APPENDIX C – BIOLOGICAL RESOURCES SUPPORTING DOCUMENTATION

TABLE C-1
YUBA COUNTY VEGETATION TYPES AND SPECIES SUITABLE HABITAT

CWHR HABITAT TYPE	BLACK BEAR (SQ MI)	BOBCAT (SQ MI)	COYOTE (SQ MI)	GRAY FOX (SQ MI)	MOUNTAIN LION (SQ MI)	RACCOON (SQ MI)	SKUNK (SQ MI)	VIRGINIA OPOSSUM (SQ MI)	BEAVER and MUSKRAT (STREAM KM)
Annual grassland	2	122	122	122	61	122	122	122	
Barrem			5						
Blue oak foothill pine	1	40	40	40	40	40	40	40	
Blue oak woodland		65	65	65	65	65	65	65	
Closed-cone pine cypress									
Cropland	1	35	35	35	2	35	35		
Douglas fir	45	45	45	45	45	45	45		
Decidiuous orchard		41	41	41	1	41	41	41	
Fresh emergent wetland		7	7	7		7	7	7	
Irrigated field		12	12	12		12	12	12	
Lacustrine						5			
Mixed chaparral	1	5	6	6	6	6	9	9	
Montane chaparral	1	1	1	1	1	1	1	1	
Montane hardwood-confier	18	19	19	19	19	19	19	19	
Montane hardwood	17	32	32	31	32	32	32	32	
Montane riparian	1	1	1	1	1	1	1		
Pasture		5	5	5	5	5	5	5	
Ponderosa pine	17	20	20	20	20	20	20	20	
Rice			60	60			60	60	
Riverine	1					6			
Sierran mixed conifier	51	51	51	51	51	51	51	51	
Urban			41	41		41	41	41	
Valley oak woodland		2	2	2	2	2	2	2	
Valley foothill riparian		11	11	11	3	11	11	11	
White fir	1	1	1	1	1	1			
Total Square Miles	157	515	622	616	355	568	619	538	
Square Kilometers					919				
Stream Kilometers									587

Data Sources

Species habitat: CDFW Interagency Wildlife Task Group. Predicted Habitats. SDE Raster Datasets. Available at: https://apps.wildlife.ca.gov/bios/. Accessed March 2020;
CDFW Biogeographic Data Branch. California Wildlife Habitat Relationships (CWHR) Model and BIOVIEW (CWHR Version 9.0). Available at: https://wildlife.ca.gov/Data/CWHR; USFS (United States Forest Service). 2019. EVeg Mid Region 5 Central Valley and Region 5 North Sierra; Downloaded from http://data.fs.usda.gov/geodata/edw/datasets.php on December 11, 2019.

Stream kilometers: USGS (U.S. Geological Survey). 2019, National Hydrography Dataset (ver. USGS National Hydrography Dataset Best Resolution (NHD) for Unit (HU) 4 – 1802 (published 20191002); Downloaded from https://prd-tnm.s3.amazonaws.com/StagedProducts/Hydrography/NHD/HU4/HighResolution/GDB/NHD_H_1802_HU4_GDB.zip on October 18th, 2019.

Table C-2
YUBA COUNTY SPECIAL-STATUS PLANTS

Common Name	Scientific Name	CRPR	GRank	SRank	CESA	FESA
Ahart's buckwheat	Eriogonum umbellatum var. ahartii	1B.2	G5T3	S3	None	None
Ahart's dwarf rush	Juncus leiospermus var. ahartii	1B.2	G2T1	S1	None	None
Bacigalupi's yampah	Perideridia bacigalupii	4.2	G3	S3	None	None
Brandegee's clarkia	Clarkia biloba ssp. brandegeeae	4.2	G4G5T4	S4	None	None
Brazilian watermeal	Wolffia brasiliensis	2B.3	G5	S2	None	None
brownish beaked-rush	Rhynchospora capitellata	2B.2	G5	S1	None	None
Butte County fritillary	Fritillaria eastwoodiae	3.2	G3Q	S3	None	None
buxbaumia moss	Buxbaumia viridis	2B.2	G4G5	S1	None	None
California pitcherplant	Darlingtonia californica	4.2	G4	S4	None	None
Cantelow's lewisia	Lewisia cantelovii	1B.2	G3	S3	None	None
Cedar Crest popcornflower	Plagiobothrys glyptocarpus var. modestus	3	G3THQ	SH	None	None
chaparral sedge	Carex xerophila	1B.2	G2	S2	None	None
clustered lady's-slipper	Cypripedium fasciculatum	4.2	G4	S4	None	None
depauperate milk-vetch	Astragalus pauperculus	4.3	G4	S4	None	None
dwarf downingia	Downingia pusilla	2B.2	GU	S2	None	None
El Dorado County mule ears	Wyethia reticulata	1B.2	G2	S2	None	None
flexuose threadmoss	Pohlia flexuosa	2B.1	G5	S1	None	None
giant checkerbloom	Sidalcea gigantea	4.3	G3	S3	None	None
golden-anthered clarkia	Clarkia mildrediae ssp. lutescens	4.2	G3T3	S3	None	None
Hartweg's golden sunburst	Pseudobahia bahiifolia	1B.1	G2	S2	CE	FE
Humboldt lily	Lilium humboldtii ssp. humboldtii	4.2	G4T3	S3	None	None
Layne's ragwort	Packera layneae	1B.2	G2	S2	CR	FT
legenere	Legenere limosa	1B.1	G2	S2	None	None
Michael's rein orchid	Piperia michaelii	4.2	G3	S3	None	None
minute pocket moss	Fissidens pauperculus	1B.2	G3?	S2	None	None
Mosquin's clarkia	Clarkia mosquinii	1B.1	G2	S2	None	None
northern Sierra daisy	Erigeron petrophilus var. sierrensis	4.3	G4T4	S4	None	None
Pine Hill flannelbush	Fremontodendron decumbens	1B.2	G1	S1	CR	FE
Quincy lupine	Lupinus dalesiae	4.2	G3	S3	None	None
Sanborn's onion	Allium sanbornii var. sanbornii	4.2	G4T3T4	S3S4	None	None
Sanford's arrowhead	Sagittaria sanfordii	1B.2	G3	S3	None	None
Sierra arching sedge	Carex cyrtostachya	1B.2	G2	S2	None	None
Sierra foothills brodiaea	Brodiaea sierrae	4.3	G3	S3	None	None
Sierra sweet bay	Myrica hartwegii	4.3	G4	S4	None	None
sticky pyrrocoma	Pyrrocoma lucida	1B.2	G3	S3	None	None
stinkbells	Fritillaria agrestis	4.2	G3	S3	None	None
Tehama navarretia	Navarretia heterandra	4.3	G4	S4	None	None
True's manzanita	Arctostaphylos mewukka ssp. truei	4.2	G4?T3	S3	None	None
valley brodiaea	Brodiaea rosea ssp. vallicola	4.2	G5T3	S3	None	None
veiny monardella	Monardella venosa	1B.1	G1	S1	None	None
western waterfan lichen	Peltigera gowardii	4.2	G3G4	S3	None	None

Source: California Native Plant Society, Rare Plant Program. 2019. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 21 August 2019].

