

APPENDIX 5F

BIRD AND WILDLIFE POINT COUNTS AND AREA SEARCH SURVEYS BY HABITAT TYPE

Appendix Table 5F-1. Total numbers of birds detected during 2002 avian plot and facility surveys by Project area.
(Birds detected during plot and facility surveys listed in order of decreasing total abundance.)

Bird Species	Copco Bypass (n=7)	Copco Reservoir (n=37)	Fall Creek (n=20)	Iron Gate Reservoir (n=41)	JC Boyle Bypass (n=24)	JC Boyle Peaking Reach (n=73)	JC Boyle Reservoir (n=20)	Keno Canyon (n=19)	Keno Reservoir (n=23)	Link River (n=21)	Iron Gate-Shasta (n=19)	Total (All Sections; n=304)
Cliff Swallow	80	24	9	226	124	26	67	214	100	236	123	1229
Double-crested Cormorant		4		3	2	4	2	41	77	454	3	590
Red-winged Blackbird		21	11	44	5	57	9	68	126	121	26	488
American White Pelican		20		53	3	8	28	14	140	122	25	413
Canada Goose	1	24	4	49	4	26	1		139	49	14	311
Brewer's blackbird	15	40	4	31	16	29	17	21	28	54	31	286
Western Wood Pewee	3	32	17	28	19	100	21	20	8	3	10	261
Song Sparrow	2	5	8	7	29	74	17	46	39	12	8	247
Yellow Warbler	6	12	7	16	20	42	7	47	8	45	30	240
Brown-headed Cowbird	7	12	6	17	21	30	11	12	75	31	13	235
Black-headed Grosbeak	13	14	5	19	13	73	2	12	6	21	29	207
Tree Swallow	4	19	1	32	15	34	7		56	15	4	187
Western Tanager	1	9	16	5	23	90	19	3	2		3	171
Bullock's Oriole	8	36	12	33	1	48			1	14	14	167
American Robin	6	6		10	19	54	30	12	4	16	2	159
Forster's Tern		12		3	5	2	16	3	44	55		140
Yellow-rumped Warbler		6	7		27	62	27	10	1			140
Mourning Dove	3	26	6	30	1	14	5	5	20	10	13	133
Violet-green Swallow	2	44	4	28	3	26	6		7	8	4	132
Acorn Woodpecker	4	61	8	21		27	1				1	123
European Starling		21			2	11	5		46	11	6	102
Chipping Sparrow		4	12	4	14	36	18	7	1	4	1	101
Spotted Towhee		3	6	7	10	30	4	26	4	10	1	101
Turkey Vulture	18	9	9	41		4	2	4	3	6		96
Wilson's Warbler		6	19	30	3	25	1	3	2	1	6	96
Killdeer		12		33	8	1	8	2	23	1	6	94
Mallard		9	1	7	5		5	3	43	10	6	89
Red-shafted Flicker	1	4	2	9	17	25	17	1	4	3	1	84
