present, possible transient.
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE/SE	Riparian habitat below 2000 ft.	Not observed on site, no suitable habitat.
<i>Antrozous pallidus</i> Pallid bat	--/CSC	Grassland, shrubby and forested areas, desert with rocky areas for roosting.	Not observed on site, no suitable habitat.
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	--/CSC	Moderate to dense canopies with rocky outcrops. Coastal Southern California from San Diego to San Luis Obispo county.	Not observed on site, no suitable habitat.
<i>Taxidea taxus</i> American badger	--/CSC	Open grassland, chaparral, and oak woodland	Observed in project area, suitable habitat present within drainages.

Source: Rincon Consultants 2004

Federal Status (determined by U.S. Fish and Wildlife Service):

E Endangered. In danger of extinction throughout all or a significant portion of its range.

T Threatened. Likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

FSC Federal Species of Concern, formerly List 2 Candidate Species (designation is not used by CNPS or CDFG). Species of Concern is an informal term used by some but not all U.S. Fish & Wildlife Service offices. Species of Concern receive no legal protection and the use of the term does not necessarily mean that the species will eventually be proposed for listing as a threatened or endangered species)

State Status (determined by California Department of Fish and Game):

E State listed as Endangered

T State listed as Threatened

CSC Species of Special Concern

FP Fully Protected

¹ Nesting colonies of the white-tailed kite are Fully Protected in California.

1 *Dispersal Behavior.* California red-legged frogs occupy both aquatic and terrestrial habitats
2 during different stages of their lives and during different seasons of the year. Most adult
3 California red-legged frogs remain near or within aquatic breeding habitat. Bulger et al. (2002)
4 found that only 11 to 22 percent of adult red-legged frogs in their study dispersed from the
5 breeding site, whereas the remaining adult frogs remained at the breeding site. This species
6 typically disperses during the wet season after rain events (November through April), with
7 most of the overland movements occurring at night. However, California red-legged frogs may
8 move from breeding sites at any time of the year (USFWS 2001) and can persist in upland
9 habitat up to 77 days (Bulger et al. 2002). This species has been observed to use small mammal
10 burrows and moist leaf litter for brief periods (Jennings and Hayes 1994).

11 Adult red-legged frogs can be found within streams or ponds over 1.8 miles from breeding habitat
12 and within dense riparian vegetation more than 328 feet from water (USFWS 2000a). After winter
13 rains begin, red-legged frogs may move away from aquatic habitats, primarily at night, and can
14 travel up to two miles from those habitats. Juveniles may also disperse locally shortly after
15 metamorphosis in July-September and away from their natal habitats during warm rain events.
16 Adults typically migrate in straight lines to target sites whereas sub-adults are more likely to
17 disperse radially (Bulger et al. 2002). The dispersal of juvenile frogs has not been well studied
18 (USFWS 2001). Bulger reports that juveniles are underrepresented at breeding sites during the
19 winter and proposes that the age class moves into terrestrial habitats at this time.

20 Upland habitat is essential to maintain California red-legged frog populations associated with
21 aquatic habitat. The associated uplands habitat provide food and shelter sites for California red-
22 legged frogs, and assist in maintaining the integrity of aquatic sites by protecting them from
23 disturbance and supporting the normal functions of the aquatic habitat. Key conditions include
24 the timing, duration, and extent of water moving within the system, filtering capacity, and
25 maintaining the habitat to favor California red-legged frogs and to discourage the colonization of
26 nonnative species such as bullfrogs.

27 The USFWS (2001) describes essential upland habitat (as part of the Critical Habitat designation
28 for this species) as the upland areas within 90 meters (m) (300 ft), or no further than the
29 watershed boundary, of the edge of the ordinary high-water mark. Essential dispersal habitat
30 provides connectivity among California red-legged frog breeding habitat (and associated
31 upland) patches. While frogs can pass many obstacles and do not require a particular type of
32 habitat for dispersal, the habitat connecting essential breeding locations and other aquatic
33 habitat must be free of barriers (e.g., a physical or biological feature that prevents frogs from
34 dispersing beyond the feature) and at least 90 m (300 ft) wide.

