

DOCKETED

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Project Title:	Palen Solar Power Project - Compliance
TN #:	201811
Document Title:	Palen Solar Holdings, LLC's Updated Compilation of Avian Data at Various Solar Projects as of 02-26-14
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AVIAN MORTALITY INFORMATION FROM 2012/2013/2014 COMPLIANCE REPORTS

Monthly Totals	2012												2013												2014
	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan
Genesis (Trough)	0	0	0	0	2	0	6	2	0	4	0	0	0	0	3	4	10	4	27	66	7	11	2	6	4
Desert Sunlight (PV)	2	0	2	0	2	2	3	4	4	4	6	0	1	1	1	8	7	11	11	7	6	39	12	1	2
ISEGS (Tower)	1	0	1	3	1	0	2	1	2	1	1	2	2	1	1	3	5	5	7	7	30	50	11	13	25
Totals by Month	3	0	3	3	5	2	11	7	6	9	7	2	3	2	5	15	22	20	45	80	43	100	25	20	31

Yearly Totals	2012	2013	2014
Genesis (Trough)	14	140	4
Desert Sunlight (PV)	29	105	2
ISEGS (Tower)	15	135	25

NOTE: Systematic, statistically rigorous carcass surveys began at ISEGS in November 2013 under the CEC and BLM approved Avian and Bat Monitoring and Management Plan

Color Code Legend

Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted
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THIS IS A SUMMARY SHEET--PROJECT SPECIFIC DATA FOLLOWS ON NEXT PAGES

GENESIS	2012												2013												2014	
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan
Monthly Total	0	0	0	0	0	2	0	6	2	0	4	0	0	0	0	3	4	10	4	27	66	7	11	2	6	4
						Unknown		Bullocks Oriole	Mourning dove		American coot				Lesser goldfinch	Black throated grey warbler	Pied billed grebe	Mourning dove	Barn owl	White winged dove	Grebe species (netting)	Clark's grebe (netting)	Gadwall	House finch	Pigeon	
						Unknown		Bullocks Oriole	Lesser nighthawk		Unknown small bird				Lesser goldfinch	House wren	Wilson's warbler	Barn owl	Cliff swallow	Tree swallow	MacGillivray's warbler	Green wing teal	Pigeon	Unknown	Dove	
								Western meadow lark			American kestrel				Bufflehead	Orange-crowned warbler	Hermit thrush	Great Blue Heron	Yellow headed blackbird	Tree swallow	Yellow breasted black bird	Green wing teal		White crowned sparrow	Rock wren	
								Unknown species			Barn owl					Pied-billed grebe (netting)	Wilson's warbler	Barn owl	Mourning dove	Cowbird	Unknown water bird	Blue wing teal		Grebe species (netting)	American kestrel	
								Brewers blackbird									Townsend's warbler		Barn owl	Cowbird	Grebe species (netting)	Marsh wren		Grebe species (netting)		
								Mourning dove									Western grebe		American coot	Herring gull	Mourning dove	Lesser goldfinch		Unknown		
																	Yellow warbler		Bat western pipstrelle	Say's Phoebe	Unknown	Cooper's hawk				
																	Unknown warbler		Great blue heron	Cliff swallow		Passerine species				
																	Unknown sparrow		American kestrel	Gull		Orange-crowned warbler				
																	American coot		Yellow headed blackbird	Bullock's Oriole		Bat				
																		Unknown	Cliff swallow			Bat				
																		Bat western pipstrelle	Eared grebe							
																		Great roadrunner	Yellow headed blackbird							
																		Brown pelican	Common loon							
																		Cliff swallow	Bullock's Oriole							
																		Lesser nighthawk	Tree swallow							
																		Cliff swallow	Rough wing swallow							
																		Cowbird	Cowbird							
																		Unknown	Cowbird							
																		Say's Phoebe	Mourning dove							
																		Cowbird	Black headed Grosbeak							
																		Great blue heron	Common loon							
																		Cowbird	Black phoebe							
																		Great tailed grackle	Mourning dove							
																		American kestrel	Cliff swallow							
																		Brown pelican	Cliff swallow							
																		Canyon bat	Flycatcher							
																				Mourning dove						
																				Lesser nighthawk						
																				Sora						

