APPENDICES

APPENDIX A

Public Involvement

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Public Involvement

Public Review under CEQA

Public involvement is an essential feature of the California Environmental Quality Act (CEQA) process. The CEQA environmental review process has greatly expanded the opportunities for interested citizens to participate in project planning and government decision-making. CEQA encourages public involvement in project planning as early as possible. The Environmental Impact Report (EIR) is a well-established tool by which the public can gain access to information and influence the outcome of a broad variety of projects, including the proposed EBMUD Water Treatment and Transmission Improvements project. EBMUD's outreach efforts to date for the project, described below, exceed CEQA requirements.

Public Involvement for the Project

EBMUD has provided and will continue to provide opportunities for the public to participate in the CEQA process through meetings, public notices on and public review of the this Draft EIR, additional public meetings, and preparation of the Final EIR. A summary of the public involvement process to date is provided below.

EBMUD held the following public agency scoping and informational meetings for the Water Treatment and Transmission Improvements Program Notice of Preparation/EIR:

- Agency NOP Scoping Meeting — September 26, 2005
- City of Walnut Creek Public Meeting — October 26, 2005
- City of Lafayette Public Meeting — November 7, 2005
- Public Informational Meeting, Lamorinda — November 7, 2005
- Public Informational Meeting, South Walnut Creek and County — December 8, 2005
- Agency Scoping Meeting, Revised NOP — March 2, 2006

Approximately 5,000 public notices announcing the meetings were mailed to residents of the Moraga, Lafayette, Orinda, Walnut Creek, Unincorporated Contra Costa County, others who had previously expressed interest in the project, and regional and local agencies. EBMUD has attempted in good faith to involve the public in reviewing the proposed project. At each stage of the environmental review process, EBMUD has invited and continues to invite the public to provide input. EBMUD welcomes and encourages comments concerning the project and respects the input that members of the community have to offer on this project.

APPENDIX B

Project-Specific Construction Assumptions

APPENDIX B
Project-Specific Construction Assumptions

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B-HVPP-1	Trip Generation Estimate – Happy Valley Pumping Plant
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B-TICEPP-1	Trip Generation Estimate – Tice Pumping Plant
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WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate -Lafayette WTP Alternative 1

B-LWTP-1

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Phase 1 - Clearwells and Pumping Plant Construction and Pipeline and Interties							
Mobilization	2.0	0	4	18	44	1 18	Trucks Vehicles
Excavation	12.7 link	36 link	0	60	192	12 60	Trucks Vehicles
Foundation - Rebar	2.0	0	6	120	252	2 120	Trucks Vehicles
Foundation - Concrete	5.1 link	0	36 link	120	312	12 120	Trucks Vehicles
Backfilling	7.5 link	24 link	0	120	288	8 120	Trucks Vehicles
Mechanical/Electrical	6.0	0	2	90	184	1 90	Trucks Vehicles
Phase 2 - Demolition of the Backwash water system & Currnt Pumping Plant							
Excavation	0.7 link	4 link	0	40	88	1 40	Trucks Vehicles
Phase 3 - Chlorine Contact Basin & Backwash Water Recycle System							
Excavation	4.1 link	36 link	0	60	192	12 60	Trucks Vehicles
Foundation - Rebar	1.0	0	6	120	252	2 120	Trucks Vehicles
Foundation - Concrete	0.8 link	0	36 link	120	312	12 120	Trucks Vehicles
Backfilling	2.6 link	24 link	0	120	288	8 120	Trucks Vehicles
Mechanical/Electrical	6.0	0	2	90	184	1 90	Trucks Vehicles
Demobilization	1.0	0	4	30	68	1 30	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**312**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**12** **120**	**Trucks** **Vehicles**

B-LWTP-1

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate -Lafayette WTP Alternative 1

B-LWTP-1

Assumptions:

1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. 167,174 CY of total Cut (99,663 CY to be disposed, and 66,711 CY reused as Fill), and 42,249 CY of total Concrete
5. Haul schedule is from M-F, 9:00 am to 4:00 pm
6. Work schedule M-F 7:00 am to 6:00 pm
7. Foundation material truck number is peak number for floor slab concrete pour.
8. Phase 2 starts after Phase 1 completion, and Phase 3 starts after Phase 2 completion.
9. Doesn't show down time nor reflect total duration

Lafayette Alternative 1 Estimates of Truck Trips for Excavation & Fill

Phase 1 - Construction of Clearwells & PP & PL		
Total Excavation	125,824	cy
Total Fill	49,704	cy
Total Soil to Be Disposed	76,120	cy
Total Concrete	36,582	cy
Phase 2 - Demo of Current BW System & Existing PP		
Total Excavation	800	cy
Phase 3 - CCB and Backwash Water Facilities		
Total Excavation	40,550	cy
Total Fill	17,007	cy
Total Soil to Be Disposed	23,543	cy
Total Concrete	5,666	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
Phase I - Construction of the Clearwells & PP & Temp backwash water treatment tank & backfill								
Total Number Excavation Trucks	10,066	12.5	10	1	36	72	280	12.7
Total Number of Fill Trucks	3,976	12.5	15	1	24	48	166	7.5
Total Number of Conc. Trucks	4,065	9	30	3	36	72	113	5.1
Phase 2 - Demo of Current BW System, and Existing Pumping Plants								
Total Number of Excavation Trucks	64	12.5	90	1	4	8	16	0.7
Phase 3 - CCB and Backwash Water Facilities								
Total Number Excavation Trucks	3,244	12.5	10	1	36	72	90	4.1
Total Number of Fill Trucks	1,361	12.5	15	1	24	48	57	2.6
Total Number of Conc. Trucks	630	9	30	3	36	72	17	0.8

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate -Lafayette WTP Alternative 2

B-LWTP-2

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1.0	0	4	10	28	1 10	Trucks Vehicles
Excavation	2.0	6 link to below	0	20	52	2 20	Trucks Vehicles
Backfilling	0.5	6 link to below	0	20	52	2 20	Trucks Vehicles
Mechanical/Electrical	5.0	1	1	15	34	1 15	Trucks Vehicles

Assumptions:
1. Haul trucks for soil disposal and import of new fill.
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY;
4. Haul schedule is from M-F, 9:00 am to 3:00 pm
5. Work schedule M-F 7:00 am to 6:00 pm
6. Doesn't show down time nor reflect total duration

Lafayette Alternative 2 Estimates of Truck Trips for Excavation & Fill

Total Excavation	800	cy
Total Fill	900	cy
Total Soil to Be Disposed	800	cy
Total Concrete	0	cy

	Truck loads	Truck Capacity	Average Time Truck Loading/ Unloading per crew	# of crews	# truck loads/day	# of round trips/ day	# of days to get job done	Months
Total Number Excavation Trucks	64	12.5	60	1	6	12	11	0.5
Total Number of Fill Trucks	72	12.5	60	1	6	12	12	0.5

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Orinda WTP Alternative 1

B-OWTP-1

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	2.4 link	24 link	0	30	108	7 30	Trucks Vehicles
Foundation - Rebar	2.0	0	3	45	96	1 45	Trucks Vehicles
Foundation - Concrete	0.3 link	0	36 link	45	162	10 45	Trucks Vehicles
Backfilling	0.6 link	18 link	0	45	126	5 45	Trucks Vehicles
Mechanical/Electrical	3.0	0	4	60	128	1 60	Trucks Vehicles
Demobilization	1.0	0	4	15	38	1 15	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**162**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**10 60**	**Trucks Vehicles**

Assumptions:
1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. Haul schedule is from M-F, 9:00 am to 4:00 pm
5. Work schedule M-F 7:00 am to 6:00 pm
6. Foundation material truck number is peak number for floor slab concrete pour.
7. Doesn't show down time nor reflect total duration

Orinda Alternative 1 Estimates of Truck Trips for Excavation & Fill

Total Excavation	15,692	cy
Total Fill	3,144	cy
Total Soil to Be Disposed	12,548	cy
Total Concrete	2,464	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
Total Number Excavation Trucks	1,255	12.5	15	1	24	48	52	2.4
Total Number of Fill Trucks	252	12.5	20	1	18	36	14	0.6
Total Number of Conc. Trucks	274	9	30	3	36	72	8	0.3

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate- Orinda WTP Alternative 2

B-OWTP-2

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Phase 1 - Backwash Water Recycle System							
Mobilization	2.0	0	4	18	44	1 18	Trucks Vehicles
Excavation	1.6 link	36 link	0	60	192	10 60	Trucks Vehicles
Foundation - Rebar	0.5	0	6	60	132	2 60	Trucks Vehicles
Foundation - Concrete	0.5 link	0	27 link	60	174	8 60	Trucks Vehicles
Backfilling	0.5 link	24 link	0	60	168	7 60	Trucks Vehicles
Mechanical/Electrical	5.0	0	4	120	248	1 120	Trucks Vehicles
Phase 2 - Clearwell & PP Construction							
Excavation	14.1 link	72 link	0	90	324	21 90	Trucks Vehicles
Foundation - Rebar	3.0	0	6	120	252	2 120	Trucks Vehicles
Foundation - Concrete	5.1 link	0	54 link	100	308	15 100	Trucks Vehicles
Backfilling	14.2 link	36 link	0	90	252	10 90	Trucks Vehicles
Mechanical/Electrical	5.0	0	4	120	248	1 120	Trucks Vehicles
Demobilization	1.0	0	4	30	68	1 30	Trucks Vehicles
MAXIMUM ONE-WAY TRIPS PER DAY = **MAXIMUM ONE-WAY TRIPS PER HOUR =**					**324**	**21** **120**	**Trucks** **Vehicles**

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate- Orinda WTP Alternative 2

B-OWTP-2

Assumptions:

1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. 295,784 CY of total Cut (151,761 CY to be disposed, and 144,023 CY reused as Fill), and 56,594 CY of total Concrete.
5. Haul schedule is from M-F, 9:00 am to 4:00 pm
6. Work schedule M-F 7:00 am to 6:00 pm
7. Foundation material truck number is peak number for floor slab concrete pour.
8. Phase 2 starts after Phase 1 completion
9. Doesn't show down time nor reflect total duration

Orinda Alternative 2 Estimates of Truck Trips for Excavation & Fill

Phase 1 - Backwash Water Construction		
Total Excavation	15,692	cy
Total Fill	3,144	cy
Total Soil to Be Disposed	12,548	cy
Total Concrete	2,464	cy
Phase 2 - Clearwell + PP + VP Construction		
Total Excavation	280,092	cy
Total Fill	140,879	cy
Total Soil to Be Disposed	139,213	cy
Total Concrete	54,130	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
Phase 1 - Backwash Water Construction								
Total Number Excavation Trucks	1,255	12.5	10	1	36	72	35	1.6
Total Number of Fill Trucks	252	12.5	15	1	24	48	10	0.5
Total Number of Conc. Trucks	274	9	40	3	27	54	10	0.5
Phase 2 - Clearwell + PP + VP Construction								
Total Number Excavation Trucks	22,407	12.5	5	1	72	144	311	14.1
Total Number of Fill Trucks	11,270	12.5	10	1	36	72	313	14.2
Total Number of Conc. Trucks	6,014	9	20	3	54	108	111	5.1

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Walnut Creek WTP Alternatives 1 and 2

B-WCWTP-1

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1.0	0	4	10	28	1 10	Trucks Vehicles
Excavation	4.4 link	5 link	0	15	39	2 15	Trucks Vehicles
Foundation - Rebar	1.0	0	4	30	68	1 30	Trucks Vehicles
Foundation - Concrete	0.5 link	0	12 link	30	84	4 30	Trucks Vehicles
Backfilling	0.4 link	4 link	0	15	38	1 15	Trucks Vehicles
Mechanical/Electrical	5.0	0	2	12	28	1 12	Trucks Vehicles
Demobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**84**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**4** **30**	**Trucks** **Vehicles**

Assumptions:

1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. Work schedule M-F 7:00 am to 6:00 pm
5. Haul schedule is from M-F, 9:00 am to 4:00 pm
6. Foundation material truck number is peak number for floor slab concrete pour.
7. Doesn't show down time nor reflect total duration

Walnut Creek Estimates Truck Trips for Excavation & Fill

Total Excavation	**5,500 cy**
Total Fill	**400 cy**
Total Soil to Be Disposed	**4,100 cy**
Total Concrete	**1,100 cy**

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
Total Number Excavation Trucks	440	12.5	80	1	4.5	9	98	4.4
Total Number of Fill Trucks	32	12.5	90	1	4	8	8	0.4
Total Number of Conc. Trucks	122	9	30	1	12	24	10	0.5

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Sobrante WTP Alternative 1

B-SOBWTP-1

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
CCB & Related Structures and Piping							
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	4.3 link	24 link	0	60	168	7 60	Trucks Vehicles
Foundation - Rebar	2.0	0	6	90	192	2 90	Trucks Vehicles
Foundation - Concrete	0.4 link	0	36 link	90	252	10 90	Trucks Vehicles
Backfilling	2.9 link	18 link	0	90	216	5 90	Trucks Vehicles
Mechanical/Electrical	3.0	0	4	120	248	1 120	Trucks Vehicles
Demobilization	1.0	0	4	30	68	1 30	Trucks Vehicles
Filter-to-Waste Basin & HR Sedimentation							
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	1.8 link	18 link	0	25	86	5 25	Trucks Vehicles
Foundation - Rebar	0.5	0	6	25	62	2 25	Trucks Vehicles
Foundation - Concrete	0.2 link	0	31 link	30	122	9 30	Trucks Vehicles
Backfilling	0.3 link	14 link	0	25	79	4 25	Trucks Vehicles
Mechanical/Electrical	4.0	0	2	30	64	1 30	Trucks Vehicles
Demobilization	1.0	0	4	15	38	1 15	Trucks Vehicles
			MAXIMUM ONE-WAY TRIPS PER DAY =		**252**		
			MAXIMUM ONE-WAY TRIPS PER HOUR =			**10 120**	**Trucks Vehicles**

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Sobrante WTP Alternative 1

Assumptions:
1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. Haul schedule is from M-F, 9:00 am to 4:00 pm
5. Work schedule M-F 7:00 am to 6:00 pm
6. Foundation material truck number is peak number for floor slab concrete pour.
7. Doesn't show down time nor reflect total duration

Sobrante Estimates of Truck Trips for Excavation & Fill

CCB & Related Structures and Piping		
Total Excavation	28,099	cy
Total Fill	14,131	cy
Total Soil to Be Disposed	13,968	cy
Total Concrete	2,747	cy
Filter-to-Waste Basin & HR Sedimentation		
Total Excavation	8,948	cy
Total Fill	1,333	cy
Total Soil to Be Disposed	7,615	cy
Total Concrete	1,063	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
CCB & Related Structures and Piping								
Total Number Excavation Trucks	2,248	12.5	15	1	24	48	94	4.3
Total Number of Fill Trucks	1,130	12.5	20	1	18	36	63	2.9
Total Number of Conc. Trucks	305	9	30	3	36	72	8	0.4
Filter-to-Waste Basin & HR Sedimentation								
Total Number Excavation Trucks	716	12.5	20	1	18	36	40	1.8
Total Number of Fill Trucks	107	12.5	25	1	14.4	28.8	7	0.3
Total Number of Conc. Trucks	118	9	35	3	31	62	4	0.2

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Sobrante WTP Alternative 2

B-SOBWTP-2

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
CCB & Related Structures and Piping							
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	4.4 link	24 link	0	60	168	7 60	Trucks Vehicles
Foundation - Rebar	2.0	0	6	90	192	2 90	Trucks Vehicles
Foundation - Concrete	0.5 link	0	36 link	90	252	10 90	Trucks Vehicles
Backfilling	1.7 link	18 link	0	90	216	5 90	Trucks Vehicles
Mechanical/Electrical	3.0	0	4	120	248	1 120	Trucks Vehicles
Demobilization	1.0	0	4	30	68	1 30	Trucks Vehicles
Filter-to-Waste Basin & HR Sedimentation							
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	1.8 link	18 link	0	25	86	5 25	Trucks Vehicles
Foundation - Rebar	0.5	0	6	25	62	2 25	Trucks Vehicles
Foundation - Concrete	0.2 link	0	31 link	30	122	9 30	Trucks Vehicles
Backfilling	0.3 link	14 link	0	25	79	4 25	Trucks Vehicles
Mechanical/Electrical	4.0	0	2	30	64	1 30	Trucks Vehicles
Demobilization	1.0	0	4	15	38	1 15	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**252**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**10 120**	**Trucks Vehicles**

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Sobrante WTP Alternative 2

Assumptions:
1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. Haul schedule is from M-F, 9:00 am to 4:00 pm
5. Work schedule M-F 7:00 am to 6:00 pm
6. Foundation material truck number is peak number for floor slab concrete pour.
7. Doesn't show down time nor reflect total duration

Sobrante Estimates of Truck Trips for Excavation & Fill

CCB & Related Structures and Piping		
Total Excavation	29,092	cy
Total Fill	8,251	cy
Total Soil to Be Disposed	20,842	cy
Total Concrete	3,447	cy
Filter-to-Waste Basin & HR Sedimentation		
Total Excavation	8,948	cy
Total Fill	1,333	cy
Total Soil to Be Disposed	7,615	cy
Total Concrete	1,063	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
CCB & Related Structures and Piping								
Total Number Excavation Trucks	2,327	12.5	15	1	24	48	97	4.4
Total Number of Fill Trucks	660	12.5	20	1	18	36	37	1.7
Total Number of Conc. Trucks	383	9	30	3	36	72	11	0.5
Filter-to-Waste Basin & HR Sedimentation								
Total Number Excavation Trucks	716	12.5	20	1	18	36	40	1.8
Total Number of Fill Trucks	107	12.5	25	1	14.4	28.8	7	0.3
Total Number of Conc. Trucks	118	9	35	3	31	62	4	0.2

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Upper San Leandro WTP

B-USLWTP-1

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1.0	0	4	12	32	1 12	Trucks Vehicles
Excavation	1.4 link	5 link	0	60	129	1 60	Trucks Vehicles
Foundation - Rebar	1.0	0	3	90	186	1 90	Trucks Vehicles
Foundation - Concrete	0.1 link	0	36 link	90	252	10 90	Trucks Vehicles
Backfilling	0.2 link	4 link	0	90	188	1 90	Trucks Vehicles
Mechanical/Electrical	3.0	0	4	120	248	1 120	Trucks Vehicles
Demobilization	1.0	0	4	30	68	1 30	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**252**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**10** **120**	**Trucks** **Vehicles**

Assumptions:

1. Haul trucks for soil disposal and import of fill from a temporary off-site stockpile location (no on-site capacity is assumed for excavated soil that will be used as fill).
2. Material trucks for concrete and equipment delivery.
3. Haul trucks average 12.5 CY; Concrete trucks average 9 CY
4. Haul schedule is from M-F, 9:00 am to 4:00 pm
5. Work schedule M-F 7:00 am to 6:00 pm
6. Foundation material truck number is peak number for floor slab concrete pour.
7. Doesn't show down time nor reflect total duration

USL Estimates of Truck Trips for Excavation & Fill

Total Excavation	1,780	cy
Total Fill	272	cy
Total Soil to Be Disposed	1,508	cy
Total Concrete	761	cy

	# of Loads	Truck Capacity (cy/truck)	Average Time Truck Loading/ Unloading per crew (minutes)	# of crews	# of truck loads/day	# of one-way trips/day	# of days to get job done	# of months to get job done
Total Number Excavation Trucks	142	12.5	80	1	4.5	9	32	1.4
Total Number of Fill Trucks	22	12.5	90	1	4	8	5	0.2
Total Number of Conc. Trucks	85	9	30	3	36	72	2	0.1

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Orinda - Lafayette Aqueduct - Pipeline Portion

B-OLA-1

Construction Phase	Pipe length	Pipe diameter	Production Rate (feet/day)	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
El Nido Ranch Rd. (*requires road closure in vicinity of construction*)										
St. Stephens Dr. to Acalanes Rd	5,280	48	60	17.6	38	4	13	109	10 13	Trucks Vehicles
Acalanes Rd to Bore and Jack Pit near Sunnybrook Dr.	1,000	48	60	3.3	38	4	13	109	10 13	Trucks Vehicles
Highway 24 Undercrossing										
Bore and Jack Pit (northern portal, 50'x15'x15')	50	48	5	2.0	9	4	13	52	3 13	Trucks Vehicles
Bore and Jack Pipeline	500	60	10	10.0	1	2	13	32	1 13	Trucks Vehicles
Bore and Jack Pit (southern portal, 15'x15'x15')	15	48	5	0.6	9	4	13	52	3 13	Trucks Vehicles
Mt. Diablo Blvd. (*restricts vehicle traffic down to two of four lanes in vicinity of construction*)										
From Bore and Jack Pit to connection with Bryant PZ Piping near entrance to Lafayette Reservoir Recreation Area	2,000	48	60	6.7	38	4	13	109	10 13	Trucks Vehicles
Total Length	8,845									
							MAXIMUM ONE-WAY TRIPS PER DAY =	**109**		
							MAXIMUM ONE-WAY TRIPS PER HOUR =		**10** **13**	**Trucks** **Vehicles**

Assumptions:
1. Haul trucks for soil disposal and import of new fill. Haul truck average 9 cubic yards per load
2. Material trucks for pipe, appurtence and equipment delivery
3. Worker vehicles consist of 9-person crew, and 4 vehicles for contractor superintendent, district inspector, city inspector, visitors.
4. The contractor would be able to install up to 60 feet per workday in paved areas
5. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced
6. For pipeline in roadway : Work schedule M-F 8:30 am to 4:30 pm
7. Trench width of 7.5 feet and trench depth of 11 feet
8. Per lineal foot of 48" pipe: 3.06 CY of trench spoils will be hauled off-site and 2.59 CY of new fill will be imported
9. Per lineal foot of Bore and Jack pit: 8.33 CY of excavation, 7.86 CY backfil
10. Per lineal foot of Bore and Jack pipeline: 0.73 CY of excavation, no backfil
11. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENTS
Trip Generation Estimate - Orinda-Lafayette Aqueduct - Tunnel Portion

B-OLA-2

Construction Phase	Approx. Duration (months)	Haul Trucks (per day)	Materials Trucks (per day)	Worker (per shift)	One-Way Trips (per day)	Max. One-Way Trips Per Hour		Comments
1. Mobilize/Develop Shaft Area/ Shaft Excavation (day shift only)	2.5	3	5	30	76	2 60	Trucks Autos	Equipment Deliveries Contractor (22); EBMUD (8)
2. Excavate Starter Tunnel and Sed Pond Riser Tunnel (3 shifts per day)	3	6	6	34	228	3 68	Trucks Autos	Materials and Equipment Deliveries Contractor (26); EBMUD (8)
3. Excavate Tunnel & Install Initial Tunnel Support (3 shifts per day)	6.5	41	8	34	302	12 68	Trucks Autos	Materials and Equipment Deliveries Contractor (26); EBMUD (8)
4. Excavate Exit Shaft (day shift only)	1	4	3	34	82	2 68	Trucks Autos	Equipment Deliveries Contractor (26); EBMUD (8)
5. Sed Pond Riser Shaft (day shift only); concurrent with other shaft work	1	1	1	3	10	1 6	Trucks Autos	Equipment Deliveries Driller Personnel Only
6. Install Final Lining (pipeline) for Tunnels and Shafts (day shift only)	11		79	42	242	16 84	Trucks Autos	Equipment Deliveries Contractor (34); EBMUD (8)
MAXIMUM ONE-WAY TRIPS PER DAY = **MAXIMUM ONE-WAY TRIPS PER HOUR =**					**302**	**16** **84**	**Trucks** **Autos**	

Assumptions:
1. Haul trucks average 12 CY for shafts, and 20 CY for tunnel work; muck disposal off-site
2. Concrete trucks average 9 CY.
3. Personnel counts are on a per-shift basis.
4. Off-Hauling of Spoils is assumed to occur during the Day shift only (8 hours for this estimate, except during Phase 6, when 10 hours [matches 8a-6p Noise ordinance])
5. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Ardith Reservoir

B-ARRES-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	4	2	12	4	Trucks
						2	Vehicles
Excavation	3	84	0	5	178	24	Trucks
						5	Vehicles
Reservoir foundation & floor slab	2	0	42	15	114	11	Trucks
						15	Vehicles
Reservoir walls	12	0	8	12	39	2	Trucks
						12	Vehicles
Reservoir roof	4	0	42	12	108	11	Trucks
						12	Trucks
Field Testing and Startup	6	0	1	6	14	1	Trucks
						6	Vehicles
Backfilling	3	69	0	5	148	18	Trucks
						5	Vehicles
Site restoration	2	0	4	4	16	4	Trucks
						4	Vehicles
Access Road	1	0	10	8	36	3	Trucks
						8	Vehicles
Demobilization	1	0	4	4	16	4	Trucks
						4	Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**178**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**24**	**Trucks**
						15	**Vehicles**

Assumptions:
1. Truck and vehicle trip are peak rates.
2. Haul trucks are for soil disposal and import of new fill.
3. Off-hauling trucks average 9 cubic yards per load, one load every 5 minutes, with 7 hours production per day.
4. Backfilling trucks average 9 cubic yards per load, one load at approximately 6.5 minutes with 7.5 hour production per day.
5. 8,500 CY of Cut and 6,400 CY of Fill.
6. Material trucks are for forms, rebar, concrete, prestressing materials, paving, and equipment.
7. Concrete trucks average 9 cubic yards per load.
8. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
9. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm, with 7 hours of production per day.
10. Rates for reservoir floor slabs, walls, and roofs do not last the entire durations.
11. Reservoir construction peak rate durations: floor slabs -1 day, wall sections 2 weeks, roof-1day
12. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Donald Pumping Plant

B-DONPP-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	2	2	8	2	Trucks
						2	Vehicles
Excavation/Site Work	2	28	10	5	66	10	Trucks
						5	Vehicles
Pumping Plant Construction	2	0	7	10	34	2	Trucks
(concrete work)						10	Vehicles
Pumping Plant Construction	10	0	2	8	20	1	Trucks
						8	Vehicles
Backfill	1	24	0	5	58	6	Trucks
						5	Trucks
Landscaping	2	0	1	4	10	1	Trucks
						4	Vehicles
Demobilization	1	0	2	4	12	2	Trucks
						4	Vehicles
			MAXIMUM ONE-WAY TRIPS PER DAY =		**66**		
			MAXIMUM ONE-WAY TRIPS PER HOUR =			**10**	**Trucks**
						10	**Vehicles**

Assumptions:
1. Haul trucks for soil disposal and import of new fill.
2. Material trucks for building material, piping, paving, and equipment delivery
3. Haul trucks average 9 cubic yards; Concrete trucks average 9 cubic yards
4. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
5. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
6. Excavation is about 1,200 cubic yards. Backfill is about 500 cubic yards
7. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Fay Hill Pumping Plant

B-FHPP-1

Construction Phase	Approx. Duration (weeks)	Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	1	1	4	1	Trucks
					1	Vehicles
Site Work	2	0	2	4	0	Trucks
					2	Vehicles
Pumping Plant Construction	8	3	3	12	1	Trucks
					3	Vehicles
Landscaping	1	0	1	2	0	Trucks
					1	Vehicles
Demobilization	1	1	1	4	1	Trucks
					1	Vehicles
MAXIMUM ONE-WAY TRIPS PER DAY =				**12**		
MAXIMUM ONE-WAY TRIPS PER HOUR =					**1**	**Trucks**
					3	**Vehicles**

Assumptions:
1. Material trucks for building material, piping, paving, and equipment delivery
2. Concrete trucks average 9 cubic yards
3. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
4. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
5. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Fay Hill Pipeline

B-FHPP-2

Construction Phase	Pipe length	Pipe diameter	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Rheem Boulevard	500	12	2	7	4	13	49	3 13	Trucks Vehicles
Total	500								
						MAXIMUM ONE-WAY TRIPS PER DAY =	**49**		
Total excavated material (CY) = 230						**MAXIMUM ONE-WAY TRIPS PER HOUR =**		**3** **13**	**Trucks** **Vehicles**

Assumptions:
1. Trench width of 2.5 feet and trench depth of 5 feet.
2. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load.
3. Per lineal foot: 0.46 CY of pavement and trench spoils will be hauled off-site and 0.38 CY of new fill will be imported.
4. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1) .
5. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors.
6. The contractor would be able to install an average of about 80 feet of pipe each work day in paved areas.
7. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced.
8. Work schedule M-F 8:30 am to 4:30 pm.
9. One construction site along the alignment.
10. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Fay Hill Reservoir

B-FHRES-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	4	2	12	4	Trucks
						2	Vehicles
Temporary Tank Construction[1,2,3]	11	84	32	5	178	24	Trucks
						5	Vehicles
Demolition	3	0	7	8	30	2	Trucks
						8	Vehicles
Access Road & Excavation[1]	4	84	9	3	174	24	Trucks
						3	Vehicles
Retaining Wall[4]	6	0	5	10	30	5	Trucks
						10	Vehicles
Reservoir foundation, walls, roof[5]	13	0	15	5	40	12	Trucks
						5	Vehicles
Field Testing and Startup	6	0	1	6	14	1	Trucks
						6	Vehicles
Temporary Tank Demolition	4	0	1	5	12	1	Trucks
						5	Vehicles
Site restoration	2	0	4	4	16	4	Trucks
						4	Vehicles
Demobilization	1	0	4	4	16	4	Trucks
						4	Vehicles
MAXIMUM ONE-WAY TRIPS PER DAY =					**178**		
MAXIMUM ONE-WAY TRIPS PER HOUR =						**24**	**Trucks**
						10	**Vehicles**

Assumptions:
1. Bolted Steel, glass lined tank
2. Haul Trucks are for soil disposal and import of new fill.
3. Off-hauling trucks average 9 cubic yards per load, one load every 5 minutes, with 7 hours production per day.
4. Material trucks for forms, rebar, concrete, prestressing materials and equipment, shotcrete, paving,and reservoir equipment delivery.
5. Concrete trucks average 9 CY for foundation and roof and 7 CY for walls.
6. Worker vehicles for reservoir construction consist of vehicles for 3 trades and 3 laborers, equipment operator, contractor superintendent, foreman, district inspector, visitors.
7. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm.
8. Doesn't show down time nor reflect total duration

Notes:
[1] One-Way Trips (per day) for the Temporary Tank Construction and New Tanks' Access Road and Excavation exclude Material Trucks because it is assumed that the scheduling of Haul Trucks and Material Trucks will not coincide on the same day.
[2] 8,400 CY of Cut and No Fill. The Temporary Tank and the New Tank sites will require approximatley 1,500 and 6,900 CY, respectively of excavation. As a result, Haul trucks per day for temporary tank construction will be 2 days and for access & excavation 10 days.
[3] Number of trucks to deliver Temporary Tank foundation materials (32) is a peak number for just one day.
[4] Assume peak loading will occur with four pours of concrete footing for foundation of retaining wall (approximately 160 LF).
[5] Foundation Material Truck number is peak number for floor slab concrete pour. Assuming New Reservoir foundation will take place in two pours - one for each tank and each one taking one day to pour for a total of two days. Therefore, Material Truck trips (per day) of 15 for Reservoir foundation will occur for two days.

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Glen Pipeline Improvements

B-GLENPL-1

Construction Phase	Pipe length	Pipe diameter	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Nordstrom Lane	700	12	1.8	7	4	13	49	3	Trucks
								13	Vehicles
Glen Road	825	12	2.1	7	4	13	49	3	Trucks
								13	Vehicles
Total	1,525								
					MAXIMUM ONE-WAY TRIPS PER DAY =		**49**		
Total excavated material (CY) = 702					**MAXIMUM ONE-WAY TRIPS PER HOUR =**			**3**	**Trucks**
								13	**Vehicles**

Assumptions:

1. Trench width of 2.5 feet and trench depth of 5 feet.
2. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load.
3. Per lineal foot: 0.46 CY of pavement and trench spoils will be hauled off-site and 0.38 CY of new fill will be imported.
4. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1) .
5. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors.
6. The contractor would be able to install an average of about 80 feet of pipe each work day in paved areas.
7. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced.
8. Work schedule M-F 8:30 am to 4:30 pm.
9. One construction site along the alignment.
10. Doesn't show down time nor reflect total duration
11. A limited number of truck trips would be associated with the related project - Decommissioning Glen Reservoir. This project would involve 1) closing the inlet pipeline within the valve pit, 2) then water would continue to flow out of the check valve on the outlet pipe allowing the reservoir to draw down to 50-70% of full, 3) next a portable pump would be installed to pump out the reservoir into the distribution system, continuing until the tank is approximately 2 feet full, 4) the remaining water would be discharged to the sanitary sewer. This entire process would take approximately 2 to 3 weeks with a crew of 1 to 3 people using pick-up trucks for transportation. No heavy equipment would be required. The structures onsite including would remain in their current state unless EBMUD decides to sell the property which is not currently under consideration.