Great Blue Heron	4	31		23	3	1	2		1	2	13	80
Dark-eyed Junco	1	4	1	2	35	12	17	6				78
Stellar's Jay			7		22	24	7	10	1	6		77
Mountain Chickadee		2		1	21	15	19	15	1			74
House Wren		23	4	12	2	12	4	2	1	1	10	71
Ash-throated Flycatcher	5	25		27		5					5	67
Cedar Waxwing		50	10						7			67
Great Egret					1		3	18	4	41		67
Vaux's Swift		7	13	8	4	31	2				1	66
Caspian Tern		17		22	1		7	3	9	4	2	65
Lazuli Bunting		3	9	10	2	31		3		5	2	65
Western Grebe		3			1				15	46		65
Ring-billed Gull		8	4	9	4		2	14	19		4	64
Bushtit	1	18	8	5	8	7	2	3	4	5		61
Osprey		16	4	15	6	6	6	6			1	60
American Crow		9		8		14				1	14	46
Belted Kingfisher	1	6	1	4	3	9	4	3	4	4	6	45
House Sparrow									29	15		44
Western Meadowlark		8		23					9		4	44
Common Merganser		5		2				11		13	12	43
Lesser Goldfinch		22	6	9		2		1			3	43
Oak/Juniper Titmouse	7	16	3	8	1	1		1			5	42
House Finch	1	6	6	3					13	2	9	40
Barn Swallow				15	5	1	3		12		3	39
Northern Rough-winged Swallow		5		12	5	7			2	6		37
Black-crowned Night Heron								14	9	13		36
Marsh Wren									36			36
Scrub Jay		7	9	12						3	4	35
American Goldfinch		4	5			20		1	4			34
Purple Finch			8	8	3	6	1	1		2	2	31
Bald Eagle	1	8		2	1	4	11		2			29
Bewick's Wren	1	6	6	12		2				1	1	29
Cassin's Vireo	1	4	3		3	17				1		29
Black-necked Stilt									27			27
California Quail	2	5	4	11		1		1		1	2	27
Western Kingbird	2	15	4			2					4	27
Spotted Sandpiper		1			2		2	3	8		9	25
Wood Duck		3		18				2	1			24
Yellow-headed Blackbird					3				21			24
Nashville Warbler			4		7	11	1					23
Rock Dove				1					21			22
Yellow-breasted Chat		2	1			7					12	22
Red-breasted Nuthatch					10	8	3					21
Unidentified Mammal	2	1	1	2	2	2	3	1	2	1	1	18
Unknown Swallow		1							3	14		18
Red Crossbill						15		2				17
White-breasted Nuthatch		1		4	3	6	3					17
Red-tailed Hawk	3	1	2	1	1			2	5	1		16
Warbling Vireo			3			11	1			1		16
Magillivrays's Warbler		3		2	1	5	2			1	1	15
Orange-crowned Warbler		4	1	1		3				4	2	15
Black-billed Magpie				10			3		1			14

