

HCPA East Contra Costa County Habitat Conservation Plan Association

HCPA Coordination Group Meeting

Thursday, May 19, 2005

1:30 p.m. to 3:30 p.m.

← **NOTE THE LATE START!**

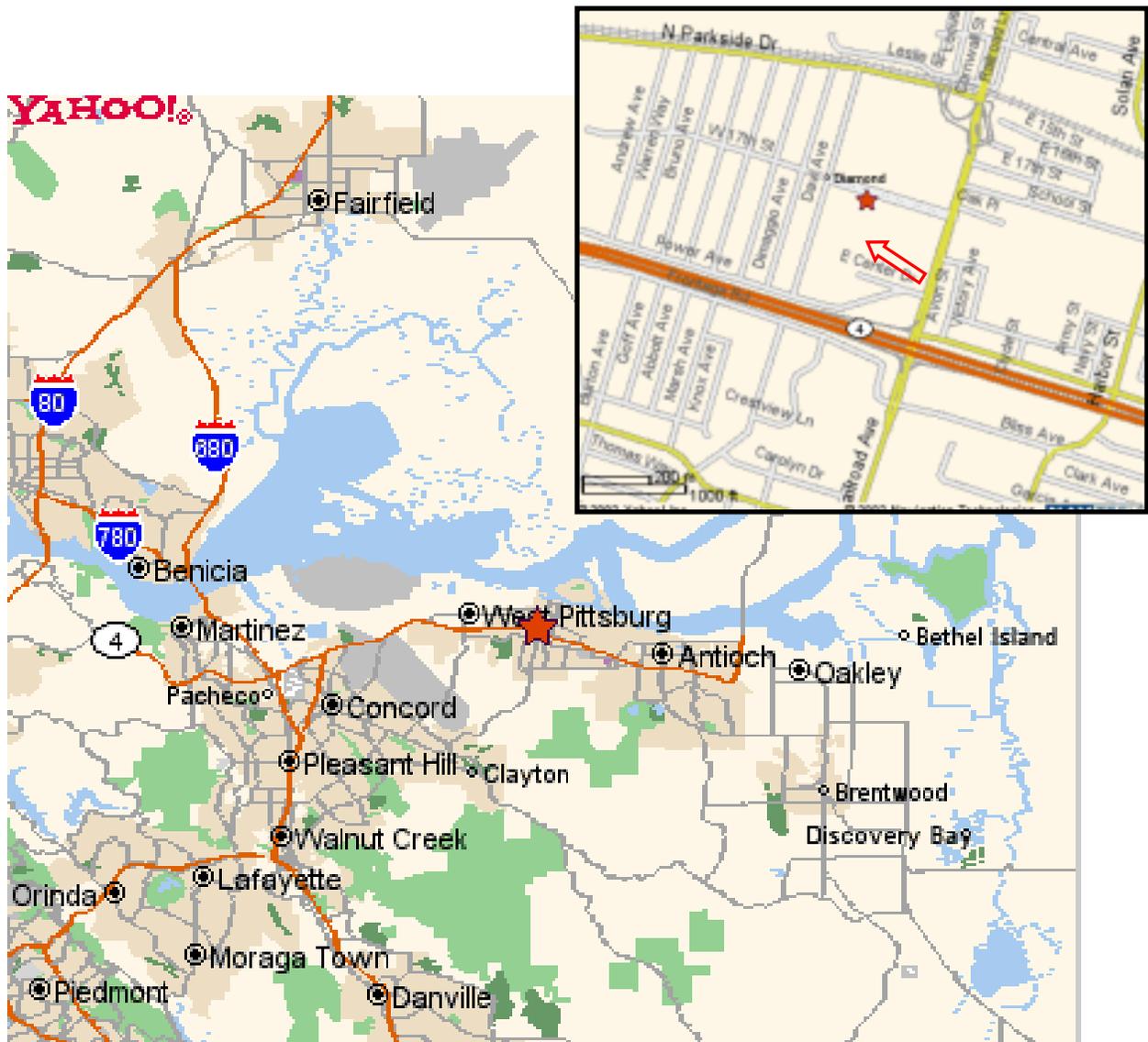
City of Pittsburg Council Chambers
65 Civic Drive in Pittsburg, 3rd Floor
(see map on reverse)

Agenda

- 1:30 Introductions. Review contents of meeting packet. Review and approve Draft Meeting Record of the January 20 and April 21, 2005 Coordination Group meeting.
- 1:35 Updates:
- General update on status of planning effort, including wetlands
 - Anticipated timeline for completion of Public Draft HCP
- 1:50 Fees and funding
- Updated cost estimates (repeat from last time as a reminder)
 - Funding
 - Base fee on new development
 - Rural road fees
 - Temporary impact fees
 - Wetland fees
- 2:50 Covered rural road projects (including map (handout) and design guidelines)
- 3:00 Review Framework document and stakeholder wish lists and seek to identify (and resolve) key outstanding issues (included in April packet, please bring that with you).
- 3:20 Confirm upcoming meeting dates. Upcoming Coordination Group meetings are scheduled as follows for the City of Pittsburg Council Chambers (usually 3rd Thursdays):
Thursday, June 16, 1 p.m. to 3 p.m.
Thursday, July 21, 1 p.m. to 3 p.m.
HCPA Executive Governing Committee: May 19 Meeting POSTPONED
- 3:25 Public comment.
- 3:30 Adjourn.

Times are approximate. If you have questions about this agenda or desire additional meeting materials, you may contact Abby Fateman of the Contra Costa County Community Development Department at 925-335-1272. The HCPA will provide reasonable accommodation for persons with disabilities planning to participate in this meeting who contact staff at least 72 hours before the meeting.