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Happy Valley Pumping Plant

B-HVPP-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	2	2	8	2	Trucks
						2	Vehicles
Site Work	2	0	0	5	10	0	Trucks
						5	Vehicles
Pumping Plant Construction	2	0	7	10	34	2	Trucks
(concrete work)						10	Vehicles
Pumping Plant Construction	10	0	2	8	20	1	Trucks
						8	Vehicles
Landscaping	2	0	1	4	10	1	Trucks
						4	Vehicles
Demobilization	1	0	2	4	12	2	Trucks
						4	Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**34**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**2**	**Trucks**
						10	**Vehicles**

Assumptions:

1. Material trucks for building material, piping, paving, and equipment delivery.
2. Concrete trucks average 9 cubic yards
3. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
4. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
5. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Happy Valley Pipeline

B-HVPP-2

Construction Phase	Pipe length	Pipe diameter	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Miner Rd. (Oak Arbor to Lombardy Ln)	1,400	16	3.5	7	4	13	49	3 13	Trucks Vehicles
Lombardy Ln (Miner Rd. to Sleepy Hollow Ln)	650	16	1.6	7	4	13	49	3 13	Trucks Vehicles
Lombardy Ln (Sleepy Hollow to Van Ripper Ln.)	3,225	16	8.1	7	4	13	49	3 13	Trucks Vehicles
Lombardy Ln (Van Ripper Ln - Proposed Happy Valley PP)	500	16	1.3	7	4	13	49	3 13	Trucks Vehicles
Total	5,775								
						MAXIMUM ONE-WAY TRIPS PER DAY =	**49**		
Total excavated material (CY) = 2,657						**MAXIMUM ONE-WAY TRIPS PER HOUR =**		**3** **13**	**Trucks** **Vehicles**

Assumptions:

1. Trench width of 2.5 feet and trench depth of 5 feet.
2. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load.
3. Per lineal foot: 0.46 CY of pavement and trench spoils will be hauled off-site and 0.38 CY of new fill will be imported.
4. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1) .
5. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors.
6. The contractor would be able to install an average of about 80 feet of pipe each work day in paved areas.
7. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced.
8. Work schedule M-F 8:30 am to 4:30 pm.
9. One construction site along the alignment.
10. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Highland Reservoir

B-HIGHRES-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	4	2	12	4	Trucks
						2	Vehicles
Excavation	7	84	0	5	178	24	Trucks
						5	Vehicles
Reservoir foundation & floor slab	3	0	20	15	70	5	Trucks
						15	Vehicles
Reservoir walls	12	0	8	12	40	2	Trucks
						12	Trucks
Reservoir roof	4	0	44	12	112	11	Trucks
						12	Trucks
Valve Pit & Piping	4	0	5	5	20	1	Trucks
						5	Vehicles
Field Testing and Startup	6	0	1	6	14	1	Trucks
						6	Vehicles
Backfilling	4	69	0	5	148	18	Trucks
						5	Vehicles
Site Restoration	7	4	4	6	28	8	Trucks
						6	Vehicles
Access Road	3	14	9	8	62	6	Trucks
						8	Vehicles
Demobilization	1	0	4	4	16	4	Trucks
						4	Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**178**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**24**	**Trucks**
						15	**Vehicles**

Assumptions:
1. Truck and vehicle trip are peak rates.
2. Haul trucks are for soil disposal and import of new fill.
3. Excavation and Off-hauling trucks average 9 cubic yards per load, one load every 5 minutes, with 7 hours production per day
4. Backfilling trucks average 9 cubic yards per load, one load at approximately 6.5 minutes with 7.5 hour production per day
5. Backfilling trucks would travel on Construction Access Road to/from the Stockpile Area (i.e., would not use external roads)
6. 25,600 CY of Cut; 5,184 CY of stockpile and backfill; 20,416 CY offhauled.
7. Material trucks are for forms, rebar, concrete, prestressing materials, paving, and equipment
8. Concrete trucks average 9 cubic yards per load.
9. Aggregate base (for Access Road) will be delivered to site at a rate of 2 trucks per hour for 7 hours a day
10. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
11. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm, with 7 hours of production per day
12. Rates for reservoir floor slabs, walls, and roofs do not last the entire durations
13. Reservoir construction peak rate durations: floor slabs -1 day, wall sections 2 weeks, roof-1day
14. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Highland Reservoir / Lafayette Reclaimed Water Pipelines

B-HIGHRES-2

Construction Phase	Pipe length	Pipe diameter	Production Rate (feet/day)	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
20" I/O only										
E3A tie-in to Mt Diablo Blvd.	150	20	80	0.4	4	4		15	1.9	Trucks
							12	24	12	Vehicles
Under Mt Diablo Blvd to Joint Pipe Alignment	260	20	80	0.7	10	4		28	3.5	Trucks
							13	26	13	Vehicles
(break in route=joint alignment)										
From Joint Pipe Alignment	120	20	120	0.2	8	4		24	3.0	Trucks
to Reservoir							12	24	12	Vehicles
20" I/O & 8" Reclaimed *(joint alignment)*										
Across Mt Diablo Blvd. and	240	20 & 8	50	1.0	13	4		33	4.2	Trucks
across Lafayette Res. In & Out Roads							13	26	13	Vehicles
Lafayett Reservoir, In Road to	970	20 & 8	120	1.6	12	4		32	4.0	Trucks
split of Joint Pipe Alignment							12	24	12	Vehicles
8" Reclaimed only										
Regulating Basin to Creek	150	8	80	0.4	2	4		12	1.5	Trucks
							12	24	12	Vehicles
Pipe Bridge Across Creek	100	8	0	7.0	1	4		10	1.3	Trucks
							6	12	6	Vehicles
Creek to Mt. Diablo Road	370	8	120	0.6	3	4		14	1.7	Trucks
							12	24	12	Vehicles
Mt. Diablo Rd. to Joint Pipe Alignment	220	8	80	0.6	7	4		21	2.6	Trucks
							13	26	13	Vehicles
(break in route=joint alignment)										
From Joint Pipe Alignment to Overflow Pipe	125	8	120	0.2	3	4		14	1.7	Trucks
							12	24	12	Vehicles
20" Overflow Line										
From Reservoir to Lafayette Reservoir	625	20	120	1.0	8	4		24	3.0	Trucks
							12	24	12	Vehicles
From Shore Line to Outlet Tower	540	20	200	0.5	0	4		8	1.0	Trucks
							6	12	6	Vehicles
							MAXIMUM ONE-WAY TRIPS PER DAY =	**33**		
Total off-hauled material (CY) = 1,376							**MAXIMUM ONE-WAY TRIPS PER HOUR =**		**4**	**Trucks**
									13	**Vehicles**

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Highland Reservoir / Lafayette Reclaimed Water Pipelines

Assumptions:

1. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per loa
2. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1
3. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector (on street), (1) visitor
4. The contractor would be able to install up to 120 feet of pipe each work day in unpaved areas and average about 80 feet per workday in paved area
   Reduce to 60 feet/day for crossing roadways
5. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas, most soil will be stockpiled and re-use
   except for imported pipe bedding material

6a. For pipeline in roadway : Work schedule M-F 8:30 am to 4:30 pm
6b. For pipeline on Lafayette Reservoir property : Work schedule M-F 7:00 am to 6:00 pm
7. One construction site along the alignment.
8a. 20" dia. pipeline trench width of 2.7 feet and average depth of 6.2 feet in paved and unpaved areas (42" min cover per ESP)
   8" dia. pipeline trench width of 2 feet and average depth of 5.2 feet in unpaved areas. Reduce by 6" in stree
   Combined trench width of 5.4 feet assumes special permission for spacing of 2.0 ft. between pipes & average depth 6.2 f
8b. Per lineal foot: 20" Pipe (in street) - 0.62 CY of trench spoils will be hauled off-site and 0.49 CY of new backfill will be importe
   " " " 8" Pipe (in street) - 0.39 CY of trench spoils will be hauled off-site and 0.35 CY of new backfill will be importe
   " " " Combined 20" & 8" Pipe (in street) - 1.24 CY of trench spoils hauled off-site and 1.05 CY new backfill importe
   " " " 20" pipe (in new access Rd.) - 0.62 CY trench spoils; 0.30 CY stockpiled & resued and 0.32 CY off-hauled. 0.27 CY importe
8c. Per lineal foot: 20" Pipe (unpaved areas) - 0.62 CY trench spoils; 0.37 CY stockpiled & reused and 0.25 CY off-hauled. 0.17 CY import (bedding
   " " " 8" Pipe (unpaved areas) - 0.39 CY trench spoils; 0.28 CY stockpiled & resued and 0.11 CY off-hauled. 0.10 CY import (bedding
   " " " Combined 20" & 8" Pipe (unpaved) - 1.24 CY of trench spoils; 0.74 CY stockpiled & re-used and 0.5 CY off-hauled
   Approx. 0.41 CY import (beddin
9. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Leland Isolation Pipeline

B-LELPL-1

Construction Phase	Pipe length	Pipe diameter	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Lacassie Ave - N. California Blvd. to N. Main St.	700	24	2.8	8	4	13	51	3	Trucks
Total	700								
Total excavated material (CY) =	560								

Assumptions:
1. Trench width of 3.0 feet and an average trench depth of about 7 feet.
2. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load.
3. Per lineal foot: 0.8 CY of pavement and trench spoils will be hauled off-site and 0.7 CY of new fill will be imported.
4. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1) .
5. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors.
6. The contractor would be able to install an average of about 50 feet of pipe each work day in paved areas.
7. Excavated soil to be hauled off site and replaced by aggregate base in the street.
8. Work schedule M-F 8:30 am to 4:30 pm.
9. One construction site along the alignment.
10. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Moraga Reservoir

B-MORRES-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	4	2	12	4 2	Trucks Vehicles
Excavation	8	84	0	5	178	24 5	Trucks Vehicles
Demolition	4	0	12	8	40	3 8	Trucks Vehicles
Reservoir foundation & floor slab	3	0	42	15	114	11 15	Trucks Vehicles
Reservoir walls	16	0	8	12	39	2 12	Trucks Vehicles
Reservoir roof	4	0	42	12	108	11 12	Trucks Trucks
Field Testing and Startup	6	0	1	6	14	1 6	Trucks Vehicles
Site restoration	2	0	4	4	16	4 4	Trucks Vehicles
Access Road	1	0	10	8	36	3 8	Trucks Vehicles
Demobilization	1	0	4	4	16	4 4	Trucks Vehicles
			MAXIMUM ONE-WAY TRIPS PER DAY =		**178**		
			MAXIMUM ONE-WAY TRIPS PER HOUR =			**24** **15**	**Trucks** **Vehicles**

Assumptions:
1. Truck and vehicle trip are peak rates.
2. Haul trucks are for soil disposal and import of new fill.
3. Trucks average 9 cubic yards per load, one load every 5 minutes, with 7 hours production per day.
4. 12,700 CY of Cut and No Fill. 2,580 CY of demolition material
5. Material trucks are for forms, rebar, concrete, prestressing materials, paving, and equipment.
6. Concrete trucks average 9 cubic yards per load.
7. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
8. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
9. Rates for reservoir floor slabs, walls, and roofs do not last the entire durations.
10. Reservoir construction peak rate durations: floor slabs -1 day, wall sections 2 weeks, roof-1day
11. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Moraga Road Pipeline

B-MORPL-1

Construction Phase	Pipe length	Pipe diameter	Production Rate (feet/day)	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Lafayette WTP to Moraga Road	5,840	36	120	9.7	15	4	13	65	5	Trucks
			40	*	17	4	13	68	13	Vehicles
Moraga Road (Nemea Ct to Sky-Hy Dr)	1,750	36	80	4.4	34	4	13	103	10	Trucks
									13	Vehicles
Moraga Road (Sky-Hy Dr to Rheem Blvd)	4,570	36	80	11.4	34	4	13	103	10	Trucks
									13	Vehicles
Moraga Road (through Rheem Blvd) *Jack and Bore*	400	36	40	2.0	17	4	13	68	5	Trucks
									13	Vehicles
Moraga Road (Rheem Blvd to Draeger Dr)	4,000	36	80	10.0	34	4	13	103	10	Trucks
									13	Vehicles
Bryant RCS from Bryant PZ to Leland PZ	800	48	80	2.0	15	4	13	64	5	Trucks
			40	*	22	4	13	78	13	Vehicles
Total	17,360									
							MAXIMUM ONE-WAY TRIPS PER DAY =	**103**		
Total excavated material (CY) = 27,722							**MAXIMUM ONE-WAY TRIPS PER HOUR =**		**10**	**Trucks**
									13	**Vehicles**

*in Mount Diablo Boulevard

Assumptions:

1. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load.
2. Material trucks trips per day include deliveries for: pipeline (1), appurtenance (1), paving (1) and equipment delivery (1).
3. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors.
4. The contractor would be able to install up to 120 feet of pipe each work day in unpaved areas and average about 80 feet per workday in paved areas.
5. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced.

6a. For pipeline in roadway : Work schedule M-F 8:30 am to 4:30 pm

6b. For pipeline on Lafayette Reservoir property : Work schedule M-F 7:00 am to 6:00 pm

6c. For pipeline in Moraga Rd (Nemea to Sky-Hy): Maintain alternate one-way traffic flow past construction work zone.

7. One construction site along the alignment.

8a. 36" diameter pipeline trench width equals 4.9 feet and trench depth of 11.6 feet. 48" diameter pipeline width equals 5.9 feet.

8b. Per lineal foot: 36" Pipe (in street)- 2.1 CY of trench spoils will be hauled off-site and 1.76 CY of new backfill will be imported.
48" Pipe (in street)- 2.7 CY of trench spoils will be hauled off-site and 2.2 CY of new backfill will be imported.

8c. Per lineal foot: 36" Pipe (on Lafayette Reservoir Property)- 0.74 CY of trench spoils will be hauled off-site and 0.41 CY of new backfill will be imported.
48" Pipe (on Lafayette Reservoir Property)- 1.11 CY of trench spoils will be hauled off-site and 0.56 CY of new backfill will be imported.

9. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Sunnyside Pumping Plant

B-SUNPP-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	2	2	8	2 2	Trucks Vehicles
Site Work	2	0	0	5	10	0 5	Trucks Vehicles
Pumping Plant Construction (concrete foundation work)	2	0	7	10	34	2 10	Trucks Vehicles
Pumping Plant Construction	10	0	2	8	20	1 8	Trucks Vehicles
Landscaping	2	0	1	4	10	1 4	Trucks Vehicles
Demobilization	1	0	2	4	12	2 4	Trucks Vehicles
				MAXIMUM ONE-WAY TRIPS PER DAY =	**34**		
				MAXIMUM ONE-WAY TRIPS PER HOUR =		**2 10**	**Trucks Vehicles**

Assumptions:
1. Material trucks for building material, piping, paving, and equipment delivery.
2. Concrete trucks average 9 cubic yards
3. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
4. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
5. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Tice Pumping Plant

B-TICEPP-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	2	2	8	2 2	Trucks Vehicles
Excavation/Site Work	2	28	10	5	66	10 5	Trucks Vehicles
Pumping Plant Construction (concrete work)	2	0	7	10	34	2 10	Trucks Vehicles
Pumping Plant Construction	10	0	2	8	20	1 8	Trucks Vehicles
Backfill	1	24	0	5	58	6 5	Trucks Trucks
Landscaping	2	0	1	4	10	1 4	Trucks Vehicles
Demobilization	1	0	2	4	12	2 4	Trucks Vehicles
MAXIMUM ONE-WAY TRIPS PER DAY =					**66**		
MAXIMUM ONE-WAY TRIPS PER HOUR =						**10** **10**	**Trucks** **Vehicles**

Assumptions:
1. Haul trucks for soil disposal and import of new fill.
2. Material trucks for building material, piping, paving, and equipment delivery.
3. Haul trucks average 9 cubic yards; Concrete trucks average 9 cubic yards
4. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
5. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
6. Excavation is about 1,300 CY. Backfill is about 450 CY
7. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Tice Pipeline

B-TICEPP-2

Construction Phase	Pipe length	Pipe diameter	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Boulevard Way									
Warren to Olympic Boulevard	2120	20	5.3	14	4	13	61	4 13	Trucks Vehicles
Olympic Boulevard									
Boulevard Way to Tice PP	600	20	1.5	14	4	13	61	4 13	Trucks Vehicles
	2720								
						MAXIMUM ONE-WAY TRIPS PER DAY =	**61**		
Total excavated material (CY) = 2,230						**MAXIMUM ONE-WAY TRIPS PER HOUR =**		**4** **13**	**Trucks** **Vehicles**

Assumptions:
1. Trench width is approximately 3 feet and trench depth of 7.3 fee
2. Haul trucks include trench pavement and soil disposal as well as fill import deliveries. Haul truck average 9 cubic yards per load
3. Material trucks trips per day include deliveries for: pipeline (1), appurtenance(1), paving(1) and equipment delivery (1)
4. Worker vehicles consist (9) vehicles for crew, (1) contractor superintendent, (1) district inspector, (1) city inspector, (1) visitors
5. Work schedule M-F 8:30 am to 4:30 pm
6. 0ne construction site along the alignment.
7. Per lineal foot: 0.82 CY of pavement and trench spoils will be hauled off-site and 0.70 CY of new fill will be imported
8. The contractor would be able to install an average of about 80 feet of pipe each work day in paved areas
9. Excavated soil to be hauled off site and replaced by aggregate base in the street. In unpaved areas the soil will be stockpiled and replaced
10. Haul trucks average 9 CY; Concrete trucks average 9 CY;
11. Doesn't show down time nor reflect total duration

WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM
Trip Generation Estimate - Withers Pumping Plant

B-WITHPP-1

Construction Phase	Approx. Duration (weeks)	Haul Trucks (per day)	Materials Trucks (per day)	Worker Vehicles (per day)	One-Way Trips (per day)	Max. One-Way Trips Per Hour	
Mobilization	1	0	2	2	8	2 2	Trucks Vehicles
Site Work	2	0	0	5	10	0 5	Trucks Vehicles
Retaining Wall Construction (concrete work and backfill)	4	42	7	10	118	12 10	Trucks Vehicles
Pumping Plant Construction (concrete work)	2	0	7	10	34	2 10	Trucks Vehicles
Pumping Plant Construction	10	0	2	8	20	1 8	Trucks Vehicles
Site Paving	2	0	4	6	20	4 6	Trucks Vehicles
Landscaping	2	0	1	4	10	1 4	Trucks Vehicles
Demobilization	1	0	2	4	12	2 4	Trucks Vehicles
			MAXIMUM ONE-WAY TRIPS PER DAY =		**118**		
			MAXIMUM ONE-WAY TRIPS PER HOUR =			**12 10**	**Trucks Vehicles**

Assumptions:
1. Material trucks for building material, piping, paving, and equipment delivery.
2. Haul trucks are for soil disposal and import of new fill.
3. Excavation is about 780 CY. Backfill is about 260 CY
4. Haul trucks average 9 cubic yards per load, one load every 10 minutes with 7 hour production per day.
5. Concrete trucks average 9 cubic yards
6. Worker vehicles consist of vehicles for trades, laborers, equipment operator, superintendent, foreman, district inspector
7. Work schedule: One shift, 8 hours, M-F between 7:00 am and 6:00 pm
8. Doesn't show down time nor reflect total duration

APPENDIX C

Properties within 50 Feet of Centerline of Proposed Orinda-Lafayette Aqueduct – Tunnel Portion

APPENDIX C

Properties Within 50 Feet of Centerline of Proposed Orinda-Lafayette Aqueduct – Tunnel Portion

PROPERTY ADDRESS	ASSESSOR'S PARCEL NUMBER
Manzanita Drive	N/A
146 Manzanita Drive	263 090 023
140 Manzanita Drive	263 090 024
100' Right-of-Way Orinda Villa Park	N/A
38 Vista Del Mar Place	263 090 016
44 Vista Del Mar Place	263 090 017
41 Vista Del Mar Place	263 090 029
45 Vista Del Mar Place	263 120 034
49 Acacia Drive	263 120 017
51 Acacia Drive	263 120 018
39 Acacia Drive	263 120 020
43 Acacia Drive	263 120 019
53 Acacia Drive	263 120 016
55 Acacia Drive	263 120 015
56 Acacia Drive	263 131 020
59 Acacia Drive	263 120 014
77 Hacienda Circle	263 131 019
65 Hacienda Circle	263 131 010
66 Hacienda Circle	263 132 013
62 Hacienda Circle	263 132 012
58 Hacienda Circle	263 132 011
54 Hacienda Circle	263 132 010
100' Right-of-Way	N/A
Lot 703 (6')	Unknown
Lot 702 (1')	Unknown
140 Camino Don Miguel	263 141 009
147 Camino Don Miguel	263 142 012
151 Camino Don Miguel	263 142 011
Opp 160 Camino Don Miguel	263 142 023
160 Camino Don Miguel	263 143 009
164 Camino Don Miguel	263 143 003
165 Miner Road	263 160 005
2 Bien Venida	262 160 001
2 La Senda	262 142 007
21 La Noria	262 142 004
25 La Noria	262 142 003
27 La Noria	262 150 013
29 La Noria	262 150 002
33 La Noria	262 142 001
38 La Noria	262 122 016
30 La Noria	262 122 010
12' Path	N/A

PROPERTY ADDRESS	ASSESSOR'S PARCEL NUMBER
389 Camino Sobrante	262 122 013
390 Camino Sobrante	262 101 002
391 Camino Sobrante	262 122 015
43 Via Hermosa	262 102 004
39 Via Hermosa	262 102 001
35 Via Hermosa	262 093 008
31 Via Hermosa	262 093 009
40 Dos Posos	262 102 020
36 Dos Posos	262 102 018
32 Dos Posos	262 093 014
24 Dos Posos	262 093 015
16 Dos Posos	262 093 006
15 Dos Posos	262 091 023
11 Dos Posos	262 091 014
5 Dos Posos	262 091 016 & 015
12 Dos Posos	262 093 018
10' Path	N/A
228 Camino Sobrante	262 091 005
224 Camino Sobrante	262 091 004
220 Camino Sobrante	262 091 003
216 Camino Sobrante	262 091 002
Lake Cascades	262 300 003
208 Camino Sobrante	262 052 002
212 Camino Sobrante	262 052 003
19 Las Cascadas	262 052 010
14 Las Cascadas	262 051 008
18 Las Cascadas	262 051 009
22 Las Cascadas	262 051 010
26 Las Cascadas	262 051 023
6' Path	N/A
30 Las Cascadas	262 051 017
825 Ironbark Place	260 230 005
822 Ironbark Place	260 230 004
816 Ironbark Place	260 230 003
808 Ironbark Place	260 230 002
653 Ironbark Circle	260 221 025
659 Ironbark Circle	260 221 024
10' D E	Unknown
10' S E	Unknown
665 Ironbark Circle	260 221 023
671 Ironbark Circle	260 221 022
699 Ironbark Circle	260 221 017
694 Fox Run	260 240 011
684 Fox Run	260 240 027
674 FoxRun	260 240 009
664 Fox Run	260 240 008
650 Orindawoods Drive	260 300 007
4 Harran Circle	260 160 026
8 Harran Circle	262 160 003
5 Harran Circle	260 160 004
2 Altarinda Circle	260 160 008
8 Altarinda Circle	260 160 021
5' PG&E R/W	N/A
7 E Altarinda Drive	260 160 007
4 E Altarinda Drive	260 153 008
11 E Altarinda Drive	260 160 006
1 Altarinda Circle	260 160 022

APPENDIX D

Plans and Policies

TABLE D-1
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
3 - Land Use		
Land Use Goals	3-A	To coordinate land use with circulation, development of other infrastructure facilities, and protection of agriculture and open space, and to allow growth and the maintenance of the County's quality of life. In such an environment all residential, commercial, industrial, recreational and agricultural activities may take place in safety, harmony, and to mutual advantage.
	3-C	To encourage aesthetically and functionally compatible development which reinforces the physical character and desired images of the County.
	3-27	Existing residential neighborhoods shall be protected from incompatible land uses and traffic levels exceeding adopted service standards.
5 - Transportation and Circulation		
Roadway and Transit Goals	5-C	To balance transportation and circulation needs with the desired character of the community.
	5-D	To maintain and improve air quality standards.
Roadway and Transit Policies	5-16	Emergency response vehicles shall be accommodated in development project design.
Scenic Routes Goals	5-R	To identify, preserve and enhance scenic routes in the County.
Scenic Routes Policies	5-35	Scenic corridors shall be maintained with the intent of protecting attractive natural qualities adjacent to various roads throughout the county
	5-37	Scenic views observable from scenic routes shall be conserved, enhanced, and protected to the extent possible.
	5-43	Provide special protection for natural topographic features, aesthetic views, vista, hills and prominent ridgelines at "gateway" sections of scenic routes. Such "gateways" are located at unique transition points in topography or land use, and serve as entrances to regions of the County.
	5-44	Aesthetic design flexibility of development projects within a scenic corridor shall be encouraged.
Scenic Routes Implementation Measures	5-ak	Develop and enforce guidelines for development along scenic routes to maintain the visual quality of those routes.
	5-am	Consider the visual qualities and character of the corridor in reviewing plans for new roads, road improvements, or other public projects. This should include width, alignment, grade, slope and curvatures of traffic islands and side paths, drainage facilities, additional setbacks, and landscaping.
7 - Public Facilities/Services		
Water Service Goals	7-F	To assure potable water availability in quantities sufficient to serve existing and future residents.
	7-G	To encourage the development of locally controlled supplies to meet the growth needs of the County.
	7-H	To encourage the conservation of water resources available to the County and to the State.
	7-I	To protect and enhance the quality of the water supplied to County residents.
Water Service Policies	7-16	Water service systems shall be required to meet regulatory standards for water delivery, water storage and emergency water supplies.
	7-17	Water service agencies shall be encouraged to establish service boundaries and to develop supplies and facilities to meet future water needs based on the growth policies contained in the County and cities' General Plans.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
7 - Public Facilities/Services		
Water Service Policies (cont.)	7-18	Water service agencies should generally be discouraged from constructing new water distribution infrastructure which exceeds future water needs based on the buildout projections of the County General Plan and city general plans.
	7-22	Water service agencies shall be encouraged to meet all regulatory standards for water quality prior to approval of any new connections to that agency.
	7-24	Opportunities shall be identified and developed in cooperation with water service agencies for use of non-potable water, including ground water, reclaimed water, and untreated surface water, for other than domestic use.
	7-27	The reclamation of water shall be encouraged as a supplement to existing water supplies.
Water Service Implementation Measures	7-p	Encourage water service agencies to require separate service connections and meters where large quantities of water are used for special purposes such as landscape irrigation.
	7-q	Encourage water agencies to provide potable water containing not more than 50 ppm sodium and 65 ppm chloride.
Sewer Service Goals	7-35	Opportunities for using reclaimed wastewater shall be identified and developed in cooperation with sewer service and water service agencies.
Drainage and Flood Control Goals	7-O	To protect and enhance the natural resources associated with creeks and the Delta, and their riparian zones, without jeopardizing the public health, safety, and welfare.
	7-P	To protect creeks and riparian zones identified as valuable from damage caused by nearby development activity.
Public Protection Goals	7-V	To provide a high standard of police protection services for all citizens and properties throughout Contra Costa County.
Public Protection Policies	7-59	A maximum response time goal for priority 1 or 2 calls of five minutes for 90 percent of all emergency responses in central business district, urban and suburban areas, shall be strived for by the sheriff when making staffing and beat configuration decisions.
Fire Protection Goals	7-Y	To ensure a high standard of fire protection, emergency, and medical response services for all citizens and properties throughout Contra Costa county.
	7-Z	To reduce the severity of structural fires and minimize overall fire loss.
Fire Protection Policies	7-62	The County shall strive to reach a maximum running time of 3 minutes and/or 1.5 miles from the first-due station, and a minimum of 3 firefighters to be maintained in all central business district (CBD), urban and suburban areas. (These areas are defined in Section 4).
	7-63	The County shall strive to achieve a total response time (dispatch plus running and set-up time) of five minutes in CBD, urban and suburban areas for 90 percent of all emergency responses.
	7-80	Wildland fire prevention activities and programs such as controlled burning, fuel removal, establishment of fire roads, fuel breaks and water supply, shall be encouraged to reduce wildland fire hazards.
Fire Protection Implementation Measures	7-au	Fire protection agencies shall be afforded the opportunity to review projects and submit conditions of project approval for consideration to determine whether: there is an adequate water supply for fire fighting; road widths, road grades and turnaround radii are adequate for emergency equipment; and structures are built to the standards of the Uniform Building Code, the Uniform Fire Code, other State regulations, and local ordinances regarding the use of fire-retardant material and detection, warning and extinguishment devices.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
7 - Public Facilities/Services (cont.)		
Solid Waste Management Goals	7-AG	To reduce the amount of waste disposed of in landfills by: 1) reducing the amount of solid waste generated (waste reduction); 2) reusing and recycling as much of the solid waste as possible; 3) utilizing the energy and nutrient value of the solid waste (waste to energy composting); and 4) properly disposing of the remaining solid waste (landfill disposal).
	7-H	To divert as much waste as feasible from landfills through recovery and recycling.
Solid Waste Management Policies	7-99	Solid waste hauling, with the exception of residential waste collection trucks, on collectors and local streets through residential areas should be avoided
Hazardous Waste Management Goals	7-AM	To eliminate the generation and disposal of hazardous waste materials to the maximum extent feasible, by: 1) reducing the use of hazardous substances and generation of hazardous waste at their source; 2) recovering and recycling the remaining waste for reuse; 3) treating those wastes not amenable to source reduction or recycling so that the environment and community health are not threatened by their ultimate disposal; 4) incinerating those wastes amenable to this technology; and 5) properly disposing of treated residuals in approved residual repositories.
8 - Conservation		
Overall Conservation Policies	8-1	Resource utilization and development shall be planned within a framework of maintaining a healthy and attractive environment.
	8-3	Watersheds, natural waterways, and areas important for the maintenance of natural vegetation and wildlife populations shall be preserved and enhanced.
	8-4	Areas designated for open space/agricultural uses shall not be considered as a reserve for urban uses and the 65 percent standard for non-urban uses must not be violated.
Agricultural Resources Goals	8-I	To minimize conflicts between agricultural and urban uses.
Agricultural Resources Policies	8-31	Urban development in the future shall take place within the Urban Limit Line and areas designated by this plan for urban growth.
Soil Resources Goals	8-P	To encourage the conservation of soil resources to protect their long-term productivity and economic value.
	8-Q	To promote and encourage soil management practices that maintain the productivity of soil resources.
Soils Resources Policies	8-63	Erosion control procedures shall be established and enforced for all private and public construction and grading projects.
	8-67	Lands having a prevailing slope above 26 percent shall require adequate special erosion control and construction techniques.
	8-68	Lands having a high erosion potential as identified in the Soil Survey shall require adequate erosion control methods for agricultural and other uses.
Soils Resources Implementation Measures	8-cd	Include erosion control measures for any discretionary project involving construction of grading near waterways or on lands with slopes exceeding 10 percent.
	8-cf	Require a soil conservation program to reduce soil erosion impacts for discretionary projects which could increase waterway or hillside erosion. Design improvements such as roads and driveways to retain natural vegetation and topography to the extent feasible.
Water Resources Goals	8-T	To conserve, enhance and manage water resources, protect their quality, and assure an adequate long-term supply of water for domestic, fishing, industrial and agricultural uses.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
8 – Conservation (cont.)		
Water Resources Goals (cont.)	8-U	To maintain the ecology and hydrology of creeks and streams and provide an amenity to the public, while at the same time preventing flooding, erosion and danger to life and property.
	8-V	Preserve and restore natural waterways
General Water Resources Policies	8-74	Preserve watersheds and groundwater recharge areas by avoiding the placement of potential pollution sources in areas with high percolation rates.
	8-75	Preserve and enhance the quality of surface and groundwater resources.
	8-78	Where feasible, existing natural waterways shall be protected and preserved in their natural state, and channels which already are modified shall be restored. A natural waterway is defined as a waterway which can support its own environment of vegetation, fowl, fish and reptiles, and which appears natural.
	8-80	Wherever possible, remaining natural watercourses and their riparian zones shall be restored to improve their function as habitats.
	8-81	Fisheries in the streams within the County shall be preserved and re-established wherever possible.
Air Resources Goals	8-AA	To meet Federal Air Quality Standards for all air pollutants.
	8-AB	To continue to support Federal, State and regional efforts to reduce air pollution in order to protect human and environmental health.
Air Resources Policies	8-103	When there is a finding that a proposed project might significantly affect air quality, appropriate mitigation measures shall be imposed.
	8-104	Proposed projects shall be reviewed for their potential to generate hazardous air pollutants.
	8-105	Land uses which are sensitive to air pollution shall be separated from sources of air pollution.
9 - Open Space Element		
Overall Open Space Goals	9-A	To preserve and protect the ecological, scenic, and cultural/historic, and recreational resource lands of the County.
Overall Open Space Policies	9-2	Historic and scenic features, watersheds, natural waterways, and areas important for the maintenance of natural vegetation and wildlife populations shall be preserved and enhanced.
Scenic Resources Goals	9-D	Preserve and protect areas of identified high-scenic value, where practical, and in accordance with the Land Use Element map.
	9-E	Protect major scenic ridges, to the extent practical, from structures, roadways, or other activities which would harm their scenic qualities.
Scenic Resources Policies	9-12	In order to protect the scenic beauty of the County, developers shall generally be required to restore the natural contours and vegetation of the land after grading and other land disturbances. Public and private projects shall be designed to minimize damages to significant trees and other visual landmarks.
	9-15	In areas along major scenic ridges which are designated for open space use, the principals outlined in 9-19 through 9-26 shall apply.
	9-16	New water tanks that would harm the visual quality of a scenic ridge shall be buried, camouflaged or screened to mitigate their impacts.
	9-18	The construction of new structures on the top of major scenic ridges or within 50 feet of the ridgeline shall be discouraged.
	9-19	When development is permitted to occur on hillsides, structures shall be located in a manner which is sensitive to available natural resources and constraints.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
9 - Open Space Element (cont.)		
Scenic Resources Policies (cont.)	9-21	Any new development shall be encouraged to generally conform with natural contours to avoid excessive grading.
	9-22	All new land uses which are to be located below a major scenic ridge shall be reviewed with an emphasis on protecting the visual qualities of the ridge.
	9-24	The appearance of the County shall be improved by eliminating negative features such as non-conforming signs and overhead utility lines, and by encouraging aesthetically designed facilities with adequate setbacks and landscaping.
	9-27	Physical and visual public access to established scenic routes shall be protected.
Scenic Resource Implementation Measures	9-b	Carefully study and review and development projects which would have the potential to degrade the scenic qualities of major significant ridges in the County or the bay and delta shoreline.
	9-d	Where possible, structures shall not be built on top of any designated scenic ridgeline.
Historic and Cultural Resource Goals	9-32	Areas which have identifiable and important archaeological or historic significance shall be preserved for such uses, preferably in public ownership.
	9-34	Development surrounding areas of historic significance shall have compatible and high quality design in order to protect and enhance the historic quality of the area.
Parks and Recreation Facilities Policies	9-40	Major park lands shall be reserved to ensure that the present and future needs of the County's residents will be met and to preserve areas of natural beauty or historical interest for future generations. Apply the parks and recreation performance standards in the Growth Management Element.
	9-43	Regional-scale public access to scenic areas on the waterfront shall be protected and developed, and water-related recreation, such as fishing, boating, and picnicking, shall be provided.
Park and Recreation Facilities Implementation Measures	9-v	Develop a comprehensive and interconnected series of hiking, biking and riding trails in conjunction with cities, special districts, public utilities and county service areas.
10 - Safety Element		
Seismic Hazard Policies	10-4	In areas prone to severe levels of damage from ground shaking (i.e., Zone IV on Map 10-4), where the risks to life and investments are sufficiently high, geologic-seismic and soils studies shall be required as a precondition for authorizing public or private construction.
	10-5	Staff review of applications for development permits and other entitlements, and review of applications to other agencies which are referred to the County, shall include appropriate recommendations for seismic strengthening and detailing to meet the latest adopted seismic design criteria.
	10-6	Structures for human occupancy, and structures and facilities whose loss would substantially affect the public safety or the provision of needed services, shall not be erected in areas where there is a high risk of severe damage in the event of an earthquake.
	10-7	The County should encourage cooperation between neighboring government agencies and public and private organizations to give appropriate attention to seismic hazards to increase the effectiveness of singular and mutual efforts to increase seismic safety.
	10-12	Prohibit construction of structures for human occupancy, and structures whose loss would affect the public safety or the provision of needed services, over the trace of an active fault.
	10-13	In areas where active or inactive earthquake faults have been identified, the location and/or design of any proposed buildings, facilities, or other development shall be modified to mitigate possible danger from fault rupture or creep.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
10 - Safety Element (cont.)		
Seismic Hazard Policies (cont.)	10-14	Preparation of a geologic report shall be required as a prerequisite before authorization of public capital expenditures or private development projects in areas of known or suspected faulting.
	10-15	To the extent practicable, the construction of structures requiring a high degree of safety and other critical structures shall not be allowed in an active or potentially active fault zone.
	10-16	When such a critical structure must be located in a fault zone, the structure shall be carefully sited, designed and constructed to withstand the anticipated earthquake stresses.
	10-18	This General Plan shall discourage urban or suburban development in areas susceptible to high liquefaction dangers and where appropriate subject to the policies in 10-20 below, unless satisfactory mitigation measures can be provided, while recognizing that there are low intensity uses such as water-related recreation and agricultural uses that are appropriate in such areas. (For the Bethel Island Area, the adopted specific plan policies will apply.)
	10-19	To the extent practicable, the construction of critical facilities, structures involving high occupancies, and public facilities shall not be sited in areas identified as having a high liquefaction potential, or in areas underlain by deposits classified as having a high liquefaction potential.
	10-20	Any structures permitted in areas of high liquefaction danger shall be sited, designed and constructed to minimize the dangers from damage due to earthquake-induced liquefaction.
	10-21	Approvals to allow the construction of public and private development projects in areas of high liquefaction potential shall be contingent on geologic and engineering studies which define and delineate potentially hazardous geologic and/or soils conditions, recommend means of mitigating these adverse conditions; and on proper implementation of the mitigation measures.
Seismic Hazard Implementation Measures	10-c	Require comprehensive geologic and engineering studies for any critical structure, whether or not it is located within a Special Studies Zone.
	10-d	Through the environmental review process, require geologic, seismic, and/or soils studies as necessary to evaluate proposed development in areas subject to groundshaking, fault displacement, or liquefaction.
	10-e	Evaluate and, where necessary, upgrade water distribution, sewage disposal, gas and electricity, communications and other service facilities in areas subject to seismic hazards.
Ground Failure and Landslide Hazard Goals	10-E	To minimize the risk of loss of life or injury due to landslides, both ordinary and seismically-induced.
Ground Failure and Landslide Hazard Policies	10-22	Slope stability shall be a primary consideration in the ability of land to be developed or designated for urban uses.
	10-23	Slope stability shall be given careful scrutiny in the design of developments and structures, and in the adoption of conditions of approval and required mitigation measures.
	10-24	Proposed extensions of urban or suburban land uses into areas characterized by slopes over 15 percent and/or generally unstable land shall be evaluated with regard to the safety hazard prior to the issuance of any discretionary approvals. Development on very steep open hillsides and significant ridgelines throughout the County shall be restricted, and hillsides with a grade of 26 percent or greater shall be protected through implementing zoning measures and other appropriate actions.
	10-26	Approvals of public and private development projects in areas subject to slope failures shall be contingent on geologic and engineering studies which define and delineate potentially hazardous conditions and recommend adequate mitigation.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
10 - Safety Element (cont.)		
Ground Failure and Landslide Hazard Policies (cont.)	10-27	Soil and geologic reports shall be subject to the review and approval of the County Planning Geologist.
	10-29	Significant very steep hillsides shall be considered unsuitable for types of development which require extensive grading of other land disturbance.
	10-30	Development shall be precluded in areas when landslides cannot adequate be repaired.
Flood Hazard Goals	10-G	To ensure public safety by directing development away from areas which may pose a risk to life from flooding, and to mitigate flood risks to property.
General Policies	10-33	The areas designated on Figure 10-8 shall be considered inappropriate for conventional urban development due to unmitigated flood hazards as defined by FEMA. Applications for development at urban or suburban densities in areas where there is a serious risk to life shall demonstrate appropriate solutions or be denied.
	10-34	In mainland areas affected by creeks, development within the 100-year flood plain shall be limited until a flood management plan can be adopted, which may include regional and local facilities if needed. The riparian habitat shall be protected by providing a cross section of channel suitable to carry the 100-year flow. Flood management shall be accomplished within the guidelines contained in the Open Space/Conservation Element.
Flood Hazard Policies	10-58	Dams and levees should be designed to withstand the forces of anticipated (design) earthquakes at their locations.
	10-59	Important dams and coastal levees shall be regarded as critical facilities that should not be sited over the trace of an active or potentially active fault.
Flood Hazard Implementation Measures	10-s	Revise the creek setback ordinance for residential and commercial structures in order to prevent property damages from bank failure along natural water courses.
Hazardous Materials Goals	10-I	To provide public protection from hazards associated with the use, transport, treatment and disposal of hazardous substances.
Hazardous Materials Policies	10-61	Hazardous waste releases from both private companies and from public agencies shall be identified and eliminated.
Water Supply Goals	10-J	To ensure a continuous supply of safe water to county residents.
	10-K	To protect the quality, quantity, and productivity of water resources as vital resources for maintaining the public, ecological and economic health of the region.
	10-L	The safety of valuable underground water supplies for present and future users shall be ensured by preventing contamination.
Water Supply Policies	10-71	The County shall support local, regional, State, and Federal government efforts to improve water quality.
	10-72	The County shall support water quality standards adequate to protect public health in importing areas as a priority at least equal in status to support of Bay/Delta estuary water standards.
	10-73	Point sources of pollution shall be identified and controlled to protect adopted beneficial uses of water.
	10-74	Public ownership of lands bordering reservoirs shall be encouraged to safeguard water quality.
	10-81	New water storage reservoirs shall be encouraged in appropriate locations subject to adequate mitigation of environmental impacts.
Water Supply Implementation Measures	10-al	Encourage all water districts in their efforts to provide water supply safety for emergency and disaster uses by the most practicable means.
Public Protection Services and Disaster Planning Implementation Measures	10-as	Require projects which encroach into areas which are determined to have a high or extreme fire hazard, or which incorporate wildfire hazard areas, to be reviewed by the appropriate Fire Bureau to determine if special fire prevention measures are advisable.

TABLE D-1 (Continued)
CONTRA COSTA COUNTY – GENERAL PLAN POLICIES

Element	Policies	
11- Noise Element		
Goals	11-B	To maintain appropriate noise conditions in all areas of the County.
	11-C	To ensure that new developments will be constructed so as to limit the effects of exterior noise on the residents.
Policies	11-1	New projects shall be required to meet acceptable exterior noise level standards as established in the Noise and Land Use Compatibility Guidelines contained in Figure 11-6. These guidelines, along with the future noise levels shown in the future noise contours maps, should be used by the county as a guide for evaluating the compatibility of "noise sensitive" projects in potentially noisy areas.
	11-2	The standard for outdoor noise levels in residential areas is a DNL of 60 dB. However, a DNL of 60 dB or less may not be achievable in all residential areas due to economic or aesthetic constraints. One example is small balconies associated with multi-family housing. In this case, second and third story balconies may be difficult to control to the goal. A common outdoor use area that meets the goal can be provided as an alternative.
	11-7	Public projects shall be designed and constructed to minimize long-term noise impacts on existing residents.
	11-8	Construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods.
	11-11	Noise impacts upon the natural environment, including impacts on wildlife, shall be evaluated and considered in review of development projects.
Implementation Measures	11-e	Noise mitigation features shall be incorporated into the design and construction of new projects or be required as conditions of project approval.