Appendix Table 5F-1. Total numbers of birds detected during 2002 avian plot and facility surveys by Project area.
(Birds detected during plot and facility surveys listed in order of decreasing total abundance.)

Bird Species	Copco Bypass (n=7)	Copco Reservoir (n=37)	Fall Creek (n=20)	Iron Gate Reservoir (n=41)	JC Boyle Bypass (n=24)	JC Boyle Peaking Reach (n=73)	JC Boyle Reservoir (n=20)	Keno Canyon (n=19)	Keno Reservoir (n=23)	Link River (n=21)	Iron Gate-Shasta (n=19)	Total (All Sections; n=304)
Unknown Empidonax Flycatcher	1	2	2	1		2		2	1	1	2	14
Lewis' Woodpecker				3		2					8	13
Pileated woodpecker			2		6	4		1				13
Savannah Sparrow							3		10			13
Willow Flycatcher		2		5		2	1			1	2	13
Canvasback								6	6			12
Golden-crowned Kinglet				6	6							12
Pygmy Nuthatch							7		5			12
California Gull				3		1				1	6	11
Green Heron			1	4		1					5	11
Olive-sided Flycatcher						1	3	3	3	1		11
Swainson's Thrush			1	4	2	4						11
Brown Creeper					2	2	6					10
Cinnamon Teal									10			10
Downy Woodpecker		1			1	8						10
Dusky Flycatcher					3	7						10
Common Raven						5	2	2				9
Redhead								2	7			9
Unknown Gull		3			2				2	2		9
Black-throated Gray Warbler			2	2		4						8
Calliope Hummingbird		1	1	1		5						8
Common Yellowthroat		1			1	1			5			8
Unknown Woodpecker		2		1	1	1	3					8
American Dipper	2				1	4						7
Black Tern							7					7
Cassin's Finch					1	1	3	2				7
Eared Grebe									7			7
Hairy Woodpecker			2		3		1	1				7
Rock Wren	3			2							2	7
Rufus Hummingbird		3	2		1	1						7
Anna's Hummingbird		4		2								6
Canyon Wren	2	3	1									6
Lark Sparrow		5		1								6
Townsend's Warbler						5		1				6
Hermit Thrush			3			1	1					5
Hermit Warbler					1	4						5
Lesser Scaup									5			5
Red-breasted Sapsucker			1		1	2	1					5
Snowy Egret								4		1		5
Unknown Flycatcher		1			1	1					2	5
Black-capped Chickadee		1		1						2		4
Clark's Grebe									2	2		4
Gadwall							1		3			4
Mountain Quail			1				1				2	4
Northern Harrier									4			4
Ruddy Duck									4			4
Vesper Sparrow							4					4
Western Bluebird	1		1	2								4
Unknown Egret								4				4
Blue-winged Teal							3					3
Bufflehead		1							2			3
Pacific Slope Flycatcher					2	1						3
White-faced Ibis							3					3
Unknown Hummingbird			2	1								3
Unknown Sparrow					1		1		1			3
American Kestrel			1			1						2
Blue-gray Gnatcatcher				2								2
Common Snipe				1							1	2
Fox Sparrow					1			1				2
Golden Eagle				1		1						2
Golden-crowned Sparrow						2						2
Prairie Falcon		1				1						2
Virginia Rail			2									2
Wrentit				1		1						2
Unidentified Amphibian				1	1				1			2
Unknown Warbler						2						2
American Avocet									1			1
Common Loon				1								1
Great-horned Owl					1							1
Hammond's Flycatcher								1				1
White-crowned Sparrow			1									1
White-headed Woodpecker					1							1
Wild Turkey		1										1
Unidentified Reptile					1							1
Unknown Bird Species				1								1
Unknown Chickadee			1									1
Unknown Finch		1										1
Unknown Tern		1										1
Total	215	879	328	1135	610	1334	505	727	1357	1517	542	9157