35 Essential dispersal habitat consists of all upland and wetland habitat free of barriers that connects
36 two or more patches of essential breeding habitat within 2 km (1.25 miles) of one another. Dispersal
37 barriers include heavily traveled roads (an average of 30 cars per hour from 10:00 P.M. to 4:00 A.M.)
38 that possess no bridges or culverts; moderate to high density urban or industrial developments; and
39 large reservoirs over 20 hectares (50 acres) in size. Agricultural lands such as row crops, orchards,
40 vineyards, and pastures do not constitute barriers to California red-legged frog dispersal (*Federal*
41 *Register* Vol. 69 No. 71 CRLF).

1 *Critical Habitat.* No designated critical habitat for California red-legged frog is present on the
2 project site.

3 *Occurrence on the Mahoney Ranch South Project Site.* Field surveys to determine presence or
4 absence of California red-legged frog in the project area were conducted by Rincon Consultants
5 in June 2004 pursuant to the USFWS survey protocol. Eleven individuals of this species were
6 identified in the project area; two were observed along Drainage B, and nine were observed at
7 Pond 3 (see Figure 4.3-3) (Rincon Consultants 2004).

8 Drainage B is an unnamed stream that flows into Betteravia Lakes located west of the project site.
9 On the east side of the site, this drainage is composed of two smaller drainages that converge into
10 one in the center of the site and continue west under Black Road by culvert. The two smaller
11 drainages are referred to as the north and south segment of the drainage (Rincon Consultants 2004).
12 California red-legged frogs were found in both the north and south segments within in-channel
13 ponded water.

14 Pond 3 is located in the center of the site between an active agricultural field and irrigated
15 pasture. In 2004, the perimeter of the pond had a depth of 2-4 inches and the center was
16 approximately 18 inches deep. Duck weed (*Lemna* sp.) covered the surface, and toad rush (*Juncus*
17 *bufonius*), brass buttons (*Cotula coronopifolia*), and one willow (*Salix* sp.) were scattered along the
18 perimeter (Rincon Consultants 2004).

19 *California Tiger Salamander*

20 The Santa Barbara County populations of California tiger salamander were listed as endangered by
21 the USFWS on January 19, 2000 (USFWS 2000b). The California tiger salamander was formerly
22 considered a subspecies of the *A. tigrinum* complex, but was recognized as a distinct species in 1991.
23 The range of this species is limited to the Central Valley and coast of California. It is a large, stout
24 salamander (7.5-16.2 cm) with small eyes, and a rounded snout. Color varies greatly within the
25 species, but the California tiger salamander is basically dark with large yellow or off-white blotches.

26 The following discussion concerning the behavior and status of California tiger salamander on
27 the project site was taken and abbreviated from the Draft HCP (Rincon Consultants 2006).

28 *Status and Range.* On August 4, 2004, USFWS listed California tiger salamander as threatened
29 throughout its range. In doing so, the status of the Santa Barbara and Sonoma county populations
30 was changed from endangered to threatened (USFWS 2004). On August 19, 2005, U.S. District
31 Judge William Alsup vacated the Service's downlisting. California tiger salamander is currently
32 listed as federally endangered in both Santa Barbara and Sonoma Counties, and threatened in the
33 rest of its range. Critical habitat was designated for this population on November 24, 2004 (USFWS
34 2004). The Mahoney Ranch is located outside of, but adjacent to, Critical Habitat Unit 1.

35 *Distribution and Habitat.* In Santa Barbara County California tiger salamander are known from
36 approximately 44 locations in grassland, oak savannah, and coastal sage scrub vegetative
37 associations in the Santa Maria Valley, Solomon Hills, Los Alamos Valley, Purisima Hills, and Santa
38 Rita Valley. Seventeen known California tiger salamander breeding sites are located in the Santa
39 Maria Valley, all located on the Orcutt Dune Sheet in the southern half of the valley. These breeding
40 sites are divided into western and eastern portions by urban and agricultural development (13

1 known populations are west of Highway 101; four known populations are east of Highway 101
2 (Hunt 2004). The project site is in the western part of the California tiger salamander range in the
3 Santa Maria Valley, and California tiger salamander are known from several locations in the vicinity
4 (see Figure 4.3-2).