SOURCE: Contra Costa General Plan 2005-2020, 2005.

TABLE D-2
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
I- Land Use		
Residential Neighborhood Goals	LU-2	Ensure that development respects the natural environment of Lafayette. Preserve the scenic quality of ridgelines, hills, creek areas, and trees.
	LU-5	Preserve and enhance the open space, scenic viewsheds, and semi-rural qualities around the residential entryways to Lafayette.
Public Facilities Goals	LU-15	Construct capital improvement projects in a manner harmonious with the character of surrounding areas.
	LU-16	Ensure that public utilities and telecommunications facilities are constructed in a visually unobtrusive manner.
Growth Management and Infrastructure Goals	LU-18	Coordinate with other jurisdictions to protect and restore environmental resources and to provide public services.
Cultural Resources Goals	LU-22	Preserve archaeological and historic resources
Public Facilities Policies	LU-15.1	Review Capital and Public Improvements: Review capital and public improvements to ensure that they are designed and built in a manner sensitive to the surrounding area.
	LU-15.2	Inter-Agency Coordination: Work with agencies who carry out capital improvements in the City to ensure that they are aware of, and comply with, the City's aesthetic standards and review procedures
Interjurisdictional Coordination Policies	LU-18.1	Interjurisdictional Participation: Participate in interjurisdictional planning. Program LU-18.1.1: Consider the regional implications of land use decisions when reviewing development proposals and revisions to the Zoning Ordinance or the General Plan. Program LU-18.1.2: Work with other public entities to ensure that development in their jurisdictions does not adversely impact Lafayette's ability to achieve its General Plan goals.
Growth Management and Infrastructure Policies	LU-18.2	Coordination of Public Services: Coordinate water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation with other jurisdictions to create the greatest public benefit and the least degree of environmental impact. Program LU-18.2.1: Periodically review level of service standards with the districts providing water supply, flood control, wastewater and solid waste disposal, soil conservation, and open space preservation.
	LU-20.7	Water: Coordinate planning with the East Bay Municipal Utility District (EBMUD) to ensure the availability of an adequate potable water supply to meet the needs of the future population. The standard for development review shall be the capacity to provide sufficient water to all residents and businesses in the City, as indicated by EBMUD. Program LU-20.7.1: Ensure that service agreements are in place that establish a level of service in accordance with this Plan and the EBMUD where development is proposed on lots that do not have principal frontage on an existing water main.
LU – Cultural Resources Policies	LU-22.1	Preserve Archaeological Resources: Protect archaeological resources. Program LU-22.1.1: Require that areas found to contain significant historic or prehistoric artifacts be examined by a qualified consulting archaeologist. Program LU-22.1.2: Continue to refer projects to Sonoma State University's Northwest Archaeological Resource Center. Program LU-22.1.6: When a site has been identified as having value as an archaeological resource, development shall be situated or designed to avoid impact on archaeological resources. This may be accomplished in any of the following ways: a. Siting improvements to completely avoid the archaeological site. b. Incorporating the site into a park or dedicated open space, or by deeding the site into a permanent conservation easement. c. "Capping" the site (i.e. covering the site with a layer of undisturbed soil) may be appropriate after the site has been thoroughly studied by a professional archaeologist and a report written on the resources found on the site.

TABLE D-2 (Continued)
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
I- Land Use (cont.)		
LU – Cultural Resources Policies (cont.)	LU-22.1 (cont.)	In the event that the site cannot be feasibly developed by avoidance of the resource, it can be developed if the site is completely studied by a professional archaeologist and that archaeologist determines that the site is not unique. The archaeologist will prepare a complete report on the site and its resources prior to any development being allowed. Program LU-22.1.7: In the event archaeological resources are uncovered on any construction project in the City, all work must be halted and an evaluation undertaken by a qualified archaeologist.
	LU-22.2	Historic Buildings, Sites, and Districts: Identify, recognize, and protect sites, buildings, structures, and districts with significant cultural, aesthetic, and social characteristics that are part of Lafayette's heritage.
II- Circulation		
Circulation Goals	C-2	Regulate traffic so as to preserve the peace and quiet of residential areas. Through-traffic tends to take the route of least resistance, often resulting in a high through volume of traffic taking residential streets located adjacent to busy traffic corridors. It is essential that through traffic on local streets be discouraged to protect the quality of life and safety of residential neighborhoods located adjacent to heavily-traveled corridors.
	C-5	Preserve and enhance the scenic quality of Lafayette's roads.
Circulation Policies	C-2.1	Manage Traffic Flow: Discourage diversion of through-traffic onto local streets.
III- Open Space and Conservation		
Open Space Goals	OS-1	Preserve areas of visual prominence and special ecological significance as Open Space.
	OS-3	Maintain the semi-rural character and beauty of the city by preserving its open and uncluttered natural topographic features.
	OS-4	Preserve areas with important biotic resources.
	OS-5	Preserve and protect creeks, streams, and other watercourses in their natural state. Streams, creeks and other riparian areas are considered to be in a natural state when they support their own environment of vegetation and wildlife and have not been concreted or otherwise channeled.
	OS-6	Improve water quality in watercourses.
	OS-7	Protect and preserve soil as a natural resource.
	OS-10	Improve air quality.
	OS-11	Reduce the consumption of non-renewable energy resources.
Open Space Policies	OS-1.1	Protection of Major Ridgelines. Preserve Major Ridgelines in their natural state as scenic resources and wildlife corridors. Program OS-1.1.1: Require a setback from the centerline of Major Ridgelines for all development including roads, grading, fencing, and introduced vegetation other than indigenous native vegetation, wherever feasible. The centerline of a ridge is the line running along the highest portion of the ridge. Program OS-1.1.2: Limit the height of structures near major ridgelines to a plane sloping downward at a 15-degree declination from the ridge.
	OS-1.2	Ridgeline Protection. Protect all ridgelines consistent with their function as scenic resources for the community and as wildlife corridors.
	OS-1.3	Conserve a Variety of Open Space Features: Protect areas of special ecological significance, including ridges, hillsides, woodlands, wildlife corridors, riparian areas, steep slopes, prominent knolls, swales, and rock outcroppings.
	OS-1.4	Specific Open Space Use Criteria: Leave in or restore open space areas to their natural state. Limit uses to those with minimal environmental impact.
	OS-1.5	Open Space for Wildlife Habitat: Preserve, protect, and where necessary, restore open space for wildlife habitat to assure the continued viability and health of diverse, natural animal and plant communities

TABLE D-2 (Continued)
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
III- Open Space and Conservation (cont.)		
Open Space Policies (cont.)	OS-1.6	Continuous Open Spaces: Assemble open space areas from contiguous parcels to provide continuous scenic and wildlife corridors wherever feasible.
	OS-1.7	Open Space for Wildlife Corridors: Assure that adequate open space is provided to permit effective wildlife corridors for animal movement between open space areas, along watercourses, and on ridges.
	OS-3.1	Protect natural features of the lands: The character and natural features of hills, steep slopes, riparian areas, woodlands, and open areas will be preserved in as natural a condition as feasible. Program OS-3.1.1: Ensure that grading does not detract from the natural forms of hillsides and that development retains the ecological characteristics of the site. This includes prominent geological features, individual trees, woodland, riparian vegetation, rock outcroppings, streams, ponds, drainage swales, and other natural features. Minimize the disturbance or removal of vegetation. Program OS-3.1.2: Limit the scarring and cutting of hillsides caused by grading, especially for long roads and driveways.
	OS-3.2	Preserve the predominant views of the hill areas: Require that structures in identified environmentally sensitive areas be substantially concealed by existing vegetation or terrain when viewed from lower elevations, to the maximum extent feasible. Program OS-3.2.1: Require structures in identified environmentally sensitive areas be located away from prominent locations such as hilltops, knolls and open slopes, wherever feasible.
	OS 4.1	Riparian Vegetation: Preserve, protect, and restore riparian habitat, particularly the native, riparian woodland species and associated understory plants. Program OS-4.1.1: Maintain creek setbacks required in the zoning code for all structures along the City's watercourses. Program OS-4.1.2: Review development proposals for opportunities to require revegetation of riparian areas with plants indigenous to local riparian area. Emphasize plants that have habitat value.
	OS-4.2	Ridgelines: Protect native vegetation along ridgelines. Program OS-4.2.1: Require new planting to be predominantly native species indigenous to the area and appropriate to the immediate plant community, (grassland, chaparral, and oak woodland), within ridgeline protection areas.
	OS-4.3	Woodlands: Preserve existing woodlands and their associated vegetation. Program OS-4.3.2: Require replacement and maintenance of native trees and/or woodland areas when a project results in the loss of woodland habitat. Replace trees accidentally damaged or removed during construction with trees substantially larger than normally required. Program OS-4.3.3: Consider establishing an in-lieu mitigation program to allow off-site replacement of trees damaged or removed for development.
	OS-4.4	The Developed Landscape: Protect important groves of trees and significant existing vegetation. Encourage the planting of native, drought-tolerant and fire-resistant species, as well as the planting of herbaceous species that have a high wildlife value. Avoid the cutting of mature trees. Program OS-4.4.1: Require that site planning, construction and maintenance of new development preserve existing healthy trees and native vegetation to the maximum extent feasible. Program OS-4.4.2: Continue to use *Trees for Lafayette* by Russell Beatty as a guide to principles of planting in Lafayette and as a guide to appropriate tree species. Update and reprint the booklet. Program OS-4.4.3: Emphasize the use of native plants in the public landscape and right-of-way, where appropriate.
	OS-4.5	Biotic Resource Analysis: Require a biotic resource analysis prior to development of properties located within, or adjacent to, identified environmentally sensitive areas.
	OS-5.1	Stream bank stability: Protect stream bank stability.

TABLE D-2 (Continued)
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
III- Open Space and Conservation (cont.)		
Open Space Policies (cont.)	OS-6.1	Reduce Watercourse Pollution: Minimize pollutants in storm water runoff. Program OS-6.1.1: Enforce the Municipal Code prohibiting: (1) the discharge of any substances other than storm water into storm drains and creeks, (2) illicit dumping of wastes into storm drains and creeks, and (3) the dumping of debris and refuse in and near waterways and their riparian areas. Program OS-6.1.2: Consider adopting the erosion and sedimentation controls described in ABAG's *Manual of Standards for Erosion and Sediment Control*, published in June 1995. Program OS-6.1.3: Require that new development provide for source control and reduction of pollutants in conformance with the City's *Stormwater Management Program* and other National Pollutant Discharge Elimination System (NPDES) criteria. Program OS-6.1.4: Require that new development implement measures to control soil erosion and minimize runoff into creeks. As part of project review, include mitigation measures to reduce the potential pollutants in runoff.
	OS-7.1	Control Soil Erosion: Control soil erosion to prevent flooding and landslides, maintain water quality, and reduce public costs of flood control and watercourse maintenance. Program OS-7.1.1: Continue to require grading permits for new construction as a part of the development review process. Require soil erosion measures and a revegetation plan.
	OS-7.2	Reduce Soil Contamination: Reduce soil contamination from chemicals through careful regulation of the storage, transportation and use of chemicals.
	OS-10.2	Air Quality Standards: Seek to comply with State and Federal standards for air quality.
	OS-11.1	Energy Conservation Measures in Buildings: Encourage energy conservation in new development and the retrofit of existing structures.
IV- Parks and Recreation		
Parks and Recreation Policies	P-3.1	Complete the Trail System: Complete the trail system as shown on the *Lafayette Master Trails Plan* on file at the City offices and the Parks and Recreation Department. Program P-3.1.1: Work with the East Bay Regional Parks District (EBRPD), East Bay Municipal Utility District (EBMUD), Contra Costa County, adjacent cities, regional trail groups and other public agencies on trail planning issues. Program P-3.1.4: Where development is proposed on a parcel that includes a planned or proposed trail as shown on the *Lafayette Master Trails Plan*, the applicant shall be required to provide an easement or dedicate public right-of-way that can be used to construct a public trail per the *Lafayette Master Trails Plan*.
VI- Safety		
Safety Goals	S-1	Minimize risks to Lafayette residents and property from landslides and other geologic hazards. Program S.1.1 Slope and Soil Stability. Consider slope and soil stability when reviewing future projects. Development proposals in areas with landslide hazards shall be reviewed by an engineering geologist to determine whether the proposed development is feasible, and to define the required construction standards and mitigation measures. Program S-1.1.1: Require submittal and review of a site-specific geotechnical report for proposed development in areas identified on Map VI-1 as "Liquefaction potential possibly present" or on Map VI-2 as "Area of known slides and ground highly susceptible to sliding." Development shall be supervised and certified by a geotechnical engineer, and where necessary, by an engineering geologist. Program S-1.1.2: Require financial protection for public agencies and individuals as a condition of development approval where geological conditions indicate a potential for ongoing maintenance costs related to the geological conditions. Program S-1.1.3: Require repair, stabilization, or avoidance of landslides, of areas of soil creep, and of possible debris flow as a condition of project approval. Program S-1.1.4: Require professional inspection of foundation and excavation, earthwork and other geotechnical aspects of site development during construction on those sites identified as being prone to moderate levels of slope instability.

TABLE D-2 (Continued)
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
VI- Safety (cont.)		
Safety Policies (cont.)	S-1.2	Density and Location of Buildings: Limit building in areas with significant risk potential. Intensity of development shall be minimal in areas of high risk. Consider potential seismic or geologic hazards when determining building density and in siting dwellings.
	S-1.4	Creekbank Protection: Prohibit structures of any kind that might be impacted by creekbank slippage and erosion.
Seismic Hazard Goal	S-2	Minimize risks to Lafayette residents and property from earthquakes.
Seismic Hazard Policies	S-2.1	Seismic Hazards: New development, including subdivisions, new construction, and remodels or expansions of existing structures, shall minimize exposure to seismic hazards through site planning and building design.
	S-2.2	Areas of Significant Risk Potential: Locate construction of high density residential and other critical, high-occupancy or essential services buildings outside high risk zones.
Flood Hazard Goal	S-3	Reduce flood hazards.
Flood Hazard Policy	S-3.5	Building Location: Consider potential flood hazards when siting a building. Intensity of development shall be the lowest in areas of high risk.
Fire Hazard Goal	S-4	Minimize risks to Lafayette residents and property from fire hazards.
Fire Hazard Policies	S-4.1	Adequate Fire Protection: Enforce regulations and standards which contribute to adequate fire protection. Program S-4.1.1: Improve access and response time of emergency response vehicles. Program S-4.1.4 Restrict parking on narrow roads to allow access by emergency vehicles and to facilitate evacuation. Program S-4.1.6: Work with East Bay Municipal Utility District and the Contra Costa County Fire Protection District to ensure that there exists sufficient water flow in fire hydrants throughout Lafayette.
	S-4.2	Reducing Fire Risk From Development: Take measures to reduce fire risks from new and existing development as well as natural fire hazards. Program S-4.2.3: Encourage the East Bay Regional Parks District and the East Bay Municipal Utilities District to undertake vegetation management programs to reduce fire hazards on their properties. Program S-4.2.6: Establish buffer areas for buildings in high fire risk areas. Buffers can include site planning techniques, vegetation management plans and defensible space. Policy S-4.5 Vegetation Management Plan: Require development in a high fire risk area to have an approved vegetation management plan that includes native, drought tolerant, and fire resistant species.
Hazardous Materials Goal	S-5	Reduce the hazards of the storage, transportation and disposal of hazardous materials.
Police Services Goal	S-7	Maintain effective police services.
Police Services Policy	S-7.3	Response Time Standards: Strive to maintain a three-minute response time for all life-threatening calls and those involving criminal misconduct, and a seven minute response time for the majority of non-emergency calls.
Emergency Preparedness Goal	S-8	Provide adequate response and support services in the event of a major emergency or natural disaster.
Emergency Preparedness Policies	S-8.1	Program S-8.1.3: Maintain designated emergency evacuation routes in a passable condition at all times, as feasible.
	S-8.5	Program S-8.5.1: Maintain an emergency evacuation routes system. Consider establishing evacuation route standards, such as road widths. Program S-8.5.3: Maintain designated evacuation routes in a passable condition at all times, as feasible.

TABLE D-2 (Continued)
CITY OF LAFAYETTE – GENERAL PLAN POLICIES

Element	Goals/Policies	
VII-Noise		
Noise Goal	N-1	Ensure that all new development is consistent with the standards for noise.
Noise Policies	N-1.1	General Noise Levels: The maximum allowable noise levels are established in this Chapter (see Fig. 1 Noise and Land Use Compatibility Standards)
	N-1.2	Reduce Noise Impacts: Avoid or reduce noise impacts first through site planning and project design. Barriers and structural changes may be used as mitigation techniques only when planning and design prove insufficient.
	N-1.3	Noise and Land Use Compatibility Standards: Ensure that all new noise sensitive development proposals be reviewed with respect to *Figure 1: Noise and Land Use Compatibility Standards*. Noise exposure shall be determined through actual onsite noise measurements.
	N-2	Work to reduce noise to acceptable levels where it now exceeds those standards.
	N-2.1	Reduce Outdoor Noise in Existing Residential Areas: Reduce outdoor noise in existing residential areas where economically and aesthetically feasible.
	N-2.2	Mitigate Noise Impacts: Mitigate noise impacts to the maximum feasible extent. Program N-2.2.1: Require acoustical studies and mitigation measures for new developments and roadway improvements which affect noise sensitive uses such as schools, hospitals, libraries and convalescent homes. Program N-2.2.2: Require acoustical studies of any project that would potentially generate non-transportation noise levels in a residential area such that noise levels would exceed the planning standards set forth in Program N-1.2.2.
VIII- Growth Management		
Goals	LU-19	Maintain the existing infrastructure essential to the public health and safety of the community.
	LU-20	Match the demand for public facilities and infrastructure generated by new development with the capacity of existing facilities, capital improvement programs and development mitigation programs.
Policies	LU-20.7	Water: Coordinate planning with the East Bay Municipal Utility District (EBMUD) to ensure the availability of an adequate potable water supply to meet the needs of the future population. The standard for development review shall be the capacity to provide sufficient water to all residents and businesses in the City, as indicated by EBMUD.

SOURCE: City of Lafayette General Plan, October 2002.

TABLE D-3
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Land Use Element		
Residential Goal	LU1	A high quality residential environment consisting primarily of detached single-family homes.
Residential Policies	LU1.1	Neighborhood Preservation. Protect existing residential neighborhoods from potential adverse impacts of new residential development and additions to existing structures.
	LU1.8	Slope Restrictions. The soil characteristics in Moraga are prone to landslide conditions which can cause damage to property, injury to persons, public cost and inconvenience; therefore, development shall be avoided on slopes of 20 percent or steeper, but may be permitted if supported by site-specific analysis. No new residential structures may be placed on after-graded average slopes of 25 percent or steeper within the development area, except that this provision shall not apply to new residential structures on existing lots that were either legally created after March 1, 1951 or specifically approved by the Town Council after April 15, 2002. All new non-MOSO lots shall contain an appropriate development area with an average after-graded slope of less than 25%. Grading on any non-MOSO land with an average predevelopment slope of 25% or more within the proposed development area shall be prohibited unless formally approved by the Town Council where it can be supported by site-specific analysis and shown that a minimum amount of grading is proposed in the spirit of and not incompatible with all other policies of the General Plan. Under the terms of the Moraga Open Space Ordinance, development is prohibited on slopes greater than 20 percent in areas designated MOSO Open Space. The Zoning Ordinance, Chapter 8.52 (Open Space District) of the Moraga Municipal Code, defines the methodology for MOSO Open Space designation.
	LU1.12	Residual Parcels as Open Space. Except in MOSO Open Space, residual parcels characterized by constraints such as geologic hazards, restricted access, an established riparian habitat, an historically significant feature or visibility from a scenic corridor shall be designated Non-MOSO Open Space. Residual parcels within designated MOSO Open Space shall remain designated MOSO Open Space as required by the Moraga Open Space Ordinance.
	LU1.13	Development on Residual Parcels. Permit the development of residual parcels only when it is found that such development will: 1) not have an adverse visual impact and is compatible with existing development; 2) provide properly sited open space; 3) generally provide for lots that are larger than the average lot size of adjacent subdivisions with setbacks from property lines greater than those in adjacent subdivisions; and 4) respect the natural features and development patterns of surrounding areas.
Institutional Goals	LU4	Promotion and preservation of public and private institutional uses that serve the public interest and enhance the quality of life in Moraga, including Saint Mary's College, churches, and public and private schools.
Institutional Policies	LU4.5	Facility Siting. Site institutional facilities so that they complement the natural environment and so that they will not intrude upon areas of adjacent land uses
Agricultural Goals	LU5	Promotion and preservation of Moraga's remaining agricultural resources as an important part of the Town's heritage and character.
Agricultural Policies	LU5.1	Agricultural Uses and Activities. Allow agricultural and horticultural uses and activities on lands within the Town so long as they are low intensity and compatible with adjacent uses. Examples include small orchards and cattle grazing.
	LU5.2	Preservation of Agricultural Resources. Strive to preserve the Town's remaining agricultural resources, such as pear and walnut orchards
Community Design Element		
Natural Setting Goal	CD1	Protection and preservation of the natural scenic qualities that make Moraga unique.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Community Design Element (cont.)		
Natural Setting Policies	CD1.1	Location of New Development. To the extent possible, concentrate new development in areas that are least sensitive in terms of environmental and visual resources, including: a) Areas of flat or gently sloping topography outside of flood plain or natural drainage areas. b) The Moraga Center area and Rheem Park area. c) Infill parcels in areas of existing development.
	CD1.2	Site Planning, Building Design and Landscaping. Retain natural topographic features and scenic qualities through sensitive site planning, architectural design and landscaping. Design buildings and other improvements to retain a low visual profile and provide dense landscaping to blend structures with the natural setting.
	CD1.3	View Protection. Protect important elements of the natural setting to maintain the Town's semi-rural character. Give particular attention to viewsheds along the Town's scenic corridors, protecting ridgelines, hillside areas, mature native tree groupings, and other significant natural features. Consideration should be given to views both from within the Town and from adjacent jurisdictions. Likewise, the Town should work with adjacent jurisdictions to protect views from Moraga to adjacent areas.
	CD1.4	Canyon and Valley Areas. Protect the scenic and environmental qualities of canyon and valley areas to retain the Town's semi-rural character. Preserve both close-up and distant views of the natural hillside landscape from valley areas, and preserve significant linear open spaces in major canyons and grassland valleys with floodplain zones as the visual focus.
	CD1.5	Ridgelines and Hillside Areas. Protect ridgelines from development. In hillside areas, require new developments to conform to the site's natural setting, retaining the character of existing landforms preserving significant native vegetation and with respect to ridgelines, encourage location of building sites so that visual impacts are minimized. When grading land with an average slope of 20% of more, require 'natural contour' grading to minimize soil displacement and use of retainer walls. Design buildings and other improvements in accordance with the natural setting, maintaining a low profile and providing dense native landscaping to blend hillside structures with the natural setting.
Public Places Goal	CD2	A network of accessible and prominent public places with clear visual and circulation connections between them.
Public Places Policies	CD2.1	Public Places as Focal Points. Provide and maintain public parks and facilities that serve as community focal points, gathering places, and activity centers, with pedestrian and bicycle path connections to residential neighborhoods and commercial centers. Provide public views and inviting pedestrian entries into public places from adjacent streets and neighborhoods.
Scenic Corridor Goal	CD3	Scenic roadways leading into and through the Town that strengthen community identity and reflect Moraga's semi-rural character.
Scenic Corridor Policies	CD3.1	Designation of Scenic Corridors. Designate the following routes as the Town's 'Scenic Corridors': a) St. Mary's Road b) Canyon Road c) Moraga Way d) Moraga Road e) Rheem Boulevard f) Camino Pablo g) Bollinger Canyon Road
	CD3.2	Visual Character. Improve the visual character along Scenic Corridors with lighting, landscaping and signage.
	CD3.3	Gateways. Create prominent 'gateways' at Town entrance points with landscaping and signage improvements.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Community Design Element (cont.)		
Scenic Corridor Policies (cont.)	CD3.6	Development Standards and Design Guidelines. Adopt development standards and design guidelines for Scenic Corridors to control site design and setbacks, landscaping, infrastructure locations, grading and signage.
Historic Resources Goal	CD7	Preservation of historically significant buildings and sites as a valued part of the community's character and a link to its past.
	CD7.1	Designation of Historic Resources. Identify and protect buildings, sites and other resources in the community that give residents a tie with the past, which may include: a) Hacienda de las Flores b) Older buildings at Saint Mary's College c) Trees with historical significance d) Moraga Ranch e) Moraga Barn
	CD7.2	Promote the preservation and conservation of historic buildings and sites, providing incentives as appropriate for their retention and rehabilitation.
	CD7.3	Adjacent Sites. Ensure that adjacent infill development is complementary to designated historic buildings and sites.
Traffic and Circulation Element		
Traffic Circulation and Safety Policies	C1.3	Effective Mitigation Measures. Ensure that traffic mitigation measures are specifically identified and reasonably demonstrated to be feasible and effective. Traffic mitigation measures may include a roadway or intersection improvement, public or private mass transportation improvement, or any other feasible solution that reduces trip volumes or enhances roadway capacity.
	C1.11	Emergency Vehicle Access. Maintain and improve critical transportation facilities for emergency vehicle access and emergency evacuation needs.
	C1.12	Right-of-Way Safety. Ensure that private recreational vehicles, trailers and other large vehicles are parked off the public right-of-way and out of the front building setback in order to promote traffic safety and good visibility.
Open Space and Conservation Element		
Open Space Preservation Goal	OS1	Preservation of as much open space land as possible, including protection of all major and minor ridgelines and lands that help meet residents' recreational needs.
Open Space Preservation Policies	OS1.2	Major Ridgelines. Moraga's major ridgelines are highly visible throughout the Town and are included within areas designated as MOSO Open Space on the General Plan Diagram.
	OS1.3	Development Densities in Open Space Areas. Any use of or development on lands designated on the General Plan Diagram or by the Moraga Open Space Ordinance as 'Public Open Space-Study' or 'Private Open Space' (now designated as MOSO Open Space in the General Plan Diagram) shall be limited to a maximum density of one (1) dwelling unit per twenty (20), ten (10), or five (5) acres, but in no case shall density on such lands exceed one (1) dwelling unit per five (5) acres. Areas identified as 'High Risk' areas, as defined by the Moraga Open Space Ordinance, shall be limited to a maximum density of one (1) dwelling unit per twenty (20) acres. Transfers of Development Rights (referred to as 'Density Transfer' as in MOSO) from any open space designation to other lands dwelling units be transferred to another open space designation or to 'High Risk' areas. The Town Council shall identify 'High Risk' areas after taking into account soil stability, history of soil slippage, slope grade, accessibility, and drainage conditions.
	OS1.4	Private Ownership and Use of Open Space Areas. Areas designated on the General Plan Diagram as MOSO Open Space or Non-MOSO Open Space may be retained in private ownership, may be used for such purposes as are found to be compatible with the corresponding open space designation and may or may not be accessible to the general public.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Open Space and Conservation Element (cont.)		
Open Space Preservation Policies (cont.)	OS1.5	Development on Slopes and Ridgelines in Open Space Lands. In MOSO Open Space, development shall be prohibited on slopes with grades of twenty percent (20%) or greater and on the crests of minor ridgelines. The Town Council shall reduce the allowable densities on slopes of less than twenty percent (20%) through appropriate means such as requiring proportionally larger lot sizes or other appropriate siting limitations. For the purposes of this paragraph the term 'minor ridgeline' means any ridgeline, including lateral ridges, with an elevation greater than 800 feet above mean sea level, other than a major ridgeline.
	OS1.8	Open Space Access and Recreational Use. Where appropriate and consistent with other General Plan goals and policies, areas with a MOSO Open Space or Non-MOSO Open Space designation on the General Plan Diagram should be made available to the public for recreational use.
Environmental Quality Goal	OS2	Environmental quality in the future that is as good or better than today.
Environmental Quality Goals	OS2.1	Protection of Wildlife Areas. Prohibit development in locations where it will have a significantly adverse effect on wildlife areas. When development is permitted in the vicinity of wildlife areas, require implementation of appropriate mitigation measures to reduce any adverse impact upon the wildlife.
	OS2.2	Preservation of Riparian Environments. Preserve creeks, streams and other waterways in their natural state whenever possible.
	OS2.3	Natural Carrying Capacity. Require that land development be consistent with the natural carrying capacity of creeks, streams and other waterways to preserve their natural environment.
	OS2.4	Areas of Natural Significance. Preserve and protect, insofar as possible, areas that are recognized as having natural significance. These areas include but are not limited to: a) The Lake LaSalle area for its scenic value and wildlife habitat. b) Flicker Ridge for its significant contribution to the wildlife of the area and because it represents a unique knob-cone pine forest. c) Remaining laguna environment of Laguna de los Palos Colorados.
	OS2.5	Wildlife Corridors. To the extent possible, connect open space areas so that wildlife can have free movement through the area, bypass urban areas and have proper access to adjacent regional parks and related open space systems.
	OS2.8	Tree Preservation. Preserve and protect trees wherever they are located in the community as they contribute to the beauty and environmental quality of the Town.
	OS2.9	Tree-covered Areas. Preserve or substantially maintain in their present form certain tree-covered areas, especially with respect to their value as wildlife habitats, even if development in those areas is permitted. Give preference to the retention of original growth over replanting. These areas include, but are not limited to: d) Mulholland Hill (both northeast and southwest slopes) e) Indian Ridge f) Bollinger Canyon g) Sanders Ranch properties h) St. Mary's Road northeast of Bollinger Canyon Road i) The "Black Forest" area located northerly of the terminus of Camino Ricardo j) Coyote Gulch west of St. Mary's Road, to the north k) Wooded area to the east and south of St. Mary's Gardens l) Wooded area behind Donald Rheem School m) Wooded area on the ridge south of Sanders Drive.
	OS2.11	Recycling and Source Reduction. Enhance the long-term viability of natural resources and reduce the volume of material sent to solid waste sites by continuing source reduction and recycling programs, encouraging participation of all residents and businesses.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Open Space and Conservation Element (cont.)		
Water Quality and Conservation Goal	OS3	Protection of water resources through protection of underground water aquifers and recharge areas; maintenance of watercourses in their natural condition; and efficient water use.
Water Quality and Conservation Policies	OS3.2	Polluting Materials. Prohibit the accumulation and dumping of trash, garbage, vehicle lubricant wastes and other materials that might cause pollution.
	OS3.5	Watercourse Preservation. Whenever possible, preserve and protect natural watercourse areas that will reflect a replica of flora and fauna of early historical conditions.
	OS3.7	Water Conservation Measures. Encourage water conservation in new building construction and retrofits, through measures such as low-flow toilets and drought tolerant landscaping.
	OS3.9	East Bay MUD Lands. Encourage the preservation of East Bay Municipal Utility District Lands for watershed use.
Air Quality Goal	OS4	Preservation and maintenance of air quality.
Air Quality Policies	OS4.1	Development Design. Conserve air quality and minimize direct and indirect emissions of air contaminants through the design and construction of new development. For example, direct emissions may be reduced through energy conserving construction that minimizes space heating, while indirect emissions may be reduced through uses and development patterns that reduce motor vehicle trips generated by the project.
	OS4.4	Landscaping to Reduce Air Quality Impacts. Encourage the use of vegetative buffers along roads to assist in pollutant dispersion.
Energy Conservation Goal	OS 5	Lower levels of energy consumption and use of more environmentally friendly energy alternatives.
Energy Conservation Policies	OS5.1	Building Standards. Require that all new buildings and additions be in compliance with the energy efficiency standards of the California Building Standards Code (Title 24, California Code of Regulations).
	OS5.2	Energy Conservation Measures. Encourage energy conservation in new construction and through retrofitting of existing buildings, utilizing passive solar design, use of alternative energy systems, solar space and water heating, adequate insulation, and other measures where feasible and cost effective.
Noise Goal	OS6	A peaceful and tranquil community.
Noise Policies	OS6.1	Acoustical Standards. Develop acoustical standards that properly reflect acceptable sound emission levels.
	OS6.2	Noise Levels. Ensure that noise from all sources is maintained at levels that will not adversely affect adjacent properties or the community, especially during evening and early morning hours. Reasonable exceptions may be made in the interest of public safety.
	OS6.3	Noise Sensitive Uses. Locate uses where they will be most acoustically compatible with elements of the man-made and natural environment.
	OS6.4	Noise Impacts of New Development. Ensure that new development will not raise noise levels above acceptable levels on the Town's arterials and major local streets.
	OS6.6	Temporary Noise Sources. Permit temporary noise generating activities such as construction only for the shortest reasonable duration and in locations that will have the least possible adverse effect.
	OS6.7	Vehicle Noise. Require that vehicles, including those used for recreational purposes, be used in such a manner that they will not intrude on the peace and quiet of residential areas. Reasonable exceptions may be made in the interest of public safety.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Public Safety Element		
General Public Safety Goal	PS1	A semi-rural environment that is relatively free from hazards and as safe as practicable
General Public Safety Policies	PS1.1	Assessment of Risk. Include an environmental assessment of natural hazard risks in development proposals to permit an adequate understanding of those risks and the possible consequent public costs in order to achieve a level of 'acceptable risk.' Public costs should be expressed in terms of effect on life and property.
	PS1.3	High Risk Areas. Prohibit development in 'high risk' areas, which are defined as being (1) upon active or inactive slides, (2) within 100 feet of active slides, as defined in Figure 4 of the Safety Element Appendix, or (3) at the base of the centerline of a swale, as shown on the Town's Development Capability Map.
	PS1.4	Moderate Risk Areas. Avoid building in 'moderate risk'areas, which are defined as being (1) those areas within 100 yards of an active or inactive landslide, as defined by the Town's Landslide Map, or (2) upon a body of colluvium, as shown in Figure 2 of the Public Safety Element background information. Where it is not possible to avoid building in such areas entirely, due to parcel size and configuration, limit development accordingly through density regulations, subdivision designs that cluster structures in the most stable portions of the subdivision, site designs that locate structures in the most stable portion of the parcel, and specific requirements for site engineering, road design, and drainage control.
	PS1.5	Control of Nuisances and Unsafe Conditions. Identify any structures and conditions that are unsafe or constitute nuisances, and take measures to make them conform to appropriate safety codes or remove them.
	PS1.8	Hazardous Wastes. Require permits in accordance with State and Federal regulations any time that hazardous materials are proposed to be transmitted into, out of, or through the Town.
Police and Emergency Services Goal	PS2	A community environment that is free from crime and prepared for any potential disaster.
Police and Emergency Services Policies	PS2.1	Police Services. Provide police services to maintain the peace, respond to localized emergencies and calls for service, and undertake crime prevention within the Town.
Fire Safety and Emergency Services Goal	PS3	A high level of fire and life safety.
Fire Safety and Emergency Services Policies	PS3.3	Response Times. Provide a maximum emergency response driving time of 3 minutes and/or a travel distance of not more than 1.5 miles for response vehicles from the closest fire station to arrive and effectively control fires and respond to medical and other emergencies in the community.
	PS3.4	Fire Flows. Deploy the fire-fighting forces of the Moraga-Orinda Fire District to deliver a minimum fire flow in accordance with the adopted standards of the Moraga-Orinda Fire District. Major fires requiring fire flows in excess of the adopted standards will exceed the initial fire attack capability of local fire-fighting forces and structures involved in such fires are expected to incur major fire damage unless protected by fire resistive interiors and fire sprinkler systems.
	PS3.5	Development Review for Emergency Response Needs. Evaluate new development proposals to ascertain and mitigate problems associated with emergency response needs
	PS3.6	Fire Vehicle Access. Provide access for fire-fighting vehicles to all new developments in accordance with fire access standards of the Moraga-Orinda Fire District and Town of Moraga Ordinances.
	PS3.8	Fire Safety Devices in Buildings. Require the installation of appropriate fire safety devices in all structures at the time of original construction, additions, or remodeling, in accordance with adopted building codes and standards.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Public Safety Element (cont.)		
Fire Safety and Emergency Services Policies (cont.)	PS3-10	Fire Protection Systems. Cooperate with the Moraga- Orinda Fire District to enforce requirements for built-in fire protection systems as required by ordinance, including specialized built-in fire protection systems that may be required based upon building size, use or location.
	PS3.12	Hazardous Fire Areas. Apply special fire protection standards to all new developments in hillside, open space, and wildland interface areas. Fire prevention measures such as removal of dry grass and brush, landscaping with fire and drought-resistant vegetation, provision of adequate water supplies and access for fire-fighting vehicles shall be required to reduce the risk of wildland fires. All new structures located in hazardous fire areas shall be constructed with fire resistant exterior materials consistent with applicable building codes and standards.
	PS3.13	Dry Grass and Brush Control. Require that all properties be maintained so as to preclude the existence of dry grass and brush that would permit the spread of fire from one property to another. Encourage preventive measures by homeowners to reduce fire risks.
	PS3.14	Fire Retardant Roofing. Require fire retardant roofing of Class B or better in all new construction and when replacing roofs on existing structures.
Seismic and Geologic Hazards Goal	PS4	Minimize risk to lives and property due to earthquakes and other geologic hazards.
Seismic and Geologic Hazards Policies	PS4.1	Development in Geologic Hazard Areas. Prohibit development in geologically hazardous areas, such as slide areas or near known fault lines, until appropriate technical evaluation of qualified independent professional geologists, soils engineers and structural engineers is completed to the Town's satisfaction. Allow development only where and to the extent that the geologic hazards have been eliminated, corrected or mitigated to acceptable levels.
	PS4.2	Development Review for Geologic Hazards. Require development proposals to address geologic hazards, including but not limited to landslide, surface instability, erosion, shrink-swell (expansiveness) and seismically active faults. Technical reports addressing the geologic hazards of the site shall be prepared by an independent licensed soil engineer, geologist and/or structural engineer, approved by the Town and at the expense of the developer. All technical reports shall be reviewed by the Town and found to be complete prior to approval of a development plan.
	PS4.5	Public Facilities and Utilities in Landslide Areas. Prohibit the financing and construction of public facilities or utilities in potential landslide areas.
	PS4.6	Construction Standards. Ensure that all new construction and applicable remodeling/reconstruction projects are built to established standards with respect to seismic and geologic safety.
	PS4.7	Construction Oversight. Adopt and follow procedures to ensure that the recommendations of the project engineer and the design and mitigating measures incorporated in approved plans are followed through the construction phase.
	PS4.9	Water Storage Reservoirs. Permit properly designed storage reservoirs for domestic water supply only in those locations that will pose no hazard to neighboring development.
	PS4.10	Grading. Grading for any purpose whatsoever may be permitted only in accordance with an approved development plan that is found to be geologically safe and aesthetically consistent with the Town's Design Guidelines. Land with a predevelopment average slope of 25% or greater within the development area shall not be graded except at the specific direction of the Town Council and only where it can be shown that a minimum amount of grading is proposed in the spirit of, and not incompatible with, the intention and purpose of all other policies of the General Plan. The Town shall develop an average slope limit beyond which grading shall be prohibited unless grading is required for landslide repair or slope stabilization.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Public Safety Element (cont.)		
Seismic and Geologic Hazards Policies (cont.)	PS4.11	Retaining Walls. Discourage the use of retaining walls and other man-made grading features to mitigate geologic hazards, permitting them only when: Required to decrease the possibility of personal injury or property damage; Designed to blend with the natural terrain and avoid an artificial or structural appearance; Appropriately screened by landscaping; Designed to avoid creating a tunnel effect along roadways and to ensure unrestricted views for vehicular and pedestrian safety; and Designed to ensure minimal public and/or private maintenance costs.
	PS4.12	Maintenance of Hillside Areas. Facilitate successful long-term maintenance of hillside areas held as common open space.
Flooding and Streambank Erosion Goal	PS5	Minimal risk to lives and property due to flooding and streambank erosion.
	PS5.3	New Structures in Flood Hazard Areas. Avoid placing new structures within potentially hazardous areas along stream courses.
	PS5.5	Streambank Erosion and Flooding Potential. Reduce the potential for future streambank erosion and flooding by requiring appropriate mitigation measures.
	PS5.6	On-site Storm Water Retention. Require on-site storm water retention for new developments.
	PS5.7	Flood Control. Utilize flood control measures where appropriate to avoid damage to sensitive and critical slope areas, coordinating with the County Flood Control and Water Conservation District to evaluate watersheds and design flood control projects.
Facilities Element		
Parks and Recreation Goal	FS3	Parks and recreational facilities that respond to community needs and priorities and are consistent with Town resources.
Parks and Recreation Policies	FS3.9	Land Management. Manage parks, open space lands and trails in accordance with recognized land management principles.
	FS3.20	Trails Master Plan. Implement the Moraga Trails Master Plan through ownership and easements to establish and maintain a comprehensive trails network in the Town. Adjust the plan as necessary to take advantage of any new trail opportunities that may arise.
	FS3.22	Regional Trail System. Encourage and cooperate with other jurisdictions and agencies to develop and maintain a unified regional trail system, including hiking, biking and equestrian trails. Support development of regional trail projects such as the Bay Ridge Trail.
Growth Management Element		
Growth Mgmt Goals	GM1	Maintenance of approved Performance Standards for Town facilities, services and infrastructure.
Growth Mgmt Policies	GM1.4	Traffic Service Standards. Establish the LOS standard for all Moraga roads, urban and suburban, as a 'high C' (0.75 to 0.79 vehicle to capacity ratio).
	GM1.5	Other Performance Standards. Establish the following performance standards for other Town facilities, services and infrastructure. These standards pertain to the development review process and should not be construed as applying to existing developed lands. Proposed developments must include mitigation measures to assure that these standards or their equivalent are maintained. Modifications to these standards may be accomplished by a resolution of the Town Council. *Parks*. Five acres of parkland per 1000 residents. *Fire*. A fire station within 1.5 miles of all residential and nonresidential development in the Town, in the absence of appropriate mitigation measures.