Map and Directions to Pittsburg City Hall 65 Civic Drive



Directions from I-680, Central County

- 1) Take Hwy 4 East toward Antioch/Stockton
- 2) Follow Hwy East over the hill (Willow Pass)
- 3) Exit Railroad Ave. (the 2nd exit after the hill)
- 4) At the end of the exit ramp, turn left on Railroad Ave.
- 5) Turn left at the second intersection, East Center Drive (signs for various city offices will also point you this way)
- 6) Immediately bear right into the large parking lot next to City Hall
- 7) Meeting is on the 3rd floor

Directions from Antioch and points east

- 1) Take Hwy 4 West toward Martinez/Richmond
- 2) Exit Railroad Ave.
- 3) At the end of the exit ramp, turn right on Railroad Ave.
- 4) Turn left at the next intersection, East Center Drive (signs for various city offices will also point you this way)
- 5) Immediately bear right into the large parking lot next to City Hall
- 6) Meeting is on the 3rd floor

DRAFT MEETING RECORD

East Contra Costa County Habitat Conservation Plan Association (HCPA) Coordination Group Meeting

Thursday, April 21, 2005
1 p.m. to 3 p.m.

City of Pittsburg Council Chambers

1:00 Welcome and Introductions. Meeting attendees introduced themselves. Coordination Group members and staff in attendance were:

Chris Barton, City of Pittsburg	Sheila Larsen, USFWS
Abigail Fateman, CCC Community Dev.	Dee Munk, CCC Farm Bureau
Janice Gan, CA DFG	Dick Vrmeer, CNPS
Jim Gwerder, CLA	Mike Vukelich, CCC Farm Bureau
Jessica Hamburger, CCRC	Carl Wilcox, DFG
Randy Jerome, City of Pittsburg	David Zippin, Jones and Stokes
John Kopchik, CC County Community Dev.	

Also in attendance: Dan Boatwright, Phillip Torres, Joe Ciolek, Ag Trust of CCC, and Cheryl Morgan.

1:05 Review contents of meeting packet. Review and approve Draft Meeting Record of the January 20 and March 17, 2005 Coordination Group meeting. The March 17 meeting record was accepted. Dee noted some typos and those will be corrected

1:10 Updates:

- **General update on status of planning effort, including wetlands.** Progress on the wetlands components of the effort continues. Regulatory agencies are engaged, including USACE, EPA, SFRWQCB, CA DFG, and US FWS
- **Anticipated timeline for completion of Public Draft HCP.** The Draft HCP is anticipated this Spring (June, 2005) and then there will be a 90 day comment period.

1:20 Updated cost estimates and funding implications. Costs for plan implementation have been updated. Depending on the development scenario, the costs for plan implementation will be between \$280 and \$325 million. This takes into account recent land transactions in the HCP study area.

1:50 How rigorous should project-by-project avoidance of wetlands and other features be under the HCP? Clarifying the tension that exists in the HCP/NCCP. Janice Gan requested that language be added to the introduction of Chapter 6 indicating that specific site surveys will still be conducted for development projects. Dick Vrmeer voiced concern that small pockets of habitat still have value for species and should not be written off. Janice also asked for clarification of the phrase "Weed Free" that is used on Page 6.28. Mike and others discussed what this could mean and perhaps how the text should be edited.

2:10 Documenting the willing seller commitment. The group discussed the issue of friendly condemnation. The group agreed the HCPA should have no power to condemn land (friendly or otherwise). No changes were recommended to the proposed Willing Seller language.

2:30 Review Framework document and stakeholder wish lists and seek to identify key outstanding issues. John Kopchik reviewed the wish lists and discussed the progress and resolution of various items.

2:50 Confirm upcoming meeting dates. Upcoming Coordination Group meetings are scheduled as follows for the City of Pittsburg Council Chambers (usually 3rd Thursdays):

Thursday, May 19, 1 p.m. to 3 p.m.

Thursday, June 16, 1 p.m. to 3 p.m.

HCPA Executive Governing Committee: May 19, 2005, 5:30 pm

2:55 Public comment. Dan Boatwright with Hoffman Co (Roddy Ranch) expressed support for the HCP concept – but also concern over how the HCP treats the Roddy Ranch property recently acquired by his firm and proposed for development.

Evolution of Cost Estimates

Type of Cost	Estimated Cost with Initial Urban Development Area		Estimated Cost with Maximum Urban Development Area	
	Nov-03	Apr-05	Nov-03	Apr-05
Land Costs	\$133,320,000	\$163,470,000	\$175,330,000	\$200,380,000
Site Improvements	\$5,400,000	\$5,560,000	\$5,625,000	\$5,625,000
Land Acquisition Capital Costs (Subtotal)	\$138,720,000	\$169,030,000	\$180,955,000	\$206,005,000
Land Acquisition Operation Costs (due diligence, surveys)	\$8,350,000	\$8,830,000	\$9,060,000	\$9,580,000
Land Acquisition (Total)	\$147,070,000	\$177,860,000	\$190,015,000	\$215,585,000
Program Admin	\$17,350,000	\$17,800,000	\$17,440,000	\$17,870,000
Planning and Design	\$5,900,000	\$6,000,000	\$5,980,000	\$6,080,000
Habitat Restoration/Creation	\$8,890,000	\$15,200,000	\$10,120,000	\$15,430,000
Environmental Compliance	\$3,600,000	\$2,300,000	\$3,600,000	\$2,300,000
Preserve Management and Maintenance	\$28,900,000	\$32,370,000	\$34,550,000	\$35,810,000
Monitoring, Research, and Adaptive Management	\$16,420,000	\$18,080,000	\$19,730,000	\$20,350,000
Remedial Measures	\$910,000	\$1,200,000	\$990,000	\$1,140,000
Contingency Fund	\$4,100,000	\$4,650,000	\$4,620,000	\$4,950,000
Management costs (30 years) (all non acquisition costs)	\$86,070,000	\$97,600,000	\$97,030,000	\$103,930,000
TOTAL ESTIMATED COSTS	\$233,140,000	\$275,460,000	\$287,045,000	\$319,515,000
TOTAL ASSUMED COSTS (for fee calculations)	\$245,000,000	\$280,000,000	\$300,000,000	\$325,000,000