TABLE C-3

AMERICAN BEAVER POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	77	700
2000	80	716
2001	82	1,077
2002	98	845
2003	38	659
2004	61	758
2005	83	824
2006	27	844
2007	56	1,086
2008	53	1,359
2009	91	1,135
2010	83	1,110
2011	83	869
2012	82	999
2013	105	1,167
2014	39	1,153
2015	20	997
2016	13	912
2017	28	887
2018	23	884
TOTAL	**1,222**	**18,981**
MED/YR	**69**	**900**
AVE/YR	**61**	**949**
County % of APHIS-WS state take over 20-year period		**6.4%**

County Population Estimate		
Suitable habitat (stream kilometers) [3]	587	
Density (individuals per stream kilometer)[4]	0.2	(low)
	3	(high)
Sex ratio	0.5	
Female breeding success	0.80	
Litter size	3.5	
Total Adults	117	(low)
	1,468	(high)
Breeding females	60	(low)
	748	(high)
Young at den	168	(low)
	2,096	(high)
County population before natural mortality (adults + young)	285	(low)
	3,563	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	18,336

County APHIS-WS Baseline Take Under CSA	
Median annual take over 20-year period	69
% median take per year of County low population estimate	21%
% median take per year of state low population estimate	0.3%
% highest historic take (105) of County low population estimate	37%
% highest historic take (105) of state low population estimate	0.6%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from National Hydrography Dataset (USGS 2019) see Table C-1
4. Population dynamics from: CDFG (2004) Appendix 2 (Beaver Population Model)
5. From: CDFG (2004) Appendix 2 (Beaver Population Model)

TABLE C-3

AMERICAN BEAVER POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (% of population)[6]	30%

Cumulative Take Estimates	
County 20-year median take by APHIS under CSA	69
County median take compared to low population	21%
County median take plus 33%[7]	92
County median take plus 33% compared to county low population	32%
County median plus 33% compared to state low population	0.5%
County median plus 33% plus county average hunting plus other equals cumulative county[8,9]	97
Cumulative county median take compared to county low population	34%
State 20-year average take by APHIS	949
State average take plus 33%	1,262
State average take plus 33% plus state average hunting equals cumulative state[8]	1,436
State average take plus 33% plus state average hunting compared to state low population	8%
County contribution to cumulative annual take	6.7%

APHIS-WS Take in County Not Funded by CSA	
Beale AFB (total for years taken - 2008-2011, no take 2012-2018)[9]	38
California Department of Water Resources (one year only - 2006)[1]	4

Notes:

6. From CDFG (2004: 39) includes trapping, damage control, private property owners, entities, or other persons.

7. * 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Trapping data from: CDFW trapper reports FY 1997-2018 CDFW (2018b). As of September 2019, trapping is no longer allowed, but beaver can be hunted with with a valid CDFW hunting license from November 1 through March 31. There are no daily bag or possession limit or reporting requirements for recrational hunting. Trapping data are used as a proxy for estimating potential hunting take.

9. Other = Take at Beale AFB under separate agreement with US Air Force (USDA 2019g)

TABLE C-4

BLACK BEAR POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	6	78
2000	3	114
2001	3	73
2002	1	92
2003	4	104
2004	1	67
2005	1	93
2006	1	96
2007	2	148
2008	0	83
2009	0	137
2010	0	175
2011	4	126
2012	0	134
2013	0	70
2014	5	167
2015	2	88
2016	1	83
2017	6	134
2018	2	93
TOTAL	**42**	**2,155**
MED/YR	**1.5**	**95**
AVE/YR	**2.1**	**108**
County % of APHIS-WS state take over 20-year period		**1.9%**

County Population Estimate		
Suitable habitat (square miles)[3]		157
Density (individuals per square mile)[4]	1.00	(low)
	2.50	(high)
Sex ratio	N/A	
Female breeding success	N/A	
Litter size	N/A	
Total adults	157	(low)
	393	(high)
Breeding females	N/A	(low)
	N/A	(high)
Young at den	N/A	(low)
	N/A	(high)
County population before natural mortality (adults + young)	157	(low)
	393	(high)

State Population Estimate	
State low population estimate[5]	17,000

County APHIS-WS Baseline Take Under CSA	
Average annual take over 20-year period	2
% average take per year of County low population estimate	1.0%
% average take per year of state low population estimate	0.01%
% highest historic take (6) of County low population estimate	3.8%
% highest historic take (6) of state low population estimate	0.04%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CHWR M151 [ds2602] (CDFW2016) (see Table C-1)
4. Population dynamics from CDFG (2011)
5. From CDFG (2011)

TABLE C-4

BLACK BEAR POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (individuals)[6]	3,875

Cumulative Take Estimates	
County 20-year average take by APHIS	2
County average take compared to low population	1.0%
County average take plus 33%[7]	3
County average take plus 33% compared to county low population	1.8%
County average plus 33% compared to state low population	0.016%
County average plus 33% + average hunting + DPs equals cumulative county[8]	22
Cumulative county average take compared to county low population	13.9%
State 20-year average take by APHIS	108
State average take plus 33%	143
State average take plus 33% + average hunting + DPs equals cumulative state[8]	1,965
State average compared to state low population	11.6%
County contribution to cumulative annual take	1.1%

Notes:

6. From: CDFG (2011: 25). Reflects sum of hunter harvest of 3,100 bears plus illegal take equal to 25% of legal harvest (775 bears). Per CDFG (2011), any legal harvest below 3,100 bears will not significantly affect the state's bear resource.

7. 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Hunting data from CDFW 2018a and CDFG 2011. Between 2006 and 2018, 17 black bears were taken in the county with depredation permits (DPs), for an average less than 2 per year. Statewide, 1,008 black bears were taken with depredation permits, for an annual average of 77 (CDFW 2019f).