Appendix Table 5F-2. Total numbers of birds detected during 2002 point count and area search surveys by habitat type.
(Birds detected during plot and facility surveys listed in order of decreasing total abundance.)

Bird Species	Unk ¹	DST	FAC ²	FLY ³	GL	J	KMC	LUB	MHO	MHOC	MHOJ	MXC	PA	PEM	PP	R/PFO	R/PSS	RG	RM	RT	RUB	SB	Total
Cliff Swallow	50	40	455	33				135			2	13	45	105	1	10	34	1			275	30	1229
Double-Crested Cormorant		3	272	138			1	73						1		1		23			78		590
Red-Winged Blackbird	5	6	24	24	20	13		15	2		1	2	14	102	7	61	138	49				5	488
American White Pelican	30		82	45		5		194						8		1					48		413
Canada Goose			8	77				173	2		1	3	1	8		1	9	1			27		311
Brewer's Blackbird	1	10	43	54	24	15		1	3	1	2	4	13	11	1	35	48	8				12	286
Western Wood Peewee	12		9		4	4	7	1	42	34	16	10		1	51	31	22	3	14				261
Song Sparrow	10		1	1	2	2	2		2	3	5	8	4	27	4	27	100	36	11		1	1	247
Yellow Warbler	3	2	9						8	8	5	17	3	5	6	48	104	14	7		1		240
Brown-Headed Cowbird	26	4	23	21	8	6			11	3	5	4	9	26	21	41	21	4	1		1		235
Black-Headed Grosbeak	3	2	13	3	1	11	11		23	20	6	6		2	6	38	42	11	7		2		207
Tree Swallow	51	1	7	8	6	1		8	14		1		4	7	4	13	29	21			12		187
Western Tanager	5		1	3	4	1	30		13	29	12	3	1	1	32	13	11	2	9		1		171
Bullock's Oriole			11	7	2	4	1		24	15	4	8		4	2	56	19	6	3	1			167
American Robin	6	3	18	3	6	4	9		16	14	1	6	2	4	25	14	16	6	2	1		3	159
Forster's Tern			22	23				69					4	1	2						19		140
Yellow-Rumped Warbler					2	1	17		4	24	4	6		1	58	5	12	1	5				140
Mourning Dove	13	7	11	8	14	3	2		13	5	6	6		3	10	18	10	3				1	133
Violet-Green Swallow			10	8				23	1		2	20	3	18	2	23	13				9		132
Acorn Woodpecker	3		14		7	1			45	13	10	8		2	1	14	3		2				123
European Starling	1	4	11	8	5	7		5	8	1	4	2	1	7	1	29	3	1			3	1	102
Chipping Sparrow	3	1	3		7	7	10		6	17	5	8	1		30		2					1	101
Spotted Towhee	7		5		1	5	6		7	7	6	18			21	10	7	1					101
Turkey Vulture			4	49	1									1	1	40							96
Wilson's Warbler			7			1			14	2	7	6		5		26	20	1	6	1			96
Killdeer	11	14	2	3	10			8	1				6	15	1	10	6	1			3	3	94
Mallard		6	5	18	1			24					7	13		1	1				9	4	89
Great Blue Heron			5	33				15			1	16				2	2	1	1		2	2	80
Stellar's Jay	7	2	2	2		6	6		2	12	4	3		1	17	1	9		2		1		77
Mountain Chickadee	1		11	1	2	6	7		2	1		4			36		3						74
House Wren		1			5	2			6	3	3	5	1		7	24	12	1	1				71
Ash-Throated Flycatcher	2		5	1	3	5			20	1	11	4				6	9						67
Cedar Waxwing				60														7					67
Great Egret		1	15	13				5						1		1	3				28		67
Vaux's Swift			20	6	1			2	1				3	1	2	6	4	3			17		66
Caspian Tern	11		6	7				32			2				2		2				2	1	65
Lazuli Bunting			3		1	1	1		7	3	7	10	1	1	1	11	7	3	8				65
Western Grebe			2			1		52													10		65
Ring-Billed Gull	2		16	4				31					2			1					8		64
Bushtit					4	4	1		2	2	10	3				13	18	2	2				61
Osprey	3			21	7		6	9			4			1	1	1	4	1			2		60
American Crow	5			12	4	1		1	5	1	1	1	5			5	2	2	1				46
Belted Kingfisher	2		5	2		2		6		3						5	8				11	1	45
House Sparrow		29	14														1						44
Western Meadowlark	1	1	2		25	1		1	3		3	1	1	4		1							44
Lesser Goldfinch			2		8	5			4	2	2		1			14		1	4				43
Oak/Juniper Titmouse			14		1				8		8				1	7	3						42
House Finch		1	9	1	2	3			1	1				1		16	1	5					40

Appendix Table 5F-2. Total numbers of birds detected during 2002 point count and area search surveys by habitat type.
(Birds detected during plot and facility surveys listed in order of decreasing total abundance.)