5 *Life History.* California tiger salamander populations in the Santa Maria Valley, as elsewhere,
6 are distributed around one or more aquatic sites, which serve as foci for breeding activity
7 during the brief breeding period. Breeding sites are always in standing, not flowing, water, and
8 include vernal pools and ponds, vernal lakes, at-grade stock ponds, and other seasonal and
9 permanent man-made and natural water sources.

10 Adults and juveniles spend the remainder of the year in subterranean retreats located hundreds or
11 thousands of feet away from these breeding sites. California tiger salamander retreat underground
12 into the burrows of California ground squirrels (*Spermophilus beecheyi*), Botta's pocket gophers
13 (*Thomomys bottae*), and other small, burrowing mammals, such as heteromyid rodents (*Dipodomys*
14 and *Perognathus*) during the dry season between late spring and early winter (Loredo et al. 1996).

15 Adult California tiger salamander emerge from their underground retreats at night during or
16 after storm events, only after the first few winter storms of the season have thoroughly soaked
17 the ground to make their way to vernal pools and other seasonal water sources to breed. These
18 movements to the breeding pool are contingent upon the timing and duration of storm events,
19 and California tiger salamander may not emerge at all if rainfall amounts are below normal or
20 widely spaced.

21 Egg-laying occurs a few days after migration and females appear to leave the breeding site at
22 night a few days later (Loredo and Van Vuren 1996). Eggs are deposited singly or in small
23 clusters of 2-4 eggs on grass stems or stalks of dead vegetation in shallow water. The eggs hatch
24 in less than 20 days, but the breeding pools must contain water for at least 10 consecutive weeks
25 (70 days) in order for California tiger salamander larvae to successfully reach metamorphosis
26 (Hunt 2004).

27 Metamorphs emerge from the breeding pool en mass at night after spending a few hours to a few
28 days along the margins of the drying pool and move to temporary or permanent underground
29 retreats within several hundred feet of the breeding site (Loredo et al. 1996). During subsequent
30 rain events or periods of high humidity, these individuals may move again in search of more
31 suitable retreat sites (Loredo et al. 1996; Hunt 2004). Metamorph California tiger salamander may
32 find refuge in deep soil crevices, at least temporarily (Holland et al. 1990; Loredo et al. 1996). Recent
33 metamorph and juvenile California tiger salamander typically remain underground, only making
34 short above-ground forays during the rainy season, until they reach sexual maturity after at least
35 two years post-metamorphosis (Shafer et al. 1993). Trenham et al. (2000) concluded that California
36 tiger salamander population survival is heavily dependent on terrestrial survival during the years
37 between metamorphosis and breeding.

38 California tiger salamander are commensal with burrowing rodents and depend on them to
39 construct and maintain burrow systems, therefore, the population dynamics of burrowing
40 mammals may be an important factor in the long-term persistence of California tiger salamander
41 populations.

1 *Dispersal behavior.* As California tiger salamander rely on both breeding ponds and upland refugia
2 for their persistence, an understanding of their movement ecology and land usage is a critical
3 foundation for the development of a conservation plan for this species.

4 Average and maximum distance between the burrow refugia and the breeding pool in a particular
5 area is probably habitat- and topography- specific to the location, and may also depend on the
6 density of burrowing mammal populations (Hunt 1998). Movements made by California tiger
7 salamander can be grouped into two categories: (1) breeding migration; and (2) interpond
8 dispersal.

9 Breeding migration is the movement of salamanders to and from a pond from the surrounding
10 upland habitat. After metamorphosis, juveniles move from breeding ponds into the surrounding
11 uplands, where they live continuously for several years (on average four years). They do not return
12 to the natal/breeding site until they are sexually mature. A few days to weeks after breeding, adult
13 California tiger salamander return to upland habitats, where they may forego breeding for one or
14 more years if rainfall is below normal (Trenham et al 2000; Trenham 2001). California tiger
15 salamander are known to travel large distances from breeding ponds into upland habitats.
16 Maximum distances moved are generally difficult to establish for any species, but California tiger
17 salamander in Santa Barbara County have been recorded up to 1.2 miles (1.9 km) from the nearest
18 known breeding pond (Hunt 1998).