TABLE D-3 (Continued)
TOWN OF MORAGA – GENERAL PLAN POLICIES

Element	Goals/Policies	
Growth Management Element (cont.)		
Growth Mgmt Policies (cont.)	GM1.5 (cont.)	*Police*. Maintain a three-minute response time for all life threatening calls and those involving criminal misconduct. Maintain a seven-minute response time for the majority of non-emergency calls. *Sanitary Facilities*. The capacity to transport and treat residential and non-residential wastewater as indicated by the Central Contra Costa Sanitary District. *Water*. The capacity to provide sufficient water to all residents and businesses in the Town as indicated by the East Bay Municipal Utility District. *Flood Control*. Containment of the 100-year flood event (as determined by FEMA) by the flood control/drainage system.
XI- Action Plan (Included below is a selection of programs that put the General Plan's relevant goals and policies into action.)		
L. Intergovernmental Coordination		Coordinate with other relevant jurisdictions and agencies to address issues of mutual concern. Specific programs of intergovernmental coordination should include the following: *IP-L12* **Coordination with Utility Providers** Work collaboratively with utility service providers to support ongoing utility provision, maintenance and service improvements. Also, work with the East Bay Municipal Utility District (EBMUD) to preserve and protect watershed lands adjacent to the Town.

SOURCE: Town of Moraga General Plan, 2002.

TABLE D-4
CITY OF OAKLAND – GENERAL PLAN POLICIES

Element	Policy	
Land Use and Transportation Element		
Objective	T1.8	The City should make efforts to re-route truck traffic away from neighborhoods, wherever possible, and enforce truck route controls.
Objective	N12	Providing Adequate infrastructure to meet the needs of Oakland's growing community
Policy	N12.1	The development of public facilities and staffing of safety-related services, such as fire stations, should be sequenced and timed to provide a balance between land use and population growth, and public services at all times
Open Space, Conservation, and Recreation Plan		
Open Space Element	OS-10.2	Minimizing Adverse Visual Impacts. Encourage site planning for new development which minimizes adverse visual impacts and takes advantage of opportunities for new vistas and scenic enhancement.
Conservation Element- Earth Resources	Objective CO-1	Soil Conservation. To protect and preserve soil as a resource for healthy plant, animal and human life.
Policy	CO-1.1	Soil Loss in New Development: Regulate development in a manner which protects soil from degradation and misuse or other activities which significantly reduce its ability to support plant and animal life. Design all construction to ensure that soil is well secured so that unnecessary erosion, siltation of streams, and sedimentation of water bodies does not occur.
Action	CO-1.1.1	Soil Related Development Controls. Maintain, enforce, and periodically review development controls affecting soil removal, including the Grading Ordinance and the Sedimentation and Erosion Control Ordinance.
Conservation Element – Water Resources	Objective CO-4	Water Supply. To maintain a water supply sufficient to meet local needs while minimizing the need to develop new water supply facilities.
Policy	C0-4.1	Water Conservation. Emphasize water conservation and recycling strategies in efforts to meet future demand.
Action	Co-4.1.1	Implementation of Urban Water Management Plan. Issue Administrative instructions to implement the water conservation strategies and programs outlined in the 1991 EBMUD UWMP at the local level. Develop a strategy to reduce the City's water consumption by 20% by the year 2005.
Policy	CO-6.1	Creek Management. Protect Oakland's remaining natural creek segments by retaining creek vegetation, maintaining creek setbacks, and controlling bank erosion. Design future flood control projects to preserve the natural character of creeks and incorporate provisions for public access, including trails, where feasible. Strongly discourage projects which bury creeks or divert them into concrete channels.
Conservation Element- Plant and Animal Resources	Objective CO-7	Protection of Native Plant Communities.
Policy	CO-7.1	Protection of Native Plant Communities. Protect native plant communities, especially oak woodlands, redwood forests, native perennial grasslands, and riparian woodlands, from the potential adverse impacts of development. Manage development in a way which prevents or mitigates adverse impacts to these communities.
Policy	Co-7.4	Tree Removal. Discourage the removal of large trees on already developed sites unless removal is required for biological, public safety, or public works reasons.
Objective	CO-9	Rate, Endangered and Threatened Species
Policy	CO-9.1	Habitat Protection. Protect rare, endangered, and threatened species by conserving and enhancing their habitat and requiring mitigation of potential adverse impacts when development occurs within habitat areas.
Conservation Element- Air Resources	Objective CO-12	To improve air quality in Oakland and the surrounding Bay Region.

TABLE D-4 (Continued)
CITY OF OAKLAND – GENERAL PLAN POLICIES

Element	Policy	
Open Space, Conservation, and Recreation Plan (cont.)		
Policy	CO-12.6	Control of Dust Emissions. Require Construction, demolition and grading practices which minimize dust emissions
Conservation Element	CO-13	Energy Resources. To manage Oakland's energy resources as efficiently as possible, reduce consumption of non-renewable resources, and develop energy resources which reduce dependency on fossil fuels.
Policy	CO-13.3	Construction Methods and Materials. Encourage the use of energy-efficient construction and building materials. Encourage site plans for new development which maximize energy efficiency.
Noise Element		
Policy	1	Ensure the compatibility of existing, and especially, of proposed development projects not only with neighboring land uses but also with their surrounding noise environment.
Action	1.1	Use the noise-land use compatibility matrix (reference Figure 6 in the Noise Element) in conjunction with the noise contour maps to evaluate the acceptability of residential and other proposed land uses and also the need for any mitigation or abatement measures to achieve the desired degree of acceptability.
	1.2	Continue using the City's zoning regulations and permit to limit the hours of operation of noise-producing activities which create conflicts with residential uses and to attach noise-abatement requirements to such activities.
Policy	2	Protect the noise environment by controlling the generation of noise by both stationary and mobile noise sources.
Policy	3	Reduce the community's exposure to noise by minimizing the noise levels that are received by Oakland residents and others in the City. (This policy addresses the reception of noise whereas Policy 2 addresses the generation of noise.)
Safety Element		
Geologic Hazard Policy	GE-4	Work to reduce potential damage from earthquakes to "lifeline" utility and transportation systems.
Action	GE-4.2	As knowledge about the mitigation of geologic hazards increases, encourage public and private utility providers to develop additional measures to further strengthen utility systems against damage from earthquakes, and review and comment on proposed mitigation measures.
Fire Hazard Policy	FI-1	Maintain and enhance the city's capacity for emergency response, fire prevention, and fire fighting.
Action	FI-1.7	Along with the East Bay Municipal Utility District, review the extent to which recommendations from the district's 1994 infrastructure policy study on needed improvements to the water distribution system were implemented.
Action	FI-3.4	Along with EBMUD, review the extent to which recommendations from the utility's district's 1993 study on its preparation and response to the 1991 firestorm were implemented.
Hazardous Materials Policy	2	Minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials
	HM 2-.4	Ensure implementation of policies and actions in the land use and transportation element designed to integrate land use and transportation planning and to promote alternative transportation options; and policies in the open space, conservation and recreation element designed to encourage transportation alternatives and land use patterns that reduce automobile dependence.
HM Policy	HM-3	Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the city's capacity to respond to such incidents.
	HM-3.1	Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider establishing time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

TABLE D-4 (Continued)
CITY OF OAKLAND – GENERAL PLAN POLICIES

Element	Policy	
Safety Element (cont.)		
Flood Hazards Action	FL-1.3	Comply with all applicable performance standards pursuant to the 2003 Alameda countywide National Pollutant Discharge Elimination System municipal stormwater permit that seek to manage increases in stormwater runoff flows from new development and redevelopment construction projects.
	FL1.4	Continue to enforce the grading, erosion and sedimentation ordinance by prohibiting the discharge of concentrated stormwater flows by other than approved methods.
	FL-1.5	Continue to enforce provisions under the creek protection, water management and discharge control ordinance designed to keep watercourses free of obstructions and protect drainage facilities.

SOURCE: City of Oakland General Plan, Land Use and Transportation Element (1998), Safety Element (2004), Noise Element (2005), and OSCAR Element (2004).

TABLE D-5
CITY OF ORINDA – GENERAL PLAN POLICIES

Element	Policy	
2.1 - Land Use Element		
Guiding Policies	2.1.1.A.	Maintain the semi-rural character of Orinda
	2.1.1.B.	Maintain the dominance of wooded and open ridges and hillsides
	2.1.5.C.3	The East Bay Municipal Utility District Land may be the subject of a separate development plan if and when such property is not to be used for utility purposes. At such time, uses on this property shall be limited to recreation, open space; "affordable" multi-family housing or other uses as may be approved by the City, subject to approval of a plan for the site, and appropriate environmental review.
2.2 - Open Space, Parks, Schools, and Utilities Element		
Guiding Policies	2.2.1.A.	Support preservation of EBMUD watershed lands
	2.2.1.C	Retain steep or unstable slopes as open space
	2.2.1.D.	Retain creeks and wildlife access corridors as open space for preservation of natural resources, consistent with flooding control.
	2.2.1.E.	Retain existing private and public recreational open space, and acquire additional land for public park development to meet the needs for all sectors of Orinda and all age groups in the community. A minimum of five acres of land for each 1,000 city residents should be devoted to public park and recreational purposes but more may be needed.
	2.2.1.G.	Preserve a nature study area at Wagner Ranch School
Guiding Policies	2.2.4.B.	Seek cooperation of PG&E and EBMUD in managing landholdings to maximize community benefit and visual attractiveness, consistent with utility needs.
2.3 – Circulation Element		
Guiding Policies	2.3.1.C	Strive to retain the existing peak hour level of service (LOS) of "C" or better at those intersections where is now prevails and improve the LOS at all other intersections.
	2.3.1.G.	It is the goal of the City of Orinda to preserve and retain, in the most natural condition possible, scenic vehicular entryways, routes, and corridors in the community.
Implementing Policies	2.3.2.A.	Consider requiring transportation management system measures that may include carpooling, shuttle buses or staggered work hours to reduce traffic impacts where appropriate.
	2.3.2.P.	The following routes are designated Scenic Corridors on the General Plan: 1. Moraga Way from its intersection with Camino Pablo south to the City limits; 2. Camino Pablo from its intersection with Santa Maria Way north to the City limits; 3. Highway 24, designated as a California Scenic Highway within Orinda City Limits.
	2.3.2.Q.	Special care shall be taken to provide a well landscaped and open feeling along Scenic Corridors, especially at the entrance to the City, utilizing such techniques as generous landscaped setbacks and open space acquisition, where appropriate.
	2.3.2.R.	Any proposed development or subdivision along a Scenic Corridor or Scenic Highway shall be designed to blend with and permit the natural environment to be maintained as the dominate visual element. It shall not lessen the scenic value of existing visual elements.
	2.3.2.S.	Where structures are permitted, they shall be designed to blend in and permit the natural environment to be maintained as the dominant visual element.
	2.3.2.T.	Because Highway 24 is a freeway that bisects Orinda, it merits special consideration to maintain its integrity as a California Scenic Highway as it passes through Orinda.
4.1 - Conservation Element		
Guiding Policies	4.1.1.A.	Preserve Orinda's historic structures and sites, unique trees and landforms.
	4.1.1.B.	Preserve rare and endangered species.

TABLE D-5 (Continued)
CITY OF ORINDA – GENERAL PLAN POLICIES

Element	Policy	
4.1 - Conservation Element (cont.)		
Guiding Policies (cont.)	4.1.1.C.	Preserve valuable wildlife habitats, particularly riparian habitats.
	4.1.1.D.	Preserve oak woodlands and other native trees, and encourage planting and reforesting of oaks and other natives in hillside areas.
	4.1.1.E.	Protect creeks from siltation, pollution, and debris buildup to minimize the danger of flooding in storms, to retain the aesthetic and habitat values of the creeks in their natural state, and enhance and restore them where possible. Prohibit major channelization.
	4.1.1.F.	Achieve aesthetically sensitive grading that conforms to the natural contours, ensures safety and preserves trees and other vegetation to the greatest practical extent.
	4.1.1.G.	Protect visually prominent ridgelines and hillsides from development.
	4.1.1.H.	Protect San Pablo Reservoir and Briones Reservoir from pollution and siltation resulting from development within the Planning Area.
	4.1.1.J.	Open space to the north and west of the Planning Area adjacent to watershed areas and parks shall be preserved.
	4.1.1.L.	Promote energy conservation programs and practices.
	4.1.1.M.	Encourage preservation of EBMUD land for watershed and recreation use.
	4.1.1.N.	Encourage under grounding of power lines and replacement of utility towers with single poles.
Implementing Policies	4.1.2.A.	Conduct an archival study of resources, map the general locations of resources, and review development proposals to determine the potential impacts on archaeological and historic resources and the need for more detailed study. Require additional study of development proposals on sites with moderate probability that such resources exist.
	4.1.2.B.	Adopt a Landmarks Preservation Ordinance to protect structures, sites and areas having a special historical, architectural, natural, or aesthetic interest or value.
	4.1.2.C.	Require environmental habitat assessment for any major development determined to be in an environmentally sensitive area. The assessment will include an on-site inspection, and a written description of any habitats, plant and animal species observed, species likely to be present, likely impacts of the proposed project, and mitigation measures which will preserve the habitats.
	4.1.2.E.	Preserve drainage easements along creeks in order to protect adjacent buildings from flooding, and to preserve valuable riparian vegetation. Where riparian vegetation has to be disturbed for construction, revegetation with local riparian species is required. The City shall develop design Policies for development near creeks.
	4.1.2.H	Review development proposals to ensure site design and construction methods that minimize soil erosion and volume and velocity of surface runoff, and mitigate impacts on properties below. Soil erosion can result in siltation of creeks and eventual siltation in San Pablo Reservoir. Erosion can be controlled by limiting surface runoff, minimizing exposure of raw soil during storm season, early mulching and seeding of slopes, and temporary or permanent siltation ponds. Stream bank erosion can be prevented using upstream detention basins and siltation basins.
	4.1.2.I.	Limit development in the proximity of reservoirs to prevent siltation and water contamination.
	4.1.2.J.	Encourage the conservation of energy through the promotion of solar design, and recycling of newspaper, aluminum and bottles. Provisions should be made to allow for a conveniently located and screened recycling area in the downtown.

TABLE D-5 (Continued)
CITY OF ORINDA – GENERAL PLAN POLICIES

Element	Policy	
4.2 – Safety Element		
Guiding Policies	4.2.1.A.	Geologic and seismic hazards shall be mitigated or development shall be located away from geologic and seismic hazards in order to preserve life and protect property.
	4.2.1.D.	Provide public protection from hazards associated with the use, storage and transportation of hazardous materials.
Implementing Policies	4.2.2.A.	A geotechnical investigation and report, including assessments of seismic and landslide risks shall be required for new development in Orinda, including single-family residences unless exempted by the City of Orinda. Any other facility that could create a geologic hazard, such as a road on hillside terrain, must also have such an investigation.
	4.2.2.B.	Evidence of probable geologic hazard will require a geotechnical study by a registered soil engineer or registered geologist to be reviewed by geotechnical consultants selected by the City.
	4.2.2.I.	Reduce the level of risk from toxic and hazardous materials in Orinda by regulating the transportation and storage of these materials into, and out of Orinda, and through an educational program on the proper disposal methods for hazardous, toxic and polluting materials.
	4.2.2.N.	Cooperate with other agencies to assure adequate medical and other emergency services.
4.3 – Noise Element		
Guiding Policies	4.3.1.A.	Where practical, mitigate traffic noise to acceptable levels.
	4.3.1.B.	Prevent unnecessary noise from all sources.
Implementing Policies	4.3.2.C.	Develop ordinance to limit noise created by temporary activities such as building construction to the shortest duration possible, and to daytime hours whenever possible. All reasonable noise mitigation measures would be used.

SOURCE: City of Orinda General Plan, 1989. Last Amended 11-15-94

TABLE D-6
CITY OF WALNUT CREEK – GENERAL PLAN POLICIES

Element	Policy	
Quality of Life Element		
Neighborhoods and Residential Areas	Goal 1	Protect and enhance the quality of life in the city's residential neighborhoods.
Neighborhoods and Residential Areas	Policy 1.1	Protect and enhance the distinctive characteristics of each neighborhood.
Neighborhoods and Residential Areas	Policy 1.4	Require that development is compatible with surrounding uses.
Natural Environment and Public Space Element		
Open Space	Goal 1	Maintain and enhance open space lands.
Open Space	Policy 1.1	Protect, manage and improve open space lands.
Open Space	Action 1.1.2	Work with other public agencies (such as water districts, adjacent cities, and park districts) in managing, operating, linking and providing access to open space.
Open Space	Policy 1.2	Protect and enhance the natural environment.
Open Space	Action 1.2.1	Identify, protect, restore, and enhance sensitive biological and wetland resources and areas critical for habitat and habitat connectivity.
Open Space	Action 1.2.2	Strive to eliminate non-native plant species and expand areas with native plants.
Open Space	Policy 1.3	Promote a variety of appropriate activities on open space lands.
Open Space	Action 1.3.2	Allow on open space lands, only facilities, structures, and activities compatible with conservation, preservation, and education.
Open Space	Policy 2.4	As development projects arise, strive to preserve existing private open space lands under private ownership, and to provide public access to these private open spaces.
Creeks	Goal 3	Maintain and enhance the area's creek systems, their riparian environments, and their recreational amenities.
Creeks	Policy 3.1	Restore riparian corridors and waterways throughout the city.
Trails	Goal 4	Provide a system of safe, well-developed, well connected, and well maintained trails.
Trails	Policy 4.1	Plan for a full complement of interconnected trails and paths for walkers, joggers, bicyclists, and equestrians, from the regional trails to downtown trails and paths.
Trails	Action 4.1.1	Work with the County, the East Bay Regional Park District, and other agencies to develop trail links between residential areas and parks, creeks, transportation, schools, open space, shopping, and various public facilities.
Trails	Action 4.1.2	Link adjacent urban or open space trails and nearby open spaces owned by various agencies.
Trails	Policy 4.2	Maintain and improve the trails system, including to and within the open space lands.
Trails	Action 4.2.1	Provide consistent, clear signage for all trails and at all trailheads.
Built Environment Element		
Archaeological Resources	Goal 24	Protect and conserve archaeological and paleontological resources.
Archaeological Resources	Policy 24.1	Review the potential for the presence of archaeological and paleontological resources and remains in or near identified archaeological sites.

TABLE D-6 (Continued)
CITY OF WALNUT CREEK – GENERAL PLAN POLICIES

Element	Policy	
Built Environment Element (cont.)		
Archaeological Resources	Action 24.1.1	Require (a) review by the California Archaeological Inventory, Northeast Information Center, Sonoma State University, of all major new projects and all projects of any size within 660 feet of a site identified on the City's map of sensitive archaeological sites and (b) add appropriate mitigations as conditions of project approval as may be recommended by the California Archaeological Inventory.
Archaeological Resources	Action 24.1.2	Require developers to halt all work if cultural resources are encountered during a project, and to retain a qualified archaeologist to evaluate and make recommendations for conservation and mitigation.
Historical Resources	Goal 25	Maintain and enhance Walnut Creek's historic resources.
Historical Resources	Policy 25.1	Foster the preservation, restoration, and compatible reuse of historically significant structures and sites.
Protecting Nature in Development	Policy 26.1	"Preserve Open Space/ Agricultural Lands, as defined in this Ordinance"[1] by: (1) "prohibiting Development on existing slopes with grades of twenty percent (20%) or greater, or within 75 vertical feet of any Ridgeline, or within the area surrounding any Native Tree for a distance of one and one-half times the distance from the trunk to the drip-line, which slopes and areas shall be preserved in their natural state; (2) limiting Development to detached, single-family residential housing and normal appurtenances, with a maximum density of one (1) dwelling unit per ten (10) acres; (3) requiring that any permitted Development be located and constructed in such a manner as to prevent visual impacts on scenic vistas and existing neighborhoods; and (4) prohibiting the cutting of and damage to any Native Tree."
Protecting Nature in Development	Policy 26.2	Incorporate natural features such as trees, hillsides, and rock outcroppings into new development.
Protecting Nature in Development	Policy 26.3	Preserve and add to the city's tree canopy.
Protecting Nature in Development	Policy 26.4	Protect tree resources on public and private property.
Protecting Nature in Development	Policy 26.5	Protect tree groves (especially oaks) and their understories.
Protecting Nature in Development	Action 26.5.3	Set standards for—and require new developments to have— adequate tree canopy.
Sustainability	Goal 27	Promote "green" development and redevelopment.
Sustainability	Policy 27.1	Encourage resource-efficient building techniques, materials, and technologies in new construction and renovation.
Conservation	Goal 28	Promote energy conservation.
Conservation	Goal 29	Promote water conservation.
Waste Reduction	Action 30.2.7	Require the recycling of construction waste for all City and private projects.
Air and Water Quality	Goal 31	Strive to meet State and federal air-quality standards for the region.
Air and Water Quality	Action 31.3.1	Control emission of dust from construction sites.
Air and Water Quality	Goal 32	Meet or exceed State and federal water-quality standards.
Air and Water Quality	Action 32.1.4	Prohibit development in areas particularly susceptible to erosion and sediment loss.
Air and Water Quality	Action 32.3.1	Reduce the amount of impervious surfaces in new development and redevelopment. (See Safety and Noise Action 2.1.1.)

TABLE D-6 (Continued)
CITY OF WALNUT CREEK – GENERAL PLAN POLICIES

Element	Policy	
Built Environment Element (cont.)		
Air and Water Quality	Action 32.3.2	Require that impervious surfaces not drain directly into storm drains. (See Safety and Noise Action 2.1.1.)
Air and Water Quality	Policy 32.5	Encourage preservation of natural water bodies and drainage systems.
Air and Water Quality	Action 32.5.3	Require participation in offsite or regional programs—including stream restoration—that provide water-quality benefits within the same watershed, wherever development and/or redevelopment projects disturb natural water bodies or drainage systems.
Transportation Element		
Growth Management Standards	Goal 3	Maintain a transportation network that provides mobility for all ages and abilities and for all areas of the community.
Growth Management Standards	Policy 3.1	Maintain the level of service standards for roadways shown in Figure 2 for the City's transportation network.
Growth Management Standards	Action 3.1.1	Except as modified by Chapter 4 Policy 9.2, require that new development meet intersection LOS standards.
Growth Management Standards	Action 3.2.1	Manage and coordinate construction projects to minimize traffic delays.
Neighborhood Traffic and Parking	Goal 4	Protect residential neighborhoods from through-traffic, speeding, and nonresidential parking.
Neighborhood Traffic and Parking	Policy 4.1	Manage arterial and collector traffic to minimize adverse affects on neighborhoods.
Neighborhood Traffic and Parking	Policy 4.2	Discourage through-traffic on local streets and collectors.
Neighborhood Traffic and Parking	Action 4.2.1	Selectively use alternative street designs to discourage through traffic.
Neighborhood Traffic and Parking	Policy 4.3	Prevent encroachment of nonresidential parking in existing neighborhoods.
Walking	Policy 6.3	When utility rights-of-way, drainage, or other corridors are established, obtain dedications of land or easements, where appropriate, for paths that would enhance the pedestrian system.
Safety and Noise Element		
Seismic and Other Geologic Hazards	Goal 1	Protect life and property from geologic hazards.
Seismic and Other Geologic Hazards	Policy 1.1	Reduce the potential effects of seismic and other geologic hazards, including slope instability.
Seismic and Other Geologic Hazards	Action 1.2.5	For development proposals submitted in areas near high or very high liquefaction-susceptibility areas, require a geotechnical evaluation to identify hazard mitigation measures needed to reduce the risk to life and property from liquefaction-induced hazards.
Flooding	Goal 2	Reduce the potential for flooding in flood-prone areas.
Flooding	Policy 2.1	Reduce the risk of property damage and personal injury due to flooding.
Flooding	Action 2.1.1	Limit the amount of impervious surface in flood-prone areas.
Flooding	Action 2.1.2	Limit runoff in flood-prone areas.
Hazardous Materials	Goal 3	Reduce dangers from hazardous materials.
Hazardous Materials	Policy 3.1	Facilitate the proper disposal of hazardous materials.

TABLE D-6 (Continued)
CITY OF WALNUT CREEK – GENERAL PLAN POLICIES

Element	Policy	
Safety and Noise Element (cont.)		
Hazardous Materials	Policy 3.4	Work with federal and state authorities to ensure that any transport of hazardous materials through Walnut Creek is at the highest standard of safety.
Hazardous Materials	Action 3.4.1	Designate hazardous-material carrier routes that direct hazardous materials away from populated and other sensitive areas.
Hazardous Materials	Action 3.4.2	Prohibit hazardous-materials transport vehicles from parking on city streets.
Hazardous Materials	Action 3.4.3	Require, as much as possible, that new pipelines and other channels carrying hazardous materials be placed to avoid residential areas and, in particular, areas where the population is less mobile (e.g., convalescent homes).
Hazardous Materials	Policy 3.5	Require that soils, groundwater, and buildings affected by hazardous-material releases from prior land uses, and lead and asbestos potentially pre-sent in building materials, will not have the potential to adversely affect the environment or the health and safety of residents.
Hazardous Materials	Action 3.5.1	Require an environmental investigation for hazardous materials when reviewing applications for new development in former commercial or industrial areas.
Hazardous Materials	Policy 3.6	Require that new development and redevelopment protect public health and safety from hazardous materials
Hazardous Materials	Action 3.6.1	Require environmental investigations stipulated by State and County regulations for potential hazardous material releases from prior uses, as well as for lead and asbestos present in building materials.
Fire Hazards	Goal 4	Strive to prevent and reduce damage related to fire hazards.
Fire Hazards	Policy 4.1	Regulate projects in high-risk areas.
Fire Hazards	Policy 4.2	Work with the Contra Costa County Fire Protection District to ensure adequate fire response times and address other fire-related issues in the Planning Area.
Fire Hazards	Action 4.2.1	Require that all new development or redevelopment plans be submitted to the Fire District for review.
Fire Hazards	Action 4.2.2	Require greenbelt zones and fire-resistant landscaping and building materials in developments in and on the edges of higher risk areas.
Fire Hazards	Action 4.2.3	Establish minimum road widths and clearances around structures in high, very high, and extreme fire risk areas.
Public Safety	Goal 5	Promote public safety.
Public Safety	Policy 5.5	Seek ways to reduce police service demands through project design enhancements.
Public Safety	Action 5.5.1	Incorporate crime-reduction and public-safety features in the design and planning of private and public projects.
Public Safety	Action 5.5.2	Submit all discretionary permits to the Police Department for analysis of and recommendations to reduce impacts on police services.
Water Supply	Goal 7	Work with the water districts to ensure safe and adequate water supplies for the Planning Area.
Water Supply	Policy 7.1	Work with water agencies to secure water supplies to serve the Planning Area's growing number of residents and employees.
The Urban Noise Environment	Goal 8	Provide compatible noise environments for new development, redevelopment, and condominium conversions.
The Urban Noise Environment	Action 8.2.1	For new single-family residential projects, use a standard of 60 Ldn for exterior noise in private use areas.
The Urban Noise Environment	Action 8.2.2	For new multifamily residential projects and for the residential component of mixed-use development, use a standard of 65 Ldn in outdoor areas, excluding balconies.

TABLE D-6 (Continued)
CITY OF WALNUT CREEK – GENERAL PLAN POLICIES

Element	Policy	
Safety and Noise Element (cont.)		
The Urban Noise Environment	Action 8.2.3	Strive for a maximum interior noise levels at 45 Ldn in all new residential units.
The Urban Noise Environment	Goal 9	Control excessive noise sources in existing development.
The Urban Noise Environment	Action 9.1.1	Require the evaluation of noise mitigation measures for projects that would cause a substantial increase in noise.
The Urban Noise Environment	Action 9.2.2	Control vehicle-related noise.

[1] Measure P, Ord. 1781, 11/5/91, Section 3.f.

SOURCE: City of Walnut Creek General Plan, 2006.

TABLE D-7
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
I- Natural Resource Management Programs		
Water Quality Element	Goal	Maximize reservoir water quality to comply with current and anticipated future drinking water regulations
	Objectives	Maintain the high quality of water stored in District reservoirs
		Ensure that surface runoff from District lands meet state water quality standards
Erosion Control Guidelines	WQ.7	Develop and implement erosion control standards and BMPs to reduce soil erosion, sedimentation, and nutrient impacts throughout the watershed. Standards and BMPs should be adhered to by all staff, contractors, researchers, recreationists, visitors, and others performing construction, maintenance, or other activities on watershed lands.
	WQ.8	Conduct erosion control analysis and planning before initiating construction or other land disturbance activities.
	WQ.11	Prevent construction-related water quality impacts such as erosion from exposed soil and pollutants from equipment.
Recreation, Roads and Trails Guidelines	WQ.27	Evaluate stream crossings with respect to water quality. Identify and implement measures to control sediment, pollutants, or other sources of water quality degradation from entering watercourses.
Buffer Areas Guidelines	WQ.32	Establish buffer zones or setbacks from watershed margins along sensitive urban interface areas to ease the encroaching development pressures on the watershed core and to protect the watershed, tributary streams, and reservoirs. Identify areas that are likely to be developed and consider alternative protection strategies.
	WQ..34	Identify activities adjacent to the developed watershed interface that may affect water quality, such as agriculture, construction, recreation, and rights-of-way. Implement pollution prevention practices (e.g., improving the vegetative buffer between District lands and urban development).
	WQ.35	Protect riparian corridors from direct and indirect water quality impacts. Direct impacts include cattle access, trail crossings, and loss of vegetation. Indirect impacts may include overgrazing, runoff from prescribed burns, animal waste, and runoff from trails and roads.
Reservoirs Guidelines	WQ.37	Stabilize and vegetate shoreline areas and drawdown zones, where necessary and feasible. Use drainage structures, grading, planting, or other site-specific methods to control erosion as needed. Implement BMPs when conducting land-disturbing activities.
Biodiversity Element	Goal	Maintain and enhance biological resource values on District lands through active management and careful coordination with other resource management programs.
	Objectives	Maintain, enhance and where feasible restore plant and animal communities, populations, and species.
		Implement an ecosystem management approach that maintains and enhances natural ecological processes.
		Apply an adaptive management strategy using inventory, management, monitoring, and research.
		Coordinate all resource management programs to ensure that biological resources are protected.
Threatened & Endangered, Special Status Species Guidelines	Bio.1	Enhance habitat for threatened and endangered species as financially feasible.
	Bio.3	Monitor listed species populations and conduct site surveys using monitoring methods identified in the District's *Biological Survey Studies* program (Stebbins 1996).

TABLE D-7 (Continued)
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
I- Natural Resource Management Programs (cont.)		
Habitats and Vegetation Types of High Biological Value Guidelines	Bio.4	Design and control management activities to limit fragmentation of common vegetation types.
	Bio.5	Designate and protect heritage native trees and trees with outstanding characteristics.
	Bio.6	Maintain and, where necessary, enhance habitat suitability for wildlife movement in key corridors.
	Bio.7	Participate in coordinated resource management planning efforts with other local land management agencies to conserve regional biodiversity by maintaining regional movement corridors (e.g., the Caldecott Tunnel corridor) and management of large landscape units. Include a water quality specialist during coordinated resource management planning.
	Bio.8	Identify high-priority sites for habitat restoration based primarily on water quality protection and on the value of restored habitats and location relative to important wildlife use areas and corridors.
	Bio.9	Identify key habitat areas necessary for protection and management of special-status plants and animals. Provide buffer areas to reduce disruption of nesting and roosting areas for raptors, herons, egrets, and other sensitive wildlife species.
	Bio.19	Avoid use of non-native species for erosion control and other re-vegetation that are invasive or that inhibit recovery of native habitats.
Management Coordination Procedures	Bio.21	While planning and implementing resource management actions, apply the following coordination guidelines to meet state and federal legal requirements for threatened and endangered species: • if listed species are likely to be affected, consult with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and • Game (DFG) as required and implement measures required by USFWS and DFG to avoid take and other financially feasible measures to protect other special-status species.
	Bio 22	In conducting management activities, evaluate effects on species (prioritized according to guideline BIO.1) of proposed management activities (e.g., changes to water system operations, watershed management activities, construction of new facilities and public access) according to the following guidelines: • query GIS for information on known occurrences of listed and other special-status species and special communities and general habitat types in the project area, • identify potential species that could be affected by the proposed action based on known species' occurrences, the habitat type within which the project occurs, and the habitats used by the species (see Table 2-3 for habitat occurrences of species), • assess impact occurrence using the District's Biological Survey Studies protocols (Stebbins 1996), and • evaluate project impacts and identify opportunities to avoid, mitigate, or compensate for impacts, including species- and project-specific buffers to protect plant and animal species from adverse effects of management activities; evaluate consistency with other EBWMP direction.
	Bio.24	Ensure that all District projects that directly impinge on blue line streams, as defined under California Fish and Game Code Sections 1601 and 1603, receive appropriate permits from DFG prior to disturbance.
Fire and Fuel Management Element	Goal	Protect human life and property and provide for public safety, and protect and enhance water quality, other natural resources, and watershed land uses.
	Objective	Provide an appropriate level of fire protection for all watershed lands, emphasizing protection of life, public safety, and property values in interface areas.