TABLE C-5

BOBCAT POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	1	97
2000	0	90
2001	0	73
2002	0	85
2003	0	44
2004	0	82
2005	1	36
2006	2	59
2007	3	57
2008	1	81
2009	0	73
2010	0	53
2011	0	58
2012	0	84
2013	0	44
2014	0	28
2015	0	12
2016	0	16
2017	0	11
2018	0	10
TOTAL	**8**	**1,093**
MED/YR	**<1**	**58**
AVE/YR	**<1**	**55**
County % of APHIS-WS state take over 20-year period		**0.7%**

County Population Estimate		
Suitable habitat (square miles)[3]		515
Density (individuals per square mile)[4]	0.55	(low)
	0.58	(high)
Sex ratio	0.5	
Female breeding success	0.53	
Litter size	2.7	
Total adults	283	(low)
	299	(high)
Breeding females	142	(low)
	149	(high)
Young at den	203	(low)
	214	(high)
County population before natural mortality (adults + young)	486	(low)
	512	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	81,609

County APHIS-WS Baseline Take Under CSA	
Median annual take over 20-year period	1
% median take per year of County low population estimate	0.2%
% median take per year of state low population estimate	0.001%
% highest historic take (3) of County low population estimate	0.6%
% highest historic take (3) of state low population estimate	0.004%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M166 [ds2617] (CDFW 2016) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 3 (Bobcat Population Model)
5. From: CDFG (2004) Appendix 3 (Bobcat Population Model)

TABLE C-5

BOBCAT POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (individuals)[6]	14,400

Cumulative (Historic) Take Estimates	
County 20-year median take by APHIS	1
County median take compared to low population	0.2%
County median take plus 33%[7]	1.3
County median take plus 33% compared to county low population	0.3%
County median plus 33% compared to state low population	0.002%
County median plus 33% plus county hunting equals cumulative county[8]	3
Cumulative county median take compared to county low population	0.7%
State 20-year median take by APHIS	58
State median take plus 33%	76
State median take plus 33% plus state hunting equals cumulative state[8]	379
State median plus 33% plus hunting state compared to state low population	0.5%
County contribution to cumulative annual take	0.9%

Notes:

6. From: CDFG (2004:57) includes trapping, damage control, private property owners, entities, or other persons. Provided for informational purposes only. Hunting and trapping no longer allowed.

7. 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004): species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Hunting and trapping data from CDFW (2018b and 2019b). Historic take included in the calculations provided for informational, comparative purposes only. Hunting and trapping no longer allowed; therefore, any future take would only be with a depredation permit, and take would be less than estimated.

TABLE C-6

COYOTE POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	13	7,908
2000	21	8,379
2001	13	7,921
2002	31	7,163
2003	7	6,061
2004	7	6,463
2005	3	6,395
2006	7	7,703
2007	14	6,963
2008	30	6,160
2009	18	6,530
2010	18	5,326
2011	3	5,746
2012	25	5,699
2013	5	4,988
2014	2	4,083
2015	4	3,958
2016	0	3,702
2017	1	3,514
2018	0	3,767
TOTAL	**222**	**118,429**
MED/YR	**7**	**6,111**
AVE/YR	**11**	**5,921**
County % of APHIS-WS state take over 20-year period		**0.2%**

County Population Estimate		
Suitable habitat (square miles)[3]	622	
Density (individuals per square mile)[4]	1	(low)
	5	(high)
Sex ratio	0.5	
Female breeding success	0.65	
Litter size	5.5	
Total Adults	622	(low)
	3,110	(high)
Breeding females	311	(low)
	1,555	(high)
Young at den	1,112	(low)
	5,559	(high)
County population before natural mortality (adults + young)	1,734	(low)
	8,669	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	227,818

County APHIS-WS Baseline Take Under CSA	
Average annual take over 20-year period	11
% average take per year of County low population estimate	0.6%
% average take per year of state low population estimate	0.005%
% highest historic take (31) of County low population estimate	1.8%
% highest historic take annual (31) of state low population estimate	0.01%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M146 [ds2597] (CDFW 2016) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 4 (Coyote Population Model)
5. From: CDFG (2004) Appendix 4 (Coyote Population Model)

TABLE C-6

COYOTE POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (% of population)[6]	60%
Sustainable annual harvest state low population estimate using 60% (individuals)	136,691

Cumulative Take Estimates	
County 20-year average take by APHIS	11
County average take compared to low population	0.6%
County average take plus 33%[7]	15
County average take plus 33% compared to county low population	0.9%
County average plus 33% compared to state low population	0.006%
County average plus 33% plus county average trapping plus hunting plus other equals cumulative county[8,9]	444
Cumulative county average take compared to county low population	26%
State 20-year median take by APHIS	6,111
State median take plus 33%	8,127
State median take plus 33% plus state average trapping plus hunting equals cumulative state[8]	65,084
State median plus 33% plus trapping state compared to state low population	29%
County contribution to cumulative annual take	0.7%

APHIS-WS Take in County Not Funded by CSA	
Beale AFB (total for years taken - 2008-2018)[9]	115
Average	10

Notes:

6. From: Pitt, Knowlton, and Fox (2001)
7. * 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.
8. Trapping data from: CDFW trapper reports FY 1997-98 to FY 2017-18 (less than 1/yr) CDFW (2018b);
   Hunting data from: CDFW game take hunter surveys FY 1997-98 to FY 2010-11 (most recent) (CDFW 2011b)
9. Other = Take at Beale AFB under separate agreement with US Air Force (USDA 2019g)

TABLE C-7

GRAY FOX POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	4	133
2000	1	142
2001	1	125
2002	0	173
2003	2	149
2004	0	90
2005	1	132
2006	2	149
2007	2	134
2008	3	202
2009	1	171
2010	4	193
2011	7	200
2012	3	179
2013	5	177
2014	0	126
2015	1	99
2016	0	121
2017	1	112
2018	2	98
TOTAL	**40**	**2,905**
MED/YR	**2**	**138**
AVE/YR	**2**	**145**
County % of APHIS-WS state take over 20-year period		**1.4%**

County Population Estimate		
Suitable habitat (square miles)[3]		616
Density (individuals per square mile)[4]	1	(low)
	3	(high)
Sex ratio	0.47	
Female breeding success	0.95	
Litter size	3.8	
Total Adults	616	(low)
	1,873	(high)
Breeding females	290	(low)
	880	(high)
Young at den	1,045	(low)
	3,177	(high)
County population before natural mortality (adults + young)	1,661	(low)
	5,050	(high)

State Population Estimate	
State low population estimate (after mortaility)[5]	157,175

County APHIS-WS Baseline Take Under CSA	
Average annual take over 20-year period	2
% average take per year of County low population estimate	0.1%
% average take per year of state low population estimate	0.001%
% average historic take (7) of County low population estimate	0.4%
% average historic take (7) of state low population estimate	0.004%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated CDFW BIOS dataset CWHR M149 [ds2600] (CDFW 2016) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 5 (Gray Fox Population Model)
5. From: CDFG (2004) Appendix 5 (Gray Fox Population Model)