19 Some evidence suggests that juvenile California tiger salamander disperse further into upland
20 habitats than adults. A trapping study conducted in Solano County during winter 2002-03
21 found that juveniles used upland habitats further from breeding ponds than adults (Trenham
22 and Shaffer 2003). Fitting a distribution curve to the data revealed that 95 percent of juvenile
23 salamanders could be found within 2,099 feet (640 m) of the natal pond, with the remaining five
24 percent being found at greater distances.

25 The spatial distribution of California tiger salamander in the uplands surrounding breeding
26 ponds is a key issue for conservation planning. Although it might be supposed that California
27 tiger salamander will move only short distances if abundant burrows are found near their ponds,
28 this does not seem to be the case. In the Solano County study, even though abundant burrows
29 were available near the pond, a nearly equal number of adult California tiger salamander were
30 captured at 328, 656 and 1,312 feet (100, 174 and 400 m) from the breeding pond (Trenham and
31 Shaffer 2003). Unlike other ambystomatid salamanders elsewhere in California and the eastern
32 United States, California tiger salamander and other tiger salamanders are grassland animals, and
33 do not favor forested areas as corridors for movement or long-term residence. Trenham (2001)
34 found that radiotracked adults favored grasslands with scattered large oaks, over more densely
35 wooded areas, however, this apparent preference in California tiger salamander is likely to be
36 habitat- or site-specific (Hunt 2004).

37 At two ponds surrounded by open space and completely encircled by drift fences and pitfall
38 traps, captures of arriving adults and dispersing new metamorphs were distributed roughly
39 evenly around the ponds. However, individual adult California tiger salamander frequently
40 enter and exit ponds at the same location, indicating some degree of directional, and possibly
41 site, fidelity. Thus it appears that metamorph dispersal into the terrestrial habitat occurs
42 randomly with respect to direction and habitat types, but that adults may display some degree

1 of burrow fidelity. Most California tiger salamander breed in the pond where they hatched and
2 developed as larvae (Trenham et al. 2001).

3 Inter-pond dispersal is another important facet of the movement ecology of California tiger
4 salamander. Because random events, such as disease or drought, may occasionally extirpate local
5 populations (i.e., local extinction), maintaining inter-pond dispersal is important for the long-term
6 viability of California tiger salamander in an area. In Monterey County, Trenham et al (2001)
7 showed that a significant minority of California tiger salamander dispersed to other ponds. In
8 that study, more than 20 percent of both first-time and experienced breeders were recaptured
9 breeding at ponds other than where they were last captured. The frequency of dispersal among
10 subpopulations will ultimately depend on the distance between the ponds or pond complexes
11 and also on the presence and type of intervening barriers. In general: a) California tiger
12 salamander are capable of moving long distances; b) persistence of metapopulations, i.e.,
13 populations connected by dispersal, is a key feature of their life history, and; c) population and
14 metapopulation persistence requires a series of pools that are within dispersal distance of one
15 another, which one study suggests to be on the order of 2,200 feet (671 m).

16 Local topography and vegetation, as well as the density and distribution of ground squirrel or other
17 rodent burrows may be important influences on distances moved by metamorph and adult
18 California tiger salamander between upland and natal/breeding habitat (Hunt 1998). Observations
19 of metamorph and adult California tiger salamander on the surface away from ponds (presumably
20 migrating to or from the breeding pond, moving from one burrow to another, or in search of food)
21 almost inevitably coincide with recent rainfall, suggesting that surface movement is limited to
22 periods of precipitation. For a sustainable breeding population to exist, a sufficient fraction of
23 adults and juvenile salamanders hatched in a given pond must survive their excursions into the
24 surrounding uplands and return to breed again.

25 *Threats.* The primary threat to California tiger salamander is the loss, degradation and
26 fragmentation of habitat due to human activities. California tiger salamander are also vulnerable
27 to competition and/or predation from introduced species including bullfrogs (*Rana catesbeiana*),
28 mosquitofish (*Gambusia affinis*), Louisiana red swamp crayfish (*Procambarus clarki*), non-native
29 ambystomatid salamanders, and introduced fish. California tiger salamander suffer high
30 mortality from automobiles as they must often cross roads to reach breeding ponds. They are
31 dependent on small burrowing mammals to dig and maintain underground refugia. Reduction
32 of ground squirrel populations to low levels through widespread rodent control programs may
33 reduce availability of burrows and adversely affect California tiger salamander. Rodent poison is
34 also likely to result in California tiger salamander mortality.

