

Contains Confidential Information – Do Not Distribute

**Placer County Water Agency
Middle Fork American River Project
(FERC No. 2079)**

FINAL

**CONTAINS CONFIDENTIAL INFORMATION
NOT FOR PUBLIC DISTRIBUTION**

**TERR 5 – BALD EAGLE
TECHNICAL STUDY REPORT – 2008**



Placer County Water Agency
P.O. Box 6570
Auburn, CA 95604

March 2009

TERR 5 – BALD EAGLE TECHNICAL STUDY REPORT – 2008

“Where’s the rest of the report?”

The following pages contain *only* the Confidential information from this report which could not be freely disclosed to the public (pursuant to 18 CFR 385.1112); the non-confidential portions (i.e. “the rest of the report”), can be found in **Volume 3, Book 11**.

Non-confidential Information (refer to Volume 3, Book 11)

- 1.0 Introduction
- 2.0 Study Objectives
- 3.0 Study Implementation
- 4.0 Extent of Study Area
- 5.0 Study Approach
- 6.0 Results
- 7.0 Literature Cited

Figure TERR 5-1. **TERR 5 Bald Eagle Study Objectives and Related Study Elements and Reports.**

Map TERR 5-1. **Bald Eagle Occurrences in the Middle Fork American River Watershed.**

Confidential Information (contained herein)

Map TERR 5-2. Bald Eagle Nests and Night Roosting Locations in the Middle Fork American River Watershed.

Appendix A. Bald Eagle Observation Data Sheets.

Appendix B. CDFG Bald Eagle Nesting Territory Survey Form.