Evolution of Funding Plan

Type of Funding Source (1)	Estimated Amount with Initial Urban Development Area		Estimated Amount with Maximum Urban Development Area		Source Category
	Nov-03	May-05	Nov-03 (Note 2)	May-05	
<u>Fee Funding</u>					
Fees on new development in Urban Development Area	n/a	\$116,081,240	n/a	\$159,698,240	Local
Wetland Impact Fees	n/a	\$16,505,000	n/a	\$17,888,000	Local
Fees on rural infrastructure (roads, detention basins, etc.)	n/a	\$8,442,600	n/a	\$8,442,600	Local
Total Projected Fee Funding	n/a	\$141,028,840	\$120,000,000	\$186,028,840	Local
<u>Non Fee Funding</u>					
Maintenance of Existing Conservation Effort (3)	n/a	\$80,000,000	\$53,500,000	\$80,000,000	Mixed
<i>Breakdown of above by source:</i>	n/a	\$52,000,000	\$34,775,000	\$52,000,000	Local
	n/a	\$24,000,000	\$16,050,000	\$24,000,000	State
	n/a	\$4,000,000	\$2,675,000	\$4,000,000	Federal
Open Space Funding Measure	n/a	n/a	\$30,000,000	n/a	Local
Byron Airport Clear Zone Acquisitions	n/a	\$6,500,000	\$6,500,000	\$6,500,000	Federal
New Wildlife Agency Funds (Section 6, park bonds, etc.) (4)	n/a	\$55,000,000	\$10,000,000	\$55,000,000	State/Fed
Total Projected Non-Fee Funding	n/a	\$141,500,000	\$100,000,000	\$141,500,000	
TOTAL PROJECTED FUNDING (Permit Term)	n/a	\$282,528,840	\$220,000,000	\$327,528,840	
TOTAL FUNDING - TOTAL COSTS (Permit Term)	n/a	\$2,528,840	-\$67,045,000	\$2,528,840	
Funding for Post Permit Term Management (5)	n/a	\$78,000,000	n/a	\$87,000,000	Local
Summary of Funding by Source					
Local	n/a	\$271,028,840	\$184,775,000	\$325,028,840	
State/Federal (4)	n/a	\$89,500,000	\$35,225,000	\$89,500,000	
Local (%)	n/a	75.2%	84.0%	78.4%	
State/Federal (%)	n/a	24.8%	16.0%	21.6%	
Local share of non-fee \$\$ (incl. fair share of post-permit mngmnt)	n/a	51.7%	34.8%	51.2%	
State/Federal share of non-fee \$\$ (incl. fair share of post-permit mngmnt)	n/a	48.3%	35.2%	48.8%	
State/Federal Contribution in Units of Acres					
Total State/Federal contribution (6)	n/a	13,350	n/a	13,350	
Wildlife agencies' share of state/federal contribution (7)	n/a	8,700	n/a	8,700	
Non wildlife agency share of state/federal contribution	n/a	4,650	n/a	4,650	

(1) Funding estimates include projected monetary contributions and the monetary value of projected in-kind contributions.

(2) "Fair Share Scenario" from Nov 2003 is shown for comparison purposes. "No funding gap scenario" from Nov 2003 not shown.

(3) Based on analysis of conservation performed over the past 30 years. Assumes 75% historic rate. See Append G.

(4) Estimates only. State and federal contributions are described in the HCP/NCCP in terms of acres.

(5) Net present value of a perpetual funding stream. Assumes post permit term management costs of \$2.9M and \$3.2M per year for the initial and max UDA respectively and a net return on investment 2% above inflation (equivalent to an endowment at the end of year 30 of \$145M and \$160M respectively)

(6) \$99,250,000 divided by \$6,702, the projected average per acre cost of land acquisition.

(7) New wildlife agency funds funds (\$55,000,000) plus about 15% of the state and federal component of maintenance of existing effort.

Fee Calculator: Preferred Alternative updated with April 2005 Cost Estimates and Fee Zone Acreage Estimates

1. FAIR SHARE (assumes Max. Permit Area)

	Urban Acres	Irrigated Ag. Acres	Total "Developed" Ac.	Conservation Acres	Conservation Ratio	Fair Share Ratio	Fair Share of New Conservation Acres	Fair Share
Existing	23,828	33,028	40,342	44,746	1.11	1.47	14,732	48% (public share)
Affected during HCP	15,000	(8,000)	11,000	30,950	2.81	1.47	16,218	52% (new development share)
Status after HCP	38,828	25,028	51,342	75,696	1.47	1.47	30,950	100%

2. Gross Cost Allocations

Item	Amount	
	Initial Permit Area	Max. Permit Area
a Total Plan Cost	\$280,000,000	\$325,000,000
b Wetland Mitigation Cost (Creation & Restoration) (to be paid by wetland fee)	\$16,505,000	\$17,888,000
c Adjusted Plan Cost	\$263,495,000	\$307,112,000
d Future Urban Development's "Fair Share" %	44%	52%
e=c*d Future Impacts "Fair Share" \$	\$116,081,240	\$159,698,240
f Contribution by Rural Infrastructure Projects	\$8,442,600	\$8,442,600
g=c-e-f Remaining Cost (to be funded by a variety of public sources)	\$138,971,160	\$138,971,160
i=b+e+f+g Total revenues	\$280,000,000	\$325,000,000

Key Assumptions:	
Ag. habitat & open space value relative to natural land	50%
New development's share of rural infrastructure mitigation costs	0%
Rural road mitigation costs	\$6,942,600
Other rural infra. mitigation costs	\$1,500,000
Total rural infra. mitigation costs	\$8,442,600
Fee zone ratio:	
Zone 1: Eastern and Ag:	2
Zone 2: S/W and Natural:	4
Zone 3: Infill:	1
Paying acres contingency	10%
Units / acre	4

3. Estimated Basic Development Fee by Fee Zone

Item	Fee Zones			
	Eastern and Agricultural Zone I	South + West Natural Areas Zone II	Infill (less 10 acres) Zone III	Total/ Avg
<u>Total Fee Zone Acreages</u>				
Initial Plan Area				
Maximum Plan Area				
<u>Fee Zone Acreages -- Less Roads</u>				
Initial Plan Area	6,306	2,368	191	8,864
Maximum Plan Area	8,717	4,634	191	13,542
Relative Fee Weighting by Zone (1)	2	4	1	2.33
<u>Relative Funding Burden by Zone -- Percent (2)</u>				
Initial Plan Area	57%	43%	0.9%	100%
Maximum Plan Area	48%	51%	0.5%	100%
<u>Relative Funding Burden by Zone -- Amount (3)</u>				
Initial Plan Area	\$65,726,969	\$49,357,647	\$996,624	\$116,081,240
Maximum Plan Area	\$76,996,202	\$81,857,494	\$844,544	\$159,698,240
<u>Fee Per Developed Acre (4)</u>				
Initial Plan Area	\$11,466	\$22,932	\$5,733	\$13,377
Maximum Plan Area	\$9,716	\$19,433	\$4,858	\$11,336
<u>Fee Per Housing Unit (5)</u>				
Initial Plan Area	\$2,867	\$5,733	\$1,433	\$3,344
Maximum Plan Area	\$2,429	\$4,858	\$1,215	\$2,834

- (1) Relative contribution of an acre in each zone from a conservation perspective.
- (2) Relative funding contribution of each zone, taking into account total zone acreage and fee weighting factor.
- (3) Relative funding burden times total fee-funded HCP costs.
- (4) Funding burden divided by zone acreage. Also includes a 10% contingency factor to account for incomplete buildout.
- (5) Assumes average housing density of 4.0 units per acre.