35 *Occurrence on the Mahoney Ranch South Project Site.* California tiger salamander are known to occur
36 on and around the project site. A total of three gravid females were captured in annual grassland
37 habitat within proposed onsite Open Space Drainage "B" and "C" in the area surrounding Drainage
38 B during pit fall trapping efforts from February 3 to March 2, 2004 (Figure 4.3-4). Conservation Area
39 2 offsite to the southeast is located within California tiger salamander Critical Habitat Unit 1 and
40 contains known California tiger salamander and California red-legged frog occurrences (CNDDDB
41 2006).

1 *Vernal Pool Fairy Shrimp*

2 The following status, range, distribution and occurrence information on the vernal pool fairy
3 shrimp (VPFS) was derived and abbreviated from the Draft HCP (Rincon Consultants 2006). This
4 species is not expected to occur within the proposed project development footprint due to the
5 absence of suitable habitat. Suitable habitat is present within Conservation Area 2 but the species'
6 presence is unknown.

7 *Status and Range.* VPFS was designated as a federally threatened species by USFWS on September
8 19, 1994 (USFWS 1994). Critical habitat was designated on August 6, 2003 (USFWS 2003).

9 The range of this species is from southern Oregon to southern California and VPFS is endemic to the
10 grasslands of California's central valley and central and south Coast Ranges. Since VPFS was
11 identified as a species as recently as 1990, there is little information on its historical range. However,
12 VPFS presence is currently known to occur in a wide range of vernal pool habitats. Therefore, the
13 historic distribution of this species may have coincided with the historic distribution of Central
14 Valley and Southern California vernal pools (USFWS 2006).

15 *Distribution and Habitat.* VPFS are found in vernal pool habitats ranging from 0.3 foot (1 m) wide
16 depressions in sandstone to small swale, earth slump, or basalt-flow depression basin with a grassy
17 or, occasionally, muddy bottom in grassland (Eriksen and Belk 1999). They have also been
18 documented as occurring in puddled tire ruts on dirt roads. VPFS have been observed from
19 December to early May in the Central Valley of California, and in the central and southern Coast
20 Ranges from Solano County to Ventura County, California. Until recently, this species occurrence
21 had not been documented in Santa Barbara County. Surveys in 2004/2005 identified this species on
22 the Burton Mesa located to the east of Lompoc. Additional observations are documented from
23 vernal pool habitat on Vandenberg Air Force Base further south. In March 2006, VPFS were found
24 in ponds on the adjacent Santa Maria Public Airport property (Rincon Consultants 2006). Given
25 known locations in San Luis Obispo County and the recent findings in northern Santa Barbara
26 County, potential exists for this species to occur in vernal pools on the offsite mitigation area.

27 *Life History.* A member of the fairy shrimp family Branchinectidae, VPFS are short lived and
28 fast reproducers, completing their life cycle in 18 days, under optimal conditions, to 41 days,
29 under less favorable conditions. During the dry season, VPFS embryos are contained in a
30 protective impenetrable shell called a cyst. Cysts may remain viable in the soil for 15 years and
31 often for much longer. Following winter/spring rains and the inundation of vernal pools,
32 embryos hatch from the protective cysts and enter the water column and begin their life cycle.
33 They eat algae, bacteria, protozoa, rotifers, and detritus (USFWS 2006).

34 *Threats.* The ephemeral wetlands that support this network of VPFS populations are remnants
35 of what was formerly a vernal pool ecosystem, which has been converted to primarily
36 agricultural and urban uses. This highly disturbed remnant habitat is imperiled by a variety of
37 human-caused activities, primarily urban development, habitat fragmentation, pesticide
38 contamination, water supply/flood control projects and conversion of land to agricultural use.
39 Holland (1978) estimated that between 60 and 85 percent of the habitat that once supported
40 vernal pools had been destroyed by 1973. Since 1973, a substantial amount of remaining habitat
41 has been converted for human uses. The rate of loss of vernal pool habitat in the state has been
42 estimated at two to three percent per year (Holland and Jain 1988).