LEGEND												
Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted

GENESIS, cont.	2012												2013												2014		
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	
																											Tree swallow
																											Blue winged teal
																											Cowbird
																											Mourning dove
																											Sora
																											Tree swallow
																											Tree swallow
																											Yellow headed blackbird
																											Cowbird
																											Cowbird
																											Bullock's Oriole
																											Bullock's Oriole
																											Bunting (Lazul?)
																											Bunting (Lazul?)
																											Cowbird
																											Cowbird
																											Cowbird
																											Passerine species
																											Passerine species
																											Passerine species
																											Passerine species
																											Unknown
																											Unknown
																											Unknown
																											Passerine species
																											Eared grebe
																											Gull - ring billed
																											Hermit warbler
																											Lesser nighthawk
																											Unknown
																											American Kestral
																											Chipping sparrow
																											Bat
																											Bat
																											Bat

LEGEND												
Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted

DESERT SUNLIGHT	2012												2013												2014
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec
Monthly Total	2	0	2	0	2	2	3	4	4	4	6	0	1	1	1	8	7	11	11	7	6	39	12	1	2
	Burrowing owl		Black tailed gnatcatcher		Western grebe	Unknown	Yellow headed blackbird	Yellow headed blackbird	Cowbird	White crowned sparrow	Barn owl		Common poorwill	Common poorwill	Loggerhead shrike	Loggerhead shrike	Yuma clapper rail	Mourning dove	Townsend's warbler	Brewer's blackbird	Common yellowthroat	Western grebe	Western grebe	Eared grebe	Loggerhead shrike (onsite)
	Prairie falcon		Costa's humming bird		Brewer's blackbird	American kestrel	Sparrow	Wilson's warbler	American avocet	American avocet	Long-eared owl					White-crowned sparrow	Wilson's warbler	Common loon	Brown pelican	Western tanager	Eared grebe	Eared grebe	Western meadow lark	White-crowned sparrow (onsite)	
							Loggerhead shrike	Yellow rumped warbler	American avocet	Blackbird	Unknown					Eared grebe	Loggerhead shrike	Mourning dove	Brown pelican	Eared grebe	Unknown	Eared grebe	Western grebe		
								Pallid bat	American avocet	Eared grebe	American avocet					Surf scooter	Western tanager	Eared grebe	Brown pelican	Cowbird	Unknown	Sora	Western grebe		
											Mourning dove					Great-tailed grackle	Townsend's warbler	Western grebe	Black crowned night heron	Western tanager	Savannah sparrow	American coot	Sora		
											American avocet					Red-breasted Merganser	Lesser nighthawk	American coot	Ash throated fly catcher	Pied billed grebe	Common raven	Western grebe	Red-necked Phalarope		
																Horned lark	Wilson's warbler	Double breasted comorant	Black headed grosbeak e	Wilson's warbler		Eared grebe	Great egret		
																Double-breasted comorant		Common raven	Tree swallow			Sora	Western grebe		
																	Great tailed grackle		Horned lark			American coot	Sora		
																	Double breasted comorant		Common poorwill			EAGR (?)	Red-necked Phalarope		
																	Costa humming bird		Great tailed grackle			Mourning dove	Western grebe		
																						American Avocet	Great egret		
																						Eared grebe			
																						Mourning dove			
																						Eared grebe			
																						American Avocet			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Western grebe			
																						Yellow headed blackbird			

LEGEND

Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted
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DESERT SUN., cont.	2012												2013												2014
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec

Western grebe
Western grebe
Western grebe
Blue-winged teal
American coot
American coot
Mourning dove
Western grebe
Yellow headed blackbird
Western grebe
Blue-winged teal
American coot
Mourning dove
American coot