Fees on Covered Rural Road Projects (some rural road projects still need to be added to this table. See map for details)

ROADS (Option 1)

Name	Footprint Estimate ¹			Base fee		Draft Fee Calculator. Fee Multipliers		Net Multiplier		Fee Per Acre	Estimated Total Fee (all design measures)		
	(best available)	(lower)	(higher)	Fee Zone	Base Fee ²	A) Unavoidable effects beyond footprint ³	(pay only if Design Measures not Implemented ⁴)	Design Measures Not Implemented	Design Measures are Implemented		(if Design Measures Implemented)	Footprint= Best Available	Footprint= Lower
Bethel Is/Cypress Road Bridge Widening				ag	\$11,466	1	1	1.00	1.00	\$11,466			
Buchanan Bypass	42	35	50	natural	\$22,932	1.5	1.3	1.95	1.50	\$34,398	\$1,444,700	\$1,203,900	\$1,719,900
Byron Highway Extension (northern)	15	10	20	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$172,000	\$114,700	\$229,300
Byron Highway Widening	25	20	30	mixed	\$17,199	1.1	1.0	1.10	1.10	\$18,919	\$473,000	\$378,400	\$567,600
EBART				ag	\$11,466	1	1.0	1.00	1.00	\$11,466			
Kirker Pass Widening (Truck Climbing Lane)	25	20	30	natural	\$22,932	1.25	1.3	1.63	1.25	\$28,665	\$716,600	\$573,300	\$860,000
Marsh Creek Road Realignment at selected curves				natural	\$22,932	1.25	1.0	1.25	1.25	\$28,665			
SR4 Widening Oakley to Disco Bay	40	30	50	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$458,600	\$344,000	\$573,300
SR239 (S of Vasco Connector, not along Byron Highway)*				mixed	\$17,199	1.1	1.0	1.10	1.10	\$18,919			
Vasco-Byron Hwy Connector (S of Byron Hot Springs)*	3	2	5	natural	\$22,932	1.5	1.0	1.50	1.50	\$34,398	\$103,200	\$68,800	\$172,000
Vasco-Byron Hwy Connector (N of Byron Hot Springs)	10	7	15	natural	\$22,932	1.5	1.0	1.50	1.50	\$34,398	\$344,000	\$240,800	\$516,000
Vasco Road Widening	100	70	200	natural	\$22,932	1.25	1.0	1.25	1.25	\$28,665	\$2,866,500	\$2,006,600	\$5,733,000
TOTAL (projects marked w/ * not included in total)	257	192	395								\$6,475,400	\$4,861,700	\$10,199,100

ROADS (Option 2)(recommended)

Name	Footprint Estimate ¹			Base fee		Fee Multipliers		Net Multiplier		Fee Per Acre	Estimated Total Fee (all design measures)		
	(best available)	(lower)	(higher)	Fee Zone	Base Fee ²	A) Unavoidable effects beyond footprint ³	B) Avoidable effects (pay only if Design Measures not Implemented ⁴)	If optional Design Measures Not Implemented	If optional Design Measures are Implemented		(if Design Measures Implemented)	Footprint= Best Available	Footprint= Lower
Bethel Is/Cypress Road Bridge Widening				ag	\$11,466	1	1	1.00	1.00	\$11,466			
Buchanan Bypass	42	35	50	natural	\$22,932	1.75	1.5	2.63	1.75	\$40,131	\$1,685,500	\$1,404,600	\$2,006,600
Byron Highway Extension (northern)	15	10	20	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$172,000	\$114,700	\$229,300
Byron Highway Widening	25	20	30	mixed	\$17,199	1.25	1.0	1.25	1.25	\$21,499	\$537,500	\$430,000	\$645,000
EBART				ag	\$11,466	1	1.0	1.00	1.00	\$11,466			
Kirker Pass Widening (Truck Climbing Lane)	25	20	30	natural	\$22,932	1.5	1.5	2.25	1.50	\$34,398	\$860,000	\$688,000	\$1,031,900
Marsh Creek Road Realignment at selected curves				natural	\$22,932	1.5	1.0	1.50	1.50	\$34,398			
SR4 Widening Oakley to Disco Bay	40	30	50	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$458,600	\$344,000	\$573,300
SR239 (S of Vasco Connector, not along Byron Highway)*				mixed	\$17,199	1.25	1.0	1.25	1.25	\$21,499			
Vasco-Byron Hwy Connector (S of Byron Hot Springs)*	3	2	5	natural	\$22,932	1.75	1.0	1.75	1.75	\$40,131	\$120,400	\$80,300	\$200,700
Vasco-Byron Hwy Connector (N of Byron Hot Springs)	10	7	15	natural	\$22,932	1.75	1.0	1.75	1.75	\$40,131	\$401,300	\$280,900	\$602,000
Vasco Road Widening	100	70	200	natural	\$22,932	1.5	1.0	1.50	1.50	\$34,398	\$3,439,800	\$2,407,900	\$6,879,700
TOTAL (projects marked w/ * not included in total)	257	192	395								\$7,554,700	\$5,670,100	\$11,967,800

ROADS (Option 3)