Bird Species	Unk ¹	DST	FAC ²	FLY ³	GL	J	KMC	LUB	MHO	MHOC	MHOJ	MXC	PA	PEM	PP	R/PFO	R/PSS	RG	RM	RT	RUB	SB	Total	
Barn Swallow	2		3	3								1	5	17		1	5				1	1	39	
Northern Rough-Winged Swallow			4	6		4		4						14		1	4						37	
Black-Crowned Night Heron		1	11	5				1								5	11				2		36	
Marsh Wren														36									36	
Scrub Jay			11	1		2			9		4	2				4		2					35	
American Goldfinch				3	1				3	8	1	3	2	1		4	2		6				34	
Purple Finch			3						1	2	6				5	5	4	1	4				31	
Bewick's Wren			5			2	1		6		3	5				4	1		1	1			29	
Cassin's Vireo							8		6	6	2	1			1	3			2				29	
Black-Necked Stilt		4						1						22									27	
California Quail	3		5		2	1			3		4	1				2	4		2				27	
Western Kingbird	1	1	3	3	6				1	1	4	3		1		1		2					27	
Spotted Sandpiper			4					6						1		6	2	2				3	1	25
Wood Duck	5		1					14						2								2		24
Yellow-Headed Blackbird				2									3	6		12		1						24
Nashville Warbler			1		2		2		3	6	2	1		1	2		1	1	1					23
Bald Eagle	1		1	10				3	2						1	2	1					1		22
Rock Dove			1					21																22
Yellow-Breasted Chat					1										1	10	6	4						22
Unidentified Mammal	2	2	3		1		2	1	2		1					2		2						18
Unknown Swallow				11												3						4		18
White-Breasted Nuthatch							1		4		5				6				1					17
Warbling Vireo			1		1		1		2	1	1				1		5		3					16
Magillivrays's Warbler							3		1	1	2	1				4	3							15
Orange-Crowned Warbler									4			2				7	2							15
Black-Billed Magpie				1					1					1			9					2		14
Unknown Empidonax Flycatcher			2			2					1	1		3		3	2							14
Lewis' Woodpecker			2	2					4			1				1	2	1						13
Pileated Woodpecker							3			3	1				4		1		1					13
Savannah Sparrow													6	4								3		13
Willow Flycatcher														1		2	9	1						13
Canvasback			6					6																12
Golden-Crowned Kinglet							3								3	6								12
California Gull			5	2				3														1		11
Green Heron	1			4												2	3	1						11
Olive-Sided Flycatcher	1					1									9									11
Swainson's Thrush					1		4			2						4								11
Brown Creeper							1			1					8									10
Cinnamon Teal		2						6						2										10
Dusky Flycatcher					3		2			2					1		1		1					10
Redhead			2											7										9
Black-Throated Gray Warbler									1		1				3	1			2					8
Calliope Hummingbird									1			1				2	1	1	2					8
Common Yellowthroat														5		1	2							8
Unknown Woodpecker	3									1					2	1	1							8
American Dipper			1													4	1					1		7
Black Tern								7																7
Cassin's Finch										1		2			4									7

Appendix Table 5F-2. Total numbers of birds detected during 2002 point count and area search surveys by habitat type.
(Birds detected during plot and facility surveys listed in order of decreasing total abundance.)

Bird Species	Unk ¹	DST	FAC ²	FLY ³	GL	J	KMC	LUB	MHO	MHOC	MHOJ	MXC	PA	PEM	PP	R/PFO	R/PSS	RG	RM	RT	RUB	SB	Total
Eared Grebe								7															7
Hairy Woodpecker			1		1		2								1				2				7
Rock Wren			4		2						1												7
Rufus Hummingbird			1							1						2	2		1				7
Anna's Hummingbird				2							2					1	1						6
Canyon Wren	1		2									2					1						6
Lark Sparrow					1	1					4												6
Townsend's Warbler										5					1								6
Hermit Thrush									1		1			2	1								5
Hermit Warbler			1						1	3													5
Lesser Scaup								5															5
Red-Breasted Sapsucker			2							1							1		1				5
Snowy Egret			4																			1	5
Black-Capped Chickadee					1												1	2					4
Clark's Grebe			1					3															4
Gadwall								4															4
Mountain Quail	1									1							2						4
Northern Harrier				3										1									4
Ruddy Duck								4															4
Vesper Sparrow															1							3	4
Western Bluebird									2	1	1												4
Unknown Egret	2			2																			4
Blue-Winged Teal								3															3
Bufflehead								3															3
Pacific Slope Flycatcher							1			1							1						3
White-Faced Ibis															3								3
Unidentified Amphibian								1						2									3
Unknown Sparrow														1			1					1	3
American Kestrel				1												1							2
Blue-Gray Gnatcatcher																2							2
Fox Sparrow			1		1																		2
Golden Eagle			1	1																			2
Golden-Crowned Sparrow	1																		1				2
Prairie Falcon	1			1																			2
Virginia Rail																	2						2
Wrentit											1					1							2
Unknown Warbler									1			1											2
American Avocet								1															1
Common Loon								1															1
Great-Horned Owl															1								1
Hammond's Flycatcher															1								1
White-Crowned Sparrow														1									1
White-Headed Woodpecker																	1						1
Wild Turkey	1																						1
Unknown Finch				1																			1
Unknown Tern								1															1
Total	330	150	1305	786	216	145	186	998	395	286	214	238	150	520	499	807	868	247	122	4	604	79	9149

¹UNK=unidentified habitat; ²FAC=facilities survey detection (all habitats); ³FLY=flyover.