CONFIDENTIAL

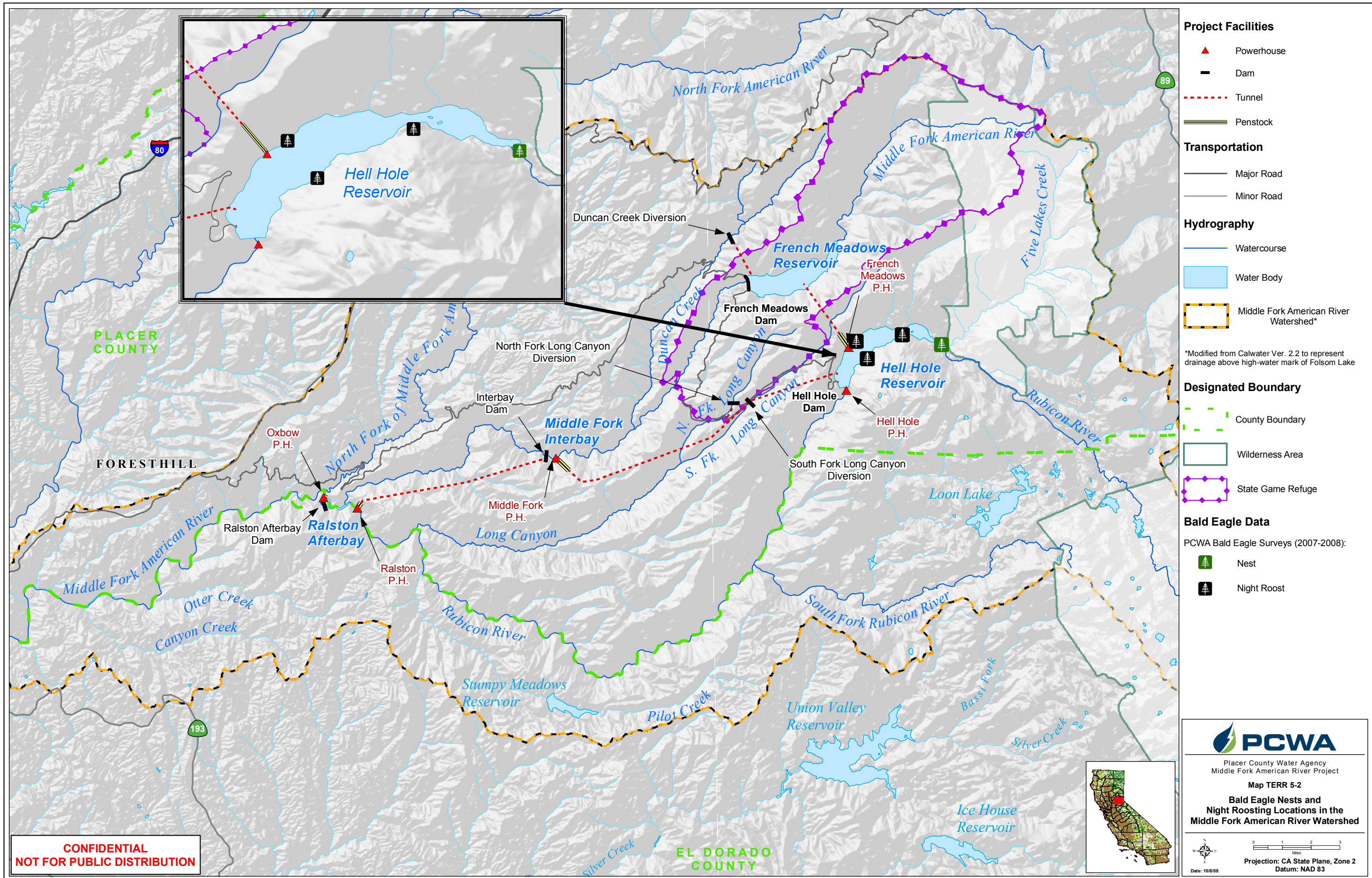
APPENDIX A

Bald Eagle Observation Data Sheets

CONFIDENTIAL

APPENDIX B

CDFG Bald Eagle Nesting Territory Survey Form



Project Facilities

- ▲ Powerhouse
- Dam
- - - Tunnel
- Penstock

Transportation

- Major Road
- Minor Road

Hydrography

- Watercourse
- Water Body
- Middle Fork American River Watershed*

*Modified from Calwater Ver. 2.2 to represent drainage above high-water mark of Folsom Lake

Designated Boundary

- County Boundary
- Wilderness Area
- State Game Refuge

Bald Eagle Data

PCWA Bald Eagle Surveys (2007-2008):

- Nest
- Night Roost

PCWA
Placer County Water Agency
Middle Fork American River Project
Map TERR 5-2
Bald Eagle Nests and Night Roosting Locations in the Middle Fork American River Watershed

Scale: 0 to 3 Miles
Projection: CA State Plane, Zone 2
Datum: NAD 83
Date: 10/6/08

**CONFIDENTIAL
NOT FOR PUBLIC DISTRIBUTION**

CONFIDENTIAL

APPENDIX A

Bald Eagle Observation Data Sheets

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET¹

Pg 1 of 2 **Date:** Dec. 13, 2007 **Data Entered:** _____ **Time Start:** 0910 **End:** ~1115
Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.
Observer Location: Helicopter Survey – Wintering Bird **Observers:** REJ/JNS
Temperature (x10°): 30's **Weather:** Overcast **Wind:** Calm to light **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	0920	0939	0945	0950	0951	0955	1010
Species/Age/Sex	GBHE	BAEA/ SubAd #1	BAEA/Ad #1	BAEA/Ad #2	Osprey	Osprey	Osprey
Number	Nest	1	1	1	Nest	Nest	Nest
General Location	Ralston Afterbay	Rubicon R. d/s Ellicott Bridge	Rubicon R. d/s Hell Hole Dam	Hell Hole Reservoir	Hell Hole Reservoir	Hell Hole Reservoir	French Meadows Reservoir
UTM northing	4319420	4314059	4320993	4326870	4327840	4329698	4333036
UTM easting	695375	717189	721270	724714	725465	726346	721321
Activity	medium-sized nest in FHP	flying d/s	flew to perch	perched	nest	nest	nest
Perch type	foothill pine		fir (<i>Abies</i> sp.)	fir (<i>Abies</i> sp.)	snag	snag top	snag
Dist from H ₂ O (m)			10	40			
Habitat			riverine pool	reservoir			
Comments	Species determined on 5-6-08		Mergansers nearby		Nest in good condition	Nest in fair condition	Nest in fair condition

Forage	1F	2F	3F	4F	5F	6F	7F
General Location							
UTM northing							
UTM easting							
Time							
# Attempts							
Attack mode							
Dist. from perch							
Dist. from shore							
Success?							
Prey species							
Prey remains?							
Prey size (mm)							
Prey status							
Aquatic Habitat							

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle (m)							

¹ Osprey data (occurrences and nests) was also collected during the bald eagle surveys. Refer to TERR 4 for discussion of results.