Name	Footprint Estimate ¹			Base fee		Fee Multipliers		Net Multiplier		Fee Per Acre	Estimated Total Fee (all design measures)		
	(best available)	(lower)	(higher)	Fee Zone	Base Fee ²	A) Unavoidable effects beyond footprint ³	(pay only if Design Measures not Implemented ⁴)	Design Measures Not Implemented	Design Measures are Implemented		(if Design Measures Implemented)	Footprint= Best Available	Footprint= Lower
Bethel Is/Cypress Road Bridge Widening				ag	\$11,466	1	1	1.00	1.00	\$11,466			
Buchanan Bypass	42	35	50	natural	\$22,932	2	2.0	4.00	2.00	\$45,864	\$1,926,300	\$1,605,300	\$2,293,200
Byron Highway Extension (northern)	15	10	20	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$172,000	\$114,700	\$229,300
Byron Highway Widening	25	20	30	mixed	\$17,199	1.5	1.0	1.50	1.50	\$25,799	\$645,000	\$516,000	\$774,000
EBART				ag	\$11,466	1	1.0	1.00	1.00	\$11,466			
Kirker Pass Widening (Truck Climbing Lane)	25	20	30	natural	\$22,932	1.75	2.0	3.50	1.75	\$40,131	\$1,003,300	\$802,600	\$1,203,900
Marsh Creek Road Realignment at selected curves				natural	\$22,932	1.75	1.0	1.75	1.75	\$40,131			
SR4 Widening Oakley to Disco Bay	40	30	50	ag	\$11,466	1	1	1.00	1.00	\$11,466	\$458,600	\$344,000	\$573,300
SR239 (S of Vasco Connector, not along Byron Highway)*				mixed	\$17,199	1.5	1.0	1.50	1.50	\$25,799			
Vasco-Byron Hwy Connector (S of Byron Hot Springs)*	3	2	5	natural	\$22,932	2	1.0	2.00	2.00	\$45,864	\$137,600	\$91,700	\$229,300
Vasco-Byron Hwy Connector (N of Byron Hot Springs)	10	7	15	natural	\$22,932	2	1.0	2.00	2.00	\$45,864	\$458,600	\$321,100	\$688,000
Vasco Road Widening	100	70	200	natural	\$22,932	1.75	1.0	1.75	1.75	\$40,131	\$4,013,100	\$2,809,200	\$8,026,300
TOTAL (projects marked w/ * not included in total)	257	192	395								\$8,676,900	\$6,512,900	\$13,788,000

Footnotes:

- 1 Rough estimates only. Design specifications for most of these facilities have not been completed. Footprint includes area of cut & fill. Fee would be charged against entire disturbed area.
- 2 Base fee for projects that cross more than one fee zone have been roughly estimated. Actual fee would be based on proportion of impacts in the applicable fee zone.
- 3 Beyond direct footprint impacts, rural roads have more severe fragmentation, edge, and increased-mortality effects than other projects. The extent of these additional impacts depend on whether the proposed facility is new or expanded, on the length of the facility, on the type of habitat traversed by the road, and other factors. Some of these additional impacts can be partially reduced by wildlife-friendly design measures (see fee multiplier (B)). Other indirect effects of rural road projects (growth inducement, etc.) are addressed by the fee on new development. Consequently, multipliers are lower than they might be outside the HCP.
- 4 Design measures are either required (or required unless further studies show they are unnecessary) for projects except Kirker and Buchanan (only 1 measure is optional for Buchanan)

Temporary Impact Fee

As described in Chapter 2, there are many covered activities that are ongoing and that result in small, localized, temporary impacts on natural land-cover types. As described in Chapter 4, the majority of these activities, particularly those within the ULL, will have little or no effect on covered species or their habitats. Some ongoing activities, however, are expected to have substantial temporary impacts on covered species due to their large footprint, linear nature, location in the inventory area, effect on local soils or hydrology, or a combination of these factors. Temporary impacts are defined as any impact on vegetation or habitat that does not result in permanent habitat removal. (Covered activities with permanent impacts must pay the development fee as described above.)

Temporary impacts that occur within wetland land-cover types will be assessed the full wetland fee unless applicants develop and implement restoration to return the wetland to preproject conditions (see Chapter 6).

Temporary impacts subject to the fee (see list below of specific activities subject to this fee) will pay the fee once during the permit term in one of two ways.

- If the frequency of the impact can be predicted during the permit term, the applicant may pay a discounted fee for infrequent treatments. The total fee will be calculated using the following formula:

$$\text{Temporary Impact Fee} = \text{Full development fee} \times \text{activity footprint} \times F/30$$

where F = the number of years during the permit term in which the activity occurs. For activities that disturb soil, F must be doubled to account for the longer delay in habitat recovery.

OR

- If impact frequency and location are not known, the applicant will pay the full development fee based on the known footprint of the activity (see Figure 9-1 and Table 9-4).

Regardless of the method used, the fee will be paid once during the permit term for any given piece of ground.

Activities Subject to the Fee

To reduce administrative costs, temporary impact fees will not be assessed on any covered project with impacts of less than 0.05 acre. The following covered activities greater than 0.05 acre will be assessed a temporary impact fee *inside and outside the ULL* because of their potential effects on covered species and aquatic communities.

- Construction and maintenance of detention basins.

- Repair of channel banks damaged by erosion or slope failure.
- Silt removal within nontidal areas of natural channels or reservoirs to maintain design flood capacity; activity may include temporary dewatering to allow silt removal (silt removal in the existing Marsh Creek Reservoir is not a covered activity because of the potential to mobilize high concentrations of mercury in the sediment; silt removal in the expanded detention basin of Marsh Creek Reservoir is covered; see Chapter 2).

The following covered activities greater than 0.05 acre will be assessed a temporary impact fee in the same way as the development fee (see Figure 9-1 and Table 9-4) for the portion of the project *outside the ULL*.

- Pipeline repair or replacement (trenching).
- Underground telecommunication line installation, repair, or replacement.
- Transmission tower replacement.
- Underground electrical transmission line installation, repair, or replacement.
- Vegetation clearing needed for utility line or gas line maintenance (e.g., mowing, disking, herbicide spraying, tree trimming).

Utilities will pay the full development fee outside the ULL because of the wide scale of their impacts in the inventory area and their likely need to cross the Preserve System and other public lands that support the Preserve System.