LEGEND

Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted
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ISEGS	2012												2013												2014
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec
Monthly Total	1	0	1	3	1	0	2	1	2	1	1	2	2	1	1	3	5	5	7	7	30	50	11	13	25
	Eared grebe		Black-throated sparrow	Savannah sparrow	Western tanager		Yellow-billed Cuckoo	Lesser nighthawk	Western tanager	Pine siskin	Chipping sparrow	American coot	White-crowned sparrow	Cooper's hawk	Loggerhead shrike	Brewer's sparrow	Loggerhead shrike	White-throated swift	Greater roadrunner	Lesser Nighthawk (DT holding pens)	Western tanager	House finch	Rock pigeon	American Pipit	Unknown
				Yellow-rumped warbler			Cooper's hawk		American coot			Unknown	Logger head shrike			White-crowned sparrow	Unknown passerine	Lesser nighthawk	Blue-gray gnatcatcher	Gnatcatcher (DT holding pens)	Unknown	House finch	Unknown	American kestrel	Yellow-rumped warbler
				American coot												Green-tailed Towhee	Horned lark	Flycatcher	Ash-throated flycatcher	Common raven	Chipping sparrow	Yellow-rumped Warbler	Greater roadrunner	Northern Flicker	Greater roadrunner
																Western tanager	Common Poorwill	Black-throated sparrow	White-throated swift	Unknown	Verdin	Blackbird species	Mourning dove	Common yellow throat	
																Wilson's warbler	Greater roadrunner	Lesser nighthawk	Common raven	MacGillivray's warbler	Unknown	Yellow-rumped Warbler	American coot	Mourning dove	
																			Black-throated sparrow	Lazuli bunting	Blue-Gray Gnatcatcher	House finch	Yellow-rumped Warbler	American pipit	Brewer's blackbird
																			Northern mockingbird	Loggerhead shrike	Brewer's sparrow	House finch	Greater roadrunner	Great tailed Grackle	Mourning dove
																				Unknown	Wilson's warbler	Greater roadrunner	Great tailed Grackle	American kestrel	
																				Mourning dove	Verdin	Savannah sparrow	Say's Phoebe	Mourning dove	
																				Unknown	Yellow-rumped warbler	American Pipit	Western meadow lark	Mourning dove	
																				Unknown	Blue-winged teal	Unknown	Western meadow lark	Yellow-rumped warbler	
																				White-throated swift	Blue-winged teal			Mourning dove	Mourning dove
																				American coot	Mourning dove			Brewer's blackbird	Mourning dove
																				Cowbird	American coot				Greater roadrunner
																				Wilson's warbler	Lincoln's sparrow				Anna's humming bird
																				Black throated Gray warbler	Unknown				American kestrel
																				Cassin's vireo	House finch				Rock pigeon
																				House finch	American coot				Black-throated sparrow
																				Mourning dove	Unknown				Mourning dove
																				Unknown	Yellow-rumped warbler				Greater roadrunner
																				Mourning dove	Unknown				Cactus wren
																				Mourning dove	Verdin				Mourning dove
																				Unknown	Yellow-rumped warbler				Northern Flicker
																				Mourning dove	Unknown				Canyon bat
																				Mourning dove	House finch				Unknown

LEGEND

Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Const. Laydown Area	Carcass surveys conducted
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ISEGS, cont.	2012												2013												2014	
	Month	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan	feb	mar	apr	may	june	july	aug	sept	oct	nov	dec	jan

Mourning dove	House finch
Unknown	Unknown
Unknown	Unknown
Townsend's Warbler	Yellow-rumped warbler
Unknown	Yellow-rumped warbler
	White-crowned sparrow
	House finch
	Yellow-rumped warbler
	Yellow-rumped warbler
	House finch
	Mourning dove
	Yellow-rumped warbler
	Black and white warbler
	Unknown
	American coot
	Yellow-rumped warbler
	Yellow-rumped warbler
	Great-tailed grackle
	Unknown
	Spotted sandpiper
	Yellow-rumped warbler
	Mourning doe
	Townsend's warbler
	White-crowned sparrow
	Unknown

LEGEND

Location not reported	Open area	Fence	Pond	Solar trough, panel, or heliostat	Solar Tower	Solar Flux	Power block or building	T/L, power line, sub-station	Road or vehicle	Drainage channel	Construction laydown area	Carcass surveys conducted
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