TABLE C-7

GRAY FOX POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (% of population)[6]	25%

Cumulative Take Estimates	
County 20-year average take by APHIS	2
County average take compared to low population	0.1%
County average take plus 33%[7]	3
County average take plus 33% compared to county low population	0.2%
County average plus 33% compared to state low population	0.002%
County average plus 33% plus county median trapping plus hunting equals cumulative county[8]	6
Cumulative county average take compared to county low population	0.3%
State 20-year average take by APHIS	145
State average take plus 33%	193
State average take plus 33% plus state median trapping plus hunting equals cumulative state[8]	2,600
State average plus 33% plus trapping state compared to state low population	1.7%
County contribution to cumulative annual take	0.2%

Notes:

6. From CDFG (2004: 41) includes trapping, damage control, private property owners, entities, or other persons

7. * 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Trapping data from: CDFW trapper reports FY 1997-98 to FY 2017-18 (0 take in County) CDFW (2018b);
Hunting data from: CDFW game take hunter surveys FY 1997-98 to FY 2010-11 (most recent) (CDFW 2011). Only 1 year with reported take (27) in County.

TABLE C-8

MOUNTAIN LION POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	0	103
2000	0	146
2001	0	104
2002	0	120
2003	4	102
2004	1	132
2005	2	133
2006	0	109
2007	1	141
2008	4	113
2009	1	110
2010	0	103
2011	1	102
2012	3	67
2013	1	57
2014	0	86
2015	2	77
2016	1	75
2017	2	67
2018	3	96
TOTAL	**26**	**2,043**
MED/YR	**1**	**103**
AVE/YR	**1**	**102**
County % of APHIS-WS state take over 20-year period		**1.3%**

County Population Estimate	
Suitable habitat (square kilometers)[3]	919
Density (individuals per 100 square kilometers)[4]	1.6
County population estimate[5]	15
State Population Estimate	
State population estimate[6]	1,500-5,000

County APHIS-WS Baseline Take Under CSA	
Median take over 20-year period	1
% median take per year of County low population estimate	6.8%
% median take per year of state lowest population estimate	0.07%
% 20-year total take of state lowest population estimate	1.7%
% highest historic take (4) of County low population estimate	27.2%
% highest historic take (4) of state lowest population estimate	0.3%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M165 [ds2616] (CDFW 2016) (see Table C-1)
4. Beausoleil (2013). See Draft EIR Section 4.1, Biological Resources, for additional information.
5. Approximate. See Draft EIR Section 4.1, Biological Resources for additional information.
6. Dellinger (2019). See Draft EIR Section 4.1, Biological Resources, for additional information.

TABLE C-8

MOUNTAIN LION POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest[7]	N/A

Cumulative Take Estimates	
County 20-year median take by APHIS	1
County median take compared to low population	6.8%
County median take plus 33%[8]	1.3
County median take plus 33% compared to county low population	9.0%
County median plus 33% compared to state lowest population	0.09%
County median plus 33% plus county median take with depredation permits equals cumulative county[9]	3
Cumulative county median take compared to county low population	23%
State 20-year median take by APHIS	103
State median take plus 33%	137
State median take plus 33% plus state median take with depredation permits equals cumulative state[9]	234
State median plus 33% plus state depredation permits compared to state lowest population estimate	16%
County contribution to cumulative annual take	1%

Notes:

7. Specially protected species, no harvest threshold.

8. * 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

9. CDFW issued 25 depredation permits in Yuba County between 2001 and 2018, with actual reported take of 8 individuals (CDFW 2019e), or less than 1 per year. CDFW issued 3,528 permits statewide and reported take at 1,741 during the same timeframe, or approximately 97 per year. CDFW states that the data represent the least number of permits issued to take a mountain lion and the least number of mountain lions taken under depredation permits in a given county in a given year. In some years, more lions were reported as taken than number of depredation permits issues, which could be due to inaccuracies in reporting. Additionally, multiple mountain lions could be taken on a single permit prior to 2013.

TABLE C-9

MUSKRAT POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	0	87
2000	0	164
2001	1	86
2002	0	801
2003	0	1,376
2004	0	554
2005	0	308
2006	1	218
2007	0	836
2008	0	1,201
2009	16	324
2010	17	427
2011	2	166
2012	2	138
2013	0	146
2014	0	1,277
2015	0	228
2016	0	48
2017	0	109
2018	1	1072
TOTAL	**40**	**9,566**
MED/YR	**<1**	**478**
AVE/YR	**2**	**478**
County % of APHIS-WS state take over 20-year period		**0.4%**

County Population Estimate		
Suitable habitat (stream kilometers)[3]		587
Density (individuals per stream kilometer)[4]	3.0	(low)
	15	(high)
Sex ratio	0.5	
Female breeding success	0.80	
Litter size	19.3	
Total Adults	1,761	(low)
	8,805	(high)
Breeding females	8,068	(low)
	40,338	(high)
Young at den	155,705	(low)
	778,523	(high)
County population before natural mortality (adults + young)	1,761	(low)
	8,805	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	78,730

County APHIS-WS Baseline Take Under CSA	
Average annual take over 20-year period	2
% average take per year of County low population estimate	0.1%
% average take per year of state low population estimate	0.003%
% highest historic take (17) of County low population estimate	1%
% highest historic take (17) of state low population estimate	0.02%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from National Hydrography Dataset (USGS 2019) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 7 (Muskrat Population Model)
5. From: CDFG (2004) Appendix 7 (Muskrat Population Model)

TABLE C-9

MUSKRAT POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (% of population)[6]	60%

Cumulative Take Estimates	
County 20-year average take by APHIS	2
County average take compared to low population	0.1%
County average take plus 33%[7]	3
County average take plus 33% compared to county low population	0.2%
County average plus 33% compared to state low population	0.003%
County average plus 33% plus county average trapping equals cumulative county[8]	3
Cumulative county average take compared to county low population	0.2%
State 20-year average take by APHIS	478
State average take plus 33%	636
State average take plus 33% plus state average trapping equals cumulative state[8]	6,055
State average plus 33% plus trapping state compared to state low population	8%
County contribution to cumulative annual take	0.04%

Notes:

6. From CDFG (2004: 42) includes trapping, damage control, private property owners, entities, or other persons

7. * 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Trapping data from: CDFW trapper reports FY 1997-2018 CDFW (2018b)