TABLE D-7 (Continued)
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
Community Use Management Programs		
Developed Recreation and Trails Element	Goal	Continue to provide a high-quality recreational experience to users of watershed lands that does not compromise the District's goals for water quality and watershed management protection. Provide reasonable access routes between watershed lands and adjacent open space areas consistent with all District resource management goals. Provide equal access to recreational opportunities for users from a wide range of socioeconomic backgrounds and physical abilities where feasible and practical. Ensure that the continuation or modification of recreational use creates as little financial burden on the District and its ratepayers as is practical.
	Objectives	Offer recreational experiences that complement and are consistent with the protection of District watershed lands and water bodies. Provide opportunities for reasonable use of natural watershed attributes.
		Ensure a high quality of recreational experience on District lands by reducing user conflicts, promoting safety and courtesy, and controlling overcrowding.
		Promote environmental values in recreational use and management.
		Ensure that currently permitted or new recreational activities do not increase the potential for additional soil erosion, landscape modification, or pollutant loading, or adversely affect other watershed or reservoir resources.
		Where feasible, provide trail links to the surrounding regional open space network that do not conflict with resource protection priorities.
		Give priority to those recreational uses that serve the broadest spectrum of the population while maintaining consistency with water quality, biodiversity, fiscal responsibility, and public safety goals.
Guidelines	DRT.4	Close recreational facilities and trails as needed to protect sensitive wildlife species (e.g., nesting birds), curtail soil erosion, protect water quality, reduce fire hazards, and address other public safety concerns.
Cultural Resources Element	Goal	Avoid adversely affecting sensitive cultural resources while implementing District activities on watershed lands, and establish relationships with local Native American groups.
	Objectives	Identify, preserve, and protect significant cultural resources.
		Maintain an ongoing relationship with Native Americans who have ancestral ties to District lands.
	CR.1	Designate staff contact persons to act as liaisons with the Native American community. The contact persons' roles are to convey to District employees the need to protect the cultural resources of District watershed lands and to determine the appropriate level and timing of further coordination with interested Native Americans.
	CR.2	Negotiate a memorandum of understanding with local Native American groups regarding the disposition of Native American artifacts and remains, should any be discovered.
	CR.4	Identify resources that have a high potential for vandalism and ensure that they are protected.
	CR.5	Avoid disturbing significant cultural resource sites and sites of unknown significance, where feasible. Require fire management and other watershed personnel to protect known cultural resource sites during management activities.
	CR.6	Follow the requirements of CEQA Section 21083.2 when undertaking or approving watershed activities.
	CR.7	Conduct records searches and surveys before beginning ground-disturbing activities.
	CR.8	Maintain an inventory of cultural resources in compliance with applicable laws and regulations, including confidentiality requirements

TABLE D-7 (Continued)
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
Community Use Management Programs (cont.)		
Cultural Resources Element (cont.)	CR.9	Document the procedures to be used if potentially significant cultural resources or human remains are discovered accidentally.
	CR.10	Designate areas that are sensitive because of their potential to contain buried cultural resources and ensure that these areas are monitored during surface-disturbing activities.
	CR.11	If sites cannot be avoided or if the boundaries of a site are unknown, consult a qualified archaeologist (including tribal experts designated by the tribe) for recommendations. Recommendations may include covering or "capping" sites with a protective layer of material, recovering data through research and excavation, performing subsurface testing to determine the extent of a site, and relocating or reconstructing historic structures.
Visual Resources Element		
	Goal	Limit the negative visual effects of District activities on watershed lands by ensuring that valuable and rare visual resources are protected from degradation during other management activities.
	Objectives	Maintain and protect the general character and visual qualities of watershed lands.
		Maintain and protect the visual qualities experienced from reservoir surfaces on which public access is permitted.
		Maintain and protect the visual qualities viewed from specific public use areas, public trails, and public roads within watershed lands.
		Maintain and protect the visual qualities viewed from key public viewpoints located adjacent to District lands.
		Maintain and develop a unified visual quality and unity in structures, signs, and other improvements on watershed lands.
Guidelines	VR.1	Review new land use proposals to ensure that they are consistent with the watershed's visual character, outside of important viewing areas, or screened from important views from reservoir surfaces, shoreline locations, public trails, roads, and key public viewing areas.
	VR.2	Retain viable shoreline vegetation where it occurs on reservoirs.
	VR.4	Develop design standards for all development, including recreational facilities, District buildings, watershed signs, and other physical improvements to reflect a strong, unified visual character. Design standards should specify general architectural character, material types, acceptable colors, structure heights, roof configurations and overhangs, uniform site furnishings (e.g., benches, trash receptacles, bicycle racks, and bollards), and uniform sign treatment. Require all proposed new development to conform to design standards. Retrofit existing development, to the extent feasible, to conform to design standards.
	VR.5	Develop native plant restoration standards and apply these to all development as appropriate. Plant restoration standards should specify the use of natives where available for all site restoration and the replacement of nonnative plant materials with native plant materials to the extent feasible and compatible with fire protection needs. Non-natives may be used where site natives are unavailable for a specific application.
	VR.6	Cluster watershed development and uses to reduce visual intrusions into natural watershed lands and to reduce adverse visual effects on intervening watershed lands.
	VR.9	Coordinate with EBRPD, Alameda and Contra Costa Counties, and other adjacent jurisdictions that have significant open space resources to develop common goals and guidelines for preserving and strengthening the regional visual landscape.

TABLE D-7 (Continued)
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
Watershed Management Area Direction – *San Pablo Reservoir Watershed*		
Management Direction Developed Recreation and Trails (DRT)	SP.23	Maintain the District recreational trail system in the current configuration and with the current use rules and regulations and a permit system.
	SP.24	Develop a Bay Area Ridge Trail connector that crosses District property approximately west and north of San Pablo Reservoir.
	SP.25	Designate the Inspiration Trail and Bear Creek Trail system that crosses south of San Pablo Reservoir as a District-controlled portion of the American Discovery Trail and Mokelumne Coast to Crest Trail. The operation and types of uses permitted on these trails will be consistent with District rules and regulations.
Visual Resources	SP.26	Prohibit management practices, with the exception of the phased elimination of the Monterey pines surrounding the reservoir, or development proposals that would require large-scale modifications to portions of the San Pablo watershed landscape that are highly visible from San Pablo Dam Road, the San Pablo Dam recreation area, Old San Pablo Dam Road, Inspiration Trail, proposed regional trail connectors, and the reservoir surface.
	SP.29	Consider effects on visual quality when proposing watershed management activities in high-priority visual resource areas on Sobrante and San Pablo Ridges.
	SP.30	Formalize visual quality guidelines with EBRPD that emphasize protection of visually sensitive areas on San Pablo Ridge at Tilden Regional Park/Nature Area, Wildcat Canyon Regional Park, and Kennedy Grove Park.
Watershed Management Area Direction – *Lafayette Reservoir Watershed*		
Visual Resources	L.11	Maintain the current visual character of the Lafayette Reservoir watershed by restricting additional recreational development (with the exception of the food service facilities), maintaining and improving existing watershed facilities and signs to reflect a unified recreation area design, and developing a cooperative agreement with the Cities of Orinda and Lafayette to avoid additional development encroachment near the current looped trail system.
	L.12	Use California “site natives” in any supplemental plantings of woody species in the undeveloped areas of the park. Use appropriate District recommended drought-tolerant species in the developed areas. Give highest priority to fire-resistant species.
Management Direction for Interjurisdictional Coordination		
General Management	Objectives	Encourage policy discussions between local jurisdictions to resolve common interface issues, work on revisions to local general plans that address interface issues important to the District, formalize District review and comment on general plan revisions, specific development proposals, and environmental review actions, and promote District participation in overall land use planning and the decision-making processes of adjacent jurisdictions.
		Strengthen the understanding of District staff and staff of adjacent jurisdictions regarding important interface issues.
		Develop mutually agreed-upon interface guidelines that could be incorporated into the planning documents of adjacent jurisdictions, primarily for protection of water quality, emergency response, and fire and fuels management.
Management Guidelines	1	Establish and formalize a central point of contact for adjacent jurisdictions wishing to contact the District and for District contacts to adjacent Jurisdictions, and
	2	Formalize an internal procedure for: • District staff communication with adjacent jurisdictions and • Coordinated staff review and comment on planning actions, development proposals, and environmental review in adjacent jurisdictions.

TABLE D-7 (Continued)
EBMUD WATERSHED MASTER PLAN – APPLICABLE POLICIES AND GUIDELINES

Management Program	Goals/Policies	
Management Direction for Interjursidictional Coordination (cont.)		
Management Guidelines (cont.)	7	Continue coordination with adjacent jurisdictions and participation in coordinated efforts to maintain communication among agencies with water quality interests related to District-owned watershed lands.
East Bay Regional Park District	EB.1	Coordinate with EBRPD on the planning and management of all regional parks that are within or coincident with District reservoir watersheds to address issues pertaining to water quality, wildfire, public encroachment, viewshed, and wildlife movement in the Caldecott Tunnel corridor.

SOURCE: East Bay Municipal Utility District, Watershed Master Plan, 1996.

APPENDIX E

Biological Resources – Special-Status Species

TABLE E-1
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name ***Scientific name***	**Listing Status USFWS/ CDFG/CNPS**	**Habitat Requirements**	**Potential to Occur**	**Period of Identification / Flowering Period**
SPECIES LISTED OR PROPOSED FOR LISTING				
Invertebrates				
Vernal pool fairy shrimp *Branchinecta lynchi*	FT/--	Grassland vernal pools	**Absent**. Suitable habitat not present in project area.	March-April
Bay checkerspot butterfly *Euphydryas editha bayensis*	FT/--	Serpentine bunchgrass grassland	**Absent**. Suitable habitat not present in project area. Not known from project area (EBMUD, 1994).	March-May
Callippe silverspot butterfly *Speyeria callippe callippe*	FE/--	Found in native grasslands with *Viola pedunculata* as larval food plant	**Absent**. Suitable habitat not present in project area.	Spring
Fish				
Tidewater goby *Eucyclogobius newberryi*	FT/CSC	Shallow waters of bays and estuaries	**Absent**. Suitable habitat not present in project area.	Year-round
Steelhead – Central California Coast (ESU) *Oncorhynchus mykiss*	FT/CSC	Unblocked Bay Area and coastal rivers and streams	**Moderate Potential**. Species may occur within San Pablo Creek downstream from San Pablo Reservoir adjacent to Sobrante WTP and within St. Mary's Road/Rohr Road Pipeline area. Non-listed hatchery-released rainbow trout occur in San Pablo Reservoir and may move into San Pablo Creek adjacent to Orinda WTP (EBMUD, 1994).	Year-round
Winter-run Chinook salmon *Oncorhynchus tshawytscha*	FE/CE	Unblocked Bay Area and coastal rivers and streams	**Absent**. Suitable habitat not present in project area.	Winter
Amphibians				
California red-legged frog *Rana aurora draytonii*	FT/CSC	Breed in stock ponds, pools, and slow-moving streams with emergent vegetation for escape cover and egg attachment	**Moderate Potential**. Protocol survey of Lafayette Creek between Bentley School and Lafayette WTP did not identify this species (Beeman, 2001). However, species is known to occur within ponds in Laguna Creek east of Moraga Road (CNDDB, 2005) and within Dutra Creek (tributary to San Pablo Creek) approximately one mile north of Orinda WTP (EBMUD, date). Potential habitat located in Lauterwasser Creek and its tributaries along Happy Valley Pumping Plant and Pipeline, Las Trampas Creek along Tice Valley Pipeline, Laguna Creek between Campolindo Drive and Via Granada and other drainages that cross the Moraga Road Pipeline, within San Pablo Creek adjacent to the Sobrante WTP, within San Ramon Creek in the New Leland Pressure Zone Reservoir and Pipeline area, the San Pablo Pipeline area and the Saint Mary's Road/Rohr Road Pipeline area. Low potential habitat is located within San Pablo Creek near the Orinda WTP and its two tributaries between the ballfield area and the Orinda WTP.	Year-round

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		SPECIES LISTED OR PROPOSED FOR LISTING		
Amphibians (cont.)				
California tiger salamander *Ambystoma californiense*	FT/CSC	Wintering sites occur in grasslands occupied by burrowing mammals; breed in ponds and vernal pools	**Absent.** Suitable habitat not present in project area	November-May
Reptiles				
Alameda whipsnake *Masticophis lateralis euryxanthus*	FT/CT	Inhabits open to partially open scrub communities, including coyote bush scrub and chamise chaparral on primarily south-facing slopes	**Low to Moderate Potential.** Marginal coastal scrub habitat present along Moraga Road Pipeline. Coastal scrub in other areas is not suitable for this species. Protocol trapping surveys at Lafayette Reservoir did not identify this species; species presence considered unlikely within Lafayette Reservoir watershed (Swaim, 2000). San Pablo Pipeline area and the Saint Mary's Road/Rohr Road Pipeline located within critical habitat for this species (USFWS, 2005a). Species has moderate potential to occur in these areas.	Spring
Birds				
Little willow flycatcher *Empidonax traillii brewsteri*	FSC/CE	Rare to locally uncommon summer resident in wet meadows and montane riparian habitats from 600 to 2,440 m (2,000-8,000 feet) in elevation and a common spring (mid-May to early June) and fall (mid-August to early September) migrant at lower elevations, primarily in riparian habitats, throughout the state exclusive of the North coast	**Low Potential.** Suitable habitat not present in project area.	May-August
American peregrine falcon *Falco peregrinus anatum*	FSC/CE	Forages in marshes and grasslands. Nesting habitat includes high, protected cliffs and ledges near water	**Low Potential**. May forage over Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline and San Pablo Pipeline (EBMUD, 1994 and 2005b). No suitable nesting habitat in project area.	Year-round
Bald eagle[1] *Haliaeetus leucocephalus*	FT/CE	Nests and forages on inland lakes, reservoirs, and rivers; winter foraging at lakes and along major rivers	**Moderate Potential**. Known to winter along Lafayette Reservoir outside of project area and potentially within San Pablo Pipeline area (EBMUD, 1994 and 2005b). May occasionally roost near Highland Reservoir Pipeline and Moraga Road Pipeline.	Winter

[1] The bald eagle was proposed for delisting by the U.S. Fish and Wildlife Service on July 6, 1999.

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		SPECIES LISTED OR PROPOSED FOR LISTING		
Birds (cont.)				
Bank swallow *Riparia riparia*	--/CT	Requires vertical banks and cliffs with fine-textured or sandy soils near water for nesting, forages over grassland, shrubland and other open areas.	**Low Potential.** Suitable habitat not present in project area.	March-August
Plants				
Pallid manzanita *Arctostaphylos pallida*	FT/CE/ 1B	Broadleaved upland forest, cismontane woodland, closed-cone coniferous forest, chaparral, and coastal scrub. Found in siliceous shale, sand, or gravelly substrates.	**Low Potential.** Known to occur in Alameda and Contra Costa counties. Although it occurs in the Upper San Leandro Watershed basins; no suitable habitat at project sites due to development or past disturbance.	December–March
Robust spineflower *Chorizanthe robusta* var. *robusta*	FE/--/ 1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil	**Low Potential.** No suitable habitat at project sites.	April-September
Presidio clarkia *Clarkia franciscana*	FE/CE/ 1B	Coastal scrub, grassland (ultramafic)	**Low Potential.** No ultramafic soils. No suitable habitat at project sites.	May-July
Santa Cruz tarplant *Holocarpha macradenia*	FT/CE/1B	Coastal scrub, coastal sand dunes, openings in oak woodlands with sandy or gravelly soil	**Low potential.** Naturally occurring populations have been extirpated from the Bay Area (CNPS, 2001). A transplanted population near San Pablo area has not persisted.	June-October
Contra Costa goldfields *Lasthenia conjugens*	FE/--/1B	Moist grasslands, vernal pools	**Low Potential.** No suitable habitat at project sites due to development or past disturbance. The Moraga Pipeline supports grassland within and near the Lafayette Recreation Area. Not known to occur in EBMUD watershed based on past surveys (EBMUD 1994, EBMUD, 2005a).	March-June
San Francisco popcorn-flower *Plagiobothrys diffusus*	FSC/CE/1B	Coastal prairie and valley and foothill grassland	**Low Potential.** No suitable habitat at project sites due to development or past disturbance. The Moraga Pipeline supports grassland within and near the Lafayette Recreation Area. Not known to occur in EBMUD watershed based on past surveys (EBMUD 1994, EBMUD, 2005a).	April–June
Adobe sanicle *Sanicula maritima*	--/CR/1B	Grows in meadow and seeps, valley and foothill grasslands, chaparral, and coastal prairie	**Low Potential.** No suitable habitat at project sites due to development or past disturbance. The Moraga Pipeline supports grassland within and near the Lafayette Recreation Area. Not known to occur in EBMUD watershed based on past surveys (EBMUD 1994, EBMUD, 2005a).	February-May
California seablite *Suaeda californica*	FE/--/1B	Coastal salt marshes and swamps	**Low Potential.** No suitable habitat at project sites.	July-October

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Invertebrates				
Bridges' coast range shoulderband *Helminthoglypta nickliniana bridgesi*	FSC/--	Inhabits open hillsides under tall grasses and weeds, prefers rock piles	**Low Potential.** Suitable habitat not present in project area.	Year-round
Ricksecker's water scavenger beetle *Hydrochara ricksecker*i	FSC/--	Found in freshwater ponds, seeps, vernal pools and slow moving streams	**Low Potential.** Suitable habitat not present in project area.	January-July
Curved-foot hygrotus diving beetle *Hygrotus curvipes*	FSC/--	Found in vernal pools and alkali flats	**Absent.** Suitable habitat not present in project area.	January-July
California linderiella *Linderiella occidentalis*	FSC/--	Seasonal pools in intact grasslands where alluvial soils are underlain by hardpan or in sandstone depressions	**Absent.** Suitable habitat not present in project area.	Winter months
San Francisco lacewing *Nothochrysa californica*	FSC/--	Found beneath sandstone rocks in open oak grasslands	**Low Potential.** Suitable habitat not present in project area.	Spring
Mimic tryonia *Tryonia imitator*	FSC/--	Coastal lagoons and salt marshes	**Absent.** Suitable habitat not present in project area.	Year-round
Amphibian				
Foothill yellow-legged frog *Rana boylii*	FSC/CSC	Streams with quiet pools absent of predatory fish	**Low to Moderate Potential**. Historic occurrences in Lafayette Creek and San Pablo Creek, presumed extirpated within EBMUD watershed lands (EBMUD, 1994). Potential habitat located in Las Trampas Creek along Tice Pipeline, Lauterwasser Creek near Happy Valley Pumping Plant and Pipeline, San Pablo Creek near Sobrante WTP, and the Saint Mary's Road/Rohr Road Pipeline area.	April-June
Western spadefoot toad *Spea hammondii*	FSC/CSC	Grasslands or valley-foothill hardwood woodlands with shallow temporary ponds for breeding	**Absent.** Suitable habitat not present in project area.	February-August
Reptiles				
Silvery legless lizard *Anniella pulchra pulchra*	FSC/CSC	Moist sandy or loose loamy soils in areas with sparse vegetation.	**Low Potential** Suitable habitat not present in project area.	April- September

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Reptiles (cont.)				
Western pond turtle *Clemmys marmorata*	FSC/CSC	Freshwater ponds and slow streams edged with sandy soils for laying eggs	**Moderate Potential**. Survey of Lafayette Creek between Bentley School and Lafayette WTP did not identify this species (Beeman, 2001). Known to occur in Lafayette Reservoir (EBMUD, 1994 and 2005). Potential habitat located in Lafayette Creek near Lafayette WTP, Lafayette Reclaimed Water Pipeline and Orinda-Lafayette Aqueduct, Lauterwasser Creek along Happy Valley Pumping Plant and Pipeline, Las Trampas Creek along Tice Valley Pipeline, Laguna Creek between Campolindo Drive and Via Granada along the Moraga Road Pipeline, within San Pablo Creek adjacent to the Sobrante WTP, within San Ramon Creek in the New Leland Pressure Zone Reservoir and Pipeline area, the San Pablo Pipeline area, the Saint Mary's Road/Rohr Road Pipeline area, and within Lafayette Reservoir at terminus of Highland Pipeline. Low potential habitat is located within San Pablo Creek near the Orinda WTP and its two tributaries between the ballfield area and the Orinda WTP.	Year-round
California horned lizard *Phrynosoma coronatum frontale*	FSC/CSC	Patchy open areas with sandy soils	**Low Potential** Suitable habitat not present in project area. Not known from project area (EBMUD, 1994).	Year-round
Birds				
Cooper's hawk *Accipiter cooperi*	--/CSC	Nests in riparian growths of deciduous trees and live oak woodlands	**High Potential**. Known to breed and winter in near Lafayette Reservoir and San Pablo Reservoir (EBMUD, 1994). Riparian and woodland habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Upper San Leandro WTP, Orinda-Lafayette Aqueduct, Ardith Reservoir and Donald Pumping Plant, Fay Hill Reservoir, Pumping Plant and Pipeline Improvements, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Moraga Reservoir, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, St. Mary's Road/Rohr Road Pipeline area and San Pablo Pipeline area may support this species.	Year-round

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Birds (cont.)				
Sharp-shinned hawk *Accipiter striatus*	--/CSC	Nests in riparian growths of deciduous trees and live oaks	**High Potential**. Known to occur near Lafayette Reservoir (Loughman, 2002). Riparian and woodland habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Upper San Leandro WTP, Orinda-Lafayette Aqueduct, Ardith Reservoir and Donald Pumping Plant, Fay Hill Reservoir, Pumping Plant and Pipeline Improvements, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Moraga Reservoir, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, St. Mary's Road/Rohr Road Pipeline, and San Pablo Pipeline may support this species.	Year-round
Tricolored blackbird *Agelaius tricolor*	FSC/CSC	Riparian thickets and emergent vegetation	**Low Potential**. Project area provides marginal habitat for this species. Species not known from project area (CNDDB, 2005; EBMUD, 1994, 2005a and 2005b).	Spring
Bell's sage sparrow *Amphispiza belli belli*	FSC/CSC	Inhabits low, fairly dense stands of shrubs, including chamise chaparral and coastal sage scrub	**Moderate Potential.** Moraga Road Pipeline and San Pablo Pipeline provide suitable habitat.	Year-round
Golden eagle *Aquila chrysaetos*	--/CSC	Nests in canyons and large trees in open habitats	**Moderate Potential.** Observed near Lafayette Reservoir and San Pablo Reservoir (Loughman, 2002; EBMUD, 2005b). Ornamental Monterey pines, woodland and grassland along Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Moraga Road Pipeline, Fay Hill Reservoir, St. Mary's Road/Rohr Road Pipeline area and San Pablo Pipeline area provide suitable nesting and foraging habitat. Sunnyside Pumping Plant area may provide potential foraging habitat.	Year-round
Burrowing owl *Athene cunicularia*	FSC/CSC	Nests in mammal burrows in open, sloping grasslands	**Low to Moderate Potential**. No known occurrences from the project area (CNDDB, 2005; EBMUD, 1994). Moraga Road Pipeline, Fay Hill Reservoir, New Leland PZ Reservoir and Pipeline, St. Mary's Rohr Road Pipeline and San Pablo Pipeline grassland provides potential nesting and foraging habitat.	Year-round

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Birds (cont.)				
Oak titmouse *Baeolophus inornatus*	FSC/--	Nests in oak woodlands, forests, riparian habitats supporting oaks	**High Potential.** Known to occur at Lafayette Reservoir (EBMUD, 2005). May occur within oak woodlands and riparian habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Ardith Reservoir and Donald Pumping Plant, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Moraga Reservoir, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, St. Mary's Road/Rohr Road Pipeline, and San Pablo Pipeline.	March-July
Ferruginous hawk *Buteo regalis*	--/CSC	Forages in open grasslands and agricultural areas; breeds north of California.	**Low Potential**. May forage over grasslands along Moraga Road Pipeline, and Fay Hill Reservoir.	Winter
Northern harrier *Circus cyaneus*	--/CSC	Builds nest on ground in tall grasses, wet meadows and marshy habitats. Fairly common in open areas near wetland habitats	**Moderate Potential**. Winter resident near Lafayette Reservoir and San Pablo Reservoir (Loughman, 2002; EBMUD 2005b). Grassland habitat along Moraga Road Pipeline, Fay Hill Reservoir and wetlands along San Pablo Pipeline may support this species.	Year-round
Yellow warbler *Dendroica petechia brewsteri*	--/CSC	Nests in riparian corridors with willows or other dense foliage and low, open canopy	**Low to Moderate Potential.** Riparian habitat within Laguna Creek east of the Moraga Road Pipeline between Campolindo Drive and Via Granada provides marginal nesting habitat for this species. Known to occur near San Pablo Pipeline (EBMUD, 2005b). May occur in St. Mary's Road/Rohr Road Pipeline area.	April–August
White-tailed kite *Elanus leucurus*	FSC/3511	Nests near wet meadows and open grasslands in dense oak, willow or other large tree stands.	**Moderate Potential**. Known to occur near Lafayette Reservoir and San Pablo Reservoir (Loughman, 2002; EBMUD, 2005b). Grassland, woodland and riparian habitat at Fay Hill Reservoir, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline area may support this species.	March-July

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Birds (cont.)				
Pacific-slope flycatcher *Empidonax difficilis*	FSC/--	Warm moist woodlands, including valley foothill and montane riparian, coastal and blue oak woodlands, and montane hardwood-conifer habitats	**Moderate Potential**. May occur within oak woodlands and riparian habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Moraga Reservoir, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, and St. Mary's Road/Rohr Road Pipeline area. Species also observed near San Pablo Reservoir (EBMUD, 2005b); may occur along San Pablo Pipeline.	Summer
California horned lark *Eremophila alpestris actia*	--/CSC	Nests and forages in short-grass prairie, mountain meadow, coastal plain, fallow fields, and alkali flats	**Moderate Potential.** Moraga Road Pipeline, Fay Hill Reservoir, Sunnyside Pumping Plant, New Leland PZ Reservoir and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline areas provide suitable grassland nesting and foraging habitat.	March–July
Merlin *Falco columbarius*	--/CSC	Breeds outside California, inhabits coastlines, open grasslands, savannahs, and woodlands	**Moderate Potential.** Observed near Lafayette Reservoir and San Pablo Reservoir (Loughman, 2002; EBMUD, 2005bb). May occur along Fay Hill Reservoir, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline and San Pablo Pipeline in winter or during migration.	September–May
Saltmarsh common yellowthroat *Geothlypic trichas sinuosa*	FSC/CSC	Saline and freshwater marshes	**Low Potential**. Suitable emergent marsh habitat is not present in project area. Species not known from project area (CNDDB, 2005; EBMUD, 1994, 2005a and 2005b).	Year-round
Yellow-breasted chat *Icteria virens*	--/CSC	Nests in dense riparian thickets of willows, vine tangles, and dense brush associated with streams, swampy ground and the borders of small ponds.	**Low to Moderate potential.** Riparian habitat within Laguna Creek east of the Moraga Road Pipeline between Campolindo Drive and Via Granada provides marginal nesting habitat for this species. St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	March–September
Loggerhead shrike *Lanius ludovicianus*	FSC/CSC	Nests in shrublands and forages in open grasslands	**High Potential.** Known from San Pablo Reservoir area (EBMUD, 2005bb). Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Walnut Creek WTP, Sunnyside Pumping Plant, Fay Hill Reservoir, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline areas provide suitable grassland and scrub habitat.	March-Sept.

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Birds (cont.)				
Lewis' woodpecker *Melanerpes lewis*	FSC/--	Nests in cavities of dead or burned out trees primarily in oak savannah, and open riparian woodland habitats	**Low Potential**. Suitable woodland habitat is not present in project area.	Winter
Osprey *Pandion haliaetus*	--/CSC	Requires tall snags or living trees adjacent to or over water for nesting; also will nest on poles or cliffs	**Low to Moderate Potential.** Known to occur adjacent to Lafayette Reservoir and San Pablo Reservoir (EBMUD, 1994 and 2005b). Project sites do not provide suitable aquatic foraging habitat but species may occasionally roost near Highland Reservoir and Pipeline, Moraga Road Pipeline and San Pablo Pipeline.	March-June
American white pelican *Pelecanus erythrorhynchos*	--/CSC/--	Winters on salt ponds, large lakes, and estuaries; loafs on open water during the day; roosts at night along water's edge, sandbars	**Low Potential.** Known to occur within and along edges of San Pablo Reservoir (EBMUD, 2005b); species is not expected to utilize habitats within San Pablo Pipeline.	Winter
Double-crested cormorant *Phalacrocorax auritus*	--/CSC	Occurs in coastal estuaries, salt ponds, and inland reservoirs and lakes.	**Low Potential.** Known to occur within Lafayette Reservoir (EBMUD, 1994). Project sites do not provide suitable perching or aquatic habitat. Project activities associated with the Highland overflow pipeline will avoid the Lafayette Reservoir Intake Tower and roosting habitat for this species.	Year-round
Rufous hummingbird *Selasphorus rufus*	FSC/--	Inhabits riparian areas, open woodlands, chaparral, and other habitat with nectar-producing flowers; breeding does not occur in San Francisco Bay Area	**Moderate Potential.** Woodland and riparian habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Highland Reservoir and Pipeline, Moraga Reservoir, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may provide foraging habitat for this species.	Summer
Allen's hummingbird *Selasphorus sasin*	FSC/--	Inhabits coastal scrub, valley foothill hardwood and riparian habitats	**Moderate Potential.** Coastal scrub, woodland and riparian habitat at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Upper San Leandro WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Ardith Reservoir and Donald Pumping Plant, Happy Valley Pumping Plant and Pipeline, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Reservoir, Moraga Road	January–July

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Birds (cont.)				
			Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, Withers Pumping Plant, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	
Bewick's wren *Thryomanes bewickii*	FSC/--	Inhabits chaparral, may move to adjacent riparian and edges of woodland habitats	**High Potential.** Observed near Lafayette Reservoir and San Pablo Reservoir (Loughman, 2002; EBMUD, 2005b). Coastal scrub and woodland within the Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Orinda WTP, Orinda-Lafayette Aqueduct, Moraga Road Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	Year-round
California thrasher *Toxostoma redivivum*	FSC/--	Moderate to dense chaparral, open valley foothill riparian thickets	**Moderate Potential.** Observed near Lafayette Reservoir (Loughman, 2002). Coastal scrub, woodland and riparian habitat within the Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	Year-round
Mammals				
Pallid bat *Antrozous pallidus*	--/CSC/--	Inhabits a variety of habitats ranging from desert scrub to grasslands to coniferous and mixed hardwood forests. In northern and central CA, associated primarily with oak woodlands. Feeds mostly on ground-dwelling arthropods.	**Low to Moderate Potential.** May forage over and roost near Orinda/Lafayette Aqueduct, Fay Hill Reservoir, Walnut Creek WTP, Highland Reservoir and Pipeline, Moraga Road Pipeline, and Tice Pumping Plant and Pipeline.	March–August
Pacific western big-eared bat *Corynorhinus townsendii townsendii*	FSC/CSC	Highly associated with mines and caves, found in a variety of habitats ranging from oak woodlands to mixed coniferous forests, to low desert scrub.	**Moderate Potential**. Woodland habitats at Walnut Creek WTP, Orinda WTP, Orinda-Lafayette Aqueduct, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, Tice Pumping Plant and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	February-August
Berkeley kangaroo rat *Dipodomys heermanni berkeleyensis*	FSC/--	Open grassy hilltops and open spaces in chaparral and blue oak/gray pine woodland	**Low Potential.** Suitable habitat is not present in the project area. Presumed extirpated in majority of project area (EBMUD, 1994).	Year-round

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Mammals (cont.)				
Greater western mastiff bat *Eumops perotis californicus*	FSC/CSC	Primarily distributed along the western Sierra Nevada in all habitats with significant rock outcrops and formations.	**Low Potential**. Suitable breeding habitat is not present in the project area.	February-August
Mountain lion *Felis concolor*	--/3511	Forests, woodlands and brushy habitats, typically avoids open habitats	**High Potential.** Known to occur in vicinity of Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road, and San Pablo Pipelines (EBMUD, 1994 and 2005b)	Year-round
Small-footed myotis bat *Myotis ciliolabrum*	FSC/--	Forages over grasslands and roosts in caves and rock crevices	**Low Potential**. Fay Hill Reservoir, Walnut Creek WTP and Moraga Road Pipeline may provide suitable foraging habitat.	February-August
Long-eared myotis bat *Myotis evotis*	FSC/--	Inhabits woodlands and forests up to approximately 8,200 feet in elevation, roosts in crevices and snags	**Moderate Potential**. Coastal scrub and woodland habitats at Walnut Creek WTP, Orinda WTP, Orinda-Lafayette Aqueduct, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, Tice Pumping Plant and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	February-August
Fringed myotis bat *Myotis thysandodes*	FSC/--	Inhabits a variety of woodland habitats, roosts in crevices or caves, and forages over vegetation and along forest edges	**Moderate Potential**. Coastal scrub, woodland and riparian habitats at Lafayette WTP, Orinda WTP, Walnut Creek WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Fay Hill Reservoir, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Lafayette Reclaimed Water Pipeline, Leland Isolation Pipeline and Bypass Valves (Danville Pumping Plant), Highland Reservoir and Pipeline, Moraga Road Pipeline, New Leland PZ Reservoir and Pipeline, Sunnyside Pumping Plant, Tice Pumping Plant and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	February-August
Long-legged myotis bat *Myotis volans*	FSC/--	Inhabits a wide variety of habitats ranging from coastal forests to Joshua tree woodlands, day roosts in hollow trees and snags. Forages over open areas on moths, beetles and other flying insects	**Moderate Potential**. Woodland habitats at Walnut Creek WTP, Orinda WTP, Orinda-Lafayette Aqueduct, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, Tice Pumping Plant and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	February-August
Yuma myotis *Myotis yumanensis*	FSC/--	Found throughout California, particularly associated with most low elevation reservoirs; forages on emergent aquatic insects over relatively still water	**Moderate Potential**. Woodland and riparian habitats along Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, Moraga Road Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline may support this species.	February-August

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Mammals (cont.)				
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	FSC/CSC	Forests with moderate canopy and moderate to dense understory	**High Potential**. Species is locally abundant (Hartwell, 2005b) and was observed along Moraga Road Pipeline, Orinda WTP and Happy Valley Pumping Plant and Pipeline. Woodland and riparian habitats at Lafayette WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Tice Pumping Plant and Pipeline, Lafayette Reclaimed Water Pipeline, Highland Reservoir and Pipeline, St. Mary's Road/Rohr Road Pipeline and San Pablo Pipeline likely support this species as well.	Year-round
American badger *Taxidea taxus*	--/CSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils	**Low Potential.** Historic occurrences in project area but considered extirpated (EBMUD, 1994).	Year-round
Plants				
Bent-flowered fiddleneck *Amsinckia lunaris*	FSLC/--/1B	Coastal bluff scrub, woodland, and valley and foothill grassland	**Moderate Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	March–June
Alkali milk-vetch *Astragalus tener var tener*	FSC/--/1B	Alkali flats, valley grasslands	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	March-June
San Joaquin spearscale *Atriplex joaquiniana*	FSC/--/1B	Chaparral scrub, meadows, valley and foothill grassland (alkaline)	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	
Big-scale balsamroot *Balsamorhiza macrolepis var macrolepis*	FSLC/--/1B	Cismontane woodland, grassland	**Moderate Potential.** Potentially occurs in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	March-June
Mt. Diablo fairy-lantern *Calochortus pulchellus*	--/--/1B	Woody and shrubby slopes of chaparral, cismontane and riparian woodland, and valley and foothill grassland	**Moderate Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	April–June
Franciscan thistle *Cirsium andrewsii*	--/--/4	Broadleafed upland forests, coastal bluff scrub, sometimes on serpentinite	**Moderate Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	June-July
Mt. Diablo bird's-beak *Cordylanthus nidularius*		Open, dry chaparral (serpentine)	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	July-August

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Plants (cont.)				
Western leatherwood *Dirca occidentalis*	--/--/1B	Broadleafed upland forests, closed-cone coniferous forests, chaparral, cismontane woodland, North coast coniferous forests, riparian forests, riparian woodland; mesic sites	**Moderate Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline and in riparian corridors along creeks and associated tributaries near Lafayette WTP, Orinda WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Moraga Road Pipeline, Tice Pumping Plant and Pipeline project sites and program-level projects..	January-April
Tiburon buckwheat *Eriogonum luteolum* var. *caninum*	--/--/3	Chaparral, meadows, valley and foothill grassland (serpentine)	**Low Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). No suitable habitat in EBMUD WTTIP Area.	June-September
Round-leaved filaree *Erodium macrophyllum*	--/--/2	On clay soils in woodland and valley and foothill grasslands	**Low Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). No suitable habitat in EBMUD WTTIP Area.	March–May
Fragrant fritillary *Fritillaria liliacea*	FSC/--/1B	Coastal scrub, valley and foothill grassland, coastal prairie; on heavy clay soils, often on ultramafic soils	**Low Potential.** Potentially occurs in EBMUD watershed basin (EBMUD, 1994). No suitable habitat in EBMUD WTTIP Area.	February-April
Diablo rock-rose *Helianthella castanea*	FSC/--/ 1B	Openings in chaparral and broadleaved upland forest	**Moderate Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	April-June
Loma Prieta hoita *Hoita strobilina*	--/--/1B	Chaparral, cismontane woodland, riparian woodland (serpentine/mesic)	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	May-October
Kellogg's horkelia *Horkelia cuneata* ssp. *sericea*	FSC/--/1B	Closed-cone coniferous forests, coastal scrub	**Moderate Potential.** Not known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	April-September
Northern California black walnut *Juglans hindsii*	FSC/--/1B	Riparian forest and woodlands	**Moderate Potential.** Not known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence in riparian corridors along creeks and associated tributaries at Lafayette WTP, Orinda WTP, Sobrante WTP, Orinda-Lafayette Aqueduct, Glen Pipeline Improvements, Happy Valley Pumping Plant and Pipeline, Highland Reservoir and Pipeline, Lafayette Reclaimed Water Pipeline, Moraga Road Pipeline, Tice Pumping Plant and Pipeline project sites and program level projects.	April-May

TABLE E-1 (Continued)
SPECIAL-STATUS SPECIES REPORTED OR POTENTIALLY OCCURRING IN THE EBMUD WTTIP PROJECT AREA

Common Name *Scientific name*	Listing Status USFWS/ CDFG/CNPS	Habitat Requirements	Potential to Occur	Period of Identification / Flowering Period
		FEDERAL OR STATE SPECIES OF SPECIAL CONCERN		
Plants (cont.)				
Hall's bush mallow *Malacothamnus hallii*	--/--/4	Chaparral	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	May-September
Oregon meconella *Meconella oregana*	FSC/--/1B	Coastal prairie, coastal scrub	**Moderate Potential.** Not known to occur in EBMUD watershed basin (EBMUD, 1994). Potential occurrence along undeveloped portion of Moraga Pipeline.	March-April
Robust monardella *Monardella villosa ssp. globosa*	--/--/1B	Cismontane woodland, openings in chaparral	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	June-July
Slender-leaved pondweed *Potamogeton filiformis*	--/--/2		**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	
Most beautiful jewelflower *Streptanthus albidus* ssp. *peramoenus*	FSC/--/1B	Serpentine grassland, chaparral	**Low Potential.** Known to occur in EBMUD watershed basin (EBMUD, 1994). No suitable habitat in EBMUD WTTIP Area.	April-June
Saline clover *Trifolium depauperatum* var. *hydrophilum*	--/--/1B	Valley and foothill grassland (mesic, alkaline); vernal pools	**Low Potential.** No suitable habitat in EBMUD WTTIP Area.	April-June

STATUS CODES:

Federal Categories (U.S. Fish and Wildlife Service)
FE = Listed as Endangered by the Federal Government
FT = Listed as Threatened by the Federal Government
FPE = Proposed for Listing as Endangered
FPT = Proposed for Listing as Threatened
FC = Candidate for Federal Listing
FSC = Former Federal Species of Concern
FSLC =Former species of local concern or conservation importance
BPA = Federal Bald Eagle Protection Act

State Categories (California Department of Fish and Game)
CE = Listed as Endangered by the State of California
CT = Listed as Threatened by the State of California
CR = Listed as Rare by the State of California

California Native Plant Society (CNPS)
List 1A = Plants presumed extinct in California
List 1B = Plants rare, threatened, or endangered in California and elsewhere
List 2 = Plants rare, threatened, or endangered in CA
List 3 = Plants about which more information is needed
List 4 = Plants of limited distribution

3511 = A Fully Protected Species
CSC = California Species of Special Concern

SOURCE: CDFG, 2005; CNPS, 2005; EBMUD, 2005a, 2005b, and 1994; USFWS, 2005; Zeiner et al., 1990; ESA 2005.