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 2 of 2 **Date:** Dec. 13, 2007 **Data Entered:** _____ **Time Start:** 0910 **End:** ~1115

Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.

Observer Location: Helicopter Survey – Wintering Bird **Observers:** REJ/JNS

Temperature (x10°): 30's **Weather:** Overcast **Wind:** Calm to light **UTMs in NAD 27**

Eagle/Osprey	8	9	10	11	12	13	14
Time start	1015	1030					
Species/Age/Sex	Osprey	BAEA/Ad #3					
Number	Nest	1					
General Location	French Meadows Reservoir	MFAR vic. Portage Falls					
UTM northing	4332458	4313989					
UTM easting	718966	683725					
Activity	nest	flying d/s					
Perch type	snag						
Dist from H ₂ O(m)							
Habitat							
Comments	Old nest						

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Dec. 13, 2007 **Data Entered:** _____ **Time Start:** 1330 **End:** 1645

Survey Route: Hell Hole Reservoir at Dam, then boat up to inlet.

Observer Location: Ground/Boat Survey – Winter Night Roost **Observers:** REJ

Temperature (x10°): 40's **Weather:** Partly cloudy **Wind:** light-moderate **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	1330	1435	1437	1515			
Species/Age/Sex	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1	Osprey			
Number	1	1	1	Nest			
General Location	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res.	Hell Hole Reservoir			
UTM northing	4326550	4326320	(4329400)	~4326620			
UTM easting	724510	724080	(725700)	~723340			
Activity	Perched	Forage attempt	Soaring	Nest			
Perch type	snag branch			snag			
Dist from H ₂ O(m)	10						
Habitat	reservoir	reservoir					
Comments		Refer to 2 F below	Soared u/s then lost	Good cond. – not seen from helicopter. Loc. approximate.			
Time end	1435	1437	1500				

No night roost location identified.

Forage	1F	2F	3F	4F	5F	6F	7F
General Location		Hell Hole Res.					
UTM northing		4326320					
UTM easting		724080					
Time		1435					
# Attempts		2					
Attack mode		active					
Dist. from perch		300m					
Dist. from shore		20m					
Success?		no					
Prey species		mergansers					
Prey remains?							
Prey size (mm)							
Prey status		alive					
Aquatic Habitat		reservoir					

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle (m)							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Dec. 14, 2007 **Data Entered:** _____ **Time Start:** 0640(too dark) **End:** 0840

Survey Route: Hell Hole Reservoir at Dam

Observer Location: Ground Survey - too rough for boat – Winter Night Roost **Observers:** REJ/JNS

Temperature (x10°): 30's **Weather:** Overcast **Wind:** moderate-heavy **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	0700	0720	0721	0725	0725	0726	0732
Species/Age/Sex	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1	BAEA/Ad #1
Number	1	1	1	1	1	1	1
General Location	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res. near dam	Hell Hole Res. near dam
UTM northing	(4326830)	4326400	4326285	(4326560)	4326500	4326990	(4326770)
UTM easting	(724225)	724060	724305	(724200)	724100	724720	(722990)
Activity	Soaring, hunting	Forage attempt	Feeding	Soaring, hunting	Forage attempt	Feeding	Soaring
Perch type			log			fir (<i>Abies</i> sp.)	
Dist from H ₂ O(m)			20m			25m	
Habitat		reservoir	reservoir		reservoir	reservoir	
Time end						0732	0745
Comments		Refer to 2F below	Collected trout scales later		Refer to 5F below		Lost when crossed over ridge to west

No night roost location identified.