Other covered activities, such as mowing, herbicide use, tree trimming, and all activities that occur in already disturbed areas, are subject to BMPs described in Chapter 6 but will not be charged a fee because they tend to occur regularly and maintain some habitat value. All low-impact operations and maintenance activities of County roads and flood control facilities (excluding activities in areas described in this section above) outside the ULL have been addressed in this Plan and therefore will not pay a fee, but will apply the BMPs set forth in Chapter 6.

Table 9-5. Wetland Fee and Acreage Determination Methods

Land Cover Type	Fee per unit of Impact ¹	Required Mitigation Ratio	Method for Determining Fee Boundary
Riparian woodland/scrub	\$57,000/acre	1:1	Limit of tree or shrub canopy (drip line)
Perennial wetlands	\$78,000/acre	1:1	Jurisdictional wetland boundary of state or federal government ² , whichever is greater
Seasonal wetland	\$169,000/acre	2:1	Same as above
Alkali wetland	\$160,000/acre	2:1	Same as above
Ponds	\$85,000/acre	1:1	Jurisdictional waters boundary of state or federal government ² , whichever is greater
Aquatic (open water)	\$43,000/acre	0.5:1	Wetted area during normal rainfall year or jurisdictional waters boundary, whichever is greater
Slough/channel	\$49,000/acre	0.5:1	Area of impact within banks
Streams	\$69/linear foot	1:1	Linear distance of stream centerline

¹ See Appendix G for calculation of fee by wetland type. Wetland fee takes mitigation ratio into account.

² Using methods for determining state and federal jurisdictional waters and wetlands at the time of HCP/NCCP approval or the current approved methodology, whichever results in a larger boundary.

Conservation Measure 1.12. Implement Best Management Practices for Rural Road Maintenance

Road maintenance activities have the potential to affect covered species by introducing sediment and other pollutants into downstream waterways, spreading invasive weeds, and disturbing breeding wildlife. In order to avoid and minimize these impacts, the BMPs listed below will be used where appropriate for all covered road maintenance activities.

- Silt fencing or other sediment control device will be installed downslope from maintenance activities that disturb soil to minimize the transport of sediment off site.
- No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
- Herbicides and pesticides will be applied in strict compliance with label requirements and state and federal regulations. Herbicides and pesticides will only be applied when weather conditions will minimize drift and impacts on non-target sites.
- Maintenance activities on rural roads adjacent to natural land-cover types will be seasonally timed, when safety permits, to avoid or minimize adverse effects on resident and migratory birds. This measure is particularly relevant for right-of-way mowing, brush clearing, and tree trimming. Active nests of Swainson's hawk, golden eagle, tricolored blackbird, and western burrowing owl will be avoided.
- Mowing equipment will be thoroughly cleaned before use in rural areas so they are free of noxious weeds (e.g., yellow star-thistle) and do not introduce such weeds to new areas.
- Maintenance or repair of road medians or shoulder barriers in natural land-cover types (e.g., annual grassland, oak savanna, oak woodland) will not reduce the ability of wildlife of all types to move through or over them, within safety limits. If possible, replacement or repair of road medians should improve the ability of wildlife to move past these structures.

Rationale

Most road maintenance activities are expected to have little or no effects on covered species because they occur within the disturbed footprint of the road, median, or shoulder. Some activities, however, have the potential to affect covered species by introducing sediment and other pollutants into downstream waterways or by spreading invasive weeds, as well as by direct disturbance of breeding wildlife species that may occur adjacent to rural roads. In order to meet regulatory requirements under the Plan to avoid and minimize impacts to the maximum extent practicable [on a regional scale](#), this conservation measure was developed in accordance with the activity guidelines used by the Contra Costa County Department of Public Works and with the input of the HCPA, CDFG, and USFWS.

Table 6-6. Conditions on Rural Road Projects Covered by the HCP/NCCP

Road Conservation Measure	Natural Lands Projects								Ag. Area Projects								Small Projects		
	San Marco Road Extension	Buchanan Bypass	Kirker Pass Widening	Balfour Road Widening	Marsh Creek Rd Realignment	Vasco-Byron Hwy Connector (North of Byron Hot Springs)	Vasco-Byron Hwy Connector (South of Byron Hot Springs)	Vasco Road Widening	Bethel/Cypress Isl Widening	SR4 Widening to Disco Bay	Sand Creek Rd./Sycamore Ave. Extension	Marsh Creek Road/Walnut Blvd. Widening	EBART	Byron Hwy Extension	Byron Highway Widening	Proposed Hwy 239	Bridge Repair, Retrofit, Replace	Road Safety Improvements	Bicycle Trails
Siting Requirements																			
Site in least sensitive locations	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	N/A	N/A	R
Site equipment storage away from sensitive areas	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Conduct project surveys well in advance of design	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Planning survey requirements apply to r-o-way	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Wildlife Design Requirements																			
Design requirements superceded by latest research	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Collect data on wildlife movement for at least 1 yr prior to design	R	R	O	O	R	R	R	R	N/A	N/A	N/A	N/A	N/A	N/A	R	R	N/A	N/A	N/A
Use bridges, viaducts, or causeways	O	O	N/A	N/A	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Construct road undercrossings at freq. Intervals	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Install crossing facilities at known travel routes	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Large wildlife crossings every mile or less	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Small wildlife crossings every 1,000 feet or less	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Minimum sizing for culverts	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Use grating over tunnels/culverts for light penetration	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Fencing designs to maximize crossing use	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Discourage trails within 500 feet	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Road median designs for wildlife	P	P	O	O	P	P	R	R	O	O	N/A	N/A	N/A	O	R	R	N/A	O	N/A
Construction Actions																			
Best management practices	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Install monitoring boxes (cameras)	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A
Post-Construction Actions																			
Control roadside vegetation adj to preserves and OS	R	R	R	R	R	R	R	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Revegetate cut/fill slopes with natives	R	R	R	R	R	R	R	R	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	R	R	R
Monitor structures for wildlife use	P	P	O	O	P	P	R	R	N/A	N/A	N/A	N/A	N/A	N/A	P	P	N/A	N/A	N/A

Key

R = Required

P = Possible (required unless data demonstrate measure would not benefit wildlife and CDFG and USFWS agree to omit)

O = Optional (measure can be implemented at agency's discretion; if implemented, it will reduce mitigation fee; fee reduction determined case-by-case by Implementing Entity)

N/A = Not applicable or not needed

Conservation Measure 1.14. Design Requirements for Covered Roads outside ULL

Measure

New roads or major road improvements covered by the HCP/NCCP outside the ULL (see Chapter 2) will have impacts on many covered species far beyond the direct impacts of their project footprints. For example, new or expanded roads will create major hazards or barriers to the movement of mobile species such as San Joaquin kit fox, California red-legged frog, California tiger salamander, and Western pond turtle. Roads and other linear projects also create dispersal corridors for nonnative plants, introduce runoff of car waste (e.g., oil, grease, radiator fluid), and create substantial noise and physical disturbance. Vehicle traffic on roads generate debris such as tires, litter, or car parts that can be hazardous to wildlife.