APPENDIX F

Recorded Cultural Resources In EBMUD Database

RECORDED HISTORIC RESOURCES IN EBMUD DATABASE

	Site Name	Prehistoric Archaeological Resource (Y/N)	Historic Archaeological Resource (Y/N)	Historic Architectural Resource (Y/N)
1	Ala-422	Y	N	N
2	Ala-423h	N	Y	N
3	Ala-429h	N	Y	N
4	Ala-481h	Y	Y	Y
5	Ala-527h	N	Y	Y
6	Ala-528h	N	Y	Y
7	Ala-529h	N	Y	N
8	Cco-307	Y	N	N
9	*Cco-401*	*Y*	*N*	*N*
10	Cco-402	Y	N	N
11	Cco-403h	Y	Y	N
12	Cco-404h	Y	N	Y
13	Cco-405h	Y	Y	N
14	Cco-406	Y	N	N
15	Cco-407h	Y	Y	N
16	Cco-408h	Y	Y	N
17	*Cco-409h*	*N*	*Y*	*N*
18	Cco-410h	N	Y	N
19	Cco-411	Y	N	N
20	Cco-412h	N	Y	N
21	Cco-526h (Buckhorn Ranch)	N	Y	Y
22	Cco-549	Y	N	N
23	Cco-Iso-12	Y	N	N
24	Cco-Iso-7 And Cco-Iso-8	Y	N	N
25	Chabot Filtration Plant	N	N	Y
26	Chabot's House	N	Y	Y
27	Dickenson House	N	Y	Y
28	Felipe Briones Adobe	N	Y	Y
29	Hampton's Grave	N	N	Y
30	*Lafayette Reservoir Dam*	*N*	*N*	*Y*
31	Lake Chabot Dam	N	N	Y
32	Mendonca Ranch	N	Y	Y
33	Mohring Homestead	N	N	Y
34	Nunes Jr. Homestead	N	Y	N
35	Nunes Sr. Back Ranch	N	Y	Y
36	*Orinda Filter Plant*	*N*	*N*	*Y*
37	*Orinda Park Hotel*	*N*	*Y*	*N*
38	*Orinda Park School*	*N*	*Y*	*N*
39	'Possible Sites'	Y	N	N
40	Rowland Ranch EBMUD Headquarters	N	Y	Y
41	Sanders Ranch	N	N	Y
42	Tormey Homestead	N	Y	Y
43	Tormey Homestead	N	Y	Y
44	Upper San Leandro Dam	N	Y	N
45	Valle Vista House	N	Y	Y
46	Valle Vista Structures	N	Y	Y
47	*Wagner Ranch House*	*N*	*Y*	*N*
48	Water Temple	N	N	Y

Italicized Cultural Sites are located in the vicinity of various EBMUD WTTIP project components

SOURCE: EBMUD GIS Department, 2005.

RECORDED HISTORIC RESOURCES IN THE CITIES OF ORINDA, LAFAYETTE, AND MORAGA

	Name	Location	Listing
Orinda			
1	California and Nevada Railroad Terminus (Bryant Station)	Bates Blvd./Davis Street	CA (5S), L
2	Casa Verana	112 Camino Pablo	CA (5S)
3	Casa Vieja	8 Casa Vieja	CA (3S)
4	Cedar of Lebanon Tree	10 Irwin Way	CA (5S)
5	Delaveaga Home	12 Bien Venida	CA (3S), L
6	First Orinda Firehouse	107 Orinda Way	CA (5S)
7	Fish Ranch Site	Gateway Blvd.	CA (5S)
8	Hampton's Grave	Bear Creek Road/Briones Reservoir Watershed (EBMUD land)	CA (5S)
9	Hershell-Spillman Merry-Go-Round	Grizzly Peak Road/Tilden Park (Orinda vicinity)	NR, CA (1S)
10	Jenkins (Alexander) House (Old Yellow House)	209 Moraga Way	CA (3S)
11	Merrill, Charles W., House	407 Camino Sobrante	NR, CA (1S)
12	Moraga (Joaquin) Adobe	24 Adobe Lane	NR, CA, L (1S)
13	Miner Ranch	Miner Road and Sleepy Hollow Lane area	CA (5S), L
	Miss Graham's Riding Academy	63 Orinda Way	CA (5S)
14	Old Moraga School Site	200 Moraga Way	CA (5S)
15	Old Tunnel	Old Tunnel Road	CA (5S)
16	Orinda Country Club	315 Camino Sobrante	CA (3S)
17	*Orinda Filter Plant*	*190 Camino Pablo (EBMUD)*	*CA (7) L*
18	*Orinda Park School Site*	*Camino Pablo/Bear Creek Road*	*CA (5S)*
19	*Orinda Park Hotel Site*	*Camino Pablo /Bear Creek Road*	*CA (7L/5S)*
20	Orinda Store	Orinda Way	CA (5S)
21	Orinda Theater & American Trust Bank	10 Moraga Way	CA (2 S2)
22	Orinda Union School	26 Orinda Way	CA (4S)
23	Santa Maria Church Site	Camino Pablo/Miner Road	CA (5S), L
24	Sullivan Ranch and Home	607 El Toyonal Road	CA (4S), L
25	*Wagner Ranch and Home*	*Camino Pablo/Bear Creek Road*	*CA (5S)*
Lafayette			
1	Comstock/Bronston	811 Topper Lane	CA (7N)
2	Elam Brown Grist Mill Wheel	Mt. Diablo Blvd/Moraga Road/Plaza Way	CA (5S2), L
3	Elam Brown house site	985 Hough Street	CA (7), L
4	Daley House	3306 Moraga Road	CA (7N)
5	Garrett Building	3565 Mt. Diablo Blvd	CA (7N), L
6	Geils Building	3531 Plaza Way	(7), L
7	Friendship Farm	3350 Woodland Way	(3S)
8	James Bickerstaff home site	3615 Mt. Diablo Blvd	L
9	Lafayette Cemetery	3300 Mt. Diablo Blvd	CA (7N) L
10	Lafayette Grammar School	950 Moraga Road	CA (7N), L
11	Lafayette Plaza/Elam and Margaret Brown Plaza	Mt. Diablo Blvd/Moraga Road/Plaza Way	CA (5S2), L
12	Lafayette United Methodist Church	955 Moraga Road	L
13	Locust Trees (10)	¾ mile up Happy Valley Road, east side	CA (5S2)
14	Pioneer Store (former)	3535 Plaza Way	CA (7), L
15	Police Station	1004 Thompson Road	CA (6Z3)
16	Second Schoolhouse	3535 Mt. Diablo Blvd	L
17	Small red frame building	995 Hough/Lafayette Circle	L
18	Shreve's Store (former)	3535 Plaza Way	CA, L
19	Stone Plaque	Happy Valley Road	L
20	Way Side Inn Thrift Shop	3521 Golden Gate Way	L (7N)
21	Town Hall Theater	3535 School Street	L (3S)

RECORDED HISTORIC RESOURCES IN THE CITIES OF ORINDA, LAFAYETTE, AND MORAGA (Continued)

	Name	Location	Listing
Moraga			
1	*Carrick House*	*Moraga-Lafayette trail/Saint Mary's Road*	*L*
2	Courter House/Mason's Store site	Larch Avenue/Canyon Road	L
3	Eucalyptus Globulus Tree	Camino Ricardo	CA (5S2)
3	*Hacienda de Las Flores*	*2100 Donald Drive*	*CA (7N),L*
4	Moraga Barn	1002 Viader Street/Moraga Way	CA (7), L
5	Moraga Ranch	School Street/Moraga Way	L
6	*Saint Mary's College*	*1928 Saint Mary's Road*	*L*
7	*Willow Spring School (site)*	*Saint Mary's Road/Moraga Road*	*CA (7N), L*

NR = National Register, CR = California Register, L = Local Landmark
Italicized Cultural Sites are located in the vicinity of various EBMUD WTTIP project components
Source: OHP, 2005

APPENDIX G

City of Oakland Noise Mitigation Measures

APPENDIX G
City of Oakland Noise Mitigation Measures

Noise Mitigation Measure 1: The project sponsor shall require construction contractors to limit standard construction activities as required by the City Building Department. Such activities are generally limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, with pile driving and/or other extreme noise generating activities greater than 90 dBA limited to between 8:00 a.m. and 4:00 p.m. Monday through Friday, with no extreme noise generating activity permitted between 12:30 p.m. and 1:30 p.m. No construction activities shall be allowed on weekends until after the building is enclosed, without prior authorization of the Building Services Division, and no extreme noise generating activities shall be allowed on weekends and holidays.

Noise Mitigation Measure 2: To reduce daytime noise impacts due to construction, the project sponsor shall require construction contractors to implement the following measures:

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (*e.g.*, improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds, wherever feasible).

- Impact tools (*e.g.*, jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or other measures to the extent feasible.

Noise Mitigation Measure 3: To further mitigate potential pile driving and/or other extreme noise generating construction impacts, a set of site-specific noise attenuation measures shall be completed under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted for review and approval by the City to ensure that maximum feasible noise attenuation will be achieved. These attenuation measures shall include as many of the following control strategies as feasible:

- Erect temporary plywood noise barriers around the construction site, to shield adjacent uses;

- Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than

one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;

- Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
- Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings; and
- Monitor the effectiveness of noise attenuation measures by taking noise measurements.

Noise Mitigation Measure 4: Prior to the issuance of each building permit, along with the submission of construction documents, the project sponsor shall submit to the City Building Department a list of measures to respond to and track complaints pertaining to construction noise. These measures shall include:

- A procedure for notifying the City Building Division staff and Oakland Police Department;
- A plan for posting signs on-site pertaining to permitted construction days and hours and complaint procedures and who to notify in the event of a problem;
- A listing of telephone numbers (during regular construction hours and off-hours);
- The designation of an on-site construction complaint manager for the project;
- Notification of neighbors within 300 feet of the project construction area at least 30 days in advance of pile-driving and/or other extreme noise-generating activities about the estimated duration of the activity; and
- A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise mitigation and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

With the adoption of these noise mitigation measures, the project's impacts are considered to be less than significant.

APPENDIX H

Hazards and Hazardous Materials

APPENDIX H
Hazards and Hazardous Materials

This appendix supplements the information provided in Section 3.11 of the EIR. It provides an overview of the hazardous materials regulatory framework, including wildland fire and relevant tunnel classification and safety regulations. Relevant state, federal, and local statutes are discussed. This appendix also documents regulatory databases reviewed to identify permitted hazardous materials uses and environmental cases within ASTM search distances from where substantial excavation would be conducted and within ¼-mile of the proposed tunnel and pipeline alignments.

Regulatory Framework

Hazardous materials and hazardous wastes are extensively regulated by various federal, state, regional, and local regulations, with the major objective of protecting public health and the environment. This section summarizes the overall regulatory framework governing hazardous materials management.

Federal Regulations – General Hazardous Materials

The U.S. Environmental Protection Agency (U.S. EPA) is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include: the Resource Conservation and Recovery Act of 1974 (RCRA); the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the Code of Federal Regulations (40 CFR).

RCRA was enacted in 1974 to provide a general framework for the national hazardous waste management system, including the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities. The Hazardous and Solid Waste Amendment was enacted in 1984 to better address hazardous waste; this amendment began the process of eliminating land disposal as the principal hazardous waste disposal method. Other specific areas covered by the amendment include regulation of carcinogens, listing and delisting of hazardous wastes, permitting for hazardous waste facilities, and leaking underground storage tanks.

CERCLA, also known as Superfund, was enacted in 1980 to ensure that a source of funds was available to clean up abandoned hazardous waste sites, compensate victims, address releases of hazardous materials, and establish liability standards for responsible parties. SARA amended

CERCLA in 1986 to increase the Superfund budget, modify contaminated site clean up criteria and schedules, and revise settlement procedures. SARA also provides a regulatory program and fund for underground storage tank cleanups and Emergency Planning and Community Right- to-Know Program (EPCRA).

In 1976, Congress passed the Toxic Substances Control Act (TSCA) which was implemented in 1979. This act governs the manufacture, processing, distribution in commerce, use, cleanup, storage, and disposal of PCBs. Since 1978, the U.S. EPA has promulgated numerous rules further addressing all aspects of the life cycle of PCBs. The most recent rule was the Final Rule: Amendments to the TSCA PCB Disposal Regulations Including Amendments to the PCB Notification and Manifesting Rule promulgated on June 24, 1999. This rule is deregulatory in nature and provides individuals with more flexibility in their PCB disposal practices while continuing to provide protection from unreasonable risk.

State and Regional Regulations – General Hazardous Materials

The California Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) are the primary state agencies regulating hazardous materials in California. These agencies are part of the Cal EPA. The RWQCB is authorized by the State Water Resources Control Board to enforce provisions of the Porter - Cologne Water Quality Control Act of 1969. This act gives the RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation of the site, if necessary. The DTSC is authorized by the U.S. EPA to regulate the management of hazardous substances including the remediation of sites contaminated by hazardous substances.

California hazardous materials laws incorporate federal standards but are often stricter than federal laws. The primary state laws include: the California Hazardous Waste Control Law (HWCL), the state equivalent of RCRA; and the Carpenter-Presley-Tanner Hazardous Substance Account Act (HSAA), the state equivalent of CERCLA. State hazardous materials and waste laws are contained in the California Code of Regulations, Titles 22 and 26.

The HWCL, enacted in 1972 and administered by the DTSC, is the basic hazardous waste statute in California and has been amended several times to address current needs, including bringing the state law and regulations into conformance with federal laws. This act implements the RCRA "cradle-to-grave" waste management system in California but is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small quantity generators, transportation and permitting requirements, as well as in its penalties for violations. The HWCL also exceeds federal requirements by mandating the recycling of certain wastes, requiring certain generators to document a hazardous waste source reduction plan, requiring permitting for federally exempt treatment of hazardous wastes by generators, and stricter regulation of hazardous waste facilities.

The HSAA, enacted in 1981, addresses similar concerns as CERCLA. The primary difference is in how liability is assigned for a site with more than one responsible party. This is important for

petroleum clean up sites because federal law is usually used to force responsible party cleanups; state law is used for petroleum cleanup sites which are exempt from CERCLA.

Other relevant State of California statutes include:

- The Toxic Pit Cleanup Act of 1984 and the Toxic Injection Well Act of 1985 which were established to provide a regulatory framework for open pits or injection wells as a means of hazardous waste or disposal;

- The Hazardous Waste Management Act of 1986 which coordinates the state's implementation of federal landfill bans and authorizes landfill bans for non-RCRA hazardous wastes;

- The Aboveground Petroleum Storage Act of 1989 which requires the owner or operator of aboveground petroleum storage tanks to file a storage statement with the State Water Resources Control Board (SWRCB) if tank storage exceeds 10,000 gallons and holds petroleum or petroleum product which is liquid at ambient temperatures. In addition, the tank or tanks must be registered if they are subject to federal requirements; this potentially expands the requirement for a storage statement to any tank over 660 gallons or aggregate storage of 1,320 gallons;

- The Hazardous Waste Source Reduction and Management Act which required large quantity generators to document hazardous wastes being generated and to prepare a documented waste reduction plan beginning in 1991;

- The Hazardous Waste Treatment Permitting Reform Act of 1992 which required a permit for any hazardous waste treatment by a generator beginning on April 1, 1993. This statute established a new tiered permitting program whereby on-site treatment facilities are permitted or authorized to operate subject to different levels of regulatory requirements depending on the nature and size of the treatment activity. Amendments to this statute adopted in 1993-96 have enacted certain exemptions and modified compliance requirements.; and

- The Hazardous Waste Management Reform Act of 1995 which required the DTSC to revise its regulations to more closely conform to federal hazardous waste identification criteria and essentially eliminate land disposal restrictions for California-only hazardous wastes among other major changes. However, many of these changes have been deferred to a DTSC advisory committee for further study and are not expected to be implemented for several years, and in certain cases, not at all.

The Bay Area Air Quality Management District (BAAQMD), a regional regulatory agency, may impose specific requirements on remediation activities to protect ambient air quality from dust or other airborne contaminants.

Local Regulations – General Hazardous Materials

In accordance Chapter 6.11 of the Health and Safety Code (Section 25404, et seq.), local regulatory agencies have assumed authority and responsibility for the administration and enforcement of the unified hazardous waste and hazardous materials management program. The purpose of this legislation was to simplify environmental reporting by streamlining the number of regulatory agency contacts a facility must maintain and requiring the use of more standardized forms and reports. The Contra Costa County Health Services Department is the administering

agency for the Certified Uniform Program Agency (CUPA) program in Contra Costa County and the Oakland Fire Department is the CUPA for Oakland. As the CUPA, these agencies are responsible for the following environmental programs:

- Hazardous materials business plans (Chapter 6.95 of the Health and Safety Code, Section 25501, et seq.);
- The California accidental release prevention program for acutely hazardous materials (Chapter 6.95 of the Health and Safety Code, Section 25531, et seq.);
- State Uniform Fire Code requirements (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshall pursuant to Health and Safety Code, Section 13143.9);
- Underground storage tanks (Chapter 6.7 of the Health and Safety Code, Section 25280, et seq.);
- Aboveground storage tanks (Health and Safety Code Section 25270.5(c); and
- Hazardous waste generator requirements (Chapter 6.5 of the Health and Safety Code, Section 25100, et seq.).

Wildland Fire Regulations

The California Public Resources Code includes fire safety regulations that would apply to construction activities at the Withers Pumping Plant because the site is in an area designated by the California Department of Forestry and Fire Protection as a Wildland Area That May Contain Substantial Forest Fire Risks and Hazards and to construction activities at the Orinda Water Treatment Plant, Happy Valley Pumping Plant and Pipeline, Sunnyside Pumping Plant, and parts of the Glenn Pipeline Improvements because these sites are located in areas designated as a Very High Fire Hazard Severity Zone. These regulations are described below.

In accordance with §4427 of the Public Resources Code, the use of equipment from which a spark, fire or flame may be produced is prohibited on days when burning permits are required unless (1) all flammable material has been removed to a distance of 10 feet and (2) appropriate fire suppression equipment including a round point shovel and backpack pump water-type fire extinguisher are ready for use at the immediate area during the operation. The types of equipment covered by this restriction include any motor, engine, boiler, stationary equipment, welding equipment, cutting torches, tarpots, or grinding devices. This requirement does not apply to portable power saws and other portable tools powered by a gasoline-fueled internal combustion engine.

In accordance with §4428 of the Public Resources Code, the use of vehicles, machines, tools, or equipment powered by an internal combustion engine operated on hydrocarbon fuels in an industrial operation located near any forest, brush, or grass-covered land is prohibited from April 1 to December 1 of any year, or at any other time when ground litter and vegetation will sustain combustion permitting the spread of fire without providing and maintaining the appropriate equipment exclusively designated for fire fighting purposes. The required equipment includes:

- A sealed box of tools located within the operating area, at a point accessible in the event of a fire. The tool box shall contain one backpack pump-type fire extinguisher filled with water, two axes, two McLeod fire tools, and a sufficient number of shovels so that each employee at the operation can be equipped to fight fire.

- One or more serviceable chain saws of 3 ½ or more horsepower with a cutting bar of 20 inches in length or longer shall be immediately available within the operating area, or a full set of timber felling tools shall be located in the fire tool box.

- Each passenger vehicle used on the operation shall be equipped with one shovel and one ax, and any other vehicle or tractor used in the operation shall be equipped with one shovel.

In accordance with §4431 of the Public Resources Code, the use of portable saws, augers, drills, tamper, or other portable tool powered by a gasoline fueled internal combustion engine is prohibited on forest-, brush-, or grass-covered lands within 25 feet of any flammable material when burning permits are required without providing the required fire suppression equipment. The required equipment includes one serviceable round point shovel or one serviceable fire extinguisher; this equipment must be maintained within 25 feet of the operation of the tool, with unrestricted access for the operator from the point of operation.

In accordance with §4442 of the Public Resources Code, use of equipment equipped with an internal combustion engine that uses hydrocarbon fuels is prohibited on forest-, brush-, or grass-covered lands unless the equipment is equipped with a spark arrester.[1]

Tunnel Classification And Safety

Requirements for tunnel safety are addressed in The California Labor Code, Division 5, Part 9, Tunnel and Mine Safety. Safety requirements that apply to tunnels classified as gassy, as specified in the California Labor Code, include:

- Any tunnel classified as gassy shall operate under special procedures adopted by the board, as well as rules, regulations, special orders, or general orders for nongassy underground mines and tunnels.

- Tests for gas or vapors are required prior to each shift and hourly during actual operation. If a mechanical excavator is used, gas tests are required prior to removal of muck or material and before any cutting or drilling in tunnels where explosives are used. A log shall be maintained for inspection by the division showing the results of each test. Whenever a tunnel excavation approaches a geologic formation in which there is a likelihood of encountering gas or water, a probe hole at least 20 feet ahead of the tunnel face shall be maintained.

- Whenever gas levels in excess of 10 percent of the lower explosive limit are encountered initially in a tunnel, the division shall be notified immediately. The chief of the Division of Industrial Safety or his authorized representative may waive subsequent notification for gas readings less than 20 percent of the lower explosive limits upon a finding that adequate ventilation and other safety measures are in place to assure employee safety.

[1] A spark arrester is a device that prohibits exhaust gasses from the internal combustion engine (which contain carbon particles) from passing through the impeller blades where it could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

- The Division of Industrial Safety may order work to be halted until adequate testing can be conducted to determine the level hazard from gases or vapors.

- The Division of Industrial Safety shall review plans for electrical lighting and power for equipment and may require changes.

- Smoking is prohibited and the employer shall be responsible for collecting all personal sources of ignition such as lighters and matches from employees entering the tunnel.

- Whenever there is any ignition of gas or vapor, all work shall cease, employees shall be removed, and reentry shall be prohibited except for rescue purposes until the division has conducted an inspection and authorized reentry.

- All workers shall be removed immediately if the level of gas in the tunnel reaches 20 percent of the lower explosive limit and the division shall be notified immediately. No one shall reenter the tunnel until approval is given by the division.

- All employees shall be informed of any special orders made by the division following an inspection. Such notice shall be given before entering the tunnel. A copy of any orders subsequently written by the division shall be posted and all employees shall be notified at a safety meeting called by the safety representative before they are permitted to start work.

- Ventillation shall include continuous exhausting of fumes and air, unless and alternative ventilation plan which is as effective or better is approved by the Division of Industrial Safety. Fans for this purpose shall be placed at the surface, and shall be reversible from a single switch at the portal. These requirements shall not preclude the use of auxiliary fans to supply more air or greater exhaust to a tunnel.

- A “kill” button capable of cutting off all electrical equipment shall be maintained. The safety representative or his designated representative shall cut off power at any time gas or vapor levels reach 20 percent of the lower explosive limit or more. Before work is restarted every employee underground shall be informed of the level of gas or vapor recorded, and a permanent record shall be called to the surface and retained in a special log.

The Division of Industrial Safety shall determine the number of fire extinguishers necessary and their locations.

An escape chamber or alternate escape route shall be maintained within 5,000 feet of the tunnel face or areas being used to excavate material. Workers shall be provided with emergency rescue equipment and trained in its use.

Risk Management – Hazardous Materials Business Plans and Inventories

Businesses that handle hazardous materials over certain threshold quantities are required by the State of California to submit an HMBP to the local CUPA agency. This document is used by city emergency response agencies for chemical emergency planning. The HMBP includes an inventory of hazardous materials used, and it is required to include the following:

- specific details on the facility covered by the plan, such as name and address;

- an inventory of hazardous materials used and stored;
- a site and facility layout;
- emergency response procedures;
- procedures for immediate notification of the administering agency in the event of an emergency;
- evacuation plans in the event of an emergency;
- a description of the training employees have received in the evacuation and safety procedures; and
- identification of local emergency medical assistance.

Above Ground Storage Tanks

Title 40 of the Code of Federal Regulations, Section 112 also contains requirements for above ground storage of petroleum products. In accordance with these regulations, a petroleum tank of greater than 660 gallons or aggregate storage of over 1,320 gallons, which could reasonably discharge to a navigable water, is required to have a Spill Control and Countermeasure Plan (U.S. EPA Region IX, San Francisco, has taken a conservative stance, that virtually any large oil spill in California will enter federally regulated waters). The plan would include appropriate spill containment or equipment used to divert spills from sensitive areas, a discussion of facility specific requirements for the storage system, inspections and a record keeping system, security for the system, and personnel training.

Waste Disposal

All California landfills have been segregated by regulatory authority into the categories of Class I, Class II and Class III facilities. Class I facilities can accept hazardous wastes with chemical levels below the federal land disposal restriction (land ban) treatment standards. Class II and III facilities can accept non-hazardous wastes that meet acceptance criteria determined by the state for organic and inorganic compounds. Each landfill has individual acceptance criteria and the appropriate disposal site for a waste would be determined on the basis of the classification of the waste and individual landfill acceptance criteria.

In accordance with state and federal regulations, a waste is hazardous if it:

- Is a listed hazardous waste as defined in RCRA; or
- Exhibits the characteristics of ignitability, corrosivity, reactivity, or toxicity as defined in the California Code of Regulations.

Hazardous materials and hazardous wastes are defined in the California Code of Regulations, Title 22, Sections 66260 through 66261.10. A waste is considered toxic if it contains certain metals or organic substances at concentrations greater than federal toxicity regulatory levels using

a test method called the TCLP;2 if it contains certain substances at concentrations greater than the state regulatory levels, including the total threshold limit concentration TTLC3 or the STLC;[4] if it contains specified carcinogenic substances at a single or combined concentration of 0.001 percent; or if toxicity testing indicates toxicity greater than specified criteria.

Class II and III landfills in the Bay Area have acceptance criteria for lead that are lower than the TCLP or STLC. Soil with total petroleum hydrocarbon concentrations above the detection limit must be disposed of at an appropriate landfill facility or treated to reduce the levels of petroleum hydrocarbons in the soil. In general, soil with total petroleum hydrocarbon levels up to 100 milligrams per kilogram can be disposed of at a Class III disposal facility. If the concentration is between 100 and 1,000 milligrams per kilogram, it can be disposed of at a Class II disposal facility; and if the concentration is greater than 1,000 milligrams per kilogram, Class I disposal would be required.

The California Department of Toxic Substances Control has classified friable, finely divided and powdered wastes containing greater than one- percent asbestos as a hazardous waste.[5] A friable waste can be reduced to powder or dust under hand pressure when dry. Non-friable asbestos-containing wastes are not considered hazardous and are not subject to regulation under Title 22, Division 4.5 of the California Code of Regulations. The management of these wastes would still be subject to any requirements or restrictions which may be imposed by other regulatory agencies. The state standard for classification of asbestos wastes is contained in Section 66261.24 of Title 22 of the California Code of Regulations. Asbestos is not currently regulated as a hazardous waste under the RCRA; because of this it is considered a non-RCRA waste. Asbestos wastes, totaling more than 50 pounds, must be transported by a registered waste hauler to an approved treatment, storage or disposal facility.

Wastes containing asbestos may be disposed of at any landfill which has waste discharge requirements issued by the RWQCB that allow disposal of asbestos-containing materials, provided that the wastes are handled and disposed of in accordance with the Toxic Substances Control Act, the Clean Air Act's National Emission Standards for Hazardous Air Pollutants, and Title 22 of the Code of California Regulations (Division 4.5). The Department of Toxic Substances Control also has treatment standards for asbestos-containing wastes, which require

2 A waste would be considered hazardous if it contains a soluble concentration of the specified substance at a concentration greater than the federal toxicity characteristic level specified in CCR, Title 22, Section 66261.24 (a)(i). The soluble concentration is determined using the TCLP, which involves a 20-to-1 dilution of the sample. Because of this, the total concentration of a substance would need to exceed 20 times the TCLP level for the soluble concentration to possibly be greater than the TCLP level.

3 In accordance with CCR, Title 22, Section 66261.24(a)(2), a waste would be considered hazardous on the basis of toxicity if it contains the specified substance at a total concentration greater than the TTLC.

4 In accordance with CCR, Title 22, Section 66261.24(a)(2), a waste would be considered hazardous on the basis of toxicity if it contains the specified substance at a soluble concentration greater than the STLC. The soluble concentration is determined by performing a Waste Extraction Test, which involves at 10-to-1 dilution of the sample. Because of this, the total concentration of a substance would need to exceed 10 times the STLC for the soluble concentration to possibly be greater than the STLC.

5 California Department of Toxic Substances Control, Fact Sheet, Asbestos Handling, Transport and Disposal, October 1993.

submittal of a notification and certification form to the land disposal facility as well as wetting and containment of the asbestos-containing materials.

The owner of properties where hazardous wastes are produced or abatement would occur must have a Hazardous Waste Generator Number assigned by and registered with the California Department of Toxic Substances Control in Sacramento. The contractor and hauler of the material are required to file a Hazardous Waste Manifest, which details the hauling of the material from the site and the disposal of the material.

Hazardous Materials Worker Safety Requirements

The Federal Occupational Safety and Health Administration (Fed OSHA) and the California Safety and Health Administration (Cal OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in the Code of Federal Regulations, Title 29 (29 CFR) as authorized in the Occupational Safety and Health Act of 1970. They provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal OSHA standards are generally more stringent than federal regulations.

The state regulations concerning the use of hazardous materials in the workplace are included in Title 8 of the California Code of Regulations, which contain requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites.

Regulatory Database Review

A regulatory database review was conducted to identify permitted hazardous materials usage and environmental cases within the ¼ mile of the tunnel alignment (EDR, 2005a – 2005q). The databases reviewed are listed in Tables HAZ-1 and HAZ-2 with the date of each database reviewed. Each database is described in the following sections.

Federal Regulatory Databases

Federal agencies publish numerous lists of sites that track permitted uses of hazardous materials and environmental cases. The lists reviewed for this EIR are summarized in Table H-1. They include:

- The National Priority List (NPL) which is a subset of the CERCLIS database (described below) and includes priority sites for cleanup under the federal Superfund Program;

TABLE H-1
FEDERAL REGULATORY DATABASES REVIEWED

Name of List	Responsible Agency	Acronym	Date of List
National Priority List	USEPA	NPL	7/1/05
Proposed National Priority List Sites	USEPA	Proposed NPL	4/27/05
Superfund Consent Decrees	USEPA	CONSENT	12/14/04
Records of Decision	USEPA	ROD	6/8/05
Federal Superfund Liens	USEPA	NPL LIENS	10/15/91
National Priority List Deletions	USEPA	Delisted NPL	7/1/05
Comprehensive Environmental Response, Compensation, and Liability Information System	USEPA	CERCLIS	6/27/05
CERCLIS- No Further Remedial Action Planned	USEPA	CERCLIS NFRAP	5/17/05
Engineering Controls Site List	USEPA	US ENG CONTROLS	1/10/05
Toxic Chemical Release Inventory System	USEPA	TRIS	12/31/03
Emergency Response Notification System	USEPA	ERNS	12/31/04
Hazardous Materials Information Reporting System	USDOT	HMIRS	6/27/05
Resource Conservation and Recovery Act (RCRA)	USEPA	RCRA	5/20/05
Biennial Reporting System	USEPA	BRS	12/31/03
RCRA Corrective Action Sites	USEPA	CORRACTS	6/28/05
RCRA Administrative Action Tracking System	USEPA	RAATS	4/17/95
Department of Defense Sites	USGS	DOD	10/1/03
Formerly Used Defense Sites	USACOE	FUDS	12/31/04
Facility Index System	USEPA	FINDS	7/11/05
PCB Activity Database System	USEPA	PADS	3/30/05
Toxic Substances Control Act	USEPA	TSCA	12/31/02
Federal Insecticide, Fungicide and Rodenticide Act/TSCA	USEPA	FTTS	7/15/05
Federal Insecticide, Fungicide and Rodenticide Act/TSCA	USEPA	FTTS INSP	7/15/05
Section 7 Tracking System	USEPA	SSTS	12/31/03
Material Licensing Tracking System	NRC	MLTS	7/14/05
Underground Storage Tanks on Indian Land	USEPA	INDIAN UST	4/18/05
Leaking Underground Storage Tanks on Indian Land	USEPA	INDIAN LUST	6/2/05
Indian Reservations	USGS	INDIAN RESERV	10/1/03
Mines Master Index File	MSHA	MINES	5/13/05
Uranium Mill Tailings Sites	USDOE	UMTRA	12/29/04
Open Dump Inventory	USEPA	ODI	6/30/85

SOURCE: EDR, 2005a – 2005q

- The Proposed NPL sites (Proposed NPL) which includes sites proposed for addition to the NPL;

- Superfund Consent Decrees (CONSENT) which includes NPL sites with major legal settlements that establish responsibility and standards for cleanup;

- Records of Decision (ROD) list which includes NPL sites where a record of decision has been developed that mandates a permanent remedy and includes technical and health information to aid in the cleanup of the site;

- Federal Superfund Liens (NPL LIENS) list which includes sites where the US EPA has filed liens against real property to recover remedial action expenditures or the property owner has been issued a notification of potential liability;

- NPL Delisted sites (Delisted NPL) which includes sites that have been removed from the NPL because no further response is required in accordance with criteria contained in the National Oil and Hazardous Substances Pollution Contingency Plan;

- The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) which tracks potentially contaminated properties identified under CERCLA and SARA;

- The CERCLIS No Further Action (CERCLIS-NFRAP) database which lists sites where, following an initial investigation, no contamination was found, contamination was removed quickly, or the contamination was not serious enough to require federal Superfund action or NPL consideration. As part of the U.S. EPA's Brownfields Program, these sites have been removed from the CERCLIS database to lift unintended barriers to redevelopment;

- The Engineering Controls Site List (US ENG CONTROLS) which includes sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods that prevent human contact with or a release to the environment of hazardous materials left in-place at a site.

- The Toxic Chemical Release Inventory System (TRIS) which identifies sites which release chemicals to the air, water, or land as required by Title III of the Superfund Amendments and Reauthorization Act of 1986;

- The Emergency Response Notification System (ERNS) which identifies spills of oil or hazardous substances reported pursuant to Section 103 of CERCLA as amended, Section 311 of the Clean Water Act, and sections 300.51 and 300.65 of the National Oil and Hazardous Substances Contingency Plan;

- The Hazardous Materials Information Reporting System (HMIRS) which includes hazardous material spill incidents that were reported to the US Department of Transportation;

- Resource Conservation and Recovery Act (RCRA) which includes facilities permitted to handle hazardous wastes under RCRA including treatment, storage, and disposal facilities (RCRA - TSD); large quantity generators which report generation of greater than 1000 kilogram per month of non-acutely hazardous waste or 1 kilogram per month of acutely hazardous waste (RCRA-LQG); and small quantity generators which report generation of less than 1000 kilogram per month of non-acutely hazardous waste or 1 kilogram per month of acutely hazardous waste (RCRA-SQG);

- Biennial Reporting System (BRS) which is a national system administered by the EPA that collects data on the generation and management of hazardous wastes. RCRA Large Quantity Generators and Treatment, Storage, and Disposal facilities are included;

- RCRA Corrective Action Sites (CORRACTS) which includes RCRA permitted facilities that are undergoing corrective action. A corrective action order is issued, when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. Corrective actions may be required beyond the facility's boundary and can be required regardless of when the release occurred, even if it predates RCRA;

- RCRA Administrative Action Tracking System (RAATS) which includes enforcement actions taken under RCRA pertaining to major violations including administrative and civil actions brought by the US EPA;

- Department of Defense Sites (DOD) which includes federally owned or administered lands, administered by the Department of Defense, that have an area equal to or greater than 640 acres of the United States, Puerto Rico, and the US Virgin Islands;

- Formerly Used Defense Sites (FUDS) which includes formerly used defense site properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions;

- Facility Index System (FINDS) which includes facility information and “pointers” to other sources that contain more detail. The following databases are included in FINDS: Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); Enforcement Dockets (DOCKET); Federal Underground Injection Control (FURS); Criminal Docket System (C-Docket); Federal Facilities Information System (FFIS); State Environmental Laws and Statutes (STATE); and PCB Activity Database System (PADS);

- PCB Activity Database System (PADS) which includes generators, transporters, commercial storers, and/or brokers and disposers of PCBs who are required to notify the USEPA of such activities;

- Toxic Substances Control Act (TSCA) list which includes manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list;

- Federal Insecticide, Fungicide, and Rodenticide Act/TSCA (FTTS) list which includes administrative cases and pesticide enforcement actions and compliance actions related to the Federal Insecticide, Fungicide, and Rodenticide Act;

- Federal Insecticide, Fungicide, and Rodenticide Act/TSCA (FTTS INSP) list which includes inspection information for cases regulated under the Federal Insecticide, Fungicide, and Rodenticide Act;

- Federal Insecticide, Fungicide, and Rodenticide Act/TSCA Section 7 Tracking System (SSTS) list which includes registered pesticide producing establishments required to submit a report to the U.S. EPA annually.

- The Material Licensing Tracking System (MLTS) which includes sites that possess or use radioactive materials which are subject to Nuclear Regulatory Commission licensing requirements;

- The Underground Storage Tanks on Indian Land (Indian UST) list which includes permitted UST facilities on Indian land;
- Leaking Underground Storage Tanks on Indian Land (INDIAN LUST) which includes leaking underground storage tanks on Indian land in Arizona, California, New Mexico, and Nevada;
- Indian Reservations (INDIAN RESERV) which includes Indian administered lands of the United States that have an area equal to or greater than 640 acres;
- Mines Master Index File (MINES) which includes properties that have been involved in mining including coal mining, quarrying, or sand and gravel operations;
- Uranium Mill Tailings Sites (UMTRA) which includes former uranium ore mining sites where large piles of mill tailings remained after the uranium had been extracted from the ore; and
- Open Dump Inventory (ODI) which is defined as a disposal facility that does not comply with one or more parts of Title 40 of the Federal Code of Regulations, Parts 257 or 258.