Forage	1F	2F	3F	4F	5F	6F	7F
General Location		Hell Hole Res.			Hell Hole Res.		
UTM northing		4326400			4326500		
UTM easting		724060			724100		
Time		0720			0725		
# Attempts		1			1		
Attack mode		scavenge pluck			scavenge pluck		
Dist. from perch		n/a			n/a		
Dist. from shore		150			200		
Success?		yes			yes		
Prey species		trout			trout		
Prey remains?		yes - scales			no		
Prey size (mm)		200			200		
Prey status		carrion			carrion		
Aquatic Habitat		reservoir			reservoir		

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle(m)							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Jan 15, 2008 **Data Entered:** _____ **Time Start:** 0915 **End:** ~1140
Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.
Observer Location: Project-wide Helicopter Survey – Wintering Bird **Observers:** REJ/AH
Temperature (x10°): 30's **Weather:** Clear **Wind:** Calm to light **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6
Time start	0921	0953	0958	1005	1045	1114
Species/Age/Sex	BAEA/Ad #1	Osprey	BAEA/Ad #2	Osprey	GBHE	BAEA/Ad #3
Number	1	Nest	1	Nest	Nest	1
General Location	MFAR at American Bar	Hell Hole Reservoir	Hell Hole Reservoir	Hell Hole Reservoir	Ralston Afterbay	MFAR u/s Poverty Bar
UTM northing	4319670	4327836	4329403	4327204	4319411	4312437
UTM easting	694340	725600	727488	723581	695429	678840
Activity	Perched over pool	Nest	Perched	Nest	Medium-sized nest in FHP	Perched over pool
Perch type	snag	snag	snag	snag	foothill pine	foothill pine
Dist from H ₂ O(m)	25		40			5
Habitat	riverine pool		inflow to reservoir			riverine pool
Comments	could not find later in PM	better location of 12-13-07 No. 5	Pilot Erik says kokanee pile up here	better location of 12-13-07 PM No. 4	Species determined on 5-06-08 better location of 12-13-07 No. 1	

Forage	1F	2F	3F	4F	5F	6F
General Location						
UTM northing						
UTM easting						
Time						
# Attempts						
Attack mode						
Dist. from perch						
Dist. from shore						
Success?						
Prey species						
Prey remains?						
Prey size (mm)						
Prey status						
Aquatic Habitat						

Public user #	1P	2P	3P	4P	5P	6P
Time						
Type						
Number						
Location						
Shore dist. (m)						
Eagle response						
Dist. to eagle (m)						

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Jan 15, 2008 **Data Entered:** _____ **Time Start:** 1600 **End:** 1715

Survey Route: Ralston Afterbay area, then Hell Hole Reservoir at Dam

Observer Location: Helicopter Survey – Winter Night Roost **Observers:** REJ/AH

Temperature (x10°): 40's **Weather:** clear **Wind:** light **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	1620	1648					
Species/Age/Sex	BAEA/Ad #1	BAEA/Ad #1					
Number	1	1					
General Location	Hell Hole Reservoir	Hell Hole Reservoir					
UTM northing	4328795	4327822					
UTM easting	724892	725530					
Activity	Perched	Flew to roosting perch area					
Perch type	ponderosa pine	ponderosa pine					
Dist from H ₂ O(m)	50	50					
Habitat	reservoir	reservoir					
Comments	possibly hunting from here; obs. watched from helicopter at powerhouse	flew to this perch near sunset, likely night roosting location					
Time end	1647	1652					

Forage	1F	2F	3F	4F	5F	6F	7F
General Location							
UTM northing							
UTM easting							
Time							
# Attempts							
Attack mode							
Dist. from perch							
Dist. from shore							
Success?							
Prey species							
Prey remains?							
Prey size (mm)							
Prey status							
Aquatic Habitat							

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle (m)							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Feb 12, 2008 **Data Entered:** _____ **Time Start:** 0840 **End:** ~1030
Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.
Observer Location: Project-wide Helicopter Survey – Wintering Bird **Observers:** REJ/AH
Temperature (x10°): 30's **Weather:** Clear **Wind:** Calm to light **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	0915	0940	1000				
Species/Age/Sex	BAEA/Ad #1	Osprey	BAEA/Ad #2				
Number	1	Nest	1				
General Location	Hell Hole Reservoir inflow area	MFAR below French M. Reservoir	MFAR above NF confluence				
UTM northing	4329240	4330560	4313980				
UTM easting	727150	716782	683770				
Activity	Perched	Old nest	Perched				
Perch type	snag	snag	foothill pine				
Dist from H ₂ O(m)	50m		10m				
Habitat	Reservoir inflow		Pool tailout				
Comments	20 swans on reservoir today	Nest in disrepair	Photo 113				