TABLE C-10

RACCOON POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	26	1,876
2000	1	1,978
2001	3	2,254
2002	4	2,009
2003	25	2,220
2004	13	1,735
2005	9	2,168
2006	27	2,560
2007	23	2,359
2008	18	2,772
2009	19	2,537
2010	12	2,424
2011	26	2,549
2012	25	2,595
2013	38	2,637
2014	28	2,098
2015	18	1,481
2016	12	1,454
2017	19	1,405
2018	12	1,365
TOTAL	**358**	**42,476**
MED/YR	**19**	**2,194**
AVE/YR	**18**	**2,140**
County % of APHIS-WS state take over 20-year period		**0.8%**

County Population Estimate		
Suitable habitat (square miles)[3]	569	
Density (individuals per square mile)[4]	0.24	(low)
	0.70	(high)
Sex ratio	0.5	
Female breeding success	0.86	
Litter size	3.5	
Total Adults	137	(low)
	398	(high)
Breeding females	66	(low)
	191	(high)
Young at den	197	(low)
	575	(high)
County population before natural mortality (adults + young)	334	(low)
	974	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	36,928

County APHIS-WS Baseline Take Under CSA	
Median annual take over 20-year period	19
% median take per year of County low population estimate	5.5%
% median take per year of state low population estimate	0.05%
% highest historic take (38) of County low population estimate	11.4%
% highest historic take (38) of state low population estimate	0.10%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M153 [ds2604] (CDFW 2016) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 8 (Raccoon Population Model)
5. From: CDFG 2004 Appendix 8 (Racoon Population Model)

TABLE C-10

RACCOON POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest (% of population)[6]	49%

Cumulative Take Estimates	
County 20-year median take by APHIS	19
County median take compared to low population	5.5%
County median take plus 33%[7]	25
County median take plus 33% compared to county low population	7.4%
County median plus 33% compared to state low population	0.07%
County average plus 33% plus county median trapping plus hunting equals cumulative county[8]	36
Cumulative county median take compared to county low population	10.7%
State 20-year average take by APHIS	2,194
State average take plus 33%[7]	2,918
State average take plus 33% plus state average trapping equals cumulative state[8]	7,910
State average plus 33% plus trapping state compared to state low population	21.4%
County contribution to cumulative annual take	0.5%

Notes:

6. From: CDFG (2004:49)

7. 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Trapping data from: CDFW (2018b).

TABLE C-11

STRIPED SKUNK POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	75	3,982
2000	45	3,835
2001	95	4,336
2002	113	4,218
2003	89	3,918
2004	185	3,755
2005	148	4,154
2006	187	5,232
2007	92	5,036
2008	76	5,497
2009	77	4,680
2010	63	4,533
2011	57	3,922
2012	74	3,780
2013	79	3,473
2014	99	3,475
2015	59	2,771
2016	61	2,488
2017	65	2,866
2018	63	2,668
TOTAL	**1,802**	**78,619**
MED/YR	**77**	**3,920**
AVE/YR	**90**	**3,931**
County % of APHIS-WS state take over 20-year period		**2.3%**

County Population Estimate		
Suitable habitat (square miles)[3]	619	
Density (individuals per square mile)[4]	1.3	(low)
	6.2	(high)
Sex ratio	0.46	
Female breeding success	0.8	
Litter size	5.6	
Total Adults	805	(low)
	3,838	(high)
Breeding females	370	(low)
	1,765	(high)
Young at den	1,658	(low)
	7,909	(high)
County population before natural mortality (adults + young)	2,463	(low)
	11,747	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	143,188

County APHIS-WS Baseline Take Under CSA	
Average annual take over 20-year period	90
% average take per year of County low population estimate	3.7%
% average take per year of state low population estimate	0.06%
% highest historic take (187) of County low population estimate	7.6%
% highest historic take (187) of state low population estimate	0.13%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from CDFW BIOS dataset CWHR M162 [ds2613] (CDFW 2016) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 10 (Striped Skunk Population Model)
5. From: CDFG (2004) Appendix 10 (Striped Skunk Population Model)

TABLE C-11

STRIPED SKUNK POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest[6]	N/A

Cumulative Take Estimates	
County 20-year average take by APHIS	90
County average take compared to low population	3.7%
County average take plus 33%[7]	120
County average take plus 33% compared to county low population	4.9%
County average plus 33% compared to state low population	0.08%
County average plus 33% plus county median trapping plus hunting equals cumulative county[8]	120
Cumulative county average take compared to county low population	4.9%
State 20-year average take by APHIS	3,931
State average take plus 33%[7]	5,228
State average take plus 33% plus state median trapping equals cumulative state[8]	5,746
State average plus 33% plus state median trapping compared to state low population	4.0%
County contribution to cumulative annual take	2.1%

APHIS-WS Take in County Not Funded by CSA	
Beale AFB (2008-2017)[9]	1

Notes:

6. No harvest threshold identified in CDFG (2004)
7. 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.
8. Trapping data from: CDFW (2018b)
9. From USDA (2019g)

TABLE C-12

VIRGINIA OPOSSUM POPULATION AND TAKE DATA

APHIS-WS Annual Take		
Year	**Yuba County[1,2]**	**California[1,2]**
1999	22	1,333
2000	24	1,410
2001	29	1,418
2002	22	1,421
2003	15	1,528
2004	12	1,329
2005	20	1,410
2006	16	1,287
2007	13	1,176
2008	13	1,183
2009	11	1,198
2010	15	1,013
2011	16	1,218
2012	20	1,024
2013	18	796
2014	5	633
2015	1	731
2016	2	630
2017	1	1,011
2018	2	855
TOTAL	**277**	**22,604**
MED/YR	**15**	**1,191**
AVE/YR	**14**	**1,130**
County % of APHIS-WS state take over 20-year period		**1.2%**

County Population Estimate		
Suitable habitat (square miles)[3]	538	
Density (individuals per square mile)[4]	1.3	(low)
	20.2	(high)
Sex ratio	0.44	
Female breeding success	0.8	
Litter size	14.4	
Total Adults	699	(low)
	10,868	(high)
Breeding females	308	(low)
	4,782	(high)
Young at den	3,545	(low)
	55,086	(high)
County population before natural mortality (adults + young)	4,245	(low)
	65,953	(high)

State Population Estimate	
State low population estimate (after mortality)[5]	40,447

County APHIS-WS Baseline Take Under CSA	
Median annual take over 20-year period	15
% median take per year of County low population estimate	0.3%
% median take per year of state low population estimate	0.03%
% highest historic take (29) of County low population estimate	0.7%
% highest historic take (29) of state low population estimate	0.07%

Notes:

1. 1999-2006 data from: USDA (2019c)
2. 2007-2018 data from: USDA (2019b)
3. Calculated from VEGMAP/CWHR Crosswalk (USFS 2019) (see Table C-1)
4. Population dynamics from: CDFG (2004) Appendix 11 (Virginia Opossum Population Model)