State Regulatory Databases

Regulatory databases to track the status of environmental cases are maintained by several state agencies including the DTSC, RWQCB, SWRCB, Cal IWMB, and the Cal OES. The SWRCB also maintains databases that identify registered ASTs and permitted USTs and the DTSC maintains a list identifying facilities that conduct dry cleaning operations. The state databases reviewed for this EIR are summarized in Table H-2. They include:

- The Annual Work Plan (AWP), formerly known as the Bond Expenditure Plan, identifies hazardous substance sites targeted for cleanup;
- The California Bond Expenditure Plan (CA BOND EXP PLAN) includes sites for which a site-specific expenditure plan has been prepared for the appropriation of California Hazardous Substance Cleanup Bond Act of 1984 funds. This list is no longer updated;
- List of Deed Restrictions (DEED) which lists sites which have been issued deed restrictions because of the presence of hazardous substances;
- The Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing (SLIC Reg2) which include various sites within the jurisdiction of the San Francisco Bay RWQCB;
- Statewide SLIC Cases (SLIC) which is maintained by the State Water Resources Control Board and includes a statewide list of SLIC cases;
- Calsites (CAL-SITES), which was previously referred to as the Abandoned Sites Program Information System (ASPIS), identifies potential hazardous waste sites, which are then screened by the DTSC for further action. Sites on this list which are designated for no further action by the DTSC were removed from this list in 1996;
- Voluntary Cleanup Program Properties (VCP) which includes low threat level properties with either confirmed or unconfirmed releases and the project proponents have requested that the DTSC oversee investigation and/or cleanup activities;

TABLE H-2
STATE AND LOCAL REGULATORY DATABASES REVIEWED

Name of List	Responsible Agency	Acronym	Date of List
Annual Work Plan	DTSC	AWP	8/8/05
California Bond Expenditure Plan	DHS	CA BOND EXP PLAN	1/1/89
List of Deed Restrictions	DTSC	DEED	8/2/05
Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing	CRWQCB	SLIC Reg2	9/30/04
Statewide SLIC Cases	SWRCB	SLIC	7/11/05
Calsites	DTSC	CAL-SITES	8/8/05
Voluntary Cleanup Program Properties	DTSC	VCP	8/8/05
Properties Needing Further Evaluation	DTSC	NFE	8/8/05
Leaking Underground Storage Tank Information System	SWRCB	LUST	7/11/05
Fuel Leak List	CRWQCB	LUST Reg2	9/30/04
Solid Waste Information System	Cal IWMB	SWF/LF	6/13/05
Waste Management Unit Database	SWRCB	WMUDS/SWAT	4/1/00
Cortese Hazardous Waste and Substances Sites List	Cal EPA	CORTESE	4/1/01
Toxic Pits Cleanup Act Sites	SWRCB	TOXIC PITS	7/1/95
Waste Discharge System	SWRCB	CA WDS	6/20/05
Proposition 65 Records	SWRCB	NOTIFY 65	10/21/93
No Further Action Determination	DTSC	NFA	5/4/05
Unconfirmed Properties Referred to Another Agency	DTSC	REF	5/4/05
School Property Evaluation Program	DTSC	SCH	5/4/05
California Hazardous Material Incident Report System	Cal OES	CHMIRS	12/31/03
Hazardous Waste Information System	Cal EPA	HAZNET	12/31/02
Active UST Facilities	SWRCB	CA UST	7/11/05
Facility Inventory Database	Cal EPA	CA FID UST	10/31/94
Hazardous Substance Storage Container Database	SWRCB	HIST UST	10/15/90
Aboveground Petroleum Storage Tank Facilities	SWRCB	AST	8/1/05
Dry Cleaner Facilities	DTSC	DRY CLEANERS	4/18/05
Emissions Inventory Data	CARB	EMI	12/31/03
Statewide Environmental Evaluation and Planning System	SWRCB	SWEEPS UST	6/1/94
Alameda County Underground Storage Tanks	ACEHD	Underground Tanks	10/24/05
Alameda County Contaminated Sites	ACEHD	CS	8/16/05
Contra Costa County Site List	CCHSD	SL	6/13/05

SOURCE: EDR, 2005a – 2005q

- Properties Needing Further Evaluation (NFE) which includes properties that are suspected of being contaminated, but contamination has not been confirmed. These sites would be assessed using the DTSC Preliminary Endangerment Assessment process;

- The Leaking Underground Storage Tank Information System (LUST) which is an inventory of sites with reported leaking underground storage tank incidents maintained by the State Water Resources Control Board.

- The Fuel Leak List (LUST Reg2) which tracks remediation status of known leaking underground tanks;

- The Solid Waste Information System (SWF/LF) which includes a list of active, inactive or closed solid waste disposal sites, transfer facilities, or open dumps, as legislated under the Solid Waste Management and Resource Recovery Act of 1972;

- The Waste Management Unit Discharge System (WMUDS/SWAT) which tracks waste management units. The list contains sites identified in the following databases: Facility Information; Scheduled Inspections Information; Waste Management Unit Information; SWAT Program Information; SWAT Report Summary Information; Chapter 15 Information; Chapter 15 Monitoring Parameters; TPCA Program Information; RCRA Program Information; Closure Information; and Interested Parties Information;

- Cortese Hazardous Waste and Substances Sites List (CORTESE) which includes sites designated be the State Water Resources Control Board (LUST cases), Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (CAL-SITES);

- Toxic Pits Cleanup Act Sites (TOXIC PITS) which includes sites suspected of containing hazardous substances where cleanup has not yet been completed;

- The Waste Discharge System (CA WDS) which lists sites which have been issued waste discharge requirements;

- Proposition 65 Records (NOTIFY 65) which include facility notifications about any release which could threaten drinking water and thereby expose the public to a potential health risk;

- No Further Action Determination (NFA) which includes properties at which the DTSC has made a clear determination that the property does not pose a problem to the environment or to public health;

- Unconfirmed Properties Referred to Another Agency (REF) which includes properties where contamination has been confirmed and which were determined not to require direct DTSC Site Mitigation Program action or oversight. Accordingly, these sites have been referred to another state or local agency;

- School Property Evaluation Program (SCH) which includes proposed and existing school sites that are being evaluated by DTSC for possible hazardous material contamination. In some cases, these properties may be listed in the Cal-Sites category depending on the level of threat they pose to public health and safety or to the environment;

- California Hazardous Materials Incident Reporting System (CHMIRS) which includes reported hazardous materials accidental releases or spills;

- The Hazardous Waste Information System (HAZNET) which includes facility and manifest data for sites that file hazardous waste manifests with the DTSC. The information contained in the database is based on manifests submitted without correction, and therefore may contain some invalid information;

- The Active UST Facilities list (CA UST) which lists registered USTs;

- The Facility Inventory Database (CA FID UST) which is a historical listing of active and inactive underground storage tank locations. Local records should contain more current information;
- The Hazardous Substance Storage Container Database (HIST UST) which is a historical listing of UST sites. Local records should contain more specific information;

- The Aboveground Petroleum Storage Tank Facilities database (AST) which lists registered ASTs;

- The Dry Cleaner Facilities database (DRY CLEANERS) which lists drycleaner related facilities that have EPA identification numbers;

- Emissions Inventory Database (EMI) which includes sites for which the California Air Resources Board and local air pollution control agencies have collected toxic and criteria pollutant emission data; and

- The Statewide Environmental Evaluation and Planning System (SWEEPS) which is a listing of underground storage tank sites that was prepared for the SWRCB in the early 1980s, but is no longer maintained or updated.

Local Regulatory Databases

The Contra Costa County Health Services Department Site List (SL) tracks sites in Contra Costa County with USTs as well as hazardous waste generators and facilities that have submitted a hazardous materials business plan. This database is listed in Table HM-2. Alameda County Underground Storage Tank List identifies sites in Alameda County with permitted underground storage tanks and the Contaminated Sites list tracks sites with leaking underground storage tanks as well as other sites with known soil or groundwater contamination.

Other Databases Reviewed and Features Identified

In addition to the regulatory databases described above, the database review included review of the Former Manufactured Gas Site database provided by Real Property Scan, Inc. and identified oil/gas pipelines and electrical transmission lines, sensitive receptors, flood zones, and wetlands.

Specific Permitted Uses, Environmental Cases, and Spill Sites

Information from each environmental database was compiled by address to identify specific facilities permitted for hazardous materials uses, environmental cases, and spill sites. This level of analysis is important for the evaluation of hazardous materials impacts because many sites can be listed in more than one database. Compiled information for permitted hazardous materials uses, environmental cases, and reported spill sites is summarized in Tables H-3, H-4, and H-5, respectively.

TABLE H-3
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Lafayette Water Treatment Plant																
TP	EBMUD Lafayette Water Treatment Plant	3848 Mt. Diablo Blvd.		X	X	X	X	X	X	X		X		X	X	A1, A2, A3, A4, A5, A6, A7, A8, A9, A10
11	Sylvan Rife	3793 Sundale Rd.								X						
Total Number of Sites			0	1	1	1	1	1	1	2	0	1	0	1	1	
Orinda Water Treatment Plant																
TP	EBMUD Orinda Water Treatment Plant	190 Camino San Pablo	X		X		X	X		X		X		X	X	A2, A3, A4, A5, A8, A9
A6	Robison Prezioso Inc.	190 Camino Pablo												X		
A7	ECS Claims Administrator	190 Camino Pablo												X		
B10	EBMUD Briones Pumping Plant	470 Manzanita Dr.								X				X		
15	Jorgenson Industries	40 Acacia Dr.								X						
Total Number of Sites			1	0	1	0	1	1	0	3	0	1	0	4	1	
Walnut Creek WTP																
TP	EBMUD Walnut Creek Water Treatment Plant	2201 Larkey Lane	X	X		X	X	X	X	X		X	X	X	X	
Total Number of Sites			1	1	0	1	1	1	1	1	0	1	1	1	1	
Sobrante Water Treatment Plant																
TP	EBMUD Sobrante Water Treatment Plant	5500 Amend Rd.	X		X	X	X	X	X	X		X	X	X	X	8
TP	PG&E Valley View Substation	5500 Amend Rd.								X						
B9	City of Richmond	5201 Valley View Rd.								X						
Total Number of Sites			1	0	1	1	1	1	1	3	0	1	1	1	1	

See last page of table for list of abbreviations used.

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Upper San Leandro Water Treatment Plant																
TP	EBMUD Upper San Leandro Water Treatment Plant	7700 Greenly Dr.	X			X	X	X	X			X		X	X	
TP	Poly Cal Plastic, Inc.	7700 Greenly Dr.											X	X		
Total Number of Sites			1	0	0	1	1	1	1	0	0	1	1	2	1	
Orinda-Lafayette Tunnel/Pipeline																
7	Gene Worthington	4045 Los Arabis Rd								X				X		
8	Contra Costa Fire Station #16	4007 Los Arabis Dr.			X	X	X	X		X						
10	Jorgenson Industries	40 Acacia Dr.								X						
11	PG&E Las Aromas Substation	30 Las Aromas Rd.								X						
12	Mary Lyons	383 Camino Sobrante												X		
13	Verizon Wireless / Lafayette	4104 El Nido Ranch Rd.								X						
18	Orinda Country Club	315 Camino Sobrante								X				X		16
20	EBMUD Orinda Water Treatment Plant/ Robinson Prezioso / ECS Claims Administrator	190 Camino Pablo	X		X		X	X		X		X		X	X	19
21	Darryl Raines	7 Camino Lenada												X		
22	City of Orinda	176 Camino Pablo												X		
23	Formerly La Roche, Inc.	969 Acalanese Rd.								X						
24	Marion Bottomely	6 Mira Loma												X		
26	CCCSD / Lower Orinda Pumping Station	18 Miner Rd.								X						
28	Patricia Samborn Bryant	63 La Cuesta												X		
29	Temple Isaiah Religious School	3800 Mt. Diablo Blvd.												X	X	
32	EBMUD Lafayette Water Treatment Plant / Lafayette Filter Plant	3848 Mt. Diablo Blvd.		X	X	X	X	X	X	X		X		X	X	
33	Douglas McNeil DDS	915 Village Center												X		
35	EBMUD	4 Madera Ln												X		37
Total Number of Sites			1	1	3	2	3	3	1	10	0	2	0	12	3	

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Ardith Reservoir and Donald Pumping Plant																
1	Import Motors	4 Cielo Ct.		X										X	X	
Total Number of Sites			0	1	0	0	0	0	0	0	0	0	0	1	1	
Fay Hill Pumping Plant and Pipeline Improvements																
A2	Unocal Service Station / Rheem Valley Unocal #3937/Tosco Corporation Station #305/Rheem Valley 76 #253937	398 Rheem Blvd.		X	X			X		X				X	X	A1, A3, A4, A5, A6, A7, A8
A9	Shell Oil Co. / Eric Accomozzo	383 Rheem Blvd.		X		X	X	X		X						E22
B12	Exxon/ Texaco / X-Tek Automotive/ Moraga Beacon	425 Moraga Rd.			X	X	X	X		X				X		B10, B11, 28
A13	Rheem Valley Automotive Inc. / Thomas Scrubb	455 Center St.								X				X		A14
A15	Park Express Cleaners	382 Park St.									X					
C16	Rheem Center Martinizing	482 Center St.											X		X	
C17	Rheem Center 1 Hr. Martinizing	492 Center St.		X						X	X		X	X	X	C18
20	Autohaus Stuttgart	388 Moraga Rd.												X		
D21	Lori's Perfect Tan	552 Center St.												X		
D26	Rheem Valley Cleaners	568 Center St.		X						X	X		X		X	D25
D27	Comcast Cable	570 Center St.								X						
E24	Rheem Theater	350 Park St.								X						
E29	Advanced Mobil Solutions	375 Rheem Blvd.												X		
F30	Exxon Service Station #7-994	530 Moraga Rd.		X		X	X	X		X				X	X	
F31	Moraga / Orinda Fire District Station	555 Moraga Rd.								X						
G32	Longs	580 Moraga Rd.		X						X				X	X	G33
G34	Dry Clean USA / Moraga	586 Moraga Rd.								X						
Total Number of Sites			0	6	2	3	3	4	0	12	3	0	3	9	6	

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Fay Hill Reservoir																
NO PERMITTED USES IDENTIFIED WITHIN ASTM SEARCH DISTANCES																
Glen Pipeline																
1	City of Concord	3601 Deer Hill Rd.												X		
2	CCC Corporation Yard	999 Blanche LN.								X						
A3	City of Lafayette	1012 S. Thompson Rd.												X		
A4	City of Lafayette	1004 S. Thompson Rd.												X		
5	Pacific Bell	3610 Happy Valley		X			X	X		X			X	X	X	
6	Winchell's Private Residence	1 Via Oneg								X						
B7	GMW #163	953 Mt. View								X						
C9	Wentling Camera and Video / Wolf Camera #1313	3631 Mt. Diablo Blvd.								X				X		B31
D10	Lafayette Town Center Assn	3598 Mt. Diablo Blvd.												X		
B11	Meinbress Residence	3603 Happy Valley Rd.								X						
E14	Christopoulos Properties	3590 Mt. Diablo Blvd.												X		F38
D17	Shell	3603 Mt. Diablo Blvd.		X	X	X	X	X		X				X		C12, D15, D16, E13, H44
D19	Texaco/ Lafayette Beau / Texaco Refining and Marketing/ Prestige Auto	3599 Mt. Diablo Blvd.		X		X	X	X		X				X	X	D18, D20, F36, F39, H45
B24	Chevron Station #95890	3632 Mt. Diablo Blvd.		X	X		X			X				X	X	G39, G40, G41, B21, B22, B23, B25
E26	Lafayette Town Center	3588 Mt. Diablo Blvd.								X						
E28	Lafayette Town Center / Le Gas-South	3589 Mt. Diablo Blvd.				X	X	X		X				X		E27, F37
F30	One Hour Martinizing / Chevron Products USA	3580 Mt. Diablo Blvd.		X						X	X		X	X	X	F29
F32	Photo Fast	3577 Mt. Diablo Blvd.								X						
G35	Lescure Company Inc.	3667 Mt. Diablo Blvd.				X	X	X		X						G34, 66

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
40	21st & RST Building	3575 Mt. Diablo Blvd.		X											X	
44	Bedford Real Estate Investment	270 Lafayette Cir.												X		
I46	Arco/ A&A Services Inc.	3658 Mt. Diablo Blvd.				X	X	X		X				X		B8, I45
J47	Ohn H Devor MD	970 Dewing Ave.												X		
J49	Robert Herman DDS Inc.	963 Dewing Ave.												X		
K50	Lafayette Motor Sports	3670 Mt. Diablo Blvd.												X		
K54	Diamond K Building Supply	3671 Mt. Diablo Blvd.								X		X				
K55	Carlo's Automotive Repair	3672 Mt. Diablo Blvd.												X		
K58	Pacific Bell	3675 Mt. Diablo Blvd.		X		X	X	X		X					X	
79	Brooks Creative Services	3717 Mt. Diablo Blvd.												X		
Total Number of Sites			0	7	2	6	8	7	0	17	1	1	2	19	6	
Happy Valley Pumping Plant and Pipeline																
2	SRI Transport	74 Lombardy Lane		X											X	
A4	Peter Zischke	515 Miner Rd.								X				X		A3
6	Ohn Newacheck	21 Tappan Lane					X	X		X				X		
10	Ann Liphart	1 Oak Arbor Rd.												X		
D14	Rosenberg Property	12 El Sueno Rd.								X				X		D15
Total Number of Sites			0	1	0	0	1	1	0	3	0	0	0	4	1	
Highland Reservoir and Pipeline and Lafayette Reclaimed Water Pipeline																
A1	EBMUD Lafayette Water Treatment Plant	3648 Mt. Diablo Blvd.		X	X	X	X	X	X	X		X		X	X	A2, A3, A4, A5, A6, A7, A8, A9, A10
11	Sylvan Rife	3793 Sundale Rd.								X						
B12	Temple Isaiah Religious School	3800 Mt. Diablo Blvd.												X	X	B13
14	Douglas McNeil DDS	915 Village Center												X		
Total Number of Sites			0	1	1	1	1	1	1	2	0	1	0	3	2	

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Leland Isolation Pipeline																
A1	Benson's Radiator Service	1551 La Cassie Ave.								X				X		A2
B5	Pacific Bell/Walnut Creek	1755 Locust St.		X	X	X	X	X		X			X	X	X	B4, B3
C6	Unocal Service Station #7005	1823 North Main St.				X		X								
C11	Dirito Bros/Braner-Sloane Motors, Inc.	1840 North Main St.		X		X	X	X		X			X	X	X	C7, C8, C9, C10, C12, C13
D14	Walnut Creek/ Don Young Ford	1800 North Main St.				X	X	X					X		X	D15, D16
E17	Unocal	1322 North Main St.					X			X						
F18	Ken Stevenson	1717 California Blvd.												X		
E19	Target #329/Unocal Service Station #7005/Target #1208	1871 North Main St.								X				X		E20, E21, E22, E23
25	Steed Motors, Inc.	1750 North Main St.												X		
E26	Walnut Creek Nissan/ Walnut Creek Datsun Service Department/Dirito Bros Walnut Creek	1890 North Main St.				X	X	X		X						E27, E28
29	City of Walnut Creek	511 Lawrence Wy.												X		
G30	Custom Blueprint	1657 California Blvd. N.								X						
G31	Not Reported/Sprint Walnut Creek	1646 N. California St.								X						F24
H32	Walnut Creek Honda/Parker Rob Chevrolet Annex	1410 Arroyo Wy.								X						H33
I35	Parker Robb Chevrolet Inc.	1707 North Main St.		X		X	X	X		X			X	X	X	I34
K38	Stead Motors Service Center/ Springs and Bertino Body Shop	1413 Carlback Ave.								X			X	X	X	K40, K39
J41	Walnut Creek Substation/PG&E Walnut Creek Substation	1371 Arroyo Wy.		X						X					X	J42, J37
43	Sherwin-Williams Co.	1666 Locust St.		X											X	
L44	SRS Development	1756 Broadway				X				X						L61
L45	Walnut Creek Super Print	1770 N. Broadway								X						
K46	Walnut Creek Ford	1400 Carlback Ave.		X	X	X		X		X				X	X	K47, K48, K49

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
M50	Xtra Oil Company	1980 Main St.			X	X		X		X						M51, M52, Q70
53	Locusts Street Properties / Equity Concept Development Co.	1535 Giamona								X				X		I36
N54	PW Houvy						X									
O55	Walnut Creek City of Public Works	1666 North Main St.		X						X				X	X	O56, O57
P62	USA Gasoline Corp #0863/ Walnut Creek Ygnacio Shell	265 Ygnacio Valley Rd.		X	X	X	X	X		X				X	X	P58,P59, P62,P63,P64, P65, P66
P67	Nichols Chiropractic Office, Inc.	245 Ygnacio Valley Blvd.												X		
N68	City of Walnut Creek-At DMV Park	1910 N. Broadway												X		
69	Daily Printing	1618 Locust St.								X						
R71	Doctors Office	590 Ygnacio Valley Blvd.												X		
S72	Contra Costa Fire Station #1	1330 Civic Dr.			X	X	X	X		X				X		S73, S74, S75
Q78	Pembroke Real Estate/Fidelity Walnut Creek Properties	2001 North Main St.											X	X		Q77
S79	Civic Arts Education	1313 Civic Dr.												X		
U81	Don M. Morris DDS MS, Inc.	1981 N. Broadway												X		
V83	Pacific Bell	1270 Arroyo Wy.		X											X	
V84	Comcast Cable	1267 Arroyo Wy.								X						
84	Fashion Cleaners	581 Ygnacio Valley Rd.		X						X	X		X	X	X	T82
W86	Lepore Inc. / Quality Hour Photo	1601 North Main St.		X						X				X	X	W85
U87	Exxon Ras 72302	605 Ygnacio Valley Rd.											X	X		R76
Total Number of Sites			0	11	5	12	8	10	0	24	1	0	8	23	13	
Leland Bypass Valve																
TP	East Bay Municipal Utility District / Danville Pumping Plant/EBMUD Danville Pumping Plant	2055 Danville Blvd.							X	X			X		X	B4, B5, B6, B7
3	Young Residence	2099 Danville Blvd.								X						
Total Number of Sites			0	0	0	0	0	0	1	2	0	0	1	0	1	

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
Moraga Reservoir																
1	EBMUD	310 Claudia Ct.												X		
Total Number of Sites			0	0	0	0	0	0	0	0	0	0	0	1	0	
Moraga Road Pipeline																
1	Temple Isaiah Religious School	3800 Mt. Diablo Blvd.												X	X	
2	EBMUD Lafayette Water Treatment Plant/ Lafayette Filter Plant	3848 Mt. Diablo Blvd.		X	X	X	X	X	X	X		X		X	X	
3	Douglas McNeil DDS	915 Village Center												X		
4	Sylvan Rife	3793 Sundale Rd.								X						
5	Owen O'Neil	3611 Powell Dr.								X						
5	Claude Hutchison	3615 Powell Dr.												X		
9	Campolindo High School	300 Moraga Rd.		X						X				X	X	8
10	Acalanes Maintenance Yard/ Acalanes Union High School/Acalanes Service Center/ Trans Maintenance	310 Moraga Rd.	X		X	X	X	X		X		X		X	X	11
13	Autohaus Stuttgart	388 Moraga Rd.												X		
14	Advanced Mobil Solutions	375 Rheem Blvd.												X		
14	Rheem Theater	350 Park St.								X						
15	Shell Oil Co./ Eric Accomozzo	383 Rheem Blvd.		X		X	X	X		X						14
15	Unocal Service Station/ Rheem Valley Unocal #3937/Tosco Corp	398 Rheem Blvd.		X	X			X		X				X	X	
16	Park Express Cleaners	382 Park St.									X					
17	Rheem Center Martinizing	482 Center St.											X		X	
17	Rheem Valley Automotive Inc./ Thomas Scrubb	455 Center St.								X				X		
17	Rheem Center 1 Hr. Martinizing	492 Center St.		X						X	X		X	X	X	
18	Exxon/ Texaco/ X-Tek Automotive/ Moraga Beacon	425 Moraga Rd.			X	X	X	X		X				X		12

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
19	Lori's Perfect Tan	552 Center St.												X		
19	Comcast Cable	570 Center St.								X						
19	Rheem Valley Cleaners	568 Center St.		X						X	X		X		X	
20	Exxon Service Station #7-994	530 Morga Rd.		X		X	X	X		X				X	X	
20	Dry Clean USA/ Moraga	586 Moraga Rd.								X						
20	Moraga/ Orinda Fire District	555 Moraga Rd.								X						
20	Longs	580 Moraga Rd.		X						X				X	X	
21	Lamorinda Cleaners	629 Moraga Rd.								X	X		X	X	X	
24	Miramonte High School	750 Moraga Rd.												X		
Total Number of Sites			1	8	4	5	5	6	1	18	4	2	4	17	11	
New Leland Pressure Zone Reservoir and Pipeline																
A1	Smart SMR of California Inc./New Cingular Wireless Services	60 Layman Ct.								X						A2
3	Young Residence	2099 Danville Blvd.								X						
B7	East Bay Municipal Utility District/Danville Pumping Plant/Ebmud Danville Pumping Plant	2055 Danville Blvd.							X	X			X		X	B4, B5, B6
C8	Walnut Creek School District	2050 Vanderslice Ave.												X	X	C9
Total Number of Sites			0	0	0	0	0	0	1	3	0	0	1	1	2	
Sunnyside Pumping Plant																
NO PERMITTED USES IDENTIFIED WITHIN ASTM SEARCH DISTANCES																
Tice Pumping Plant and Pipeline																
A2	Contra Costa Fire Protectioin	2273 Whyte Park Ave.				X	X	X		X				X		28
B3	Cottage Veterinary Hospital	1590 Boulevard Way												X		
B11	Tice Valley Texaco/ Golden State Service Station/ Saranap Filling Station/ Franks Auto Repair	1601 Tice Valley Blvd.		X	X	X	X	X		X				X	X	B4, B13, B15, B16

TABLE H-3 (Continued)
SPECIFIC PERMITTED USE SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database													
			RCRA LQG	RCRA SQG	UST	CA FID UST	HIST UST	SWEEPS	AST	Contra Costa SL	DRY CLEANERS	WDS	EMI	HAZNET	FINDS	Other Site Nos.
B5	Shell/ Ames Gillespie	1600 Tice Valley Blvd.				X	X	X		X						B8, B14
B6	Military Family Housing/ American Cleaners/ Mobil Service Station	2400 Olympic Blvd.		X		X	X	X		X			X	X	X	B7, B9, B10, B12, D23
C17	Dr. Kenneth Brown DDS	2231 Olympic Blvd.												X		
C18	Christopher A Wolter DDS	2229 Olympic Blvd.												X		
C19	Diablo Muir Podiatry Group	2227 Olympic Blvd.												X		
C20	Christopher Thompson DDS	2225 Olympic Blvd.												X		
B21	Tice Valley Medical Center	1607 Tice Valley Blvd.												X		
D24	Bay Area Rescue Mission	2424 Olympic Blvd.												X		
25	James McGeehon	2460 Warren Blvd.						X		X						
E27	Tamarind Place Associates LP	1343 Boulevard Way												X		
29	Ruane Hayashi	3 Abbey Ct.												X		
F31	Cal Metcalf	1299 Boulevard Way								X						F32
F33	Amesterdam Art	1279 Boulevard Way												X		
38	Professional Resource Management	1136 Saranap Space		X						X						
Total Number of Sites			0	3	1	4	4	5	0	7	0	0	1	13	2	
Withers Pumping Plant																
TP	Grayson Reservoir														X	
Total Number of Sites			0	0	0	0	0	0	0	0	0	0	0	1	0	*

List of abbreviations:

AST: Aboveground Petroleum Storage Tank Facilities
CA FID UST: Facility Inventory Database
Contra Costa SL: Sites regulated under the CUPA program
DRY CLEANERS: Cleaner Facilities Database
EMISSIONS: Sites with data on toxic and criteria pollutant emissions
FINDS: Facility Index System
HAZNET: Hazardous Waste Information System
HIST UST: Hazardous Substance Storage Container Database
RCRA LQG: Resource Conservation and Recovery Act, Large Quantity Generator
RCRA SQG: Resource Conservation and Recovery Act, Small Quantity Generator
SWEEPS: Statewide Environmental Evaluation and Planning System
UST: Permitted Underground Storage Tank
WDS: Waste Discharge System

SOURCES: EDR, 2005a - 2005q; Orion Environmental Associates

TABLE H-4
SPECIFIC ENVIRONMENTAL CASES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database										
			AWP	CASLIC	CALSITES	VCP	Alameda County CS	CERCLIS NFRAP	REF	Notify 65	LUST	CORTESE	Other Site Nos.
Lafayette Water Treatment Plant													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Orinda Water Treatment Plant													
TP	EBMUD Orinda Water Treatment Plant	190 Camino San Pablo										X	A2, A3, A4, A5, A8, A9
16	Couchman Property	122 Canon Dr.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	0	1	2	
Walnut Creek Water Treatment Plant													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Sobrante Water Treatment Plant													
12	CA Autism Foundation	27 Carter Ct.				X							
13	CA Autism Foundation	3592 Morning Side Dr.				X							
Total Number of Sites			0	0	0	2	0	0	0	0	0	0	
Upper San Leandro Water Treatment Plant													
TP	EBMUD Upper San Leandro Water Treatment Plant	7700 Greenly Dr.					X				X	X	
13	Exxon	8008 Mountain Blvd.					X				X	X	
B15	Gallagher & Burke	7100 Mountain Blvd.					X				X	X	B14
C16	Oakland Naval Hospital	8750 Mountain Blvd.	X		X		X	X			X	X	C17
Total Number of Sites			1	0	1	0	4	1	0	0	4	4	
Orinda-Lafayette Tunnel/Pipeline													
20	EBMUD Orinda Water Treatment Plant/ Robinson Prezioso / ECS Claims Administrator	190 Camino Pablo										X	19
31	Couchman Property	122 Canon Dr.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	0	1	2	

See last page of table for list of abbreviations used.

TABLE H-4 (Continued)
SPECIFIC ENVIRONMENTAL CASES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database										
			AWP	CASLIC	CALSITES	VCP	Alameda County CS	CERCLIS NFRAP	REF	Notify 65	LUST	CORTESE	Other Site Nos.
Ardith Reservoir and Donald Pumping Plant													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Fay Hill Pumping Plant, Pipeline Improvements, and Reservoir													
A2	Unocal Service Station / Rheem Valley Unocal #3937 / Tosco Corporation Station #305/Rheem Valley 76 #253937	398 Rheem Blvd.									X	X	A1, A3, A4, A5, A6, A7, A8
A9	Shell Oil Co. / Eric Accomozzo	383 Rheem Blvd.									X	X	E22
B12	Exxon / Texaco / X-Tek Automotive / Moraga Beacon	425 Moraga Rd.									X	X	B10, B11, 28
E24	Rheem Theater	350 Park St.									X	X	
F30	Exxon Service Station #7-994	530 Moraga Rd.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	0	5	5	
Glen Pipeline													
2	CCC Corporation Yard	999 Blanche LN.									X	X	
5	Pacific Bell	3610 Happy Valley									X	X	
D17	Shell	3603 Mt. Diablo Blvd.									X	X	C12, D15, D16, E13, H44
D19	Texaco / Lafayette Beau / Texaco Refining and Marketing / Prestige Auto	3599 Mt. Diablo Blvd.									X	X	D18, D19, D20, F36, F39, H45
B24	Chevron Station #95890	3632 Mt. Diablo Blvd.									X	X	G39, G40, G41, B21, B22, B23, B24, B25
E26	Lafayette Town Center	3588 Mt. Diablo Blvd.									X		
E28	Lafayette Town Center / Le Gas-South	3589 Mt. Diablo Blvd.										X	E27, F37
F30	One Hour Martinizing / Chevron Products USA	3580 Mt. Diablo Blvd.										X	F29
G35	Lescure Company Inc.	3667 Mt. Diablo Blvd.									X	X	G34, 66
I46	Arco / A&A Services Inc.	3658 Mt. Diablo Blvd.									X	X	B8, I45
K54	Diamond K Building Supply	3671 Mt. Diablo Blvd.									X	X	
K58	Pacific Bell	3675 Mt. Diablo Blvd.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	0	10	11	

TABLE H-4 (Continued)
SPECIFIC ENVIRONMENTAL CASES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database										
			AWP	CASLIC	CALSITES	VCP	Alameda County CS	CERCLIS NFRAP	REF	Notify 65	LUST	CORTESE	Other Site Nos.
Happy Valley Pumping Plant and Pipeline Improvements													
D14	Rosenberg Property	12 El Sueno Rd.									X	X	D15
Total Number of Sites			0	0	0	0	0	0	0	0	1	1	
Highland Reservoir and Pipeline and Lafayette Reclaimed Water Pipeline													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Leland Isolation Pipeline and Bypass Valve													
B5	Pacific Bell/Walnut Creek	1755Locust St.									X	X	B4, B3
C11	Dirito Bros / Braner-Sloane Motors, Inc.	1840 North Main St.									X	X	C7, C8, C9, C10, C12, C13
E17	Unocal	1322 North Main St.									X	X	
I35	Parker Robb Chevrolet Inc.	1707 North Main St.									X	X	I34
L44	SRS Development	1756 Broadway									X	X	L61
M50	Xtra Oil Company	1980 Main St.								X	X	X	M51, M52, Q70
P62	USA Gasoline Corp #0863 / Walnut Creek Ygnacio Shell	265 Ygnacio Valley Rd.									X		P58, P59, P60, P63, P64, P65, P66
U87	Exxon Ras 72302	605 Ygnacio Valley Rd.									X	X	R76
88	L'il Bear Car Wash #1	604 Ygnacio Valley Wy.									X	X	
89	Anderson Oldsmobile GMC	635 Ygnacio Valley Rd.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	1	10	9	
Moraga Reservoir													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Moraga Road Pipeline													
10	Acalanes Maintenance Yard / Acalanes Union High School / Acalanes Service Center / Trans Maintenance	310 Moraga Rd.									X	X	11
14	Rheem Theater	350 Park St.									X	X	
14	Shell Oil Co. / Eric Accomozzo	383 Rheem Blvd.									X	X	15
15	Unocal Service Station / Rheem Valley Unocal #3937 / Tosco Corp	398 Rheem Blvd.									X	X	

TABLE H-4 (Continued)
SPECIFIC ENVIRONMENTAL CASES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database										
			AWP	CASLIC	CALSITES	VCP	Alameda County CS	CERCLIS NFRAP	REF	Notify 65	LUST	CORTESE	Other Site Nos.
18	Exxon / Texaco / X-Tek Automotive / Moraga Beacon	425 Moraga Rd.									X	X	12
20	Exxon Service Station #7-994	530 Morga Rd.									X	X	
Total Number of Sites			0	0	0	0	0	0	0	0	6	6	
New Leland Pressure Zone Reservoir and Pipeline													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Total Number of Sites													
Sunnyside Pumping Plant													
NO ENVIRONMENTAL CASES IDENTIFIED WITHIN ASTM SEARCH DISTANCES													
Tice Pumping Plant and Pipeline													
B11	Tice Valley Texaco / Golden State Service Station/ Saranap Filling Station / Franks Auto Repair	1601 Tice Valley Blvd.									X	X	B4, B13, B15, B16
B5	Shell/ Ames Gillespie	1600 Tice Valley Blvd.									X	X	B8, B14
B6	Military Family Housing / American Cleaners / Mobil Service Station	2400 Olympic Blvd.										X	B7, B9, B10, B12, D23
E26	Walkers Hydraulics	1360 Boulevard Way									X	X	
F31	Cal Metcalf	1299 Boulevard Way									X	X	F32
Total Number of Sites			0	0	0	0	0	0	0	0	4	5	
Withers Pumping Plant													
1	Facility 11006-1	2099 Reliez Valley Rd.										X	
Total Number of Sites			0	0	0	0	0	0	0	0	0	1	

List of Abbreviations:

Alameda County CS: Alameda County Contaminated Sites List
AWP: Annual Work Plan
CAL-SITES: Calsites
CASLIC: Spills, Leaks, Investigation, and Cleanup Cost Recovery Listing
CERCLIS NFRAP: Comprehensive Environmental Response, Compensation, and Liability Information System, sites designated for no further action
CORTESE: Cortese Hazardous Waste and Substances Site List
LUST: Leaking Underground Storage Tank Site
NOTIFY 65: Proposition 65 Records
REF: sites that do not to require direct DTSC Site Mitigation Program and have been referred to another agency
VCP: Voluntary Cleanup Program Property

SOURCES: EDR, 2005a - 2005q; Orion Environmental Associates

TABLE H-5
SPECIFIC SPILL SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database			Other Site Nos.
			ERNS	CHMIRS	HMRIS	
Lafayette Water Treatment Plant						
TP	EBMUD Lafayette Water Treatment Plant/ Lafayette Filter Plant	3848 Mt. Diablo Blvd.		X		
TP	EBMUD Lafayette Water Treatment Plant	3648 Mt. Diablo Blvd.		X		
Total Number of Sites			0	2	0	
Orinda Water Treatment Plant						
TP	EBMUD Orinda Water Treatment Plant	190 Camino San Pablo	X	X		A2, A3, A4, A5, A8, A9
Walnut Creek Water Treatment Plant						
TP	EBMUD Walnut Creek Water Treatment Plant	2201 Larkey Lane		X		
Sobrante Water Treatment Plant						
TP	EBMUD Sobrante Water Treatment Plant	5500 Amend Rd.		X		
Upper San Leandro Pumping Plant						
TP	Poly Cal Plastic, Inc.	7700 Greenly Dr.		X		
Orinda-Lafayette Tunnel/Pipeline						
9	Not Reported	1050 Upper Happy Valley		X		
15	Not Reported	Highway 24		X		
20	EBMUD Orinda Water Treatment Plant / Robinson Prezioso / ECS Claims Administrator	190 Camino Pablo	X	X		19
22	Not Reported	Ardilla Rd./ Camino Pablo		X		
30	Not Reported	174Canon Dr.		X		
32	EBMUD Lafayette Water Treatment Plant / Lafayette Filter Plant	3848 Mt. Diablo Blvd.		X		
Total Number of Sites			1	6	0	
Ardith Reservoir and Donald Pumping Plant						
NO SPILLS IDENTIFIED AT PROPERTY						
Fay Hill Pumping Plant and Pipeline Improvements						
19	Not Reported	374 Park St.		X		
Fay Hill Reservoir						
NO SPILLS IDENTIFIED AT PROPERTY						
Glen Pipeline Improvements						
E14	Christopoulos Properties	3590 Mt. Diablo Blvd.	X			F38

See last page of table for list of abbreviations used.