Forage	1F	2F	3F	4F	5F	6F	7F
General Location							
UTM northing							
UTM easting							
Time							
# Attempts							
Attack mode							
Dist. from perch							
Dist. from shore							
Success?							
Prey species							
Prey remains?							
Prey size (mm)							
Prey status							
Aquatic Habitat							

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle (m)							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** Feb 12, 2008 **Data Entered:** _____ **Time Start:** 1610 **End:** 1745

Survey Route: Hell Hole Reservoir

Observer Location: Helicopter Survey – Winter Night Roost **Observers:** REJ/AH

Temperature (x10°): 40s-50s **Weather:** clear **Wind:** light **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6
Time start	1630	1647	1635	1636	1638	
Species/Age/Sex	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#2	BAEA/Ad#2	BAEA/Ad#2	
Number	1	1	1	1	1	
General Location	Rubicon R. channel u./s of present inflow to HH Res.	Inflow area to Hell Hole Reservoir	Hell Hole Reservoir	Hell Hole Reservoir	Hell Hole Reservoir	
UTM northing	4329050	4329175	4329279	(4329000)	4328795	
UTM easting	728750	727472	725469	(726000)	724890	
Activity	Perched	Perched	Standing on shoreline	Hunting on wing	Perched	
Perch type	snag	snag	bedrock		ponderosa pine	
Dist from H ₂ O(m)	50m	250m	2m		50	
Habitat	River channel	Upland	Reservoir	Open reservoir	Reservoir	
Comments	Watched from helicopter on snow field, flew/flushed to perch #2	Possible roosting location; mild conditions at reservoir this evening		Flew out and over flock of tundra swans in the middle of the reservoir	Watched from helicopter at powerhouse; possibly roosted here	
Time end	1647	1724	1636	1638	1725	

2 adult bald eagles (#1, #2) observed at Hell Hole Reservoir area this evening.

Forage	1F	2F	3F	4F	5F	6F
General Location						
UTM northing						
UTM easting						
Time						
# Attempts						
Attack mode						
Dist. from perch						
Dist. from shore						
Success?						
Prey species						
Prey remains?						
Prey size (mm)						
Prey status						
Aquatic Habitat						

Mild conditions may have allowed roosting in more exposed perch sites.

Public user #	1P	2P	3P	4P	5P	6P
Time						
Type						
Number						
Location						
Shore dist. (m)						
Eagle response						
Dist. to eagle (m)						

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** March 25, 2008 **Data Entered:** _____ **Time Start:** 0915 **End:** 1130

Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.

Observer Location: Project-wide Helicopter Survey – Nesting Survey **Observers:** REJ/SG

Temperature (x10°): 50's **Weather:** Partly cloudy **Wind:** light to moderate **UTMs in NAD27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	0930	1005	1005	1105			
Species/Age/Sex	GOEA adult	Osprey	BAEA/Ad #1	Osprey			
Number	1	1	1	1			
General Location	~1 mi. d/s of Middle Fork Afterbay	North shore Hell Hole Reservoir	North shore Hell Hole Reservoir	MFAR ~2 mi. u/s of NFAR confluence			
UTM northing	4322878	4329700	4329560	(4309262)			
UTM easting	706386	726350	726140	(672588)			
Activity	Soaring	Standing in nest	Perched	Flying			
Perch type	-	snag	snag	-			
Dist from H ₂ O(m)	-	-	100	-			
Habitat	-	-	reservoir	-			
Comments	Golden Eagle	Same nest as 12-13-07 No. 6	Seemed to be looking at osprey in nearby nest	No nest found in vicinity			