1 *Occurrence on the Mahoney Ranch South Project Site.* USFWS protocol-level surveys for VPFS have not
2 been conducted on the project site. Available habitat on-site for VPFS is considered marginal due to
3 the lack of vernal pool habitat and poor water quality. The drainages contain flowing water and
4 Pond 3, which was formed from a leaking irrigation well, is no longer present. Therefore, it is
5 unlikely that this species occurs on the project site. The presence of suitable vernal pool habitat in
6 Conservation Area 2, coupled with known occurrences of the species on the adjacent Santa Maria
7 Public Airport property to the west, creates a potential for this species to occur in Conservation Area
8 2 offsite to the southeast and in restored and created habitat within proposed Open Space areas
9 within Drainages “B” and “C.”

10 *Western Spadefoot Toad*

11 The western spadefoot toad, a California Species of Special Concern, prefers habitat where the soil is
12 sandy or gravelly, and vegetation is short and open. Typically, habitat includes grasslands, pine-
13 oak woodlands, open chaparral, and scrubland. Dry periods are spent in self-made burrows, or
14 those of small rodents such as gophers, kangaroo rats, and ground squirrels. Spadefoot toads are
15 active mainly at night during spring and summer rains. Breeding and egg laying occur almost
16 exclusively in shallow, temporary pools formed by late winter and spring rains during January
17 through May (Stebbins 1985).

18 *Occurrence on the Mahoney Ranch South Project Site.* During the focused amphibian survey for
19 California tiger salamander, three western spadefoot toads were found on the project site. Two
20 were located along the southern segment of the Drainage B near the second California tiger
21 salamander. The third was located near the southwestern project boundary along Drainage C
22 (Figure 4-3.3). This species is expected to be present within the drainages on the proposed
23 development area.

24 *Regulatory Setting*

25 *Federal Laws, Regulations, and Executive Orders*

26 CLEAN WATER ACT (33 U.S.C. 1252 ET SEQ.)

27 The Clean Water Act (CWA) was enacted to restore and maintain the chemical, physical, and
28 biological integrity of the Nation’s waters through the elimination of discharges of pollutants.
29 Among other things, the CWA provided that continuing (point-source) pollutant discharges
30 could not occur unless specifically authorized by permit, and established permit programs for
31 various forms of discharges, including the discharge of dredged materials.

32 CWA SECTION 401. Section 401 Certification is required to demonstrate that discharges of
33 dredged or fill material into waters of the U.S. comply with state water quality standards for
34 actions within state waters. Compliance with Section 401 is provided by approval of a Water
35 Quality Certification or waiver from the State Water Resources Control Board or Regional
36 Water Quality Control Board (SWRCB and RWQCB, respectively), and is a condition for
37 issuance of a Section 404 permit discussed below.

38 CWA SECTION 402. Section 402 requires that permitted projects comply with National Pollutant
39 Elimination Discharge System (NPDES) requirements. The state is required to establish waste

1 discharge standards for all state waters, under Section 301 of the CWA. Compliance with
2 Section 402 is provided by approval of a NPDES permit from the SWRCB and RWQCB.

3 CWA SECTION 404. Section 404 addresses permits required for discharge of dredged or fill
4 material. It establishes guidelines for the discharge of dredged or fill materials and for the
5 prevention of such discharges, individually or in combination with other activities, from having
6 unacceptable adverse impacts on the ecosystem.

7 The U.S. Army Corps of Engineers (USACE) has the legal authority to regulate, through the
8 issuance of a Section 404 permit, the discharge of dredged or fill material in waters of the U.S.