TABLE C-12

VIRGINIA OPOSSUM POPULATION AND TAKE DATA

Sustainable Take Threshold	
Sustainable cumulative annual statewide harvest[6]	N/A

Cumulative Take Estimates	
County 20-year median take by APHIS	15
County median take compared to low population	0.3%
County median take plus 33%[7]	20
County median take plus 33% compared to county low population	0.5%
County median plus 33% compared to state low population	0.05%
County median plus 33% plus county median trapping equals cumulative county[8]	20
Cumulative county median take compared to county low population	0.5%
State 20-year median take by APHIS	1,191
State median take plus 33%[7]	1,583
State median take plus 33% plus state average trapping equals cumulative state[8]	1,872
State median plus 33% plus trapping state compared to state low population	4.6%
County contribution to cumulative annual take	1.1%

Notes:

6. No harvest threshold identified in CDFG (2004)

7. 33% is added to account for take by private parties and all other known sources of mortality. It is the factor applied by APHIS-WS in recent documents (see USDA 2015a: 44) in assessing impacts of its program, in CDFG (2004: species population models appendices) for APHIS-WS take, and has been used in this analysis for consistency.

8. Trapping data from: CDFW (2018b)

TABLE C-13A
YUBA COUNTY TARGET SPECIES DISPERSED AND FREED

SPECIES	FATE	1999	2000	2001	2002	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTAL
BEARS, BLACK	FREED											1						1		2
BLACKBIRDS, BREWER`S	DISPERSED									1,300						500				1,800
BLACKBIRDS, RED-WINGED	DISPERSED																	1,000		1,000
BLACKBIRDS, Z-(MIXED SPECIES)	DISPERSED								10,000				86,000							96,000
BOBCATS	FREED								1											1
CATS, FERAL/FREE RANGING	FREED			1		1				1										3
COOTS, AMERICAN	DISPERSED														12,500	9,200				21,700
COWBIRDS, BROWN-HEADED	DISPERSED							29												29
COYOTES	DISPERSED															6				6
CROWS, AMERICAN	DISPERSED		44																	44
DOGS, FERAL, FREE-RANGING AND HYBRI	FREED				1				1											2
FOXES, GRAY	FREED	1																	1	2
GEESE, CANADA	DISPERSED									350										350
GEESE, SNOW, LESSER	DISPERSED									1,000										1,000
GEESE, WHITE-FRONTED, GREATER	DISPERSED									1,000			1,000	43,000			500			45,500
OPOSSUMS, VIRGINIA	FREED						1													1
RACCOONS	FREED				1															1
SKUNKS, STRIPED	FREED																	1		1
SQUIRRELS, GROUND, CALIF	FREED						1													1

Source: USDA 2019b; USDA 2019c
None reported for 2003-2004
Data are for target intentional species only; see Table C-13b for target and non-target unintentional species dispersed and freed.

TABLE C-13B
YUBA COUNTY TARGET AND NON-TARGET UNINTENTIONAL 1999-2018

Target Unintentional 1999-2018

SPECIES	METHOD	FATE	1999	2000	2001	2002	2004	2005	2010	2011	2014	TOTAL
CATS, FERAL/FREE RANGING	TRAPS, CAGE	FREED	1		2	2	1		1			7
DEER, z-(OTHER)	SNARES, NECK z-(OTHER)	FREED		1								1
DOGS, FERAL/FREE-RANGING & HYBRIDS	SNARES, NECK z-(OTHER)	FREED				1				1		2
FOXES, GRAY	SNARES, NECK z-(OTHER)	FREED	1									1
FOXES, GRAY	TRAPS, CULVERT	FREED									1	1
FOXES, GRAY	TRAPS, CAGE	FREED	1			1	1			1		4
OPOSSUMS, VIRGINIA	TRAPS, CAGE	FREED	4	1								5
OTTERS, RIVER	SNARES, NECK z-(OTHER)	FREED			1							1
PIGEONS, FERAL (ROCK)	TRAPS, CAGE	FREED							4			4
RABBITS, COTTONTAIL	TRAPS, CAGE	FREED				1						1
RACCOONS	TRAPS, CAGE	FREED				4		1				5
RATS, NORWAY	TRAPS, CAGE	KILLED					1					1
SKUNKS, STRIPED	SNARES, NECK	KILLED							1			1
SQUIRRELS, GRAY	TRAPS, CAGE	FREED			1							1

Source: USDA APHIS-WS (USDA 2019b, USDA 2019c)
None reported for 2003, 2006-2009, 2012-2013, 2015-2018

Non-Target Unintentional 1999-2018

SPECIES	METHOD	FATE	1999	2001	2005	TOTAL
CATS, FERAL/FREE RANGING	TRAPS, CAGE	FREED	1			1
COYOTES	SNARES, NECK z-(OTHER)	KILLED		1		1
DOGS, FERAL/FREE-RANGING & HYBRIDS	SNARES, NECK	FREED			1	1
DOGS, FERAL/FREE RANGING & HYBRIDS	SNARES, NECK z-(OTHER)	FREED	1			1
FOXES, GRAY	TRAPS, CAGE	FREED	1			1
FOXES, GRAY	TRAPS, CAGE	KILLED		1		1
OPOSSUMS, VIRGINIA	TRAPS, CAGE	FREED	2			2
PIGEONS, FERAL (ROCK DOVE)	HAND CAUGHT (BARE HANDS, SNARE POLE, ETC.)	KILLED		1		1
SQUIRRELS, GROUND, OTHER	TRAPS, CAGE	FREED	2			2

Source: USDA APHIS-WS (USDA 2019b, USDA 2019c)
None reported for 2002-2004 and 2006-2018

TABLE C-14

YUBA COUNTY GENERAL PLAN NATURAL RESOURCES ELEMENT BIOLOGICAL RESOURCES POLICIES CONSISTENCY ANALYSIS

Policy Number	Policy Text	Consistency Analysis
Goal NR5: Protect and restore habitat for special-status species that have the potential to occur in Yuba County		
NR5.1	New developments that could adversely affect special-status species habitat shall conduct a biological resources assessment and identify design solutions that avoid such adverse effects. If, after examining all feasible means to avoid impacts to special-status species habitat through project design, adverse effects cannot be avoided, then impacts shall be mitigated in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species, including pre-construction surveys conducted according to applicable standards and protocols, where necessary.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.2	The County will coordinate its environmental review and mitigation requirements with the Yuba-Sutter NCCP/HCP, once adopted.	Analysis: This policy is not applicable. The Yuba-Sutter NCCP/HCP has not been adopted as of July 2020. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.3	The County will support the continued development and implementation of the Yuba-Sutter NCCP/HCP, once adopted.	Analysis: This policy is not applicable. The Yuba-Sutter NCCP/HCP has not been adopted as of January 2020. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.4	New developments shall be located and designed to preserve and incorporate existing native vegetation to the maximum extent feasible. Fire safety standards may override consideration of retaining existing vegetation in certain circumstances.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.5	The County will support cooperative restoration, development, and promotion of natural resources with the U.S. Fish and Wildlife Service, the Army Corps of Engineers, the Bureau of Reclamation, the U.S. Forest Service, and other public agencies with an interest in the Yuba County's water and wildlife assets.	Analysis: APHIS-WS consults with the USFWS, NMFS, and/or CDFW, as appropriate when any APHIS-WS program activities may affect wildlife are protected under the ESA and CESA so that restrictions or mitigation measures are applied when necessary. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.