Forage	1F	2F	3F	4F	5F	6F	7F
General Location							
UTM northing							
UTM easting							
Time							
# Attempts							
Attack mode							
Dist. from perch							
Dist. from shore							
Success?							
Prey species							
Prey remains?							
Prey size (mm)							
Prey status							
Aquatic Habitat							

Public user #	1P	2P	3P	4P	5P	6P	7P
Time							
Type							
Number							
Location							
Shore dist. (m)							
Eagle response							
Dist. to eagle (m)							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 2 **Date:** May 6, 2008 **Data Entered:** _____ **Time Start:** 0845 **End:** 1100
Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.
Observer Location: Project-wide Helicopter Survey – Nesting Survey **Observers:** REJ/AH
Temperature (x10°): 60's **Weather:** Clear **Wind:** calm **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7	8
Time start	0918	0920	0924	0930	0940	0946	0948	1000
Species/Age/Sex	Osprey	BAEA/Ad#1	BAEA/Ad#2	Osprey	Osprey	Osprey	Osprey	Osprey
Number	1	1	1	1	1	1	1	1
General Location	North shore Hell Hole Reservoir	Inflow area Hell Hole Reservoir	Hell Hole Reservoir south shore	South shore Hell Hole Reservoir	Hell Hole Reservoir near dam	French Meadows Reservoir near dam	French Meadows Reservoir north shore	MFAR below French M. Reservoir
UTM northing	4329700	4329175	4329240	4327836	4327204	4332458	4333036	4330560
UTM easting	726350	728856	727150	725600	723581	718966	721321	716782
Activity	Incubation posture	Perched, flushed	Perched	Incubation posture	Inc. posture	Inc. posture	Inc. posture	Inc. posture
Perch type	snag	snag	snag	snag	snag	snag	snag	snag
Dist from H ₂ O(m)	-	10	10	-	-	-	-	-
Habitat	-	reservoir inflow	south shoreline	-	-	-	-	-
Comments	Same nest as 12-13-07 No. 6	Flew across reservoir when flushed, not found again	Possibly same eagle as No.2; but >1mi. away	Same location as 1-15-08 No. 2	Same location as 1-15-08 No. 4	Same nest as 12-13-07 No. 8	Same nest as 12-13-07 No. 7	Same location as 2-12-08 No.2

Forage	1F	2F	3F	4F	5F	6F	7F	8F
General Location								
UTM northing								
UTM easting								
Time								
# Attempts								
Attack mode								
Dist. from perch								
Dist. from shore								
Success?								
Prey species								
Prey remains?								
Prey size (mm)								
Prey status								
Aquatic Habitat								

Public user #	1P	2P	3P	4P	5P	6P	7P	8P
Time								
Type								
Number								
Location								
Shore dist. (m)								
Eagle response								
Dist. to eagle (m)								

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 2 of 2 **Date:** May 6, 2008 **Data Entered:** _____ **Time Start:** 0845 **End:** 1100

Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.

Observer Location: Project-wide Helicopter Survey – Nesting Survey **Observers:** REJ/AH

Temperature (x10°): 60's **Weather:** Clear **Wind:** calm **UTMs in NAD 27**

Eagle/Osprey	9	10	11	12	13	14	15	16
Time start	1016							
Species/Age/Sex	Great blue heron							
Number	1							
General Location	Ralston Afterbay							
UTM northing	4319411							
UTM easting	695429							
Activity	Incubation posture on nest							
Perch type	foothill pine							
Dist from H ₂ O(m)	-							
Habitat	-							
Comments	Same location as 1-15-08 No. 5							

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 2 **Date:** June 11, 2008 **Data Entered:** _____ **Time Start:** 1330 **End:** 1745

Survey Route: Hell Hole Reservoir at Dam, then boat up to inlet.