9 ENDANGERED SPECIES ACT (16 U.S.C. 1531 ET SEQ.)

10 The Endangered Species Act (ESA) protects federally listed threatened and endangered species.
11 Consultation with the U.S. Fish and Wildlife Service (USFWS) is required under ESA Section 7 if a
12 listed species would be adversely affected by a federal action. ESA Section 9 prohibits the taking of
13 a listed species without authorization from the USFWS. ESA Section 10 provides an exception to
14 the “take” prohibition for private parties, provided a USFWS incidental take permit is obtained.
15 USFWS defines “take” to include the harassment, harming, pursuing, hunting, shooting, wounding,
16 killing, trapping, capturing, or collecting, or the attempt to engage in such conduct. Harm can
17 include habitat modification or degradation that kills or injures wildlife.

18 The ESA Section 10 process provides protection and habitat conservation of listed species from
19 non-Federal development and activities where a Federal permit is not required. It provides a
20 mechanism for ensuring that economic development does not “appreciably reduce the
21 likelihood of the survival and recovery of species in the wild.” The Section 10 process requires
22 submittal of a Habitat Conservation Plan (HCP) that includes:

- 23 • Impacts likely to result from the proposed taking of species for which permit coverage is
24 requested;
- 25 • Measures the applicant will undertake to monitor, minimize, and mitigate such impacts;
- 26 • Funding that will be made available to undertake such measures and for procedures to
27 deal with unforeseen circumstances;
- 28 • Alternative actions which the applicant considered that would not result in take, and the
29 reasons why such alternatives are not being utilized; and
- 30 • Additional measures USFWS may require as necessary or appropriate for purposes of
31 the plan.

32 The purpose of an HCP is designed to offset any harmful effects a proposed activity might have
33 on a federally listed species. The HCP process allows development to proceed while promoting
34 listed species conservation.

35 MIGRATORY BIRD TREATY ACT (16 U.S.C. 703 ET SEQ.) AND EXECUTIVE ORDER 13186

36 The Migratory Bird Treaty Act (MBTA) governs the taking, killing, possession, transportation,
37 and importation of migratory birds, their eggs, parts, and nests. The take of all migratory birds
38 is governed by the MBTA’s regulation of taking migratory birds for educational, scientific, and

1 recreational purposes and requiring harvest to be limited to levels that prevent overuse. The
2 MBTA also prohibits the take, possession, import, export, transport, selling, purchase, barter, or
3 offering for sale, purchase or barter, any migratory bird, their eggs, parts, and nests, except as
4 authorized under a valid permit (50 CFR 21.11). Certain individuals, including Department of
5 the Interior employees enforcing the MBTA, employees of federal agencies, state game
6 department staff, municipal game farms or parks employees, public museum, public zoological
7 park, accredited institutional members of the American Association of Zoological Parks and
8 Aquariums (now called the American Zoo and Aquarium Association), and public scientific or
9 educational institution staff are exempted from this statute.

10 EXECUTIVE ORDER 13186

11 This order, effective January 10, 2001, outlines the responsibilities of federal agencies to protect
12 migratory birds, in accordance with the MBTA, the Bald and Golden Eagle Protection Acts, the
13 Fish and Wildlife Coordination Act, ESA, and NEPA. This order specifies the following:

- 14 • USFWS as the lead for coordinating and implementing EO 13186;
- 15 • Requires federal agencies to incorporate migratory bird protection measures into their
16 activities; and
- 17 • Requires federal agencies to obtain permits from USFWS before any “take” occurs, even
18 when the agency intent is not to kill or injure migratory birds.

19 FISH AND WILDLIFE COORDINATION ACT (16 U.S.C. 661 ET SEQ.)

20 This Act requires the federal lead agency to consult with and consider the recommendations of
21 the USFWS and the CDFG and, for projects affecting steelhead or managed fish species, the
22 National Marine Fisheries Service.

23 EXECUTIVE ORDER 11988 – FLOODPLAIN MANAGEMENT

24 This order directs federal agencies to avoid to the extent possible the long and short-term
25 adverse impacts associated with the occupancy and modification of floodplains and to avoid
26 direct or indirect support of floodplain development wherever there is a practicable alternative.
27 Specifically, federal agencies are directed to:

- 28 • Provide leadership and take action to reduce the risk of flood loss, to minimize the impact of
29 floods on human safety, health and welfare, and to restore and preserve the natural and
30 beneficial values served by floodplains in carrying out its responsibilities for acquiring,
31 managing, and disposing of federal lands and facilities; and providing federally sponsored,
32 financed, or assisted construction and improvements and conducting federal activities and
33 programs affecting land use.