TABLE H-5 (Continued)
SPECIFIC SPILL SITES
WATER TREATMENT AND TRANSMISSION IMPROVEMENT PROGRAM EIR

EDR Site No.	Site Name	Address	Database			Other Site Nos.
			ERNS	CHMIRS	HMRIS	
Happy Valley Pumping Plant and Pipeline						
1	Not Reported	10 Lombardy Lane		X		
Highland Reservoir and Pipeline and Lafayette Reclaimed Water Pipeline						
NO SPILL SITES IDENTIFIED AT PROPERTY OR WITHIN 1/4-MILE OF PIPELINE						
Leland Isolation Pipeline						
G31	Not Reported/Sprint Walnut Creek	1646 N. California St.		X		F24
O55	Walnut Creek City of Public Works	1666 North Main St.		X		O56, O57
T80	Not Reported	Corner of N. Broadway		X		
Total Number of Sites			0	3	0	
Leland Bypass Valve						
NO SPILL SITES IDENTIFIED AT PROPERTY						
Moraga Reservoir						
NO SPILL SITES IDENTIFIED AT PROPERTY						
Moraga Road Pipeline						
2	EBMUD Lafayette Water Treatment Plant/ Lafayette Filter Plant	3848 Mt. Diablo Blvd.		X		
6	Not Reported	730 Moraga Rd.		X		
7	Not Reported	100 Calle la Mesa	X			1
9	Campolindo High School	300 Moraga Rd.		X		8
16	Not Reported	374 Park St.		X		
22	Not Reported	Moraga Rd./ Donald Dr.		X		
23	Not Reported	715 Moraga Rd.		X		
Total Number of Sites			1	6	0	
New Leland Pressure Zone Reservoir and Pipeline						
NO SPILL SITES IDENTIFIED AT PROPERTY OR WITHIN 1/4-MILE OF PIPELINE						
Sunnyside Pumping Plant						
NO SPILL SITES IDENTIFIED AT PROPERTY						
Tice Pumping Plant and Pipeline						
22	Not Reported	120 Carol Place		X		
Withers Pumping Plant						
NO SPILL SITES IDENTIFIED AT PROPERTY						

List of Abbreviations:
CHMIRS: California Hazardous Materials Incident Reporting System
ERNS: Emergency Response Notification System
HMIRS: Hazardous Materials Information Reporting System

SOURCES: EDR, 2005a - 2005q; Orion Environmental Associates

References – Appendix H

Environmental Data Resources (EDR), 2005a. *The EDR Radius Map with GeoCheck, Ardith Reservoir and Donald Pumping Plant, Leslee Lane, Orinda, CA, 94563 September 30.*

_____, 2005b. *The EDR Radius Map with GeoCheck, Fay Hill Improvements, Rheem Blvd./Moraga Rd., Moraga, CA, 94556. September 30.*

_____, 2005c. *The EDR Radius Map with GeoCheck, Happy Valley Improvements, Lombardy/Tarry Ln., Orinda, CA, 94563. September 30.*

_____, 2005d. *The EDR Radius Map with GeoCheck, Lafayette WTP and Highland Reservoir, 3848 Mount Diablo Boulevard, Lafayette, CA, 94549. September 30.*

_____, 2005e. *The EDR Radius Map with GeoCheck, Moraga Reservoir, Fernwood Dr./Draeger Dr., Moraga, CA, 94556. September 30.*

_____, 2005f. *The EDR Radius Map with GeoCheck, New Leland Reservoir and Bypass Valve, Rudgear Rd./Broadway, Walnut Creek CA, 94596. September 30.*

_____, 2005g. *The EDR Radius Map with GeoCheck, Orinda WTP, Miner Rd./Don Miguel, Orinda, CA, 94563. September 30.*

_____, 2005h. *The EDR Radius Map with GeoCheck, Sobrante Water Treatment Plant, 5500 Amend Rd., El Sobrante, CA, 94803. September 30.*

_____, 2005i. *The EDR Radius Map with GeoCheck, Sunnyside Pumping Plant and Pipeline, Sundown/Silver Oak, Orinda, CA, 94563 September 30.*

_____, 2005j. *The EDR Radius Map with GeoCheck, Tice Pumping Plant and Pipeline, Tice Valley Blvd./Olympic Blvd, Walnut Creek, CA, 94595. September 30.*

_____, 2005k. *The EDR Radius Map with GeoCheck, Walnut Creek WTP, 2201 Larkey Ln., Walnut Creek, CA, 94597. September 30.*

_____, 2005l. *The EDR Radius Map with GeoCheck, Withers Pumping Plant, Silver Hill Way/Reliez Valley, Pleasant Hill, CA, 94549. September 30.*

_____, 2005m. *The EDR Radius Map with GeoCheck, Leland Isolation Pipeline, Lacassie Ave/California Blvd, Walnut Creek, CA, 94596. October 3.*

_____, 2005n. *The EDR Radius Map with GeoCheck, Upper San Leandro WTP, 7700 Greenly Dr., Oakland, CA, 94605 October 3.*.

_____, 2005o. *The EDR Radius Map with GeoCheck, Glen Pipeline Improvements, Happy Valley Rd./Baker Lane, Lafayette, CA, 94549. October 4.*

_____, 2005p. *The EDR Radius Map with GeoCheck, Moraga Pipeline, Moraga, CA, 94556, October 5.*

_____, 2005q. *The EDR Radius Map with GeoCheck, Orinda-Lafayette Tunnel/Pipeline, Lafayette, CA, 94549. November 21.*

APPENDIX I

Secondary Effects of Growth

APPENDIX I
Secondary Effects of Growth

Summary of Secondary Effects of Growth

Table I-1 summarizes the secondary effects of growth in the Lamorinda/Walnut Creek area. The information presented in Table I-1 is derived from the following environmental documents:

- City of Lafayette, *City Council Resolution 2002-055 Certifying an Environmental Impact Report Prepared for the Lafayette General Plan Revision and Adopting Environmental Findings Pursuant to the California Environmental Quality Act, Statement of Overriding Considerations and a Mitigation Monitoring Program*, October 28, 2002.

- City of Orinda, *City of Orinda General Plan, Volume 2: Technical Supplement and Environmental Impact Report*, May 20, 1987*; Resolution No. 29-87 Certifying Completion, Review, and Consideration of the Final EIR for the Orinda General Plan*, May 20, 1987.

- City of Walnut Creek, *Walnut Creek General Plan 2025 Final Environmental Impact Report*, December 9, 2005.

- Town of Moraga, *Moraga 2000 General Plan Update Final Environmental Impact Report*, February 2001; *Resolution 21-2002 in the Matter of Town Council Action to Certify the Environmental Impact Report and Adopt the Moraga 2002 General Plan Update*, June 4, 2002.

- Contra Costa County, *Findings Related to Certification of Environmental Impact Report for General Plan and Adoption of General Plan*, January 29, 1991.

TABLE I-1
MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County	City of Lafayette	Town of Moraga	City of Orinda	City of Walnut Creek
	Contra Costa County General Plan[a]	Lafayette General Plan[b]	Moraga General Plan[c]	Orinda General Plan[d]	Walnut Creek General Plan[e]
Land Use					
Impacts					
• Conflicts between residential and commercial land uses. (S)			x		
• Incompatible residential densities. (S)			x		
• Increased in population could adversely affect existing residents and businesses. (S)		x			
• Alteration of the character of the downtown area. (S)		x			
• Inconsistencies with existing uses. (S)	x				
Mitigation Measure					
• General Plan amendment and rezoning.	x				
• Ensure that site planning, architecture, color, materials and landscaping contribute to the community identify and small town character.		x			
• Develop residential densities to reflect and maintain character of existing neighborhoods.		x			
• Maintain existing Sphere of Influence boundaries.		x			
• Policies encourage additional commercial development in the downtown area.		x			
• Work with the county and neighboring cities and other agencies in planning for public services an d coordinating future development.		x			
• Amend zoning ordinances/ limit development intensities.					
• Require architectural design guidelines.					
• Incorporate mandatory performance-based development standards for uses in Moraga Center and Rheem Specific Plan areas.			x		
Agricultural Resources					
Impact					
• Conversion of agricultural land to urban uses and loss of open space. (U)	x				
Mitigation Measure					
• Urban development shall take place in areas designated for urban growth.	x				
• Protect agriculture to assure balance in land use.	x				

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Traffic and Transportation					
Impact					
• Degradation of levels of service on local roadways and state and interstate routes. (U)	x				
• Adverse project and/or cumulative vehicular impacts on freeway. traffic/travel speeds. (U)			x		x
• Increased Traffic on Highway 24 (U)		x			
• Project and/or cumulative impacts to local roadways and intersections that would result in unacceptable levels of service. (U)	x				x
• Impacts to local roadways and intersections. (S)		x			
• Impacts for intersections in adjacent community. (U)			x		
• Increased demand for bike lanes, walkways, and other means of alternative transport. (S)		x			
• Increased volumes on local roadways. (S)	x	x			
• Increased accident potential along roadway. (S)		x			
Mitigation Measures					
• Implement Traffic Impact Fee Programs (as required by Measure C-88).	x				
• Roadway and/or intersection improvements or additions, including reconfiguring or widening some roadways to accommodate more lanes.	x				x
• Caltrans should widen I-580 and affected off- and on-ramps.	x				
• Include a transit service plan with provisions for alternative transportation; e.g. efficient buses, BART connections, bikepaths/pedestrian walkways, ridesharing, telecommuting, etc./ provide public transit amenities in new development	x				
• Require a Transportation System Management Plan (TSMP) or Transportation Implementation Program.					x
• Establish level of service standards and goals.		x			
• Periodically review traffic management plans to ensure consistency with goals and policies of the General Plan.		x			
• Limit development to that which can be adequately served by Lafayette's circulation system.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• Require new developments to pay their fair share of circulation improvements.		x			
• Seek to reduce vehicle trips by promoting alternatives to the single-occupant automobile.		x			
• Take measures to increase use of public transit.		x			
• Participate in regional transportation planning in order to minimize adverse impacts on the city's circulation system.		x			
• Seek funding from federal, state, and regional agencies for transportation projects that will alleviate congestion and enhance the livability of the community.		x			
• Work toward achieving the city's transportation service objectives on roads such as Highway 24 and the city's portion of Pleasant Hill Road.		x			
• Plan for and implement changes to the roadway system so that the system is safe and efficient for all modes of travel while preserving the semi-rural character of the community.		x			
• Place a higher priority on safety, encouraging pedestrian-oriented design and scale, and on maintaining the quality of life and identity of residential neighborhoods than on accommodating through traffic.		x			
• Continue to provide a system whereby residents can address automobile, bicycle and pedestrian issues.		x			
• Maintain roadway to provide for the public's safety.		x			
• Improve the safety of the roadway system.		x			
• Work with residents, businesses, and property owners who wish to improve traffic safety and solve circulation problems.		x			
• Discourage diversion of through-traffic onto local streets.		x			
• Continue to update and implement the Master Walkways Plan.		x			
• Seek to maintain the city's walkways to avoid hazard.		x			
• Encourage bicycling by making it easier and safer for people to travel by bicycle.		x			
• Coordinate with existing transportation agencies.	x				x
• Reduce freeway congestion.			x		
• Reduce regional intersection congestion.			x		

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Air Quality					
Impacts					
• Inconsistency with BAAQMD thresholds of significance as a result of population increases under the plan exceeding ABAG projections (upon which regional air quality plans are based) and increases in vehicle miles traveled (VMT) at a faster rate than population growth. (U)					x
• Wood smoke from residential uses allowed under the plan would increase particulate emissions and worsen existing air pollution problems. (U)					x
• New or increased emissions resulting from plan implementation would increase air pollution and cause a deterioration in regional air quality. (S)	x	x			x
• Construction related impacts from dust and vehicle exhaust emissions. (S)					x
• Exposure of sensitive receptors to source of toxic air contaminants (S).					x
Mitigation Measures					
• Work with BAAQMD to implement Regional Clean Air Plan.		x			
• Improve air quality by reducing the use of single-occupant automobiles.		x			
• Specific plan incorporates features that reduce impacts.	x				
• Implement Transportation Demand Measures (carpooling, transit, etc.).	x				
• Exercise interagency cooperation to integrate air quality planning efforts with transportation, transit, etc.	x				
• Maintain consistency among specific development plans and regional transportation and growth management plans.	x				
• Encourage mixed-use development.	x				
• Require linkage between growth of housing and job opportunities.	x				
• Require projects with sensitive receptors near freeways to conduct project-specific analyses of health risks from mobile sources of toxic air contaminants, evaluate the adequacy of project setbacks, and if necessary identify mitigation measures.					x
• Require construction emission control measures recommended by the BAAQMD.					x

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Noise					
Impact					
• Significant increase in noise for some existing residents from increased traffic. (S)	x				x
• Increased noise levels from increased automobile traffic, public transit, aircraft, trains, stationary noise sources, and construction activities.		x			
• Location of new noise-sensitive development in areas with excessive noise levels and/or exposure of new or existing residences and other noise-sensitive land uses to excessive noise or vibration levels.		x			x
• The Gateway Boulevard proposal will create noise impacts. (S)				x	
Mitigation Measure					
• Specific or General Plan incorporates features that reduce impacts.	x				x
• The County shall require noise studies. Major development projects which exceed “normally acceptable” standards shall contribute their prorated share to the cost of noise mitigation measures.	x				
• Locate sensitive land uses outside 60 dB-Ldn contour lines.	x				
• Employ noise-reducing construction practices	x				x
• Ensure that development is consistent with established maximum allowable noise levels.		x			
• Avoid or reduce noise impacts first through site planning and project design. Use barriers and structural changes as mitigation techniques only when planning and design prove insufficient.		x			
• Establish exterior and interior noise level standards and review all new noise-sensitive development proposals with respect to established noise and land use compatibility standards.		x			x
• Detailed environmental review and evaluation of mitigating design features will occur prior to approval of the Gateway Valley Specific Plan, which must be prepared.				x	
• Require a standard of 40-45 Ldn for indoor noise level for all new residential development including hotels and motels, and a standard of 55 Ldn for outdoor noise, except near the freeway.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• Mitigate noise impacts to the maximum extent feasible (through implementation of identified programs).		x			
Public Services					
Law Enforcement					
Impact					
• Development would require additional law enforcement officers, equipment and facilities/police services. (S)	x	x	x		
Mitigation Measures					
• Strive to maintain response time standards; consider alternatives and efficiency measures to ensure adequate police service. .		x			
• Review all development proposals for impacts on the ability to achieve police service standards, and require mitigation measures if necessary.		x			
• Work with the county and neighboring communities to improve police service to the community.		x			
• Specific Plan incorporates features that reduce impacts.	x				
• Impose development impact fees.			x		
Fire Protection					
Impacts					
• Increased risks of wildfires.		x			
• Need for additional fire fighters, equipment and facilities/fire protection services. (S)	x	x	x		
Mitigation Measures					
• Specific Plan incorporates features that reduce impacts.	x				
• Project proponent should dedicate and/or construct additional fire stations to serve planning area.	x				
• Review of fire prevention measures and project design by applicable Fire district to ensure compliance with safety standards.	x				

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• Review development plans for impacts on fire service standards; require fair share payments and or mitigation measure to ensure standards are maintained; maintain fees at a level to adequately finance fire protection costs.		x			
• Enforce regulations and standards that contribute to adequate fire protection.		x			
• Take measure to reduce fire risks.		x			
• Participate in mutual aid agreements with the county and state fire-fighting agencies.		x			
• Require development in a high fire risk area to have an approved vegetation management plan that includes native, drought-tolerant, and fire-resistant species.		x			
• Establish a high fire risk overlay zoning district in high fire risk areas where a vegetation management is required.		x			
• Development Impact Fees.			x		
Emergency Services					
Impacts					
• Increased demand for emergency medical response		x			
Mitigation Measures					
• Periodically review Emergency Operations Plan to assure that it meets current needs in the event of a major disaster; ensure that the emergency operations center is adequate and well equipped.		x			
• Cooperate with the county's Emergency Preparedness Plan.		x			
• Make information available to residents on methods to reduce dangers of hazards and encourage involvement in neighborhood prevention and emergency response groups; identify and publicize evacuation routes.		x			
• Strictly enforce regulations governing storage of hazardous materials.		x			
• Develop, in cooperation with county and neighboring communities regulations prohibiting through-transport by truck of hazardous materials on local streets, and requiring this activity to be limited to state highways.		x			
• Provide measures to protect residents from the hazards associated with the transportation, storage, and disposal of hazardous materials.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

	Contra Costa County	City of Lafayette	Town of Moraga	City of Orinda	City of Walnut Creek
Impact / Mitigation	**Contra Costa County General Plan[a]**	**Lafayette General Plan[b]**	**Moraga General Plan[c]**	**Orinda General Plan[d]**	**Walnut Creek General Plan[e]**
Schools					
Impacts					
• Demand for school facilities may exceed available capacity. (S)	x				
• Increase demand for schools. (S)		x	x		
Mitigation Measures					
• Specific Plan incorporates features that reduce impacts.	x				
• Impose development impact fees.			x		
• Coordinate planning with the local school districts to ensure students are adequately served.		x			
• Review new development for conformance with applicable performance standards.		x			
• Work with County and cities to identify and acquire a community college site.	x				
• Require childcare facilities in compliance with Contra Costa County childcare ordinance.	x				
Library Facilities					
Impacts					
• Increased need for library facilities. (S)	x		x		
Mitigation Measures					
• Impose development impact fees.			x		
Parks and Recreation					
Impacts					
• Increase demand for recreational facilities. (S)			x		
• Need for new parks and recreational facilities and/or managed open space. (S)	x	x			
• Potential barrier to proposed extensions of the city's trail system.		x			
• Need for additional bike lane and bike paths.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Mitigation Measures					
• Expand current park areas, establish new parks, and/or collect in-lieu park fees for development and management of parks.	x				
• Acquire and design parks in accordance with a comprehensive, community-wide vision of recreation needs and appropriate to a semi-rural and largely built-out community.		x			
• Develop system of high quality, well-designed parks and recreational facilities that take advantage of the city's semi-rural character.		x			
• Fund operation, maintenance, and improvements for parks, trails and recreation facilities through a variety of funding mechanisms outside the General Fund.		x			
• Maintain the community center as a multi-use facility.		x			
• Locate recreational, educational, and cultural programs throughout the community.		x			
• Complete the trail systems as shown on the city's Master Trails Plan, locating and designing trails to meet specific criteria; encourage residents to use the trail system.		x			
• Continue to update and implement the city's Master Walkways Plan.		x			
• Encourage bicycling by making it easier and safer to travel by bicycle.		x			
• Impose development impact fees.			x		
• Ensure that open space areas managed by EBRPD or other appropriate entity.	x				
• Specific Plan incorporates features that reduce impacts.	x				
• Apply maximum standard for parks to new development; review new development for conformance with parks performance standards.		x			
Water					
Impacts					
• Increased demand for water supply, storage systems, and/or water service extensions. (S)	x	x			
• Impacts resulting from cumulative increase in water demand relative to finite sources available in northern California. (U)					x

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Mitigation Measures					
• Promote water conservation and recycling.	x				
• Coordinate planning with EBMUD to ensure availability of adequate supply to meet the needs of future population.		x			
• Review new development for conformance with applicable performance standards.		x			
• Develop a water conservation program.		x			
Wastewater					
Impacts					
• Lack of wastewater adequate collection and/or treatment facilities. (S)	x	x			
• Lack of wastewater disposal capacity. (S)	x				
• Substantial increase in wastewater generation. (S)	x				
• Generation of additional wastewater.		x			
Mitigation Measures					
• Coordinate planning with the county sanitary district for continued availability of adequate sewage collection, treatment and disposal facilities.		x			
• Review new development for conformance with applicable performance standards.		x			
• Connect to district's sewage disposal system.	x				
• Specific Plan incorporates features that reduce impacts.	x				
Solid and Hazardous Waste Management					
Impacts					
• Impacts of siting solid waste facilities. (S)	x				
• Generation of significant/additional amounts of solid waste. (S)	x	x			
• Additional burden on hazardous waste collection facilities. (S)	x				

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

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Mitigation Measures					
• Implement policies and measures to mitigate effects of landfill siting, including landfill traffic and compliance with existing plans and policies.	x				
• Review development projects for their impacts on goals contained in the city's Source Reduction and Recycling Element and Household Hazardous Waste Element.		x			
• Review development projects for conformance with applicable performance standards.		x			
• Implement measures to encourage and facilitate recycling and resource recovery.	x	x			
Utility Service					
Impacts					
• Increased demand for electrical, natural gas and telephone service. (S)	x	x			
Mitigation Measures					
• Specific Plan incorporates features that reduce impacts.	x				
Housing/Jobs					
• Effects of population growth on housing. (S)		x			
Mitigation Measures					
• Implement policies actions and programs to improve existing housing supply.		x			
• Encouraged mixed use in downtown area, allow second units per City ordinance, and recommend infill development.		x			
• Implement programs to provide housing for seniors, disabled people, and others with special housing needs; provide density bonuses for first-time home buyers and housing for very-low income households.		x			
• Prohibitions are established on bias based on race, age, gender, sexual orientation, marital status, or national origin.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

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Energy Resources					
Impacts					
• Residential, commercial and industrial growth under the plan would significantly increase energy consumption. (U)	x				
• Consumption of energy during construction and operation. (S)		x			
Mitigation Measures					
• Require demonstration projects of cost-effective conservation techniques and conservation site planning, building design and landscaping.	x				
• Encourage energy conservation in new development and the retrofit of existing structures.		x			
Mineral Resources					
Impacts					
• Reduction in the availability of local and regional aggregate resources (construction aggregate and cement). (U)				x	
Mitigation Measures					
• None; benefits of avoiding adverse impacts of mining and avoiding delay in proposed development that would be necessary if mining were allowed outweigh the adverse impact on aggregate resources.				x	
Visual and Aesthetic Resources					
Impacts					
• Substantial alteration of Valley's visual character. (U)	x				
• Substantial alteration of the Valley's visual character. (S)	x				
• Loss of visually prominent open space. (S)	x				
• Impacts to scenic resources/aesthetics from loss of open space. (S)		x			
• Redevelopment of downtown area could clash with scale and character of that area. (S)		x			
• Potentially offensive views at city entryways. (S)		x			
• Views of Mt. Diablo and hillsides and surrounding the City. (S)		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

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• Lighting effects on nighttime views. (S)		x			
• Substantial alteration the character of the project area as a scenic route. (S)	x				
• Limited on-site views of open space. (S)	x				
• The Gateway Boulevard proposal would create adverse visual impacts. (S)				x	
• Inconsistencies with the scale and character of existing residential neighborhoods.		x			
Mitigation Measures					
• Approved grading and landscaping plans.	x				
• Emphasize retention of the prominent natural features on project sites.	x				
• Preserve and protect major ridgelines in their natural state as scenic resources and wildlife corridors.		x			
• Protect areas of special ecological significance, including ridges, hillsides, woodlands, wildlife corridors, riparian areas, steep slopes, prominent knolls swales, and rock outcroppings.		x			
• Develop strategy to expand public ownership and stewardship of key parcels.		x			
• Protect the character and patterns of development of residential neighborhoods.		x			
• Ensure that site planning, architecture, color, materials, and landscaping contribute to community identity and small town character.		x			
• Use lighting to develop a sense of security and enhance architecture. Lighting should not overpower the surrounding environment.		x			
• Enhance the appearance of downtown with well-designed public spaces.		x			
• Ensure that signs contribute to the attractiveness of downtown.		x			
• Commercial entryways to the City should be distinctive and attractive and should convey a positive image of the community.		x			
• Preserve and reclaim creeks in the downtown area and specific creeks as primary visual corridors in specified areas.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

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• Preserve scenic views of Mt. Diablo and hillsides from Downtown Lafayette.		x			
• Downtown core amenities shall have a distinctive appearance and shall be pedestrian-friendly.		x			
• Regulate building height in the Downtown Core to preserve its scale and identity.		x			
• Site planning in the Downtown Core fosters a pedestrian-friendly environment through zero or reduced front setbacks and access to the rear through alleyways, paseos, small plazas.		x			
• Provide pedestrian-friendly retail environment through the exclusive use of retail on the ground floor.		x			
• Preserve “character areas” with the downtown core.		x			
• A long-range vision for the East End Commercial Area will guide the establishment of zoning regulations and the review of the site-specific development projects.		x			
• Implement policies for specific areas including changes to street design to improve safety, appearance, and operation; preservation of multi-family uses in areas; and encouragement of well designed office uses.		x			
• Review capital and public improvements to ensure they are designed and built in a manner sensitive to the surrounding area.		x			
• Work with agencies to ensure they are aware of and comply with the city’s aesthetic standards and review procedures.		x			
• Residential and commercial entryways to the City should be distinctive and attractive features of the City’s landscape.		x			
• Require that properties are well maintained and nuisances are abated.		x			
• Land use densities should not adversely affect the significant natural features of the hill areas.		x			
• Preserve important visual and functional open space by requiring development to be clustered on the most buildable portions of lots, minimizing grading for building sites and roads.		x			
• Structures in the hillside overlay area shall be sited and designed to be substantially concealed when viewed from below from publicly owned property.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

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• Development should be characterized by good functional design.		x			
• Public and private infrastructure should reinforce the semi-rural qualities of residential neighborhoods.		x			
• Detailed environmental review and evaluation of mitigating design features will occur prior to approval of the Gateway Valley Specific Plan, which must be prepared.				x	
• Specific Plan incorporates features that reduce impacts.	x				
• Water tanks and other utilities should be located away from visually prominent areas and integrated with residential development wherever possible.	x				
Geology, Soils and Seismicity					
Earthquake Hazard					
Impacts					
• Potential for structural damage and injury or loss of life due to ground rupture and/or impacts from strong groundshaking, including liquefaction. (S)	x		x		
• Increase of persons affected by seismic activity.			x		
Mitigation Measures					
• Submit a detailed geotechnical report including an analysis of the liquefaction potential for the area with applications for approval of final development plans.	x				
• Prepare geologic hazard evaluations and incorporate appropriate design measures into each development project.			x		
• Minimize exposure of new development to seismic hazards through site planning and design.		x			
• Specific or General Plan incorporates features that reduce impacts.	x				
• Do not site residential, commercial or institutional structures closer than 50' from a fault trace judged to be capable of ground rupture.	x				
• Locate construction of high density residential and other critical, high-occupancy, or essential services outside of high risk zones.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
Grading and Erosion					
Impacts					
• Increased short-term and long-term erosion potential. (S)	x				
• Compaction and paving over of natural soils. (S)	x				
Mitigation Measures					
• Prepare a grading and design plan that includes an erosion control and rehabilitation plan.	x				
• Specific Plan incorporates features that reduce impacts.	x				
• Design all cut-and-fill slopes, engineered fills, roads, structural foundations and underground utilities to accommodate estimated settlement without failure.	x				
Landslide and Soil Hazard					
Impacts					
• Landslides on the site have the potential to cause significant damage to improvements and, in extreme cases loss of life. (S)	x				
• Result in damage or exposure to hazards caused by unstable slope conditions (S)			x	x	
• Increased effect of slope failure hazard. (S)		x			
• Aggravate creekbank slumping problems. (S)		x			
Mitigation Measures					
• The design-level geotechnical report must address the impacts of slope instability and expansive soils with respect to planned improvements.	x				
• Prepare slope stability assessments, site grading plans, and landslide mitigation designs.			x		
• Include slope repair contingency plans for existing landslide areas.	x				
• Consider slope and soil stability when reviewing future projects.		x			
• Require repair, stabilization, or avoidance of landslides, areas of soil creep, and possible debris flow as a condition of project approval.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

	Contra Costa County	City of Lafayette	Town of Moraga	City of Orinda	City of Walnut Creek
Impact / Mitigation	**Contra Costa County General Plan[a]**	**Lafayette General Plan[b]**	**Moraga General Plan[c]**	**Orinda General Plan[d]**	**Walnut Creek General Plan[e]**
• Limit building in areas with significant risk potential.		x			
• Detailed environmental review and evaluation of mitigating design features will occur prior to approval of the Gateway Valley Specific Plan, which must be prepared.				x	
• Protect streambank stability.		x			
Hydrology and Water Quality					
Impacts					
• Erosion and increased runoff from impermeable surfaces. (S)		x			
• Increase of urban runoff pollutants and degradation of existing surface water quality. (S)		x	x		
• Waterway sedimentation from soil erosion. (S)		x			
• Increase in existing flood hazards. (S)	x				
• Expose people or structures to increased potential for flooding, bank erosion, and/or sedimentation. (S)			x		
• Flood hazards from future development within the floodplain (S)		x			
• Flooding due to increased runoff from impermeable surfaces. (S)		x			
Mitigation Measures					
• Develop a Master Drainage/Flood Control Plan.	x				
• Implement runoff and drainage control measures.			x		
• Implement water quality standards and best management practices.			x		
• Control soil erosion to prevent flooding and landslides, maintain water quality, and reduce costs of flood control and watercourse maintenance.		x			
• Minimize pollutants in stormwater runoff.		x			
• Maintain unobstructed water flow in the storm drainage system.		x			
• Protect streambank stability.		x			
• Perform existing and on-going water quality investigation.	x				
• Reduce flood risks by maintaining effective flood drainage systems and regulating construction.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• In the review of flood control for proposed new development, establish as a standard the flood recurrence interval used by the county Flood Control District.		x			
• In cooperation with the county Flood Control and Water Conservation District and the California Department of Fish and Game, develop a long-term management plan for addressing creekbank stability on Las Trampas Creek, Grizzly Creek, and other creeks with bank slumping problems.		x			
• Explore all available sources of funding to ensure that adequate funding exists to finance improvements to storm drainage facilities.		x			
Biological Resources					
Impacts					
• Loss/fragmentation of wildlife habitat. (S)					
• Permanent direct habitat loss and accompanying reduction or elimination of dependent wildlife, including some special status species.(S)	x				x
• Impacts on special status species and their required habitat. (S)		x			
• Loss of mature, native trees, including grand trees. (S)		x			
• Displacement of riparian or other wetland habitat. (S)		x			
• Creation due to future development of man-made barriers to animal migration routes and travel routes between nesting, roosting, escape, and forage habitat. (S)		x			
• Introduction of aggressive non-native species to city habitats. (S)		x			
• Changes in the plant and animal communities living in or using Lafayette. (S)		x			
Mitigation Measures					
• Require biotic resource analysis prior to development of properties located within or adjacent to identified environmentally sensitive areas.		x			
• Preserve, protect, and, where necessary, restore open space for wildlife habitat to assure the continued viability and health of diverse, natural animal and plant communities.		x			
• Assemble open space areas from contiguous parcels to provide continuous scenic and wildlife corridors wherever feasible.		x			

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• Assure that adequate open space is provided to permit effective wildlife corridors for animal movement between open space areas, along watercourses, and on ridges.		x			
• Preserve, protect, and restore riparian habitat, particularly the native, riparian woodland species and associated understory plants.		x			
• Review development proposals for opportunities to require revegetation of riparian areas with plants indigenous to local riparian areas. Emphasize plants that have habitat value.		x			
• Protect native vegetation along ridgelines.		x			
• Preserve existing woodlands and their associated vegetation.		x			
• Protect important groves of trees and significant existing vegetation.		x			
• Provide on-site replacement of habitat.	x				
• The County shall encourage no net loss of riparian and seasonal wetlands.	x				
• The project should include a net reduction in grazing.	x				
• The County should reduce habitat fragmentation, compensate for the loss of habitat and maintain large tracts of foraging and habitat.	x				
Cultural Resources					
Impacts					
• Cause substantial adverse change in the significance of a historical or archaeological resource. (S)			x		
• Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (S)			x		
• Disturb any human remains, including those interred outside of formal cemeteries. (S)			x		
Mitigations					
• Protect archaeological resources.		x			
• Stop work if human remains are found and notify the county coroner's office.			x		

TABLE I-1 (Continued)
SIGNIFICANT MITIGABLE (S) AND SIGNIFICANT UNAVOIDABLE (U) IMPACTS OF GROWTH IDENTIFIED BY GENERAL AND SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORTS IN PROJECT AREA

Impact / Mitigation	Contra Costa County Contra Costa County General Plan[a]	City of Lafayette Lafayette General Plan[b]	Town of Moraga Moraga General Plan[c]	City of Orinda Orinda General Plan[d]	City of Walnut Creek Walnut Creek General Plan[e]
• Identify, recognize and protect sites, buildings, structures, and districts with significant cultural, aesthetic, and social characteristics that are part of the community's heritage.		x			

a Contra Costa County, Findings Related to Certification of Environmental Impact Report for General Plan and Adoption of General Plan, January 29, 1991
b City of Lafayette, City Council Resolution 2002-055 Certifying an Environmental Impact Report for the Lafayette General Plan and Adopting Environmental Findings Pursuant to the California Environmental Quality Act, Statement of Overriding Considerations and a Mitigation Monitoring Program, October 28, 2002.
c Town of Moraga, Moraga 2000 General Plan Update Final Environmental Impact Report, February 2001; Resolution 21-2002 in the Matter of Town Council Action to Certify the Environmental Impact Report and Adopt the Moraga 2002 General Plan Update, June 4, 2002.
d City of Orinda, City of Orinda General Plan, Volume 2: Technical Supplement and Environmental Impact Report, May 20, 1987; City Council Resolution 29-87 Certifying Completion, Review, and Consideration of the Final EIR for the Orinda General Plan, May 20, 1987.
e City of Walnut Creek, *Walnut Creek General Plan 2025 Final Environmental Impact Report*, December 9, 2005.

APPENDIX J
Alternatives

Maps

Happy Valley Pumping Plant Alternative Sites

Highland Reservoir Alternative Sites

Sunnyside Pumping Plant Alternative Sites

Tice Pumping Plant Alternative Sites

New Leland Pressure Zone Reservoir Alternative Sites

SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

Happy Valley Pumping Plant Alternative Sites

SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

Highland Reservoir Alternative Sites

SOURCE: EBMUD

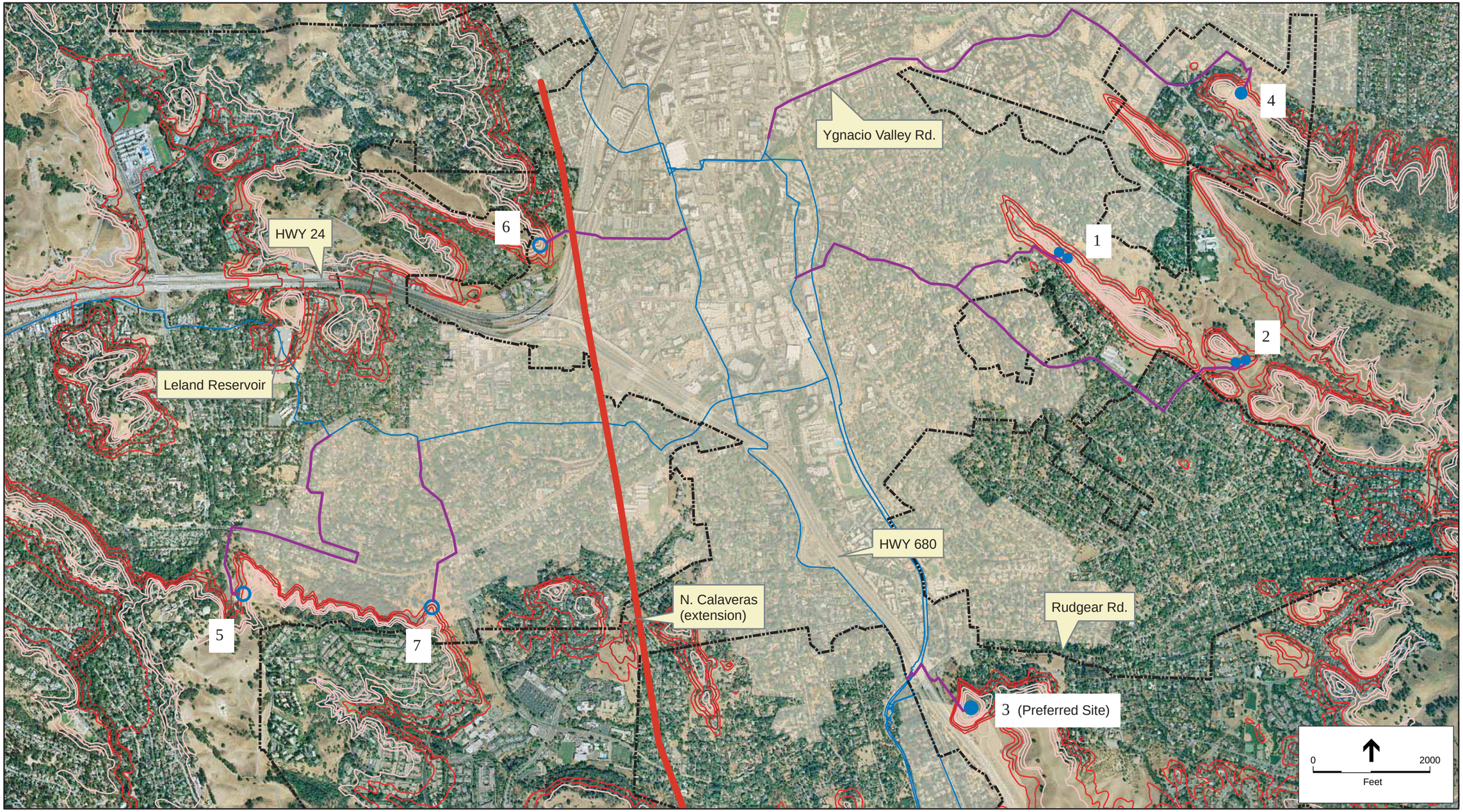
EBMUD Water Treatment and Transmission Improvements Program . 204369

Sunnyside Pumping Plant Alternative Sites

SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

Tice Pumping Plant Alternative Sites



SOURCE: EBMUD

EBMUD Water Treatment and Transmission Improvements Program . 204369

New Leland Pressure Zone Reservoir Alternative Sites