Observer Location: Ground/Boat Survey – Nesting Survey **Observers:** REJ

Temperature (x10°): 70's **Weather:** Clear **Wind:** light-moderate **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7
Time start	1520	1525	1530	1535	1543	1547	1550
Species/Age/Sex	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#1	BAEA/Ad#2
Number	1	1	1	1	1	1	1
General Location	upper Hell Hole Res	upper Hell Hole Res	upper Hell Hole Res	upper Hell Hole Res	upper Hell Hole Res	upper Hell Hole Res	Rubicon Riv u/s Hell Hole Res
UTM northing	4329428	4329672	4329238	4329143	4328845	4328845	4328662
UTM easting	727648	728397	728872	728928	729162	729155	729662
Activity	Perched, watching water	Perched, watching water	Perched, watching water	Perched, watching water	Perched, watching water; Forage attempt	Perched, watching water	Perched on limb next to nest.
Perch type	small fir	pine	pine	pine	bedrock	small tree	ponderosa pine
Dist from H ₂ O(m)	10	15	20	5	2	2	-
Habitat	reservoir	reservoir cove	reservoir narrows	reservoir narrows	reservoir inflow	reservoir inflow	nest tree
Comments	flushed by small boat to perch #2	did not take lure fish, flighty	Goose family below	Obviously hunting, but did not take 2 nd lure fish	Refer to 5F below	Lost track of this male when female spotted at nest	GPS loc. from helicopter on 6-12-08
Time end	1525	1530	1535	1543	1547	-	1700

Forage	1F	2F	3F	4F	5F	6F	7F
General Location					Upper HHR		
UTM northing					4328859		
UTM easting					729158		
Time					1543		
# Attempts					1		
Attack mode					Active		
Dist. from perch					15m		
Dist. from shore					15m		
Success?					no		
Prey species					fish		
Prey remains?							
Prey size (mm)							
Prey status					alive		
Aquatic Habitat					res. inflow		

Public user #	1P	2P	3P	4P	5P	6P	7P
Time	1525						
Type	Fishing boat						
Number	1						
Location	Upper HHR						
Shore dist. (m)	75						
Eagle response	Flushed						
Dist. to eagle (m)	100m						

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 2 of 2 **Date:** June 11, 2008 **Data Entered:** _____ **Time Start:** 1330 **End:** 1745

Survey Route: Hell Hole Reservoir at Dam, then boat up to inlet.

Observer Location: Ground/Boat Survey – Nesting Survey **Observers:** REJ

Temperature (x10°): 70's **Weather:** Clear **Wind:** light-moderate **UTMs in NAD 27**

Eagle/Osprey	8	9	10	11	12	13	14
Time start	1700	1700	1730				
Species/Age/Sex	BAEA/Ad#1	BAEA/Ad#2	BAEA/Ad#1				
Number	1	1	1				
General Location	Rubicon River u/s Hell Hole Reservoir	Rubicon River u/s Hell Hole Reservoir	Rubicon River u/s Hell Hole Reservoir				
UTM northing	4328662	4328662	4328662				
UTM easting	729662	729662	729662				
Activity	Prey delivery to nest	Feeding young behavior	Landed in nest				
Perch type	nest tree	nest tree	nest tree				
Dist from H ₂ O(m)	-	-	-				
Habitat	-	-	-				
Comments	Male dropped off fish	At least one young briefly visible	Back out to reservoir at end time				
Time end	1701	1730	1740				

Contains Confidential Information - Do Not Distribute

FINAL

BALD EAGLE OBSERVATION DATA SHEET

Pg 1 of 1 **Date:** June 12, 2008 **Data Entered:** _____ **Time Start:** 0915 **End:** 1105

Survey Route: MFAR – Folsom Lake to French Meadows Res.; Rubicon River to Hell Hole Res.

Observer Location: Project-wide Helicopter Survey – Nesting Survey **Observers:** REJ

Temperature (x10°): 70's **Weather:** Clear **Wind:** calm-light/mod at top **UTMs in NAD 27**