34 EXECUTIVE ORDER 13112 – INVASIVE SPECIES

35 The National Invasive Species Management Plan was developed in response to this order in
36 1997. This order established the National Invasive Species Council (Council) as the leaders in
37 development of the plan, and directs the Council to provide leadership and oversight on

1 invasive species issues to ensure that federal activities are coordinated and effective. In
2 addition, the Council has specific responsibilities including: promoting action at local, state,
3 tribal, and ecosystem levels; identifying recommendations for international cooperation;
4 facilitating a coordinated network to document, evaluate, and monitor invasive species' effects;
5 developing a web-based information network on invasive species; and developing guidance on
6 invasive species for federal agencies. The Council has developed nine plan priorities that
7 provide direction for federal agencies. The plan priorities are as follows:

- Leadership and coordination of state and federal entities;
- Prevention (a risk based approach);
- Early detection and rapid response;
- Control and management;
- Restoration;
- International cooperation;
- Research;
- Information management; and
- Education and public awareness.

8 Additional details are available at: <http://www.invasivespecies.gov/council/>.

9 *State Laws, Regulations and Policies*

10 CALIFORNIA ENVIRONMENTAL QUALITY ACT (P.R.C. 21000-21177)

11 The California Environmental Quality Act (CEQA) contains requirements similar to NEPA and
12 requires the preparation of an Environmental Impact Report (EIR) prior to implementation of
13 applicable projects. CEQA requires significant impacts to be mitigated to a level of insignificance or
14 to the maximum extent feasible, and that less damaging alternatives be considered. The state or
15 local lead agency is responsible for CEQA compliance.

16 PORTER-COLOGNE WATER QUALITY CONTROL ACT (C.W.C. SECTION 13000 ET SEQ.; C.C.R. TITLE 23, CHAPTER
17 3, CHAPTER 15)

18 This Act is the primary state regulation addressing water quality and waste discharges (including
19 dredged material) on land; all permitted discharges must be in compliance with the regional Basin
20 Plan. The Act's requirements are implemented by the Central Coast RWQCB.

21 CALIFORNIA ENDANGERED SPECIES ACT (FISH AND GAME CODE SECTION 2050 ET SEQ.)

22 This Act provides recognition and protection of rare, threatened, and endangered plants and animal
23 species. The Act requires state agencies to coordinate with the CDFG to ensure that state
24 authorized/funded projects do not jeopardize a listed species. The Act prohibits the taking of a
25 listed species without authorization from the CDFG.

26 CALIFORNIA LAKE AND STREAM ALTERATION (FISH AND GAME CODE SECTION 1600 ET SEQ.)

27 This program governs projects that involve lake and streambed alteration in California, and
28 requires that such alterations are evaluated under CEQA and authorized via a Streambed Alteration
29 Agreement by regional CDFG staff. Section 1601 governs activities undertaken by public agencies
30 and Section 1603 governs activities undertaken by private parties.

1 EXECUTIVE ORDER W-59-93 – CALIFORNIA WETLANDS CONSERVATION POLICY

2 In August 1993, the Governor announced the California Wetlands Conservation Policy. The
3 goals of the policy are to establish a framework and strategy that:

- 4 • Ensures no overall net loss and achieves a long-term net gain in the quantity, quality, and
5 permanence of wetlands acreage and values in California in a manner that fosters creativity,
6 stewardship, and respect for private property;
- 7 • Reduces procedural complexity in the administration of state and federal wetlands
8 conservation programs; and
- 9 • Encourages partnerships to make landowner incentive programs and cooperative planning
10 efforts the primary focus of wetlands conservation and restoration.

11 The Executive Order also directed the California Resources Agency to establish an Interagency
12 Task Force to direct and coordinate administration and implementation of the policy.

13 The Resources Agency and departments within that agency generally do not authorize or approve
14 projects that fill or harm any type of wetlands. Exceptions may be granted for projects meeting all
15 the following conditions: the project is water dependent; there is no other feasible alternative; the
16 public trust is not adversely affected; and the project adequately compensates the loss.

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