TABLE C-14

YUBA COUNTY GENERAL PLAN NATURAL RESOURCES ELEMENT BIOLOGICAL RESOURCES POLICIES CONSISTENCY ANALYSIS

Policy Number	Policy Text	Consistency Analysis
NR5.6	The County will seek funding to enhance and restore habitat along the Yuba River, in coordination with development of recreational facilities and public access.	Analysis: This policy is not applicable. APHIS-WS activities do not result in activities that would affect habitat along the Yuba River, nor is the agency involved with development of recreational facilities and public access. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.7	New developments and public investments near Yuba County's streams and rivers shall be designed to avoid tree removal, erosion, or other modifications that would adversely affect salmonid habitat.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.8	New private developments adjacent to riparian areas shall provide a buffer designed and maintained to preserve existing wildlife habitat; provide habitat conditions favorable to native local wildlife; restrict activities that may adversely affect wildlife habitat quality; and restore degraded habitat, where feasible.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.9	New developments shall be designed to avoid the loss of jurisdictional wetlands. If loss is unavoidable, the County will require applicants to mitigate the loss on a "no net loss" basis through a combination of avoidance, minimization, restoration, and/or constructed wetlands, in accordance with federal and state law.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.10	The County will encourage measures on agricultural lands that conserve or restore habitat.	Analysis: This policy is not applicable. APHIS-WS is not involved in agricultural land conservation or habitat restoration, and activities do not affect habitat in agricultural lands. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.11	The County will support the use of mitigation fees from the Yuba-Sutter Natural Community Conservation/Habitat Conservation Plan to fund preservation and restoration elements of the County's open space strategy.	Analysis: This policy is not applicable. The Yuba-Sutter NCCP/HCP has not been adopted as of July 2020, and APHIS-WS is not involved in local land use decisions. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.12	Any new developments adjacent to the Spenceville Wildlife Refuge, Marysville Wildlife Area, Feather River	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development.

TABLE C-14

YUBA COUNTY GENERAL PLAN NATURAL RESOURCES ELEMENT BIOLOGICAL RESOURCES POLICIES CONSISTENCY ANALYSIS

Policy Number	Policy Text	Consistency Analysis
	Wildlife Area, Daugherty Hill Wildlife Area, or Starbend Fishing Access shall be buffered from wildlife areas or otherwise designed to avoid adverse direct and indirect effects on wildlife. Buffers related to firearm use, if necessary, should occur within the public wildlife area.	Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.13	New developments that could adversely affect wildlife movement corridors shall conduct a biological assessment and avoid placing any temporary or permanent barriers within such corridors, if they are determined to exist on-site. Avoiding barriers to wildlife movement may be accomplished at the project or community plan level.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.14	The County will discourage development that would substantially and adversely affect the designated winter and critical winter range of the Mooretown or Downieville deer herd.	Analysis: This policy is not applicable. APHIS-WS activities do not involve land development. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.
NR5.15	Roads, water lines, sewer lines, drainage facilities, and other public facilities constructed to serve unincorporated County development shall be located and designed to avoid substantial impacts to stream courses, associated riparian areas, and wetlands, to the greatest extent feasible.	Analysis: This policy is not applicable. APHIS-WS activities do not involve construction of public infrastructure. Conclusion: The County-funded APHIS-WS IWDM program services would not conflict with this policy.

Source: Policies from Yuba County (2011b).

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TABLE C-15
USDA APHIS-WS AGENCY CONSULTATION RESULTS FOR THREATENED AND ENDANGERED SPECIES

Common Name	Scientific Name	State Listing	Federal Listing	USDA APHIS-WS Agency Consultation Results
Mammals				
Fisher – West Coast DPS	*Pekania pennanti*	ST	F (proposed)	(d)
Birds				
Bald eagle	*Haliaeetus leucocephalus*	SE*	Delisted FT FE (rev) FE	NLAA/4,7
Bank swallow	*Riparia riparia*	ST		No Effect/4,7
California black rail	*Laterallus jamaicensis coturniculus*	ST*		No Effect/4,7
Great gray owl	*Strix nebulosa*	ST		(a)
Least Bell's vireo	*Vireo bellii pusillus*	SE	FE	No Effect/4,5,7 NLAA/5
Swainson's hawk	*Buteo swainsoni*	ST		No Effect/4,7
Tricolored blackbird	*Agelaius tricolor*	ST		(d)
Western yellow-billed cuckoo	*Coccyzus americanus occidentalis*	CE	ST	No Effect/4,7
Amphibians and Reptiles				
California red-legged frog	*Rana draytonii*		FT	No Effect/3
Giant gartersnake	*Thamnophis gigas*	ST	ST	No Effect/3,4,7 NLAA/5
Foothill yellow-legged frog	*Rana boylii*	ST		(e)
Sierra Nevada yellow-legged frog	*Rana sierrae*	ST	FE	No Effect/6,7
Invertebrates				
Vernal pool fairy shrimp	*Branchinecta lynchi*		FT	(a)
Vernal pool tadpole shrimp	Lepidurus packardi		FE	(a)
Western bumble bee	*Bombus occidentalis*	CE		(a)
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	CT		(a)
Fish				
Chinook salmon – Central Valley spring run	*Oncorhynchus tshawytscha pop. 6*	ST	FT	(c)
Chinook salmon - Sacramento River winter run	*Oncorhynchus tshawytsca*	SE	FE	(c)
Green sturgeon, southern DPS	*Acipenser mediorostris*		FT	(c)
Steelhead, Central Valley DPS	*Oncorhynchus mykiss irideus*		FT	(c)

Source: Species: USFWS 2019; CDFW 2019

S = state listed

F = federally listed

T = threatened

E = endangered

NLAA – not likely to adversely affect

** = state fully protected species*

(a) = APHIS-WS does not modify habitat that supports this species.

(b) = Species cannot be inadvertently caught using APHIS-WS mammal capture methods (traps, cages, snares).