Rural road projects in cultivated agricultural areas of the eastern portion of the inventory area are not expected to have the substantial indirect effects of road projects in grassland, oak woodland, and other natural land cover types because wildlife values in cultivated agricultural areas are relatively low. Furthermore, the covered species found in cultivated agriculture (e.g., Swainson's hawk, western burrowing owl, tricolored blackbird) would be primarily affected only by the actual footprint of roads.

To minimize the substantial impacts of new and expanded roads (expanded road projects are defined as one or more lane additions) in natural areas of the inventory area, road and bridge construction projects covered by the Plan outside the ULL will adopt the siting, design, and construction requirements discussed below and listed in Table 6-6. The requirements and guidelines in Table 6-6 were developed in close coordination with CDFG, USFWS, and the Contra Costa County Public Works Department. According to the table, the design elements listed in this measure fall into one of four categories in Table 6-6 depending on the project.

1. **Required (R).** Avoidance/minimization measure is required and cannot be waived.
2. **Possible (P).** Avoidance/minimization measure is required unless field data collected at the site or in comparable areas elsewhere demonstrate that the measure would not benefit the target wildlife species. CDFG and USFWS must also agree to waive the requirement.
3. **Optional (O).** Avoidance/minimization measure can be implemented at the Permittee's discretion. If implemented, a discount will be applied to the road fee. This discount will be determined on a case-by-case basis by the Implementing Entity.
4. **Not Applicable or Not Required (N/A).** The impacts of the transportation project do not warrant the avoidance/minimization measure, or the measure would not be feasible.

All rural road projects seeking coverage under the HCP/NCCP must submit an application to the Implementing Entity, CDFG, and USFWS that explains how

project siting, design, and construction would comply with the terms of this conservation measure according to the requirements and options in Table 6-6. (One project, Vasco–Byron Highway Connector, has varying requirements in Table 6-6 depending on where the project is ultimately located.) In order to receive take coverage under the Plan, the Implementing Entity, CDFG, and USFWS must approve the application as consistent with this and any other applicable conservation measures in the HCP/NCCP. This additional compliance step is necessary because of the complexity of rural road projects and their expected substantial effects on covered species.

Siting Requirements

- Planned roads will be located in the least environmentally sensitive location feasible and will avoid, to the greatest extent feasible, impacts on covered species and sensitive natural communities such as wetlands. Alignments will follow existing roads, easements, rights-of-way, and disturbed areas as appropriate to minimize additional habitat fragmentation. The footprint of disturbance will be minimized to the maximum extent practicable.
- Equipment storage, fueling, and staging areas will be sited on disturbed areas or on ruderal or non-sensitive nonnative grassland land cover types, when these sites are available, to minimize risk of direct discharge into riparian areas or other sensitive land-cover types.
- Project surveys, including land-cover mapping, will be conducted during the conceptual planning stage of each project (i.e., well in advance of project design) so that the results can inform the siting and design process. Project surveys should be conducted in as wide a study corridor as possible to enable project siting to minimize environmental impacts.
- All planning survey requirements of this Plan will be followed within the construction corridor (i.e., the limit of project construction plus equipment staging areas and access roads) and the entire road right-of-way. Expanding the survey area beyond the project footprint will help identify covered species and their habitats so that impacts on covered species that occur adjacent to the construction zone can be minimized.
- For certain road projects (see Table 6-6), data collection will be required on wildlife movement through the road study corridor for at least 1 year prior to project design. Wildlife movement will be studied at the site to determine which species move across it, when they move, and, most importantly, which landscape features are most often used. These data will be used to select the most appropriate design requirements for the species and conditions unique to the site (see below).
- County transportation planners are urged to consult early with the HCP/NCCP Implementing Entity, CDFG, and USFWS on individual projects to ensure that conceptual designs (siting) and project designs (construction and staging areas) meet the terms of this Plan (Table 6-6).

Design Requirements for Wildlife Movement and Impact Minimization

- Design requirements in this measure will be superceded by designs shown by the best available science to be more effective at facilitating safe wildlife movement across roads. The effectiveness of road crossings for wildlife is

an active area of research, so frequent advances in design are expected throughout the permit term.

- Wildlife crossing needs will be assessed for each road project as a whole, not by road segment, and for each wildlife species likely to need to cross the facility (Barnum 2003). Data will be collected on wildlife movements at the proposed project site for at least 1 year. These data will inform the design of wildlife movement structures suitable for the site and the species that use the area.
- **Placement of Undercrossings.** Road undercrossings will be constructed at frequent intervals to allow wildlife movement. A combination of large structures (bridges, large culverts, or large tunnels) spaced at greater intervals and small structures (small culverts or tunnels) spaced at frequent intervals will be used to accommodate a wide variety of wildlife species. However, placement of undercrossings in areas where wildlife are most likely to use them is more important than maintaining a certain frequency or spacing. Wildlife crossings that serve multiple species should be used whenever possible. Crossing facilities should be installed at known travel routes, natural pinch points⁵, or other topographically appropriate locations to maximize the chance of use. Suitable areas may include stream crossings or natural drainages. Undercrossings should be placed at grade whenever possible to maximize their use by wildlife.
- **Use of Bridges.** Bridges, viaducts, or causeways⁶ will be used for certain projects (Table 6-6) to minimize impacts on important upland areas, wetlands, streams, and local surface hydrology that feeds wetlands and streams near the road, and to provide the widest and most natural passageways for wildlife (i.e., to allow natural vegetation and physical features to occur in the undercrossing). If possible, bridges will span the bed and bank of streams and avoid or minimize bridge piers or footings within the stream, within bridge safety limits. If possible, the span of bridges that cross streams should also include some upland habitat beneath their spans to provide dry areas for wildlife species that do not use creeks or for use during storms. Native plantings, natural debris, or rocks should be installed under bridges to provide wildlife cover and encourage the use of crossings.
- **Crossing Frequency.** Large wildlife crossings (for medium to large mammals) will be placed approximately once every mile along new or substantially expanded roads that cross wildlife movement routes. Small wildlife crossings will be placed approximately every 1,000 feet along new or substantially expanded roads. This is the same interval of undercrossings suitable for California tiger salamander installed along Vasco Road in the inventory area (65 undercrossings in 13 miles). Within these parameters, undercrossings should be placed where wildlife are most likely to use them, rather than evenly spaced. The required interval can be used as an average if it can be demonstrated that strict adherence to the requirement will not benefit wildlife movement.