Eagle/Osprey	1	2	3	4	5	6	7	8
Time start	0954	1000	1000	1005	1010	1013	1015	1024
Species/Age/Sex	Osprey	BAEA/Ad#1	BAEA/Ad#2	Osprey	Osprey	Osprey	Osprey	Osprey
Number	1	1	1	1	0	1	1	1
General Location	North shore Hell Hole Reservoir	Rubicon R. u/s of Hell Hole Reservoir	Rubicon R. u/s of Hell Hole Reservoir	South shore Hell Hole Reservoir	Hell Hole Reservoir near dam	French Meadows Reservoir near dam	French Meadows Reservoir north shore	MFAR below French M. Reservoir
UTM northing	4329700	4328662	4328611	4327836	4327204	4332458	4333036	4330560
UTM easting	726350	729662	729554	725600	723581	718966	721321	716782
Activity	Adult in nest	Standing in nest	Perched	Adult in nest	Nest looked empty	Adult in nest	Nest looked empty	Adult on nest
Perch type	snag	ponderosa pine	sugar pine	snag	snag	snag	snag	snag
Dist from H ₂ O(m)	-	50	50	-	-	-	-	-
Habitat	-	Nest area	Nest area	-	-	-	-	-
Comments	All osprey nests same UTM as last flight.	Adult standing over 1+ 3-wk-old young	Across river from nest				Adult chased helicopter	

Forage	1F	2F	3F	4F	5F	6F	7F	8F
General Location								
UTM northing								
UTM easting								
Time								
# Attempts								
Attack mode								
Dist. from perch								
Dist. from shore								
Success?								
Prey species								
Prey remains?								
Prey size (mm)								
Prey status								
Aquatic Habitat								

Public user #	1P	2P	3P	4P	5P	6P	7P	8P
Time								
Type								
Number								
Location								
Shore dist. (m)								
Eagle response								
Dist. to eagle(m)								

CONFIDENTIAL

APPENDIX B

CDFG Bald Eagle Nesting Territory Survey Form

Contains Confidential Information - Do Not Distribute

FINAL

California Department of Fish and Game
CALIFORNIA BALD EAGLE

NESTING TERRITORY SURVEY FORM

County: Placer

Survey Year: 2008

Property Owner: Sierra Pacific Industries (If USFS: _____ National Forest)

Name (or general location) of territory: Hell Hole

Name of nearest water body: Hell Hole Reservoir, Rubicon River

Location of nest: T 14N R 15E Sec 7 1/4 NW 1/16 NW UTMn 4328662 NAD 27

No. of nests in territory - Intact 1 Remnant _____ UTMe 729662

Nest Tree: Species Ponderosa Pine Year last used New Nest year last used New

NOTE: Please attach a map showing the location of any newly documented nest tree.

Describe tree and nest condition and size, and any other remarks: Nest & tree in good condition.

For each visit to the territory, note, in detail, the times, number and age of birds, behavior of birds (lying, perching, ect.), evidence of nesting (nest maintenance, courtship, incubation posture), disturbances, and other pertinent information:

Initials of Observer	Date of Visit	Observations
R.E.J.	06/11/08	1700 – Adult prey delivering to nest, then feeding young behavior, 1+ gray young. Boat observation.
R.E.J.	06/12/08	1000 – Adult in nest with 1+ three week old young, second adult in sugar pine along the Rubicon River. Helicopter observation.
S.G.	07/30/08	1 adult and 1 juvenile flying together on Hell Hole Reservoir. Nest empty.

(Attach additional pages, if necessary)

Contains Confidential Information - Do Not Distribute

FINAL

General Remarks: _____

PLEASE SUMMARIZE OBSERVATIONS:

A. Successful nestings: No. of young known fledged _____ or probably fledged 1

B. If no fledglings were produced this season, please answer the following, if known:

How many adults were seen in the territory? 2 Were adults seen in the nest: Yes No

Number of nestlings observed: +1 Evidence of nest repair or construction? Yes No

Was an adult in incubation posture? Yes No

When did nesting fail?: During incubation _____ or nestling state _____

Other remarks: _____

Observer's names: Ron E. Jackman and Sara Gillespie

Affiliation: Garcia and Associates /Robertson-Bryan, Inc.

Address: P.O. Box 776, Fall River Mills, CA 96028

Phone: (530) 336-6592 FAX or email: rojack@frontiernet.net

Mail completed forms by September 1 of the survey year to:

California Department of Fish and Game

Habitat Conservation Planning Branch

1416 Ninth Street

Sacramento, CA 95814

Attn: Ron Jurek

916-654-4267

FAX 916-653-2588

Rjurek@dfg.ca.gov