(c) = "Section 7(d) Determination with respect to Chinook salmon, Coho salmon, steelhead, green sturgeon, Pacific euclachon and their critical habitats." Memo to file, Dennis L. Orthmeyer, State Director, California Office APHIS-WS, June 11, 2019; ESA Section 7 Consultation with NOAA-NMFS has been initiated.

(d) = State-threatened only, federal consultation not required (no mechanism in place).

(e) = In progress as part of NOAA-NMFS beaver/nutria damage management consultation activities. All terrestrial IWDM is considered No Effect on amphibians.

Effect determinations as reported in USDA (2015a, Appendix D):

1) *USFWS Section 7 Informal Consultations 4-15-14.*
2) *Wildlife damage management is not currently proposed in the range of these species. If APHIS-WS receives a request for assistance within the range of these species, APHIS-WS would initiate and complete Section 7 consultation with USFWS and adopt all necessary conditions to ensure that either the proposed actions would not be likely to adversely affect these species, or that the proposed actions would not jeopardize the continued existence of the species. APHIS-WS would also consult with CDFW for species that are state listed.*
3) *USFWS Section 7 consultation 5-7-07 "Not likely to adversely affect" determination or confirmation of "no effect" determination. USFWS has requested additional consultation if work is proposed in the range of this species. No work is currently proposed. Concurrence CDFW 11/2014. APHIS-WS has reinitiated consultation with USFWS to update review.*
4) *CESA consultations with CDFG (1996) for state-listed species (12/20/1996, 1/16/1997, 2/13/1997, and 2014).*
5) *USFWS (1996) Section 7 Consultations when species was federally listed, and/or CDFG (1997) for species that are listed by the state only.*
6) *The proposed methods do not have the potential to affect this species in its range.*
7) *CDFW concurrence/2014.*
8) *USFWS formal consultation requested.*

TABLE C-16
YUBA COUNTY HUNTING AND TRAPPING TAKE
1998-2018

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total	Average	Median	Notes
AMERICAN BEAVER																									
Commercial Trapping[1]																									
County	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0	0	4	0	9	0	0	
State	792	311	272	172	184	98	275	168	62	276	136	160	170	193	129	122	60	39	26	6	6	3657	174	160	
BLACK BEAR																									
Sport Hunting[2]																									
County	6	13	17	8	17	12	19	20	33	20	16	37	23	20	23	11	8	16	8	(b)	(b)	327	17	17	
State	1676	1836	1796	1633	1768	1670	1848	1418	1822	1861	2028	1900	1503	1745	1962	1078	1439	1287	1072	(b)	(b)	31342	1650	1745	
BOBCAT																									
Commercial Trapping[3]																									
County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
State	1165	224	182	190	214	394	429	506	627	885	715	623	457	893	1499	1214	1292	760	0	0	0	12269	584	506	(c)
Sport Hunting[3]																									
County	1	2	2	0	1	1	1	1	2	1	0	2	2	1	10	5	3	2	4	4	3	48	2	2	(c)
State	426	353	352	414	295	342	272	261	265	317	336	281	251	238	255	324	308	206	263	265	331	6355	303	295	(c)
Sport Hunting[4]																									
County	0	0	64	0	0	0	34	32	0	0	53	(b)	27	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	210	18	0	(c)
State	2299	1124	1753	1517	1552	1379	739	608	1165	1867	1198	(b)	1,518	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	16719	1393	1448	(c)
COYOTE																									
Commercial Trapping[1]																									
County	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	11	1	0	(a)
State	1127	301	201	296	290	396	636	443	133	226	204	149	82	139	209	280	169	156	114	111	118	5780	275	204	
Sport Hunting[4]																									
County	567	266	64	359	913	92	235	258	967	367	639	(b)	293	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	5020	418	326	(a)
State	30675	44736	61064	62246	52947	52748	64820	54824	56682	69365	56815	(b)	69914	(b)	(b)	(b)	(b)	33941	(b)	(b)	(b)	710777	54675	56682	(a)
GRAY FOX																									
Commercial Trapping[1]																									
County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
State	1267	232	260	178	203	266	11	326	242	276	531	588	732	491	593	657	982	1338	774	284	133	10364	494	326	
Sport Hunting[4]																									
County	(d)	(d)	(d)	(d)	0	0	0	0	0	0	27	(b)	0	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	27	3	0	(a)
State	(d)	(d)	(d)	(d)	2878	2023	470	449	1388	1833	1518	(b)	2236	(b)	(b)	(b)	(b)	4419	(b)	(b)	(b)	17214	1913	1833	(a)
MUSKRAT																									
Commercial Trapping[1]																									
County	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
State	13370	6633	2820	7190	5774	5419	2869	2159	2508	6643	4097	5465	3597	5550	6985	5745	5593	4641	1108	91	995	99252	4726	5419	
Sport Hunting (not included in survey)																									
RACCOON																									
Commercial Trapping[1]																									
County	18	0	0	0	0	0	0	0	5	14	13	0	0	0	0	0	5	0	4	0	0	59	3	0	
State	983	459	1245	841	539	709	1352	1029	209	588	210	555	597	562	609	612	246	139	120	66	111	11781	561	562	
Sport Hunting[4]																									
County	(d)	(d)	(d)	(d)	(d)	0	0	0	0	0	53	(b)	0	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	53	8	0	(a)
State	(d)	(d)	(d)	(d)	(d)	4046	4431	3869	2627	9967	4473	(b)	9957	(b)	(b)	(b)	(b)	(d)	(b)	(b)	(b)	39370	5624	4431	(a)
STRIPED SKUNK																									
Commercial Trapping[1]																									
County	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	6	0	0	
State	950	996	914	1083	667	735	1028	1092	160	486	65	276	328	457	514	425	176	272	129	39	94	10886	518	457	
Sport Hunting (not included in survey)																									
VIRGINIA OPOSSUM																									
Commercial Trapping[1]																									
County	11	0	0	0	2	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	16	<1	0	
State	983	459	333	338	214	411	1987	343	108	24	24	88	16	153	165	164	60	51	44	48	63	6076	289	153	
Sport Hunting (not included in survey)																									

Notes:

(a) average calculated for years with take to provide conservative estimate

(b) no report prepared for this year, or report not available as of 2019

(c) average/median provided for historic information purposes only; trapping prohibited in 2015 and hunting prohibited in 2019.

(d) not included in survey

Sources:

1. CDFW 2018b (Licensed Fur Trappers and Dealers Reports 1998-2017)
2. CDFW 2018a (Bear Harvest Reports 1998-2016)
3. CDFW 2019b (Bobcat Harvest Assessments 1997-2018)
4. CDFW 2011b (Game Take Hunter Surveys 1998-2008, 2010); Responsive Management 2015