⁵ A pinch point is a constriction of habitat by a preexisting topographic or other feature such as a steep canyon, urban development, or narrowing band of woodland or scrub.

⁶ A viaduct is a long, multi-span bridge over upland habitat; a causeway is the same but often over wetland habitat.

- **Culvert Designs.** Tunnels or culverts must be the minimum length, height, and width necessary to provide safe passage under the road. Culvert designs will be based on the best available data at the time. Current thinking recommends that culverts designed for medium-size mammals such as San Joaquin kit fox, coyote, raccoon, be 5–8 feet in diameter (although culverts larger than 8 feet in diameter may be needed for longer crossings). Culverts designed for small mammals are recommended at 18–48 inches in diameter; smaller structures may be preferred by smaller wildlife species. Culverts should, when feasible, provide a natural substrate on which wildlife can travel (e.g., open bottom). It is also recommended that wildlife undercrossings using tunnels or culverts use grating on the inactive part of the roadbed (e.g., road shoulders) to allow filtration of ambient light and moisture but minimize noise intrusion. Artificial lighting inside tunnels or culverts is not recommended; these devices have not been shown to be effective and may deter nocturnal wildlife.
- **Fencing Design.** Fencing will be used along the roadway to direct wildlife to undercrossings and minimize their access to the road. Fencing designs will be customized for the wildlife expected to use the undercrossing and will be based on the best available data at the time. Fencing must be continuous along the road and must be attached to the undercrossing to facilitate its use. Fencing must also extend well beyond the target undercrossing to reduce the chance of wildlife moving around the fence. For example, four fencing designs have been installed along Vasco Road and monitored for their effectiveness in reducing mortality of California tiger salamanders (Jones & Stokes Associates 1998b, 1999).

Fencing must be monitored regularly by the applicant and repairs made promptly to ensure effectiveness. Wildlife undercrossings must be at the same or similar elevation as the fencing (e.g., along elevated roadways) to increase chances of their use. Vegetation must be managed along small mammal and amphibian fencing to reduce the opportunity for these species to climb the fence. Fencing designed for small mammal or amphibian exclusion must be installed at least 8 inches deep into the soil to prevent small mammal burrows providing access under the fence.

Where roads cross the wildlife exclusion fences, gates should be used whenever possible with material at the base of the gate to minimize the gap between the gate and the roadbed. If gates are not feasible, an in-roadway barrier (e.g., wildlife grates or similar devices) or device that channels species away must be installed to deter wildlife from moving around fences into the road.

- **Placement of Trails.** Trails and trail use should be discouraged within 500 feet of undercrossings for medium to large wildlife to minimize disturbance to diurnal wildlife using these undercrossings.
- **Road Median Designs.** When compatible with vehicle safety, road medians should allow wildlife to cross under or over the median in the event they become trapped on the roadway.

Construction Requirements

The following measures are considered BMPs for rural road and transportation projects.

- No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
- All no-take species will be avoided.
- Timing of construction activities will consider seasonal requirements for birds and migratory non-resident species, including covered species.
- Temporary stream diversions, if required, will use sand bags or other approved methods that minimize instream impacts and effects on wildlife.
- Silt fencing or other sediment trapping method will be installed downgradient from construction activities to minimize the transport of sediment off site.
- Onsite monitoring will be conducted throughout the construction period to ensure that disturbance limits, BMPs, and Plan restrictions are being implemented properly.
- Active construction areas will be watered regularly to minimize the impact of dust on adjacent vegetation and wildlife habitats, if warranted.

The following construction measure will be applied differently to each rural road project (see Table 6-6).

- Install sturdy lock-boxes for cameras at each large wildlife undercrossing to facilitate wildlife monitoring by the Implementing Entity. Boxes should be at least 1 foot square, include a removable door, and be prewired for electricity (solar, battery, or alternating current). This will provide for the least intrusive, most secure, most flexible, and most cost-effective way to monitor wildlife usage, while minimizing human impacts. Boxes will be mounted on adjustable pedestals to vary the height of the box.

Postconstruction Requirements

- Roadside vegetation within the right-of-way and adjacent to HCP/NCCP Preserves and other open space areas will be controlled to prevent the spread of invasive exotic plants such as yellow star-thistle into nearby or adjacent preserves.
- Vegetation and debris must be managed in and near culverts and under and near bridges to ensure that entryways remain open and visible to wildlife and the passage through the culvert or under the bridge remains clear.
- Cut-and-fill slopes will be revegetated with native or non-invasive nonnative plants suitable for the altered soil conditions.
- All structures constructed for wildlife movement (tunnels, culverts, underpasses, fences) must be monitored at regular intervals and repairs made promptly to ensure that the structure is in proper condition.

Rationale

Road projects in rural natural areas have been shown to have significant adverse effects on some wildlife species (Forman et al. 2002; Irwin et al. 2003). Some rural road projects covered by the HCP/NCCP are expected to have adverse effects on native wildlife as well as some covered species, particularly amphibians and San Joaquin kit fox. In order to meet regulatory requirements under the Plan to avoid and minimize impacts to the maximum extent practicable, this conservation measure was developed by Contra Costa County transportation planning staff, the HCPA, CDFG, and USFWS. Design guidelines and requirements are based on some of the latest techniques for minimizing impacts of rural road projects (Forman et al. 2002; Irwin et al. 2003; Finch 2004).