FINAL
ENVIRONMENTAL DOCUMENT

Section 670, Title 14, California Code of Regulations
And
Section 703, Title 14, California Code of Regulations

Regarding

Falconry Regulations

February 22, 2013
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF FISH AND WILDLIFE

TABLE OF CONTENTS

LIST OF TABLES iv
LIST OF FIGURES iv
LIST OF APPENDICES v
CHAPTER 1 1
SUMMARY 1
PROPOSED ACTION 1
PROPOSED PROJECT 1
INTENDED USE OF ENVIRONMENTAL DOCUMENT 1
THE FUNCTIONAL EQUIVALENT 2
POLICY CONSIDERATIONS 2
PUBLIC INPUT AND AGENCY CONSULTATION 3
AREAS OF CONTROVERSY 3
ISSUES TO BE RESOLVED 5
CHAPTER 2 6
PROPOSED PROJECT 6
PROJECT DESCRIPTION 6
SUMMARY OF PROPOSED REGULATIONS 6
CHAPTER 3 8
BACKGROUND OF THE PROPOSED PROJECT 8
THE PRACTICE OF FALCONRY IN CALIFORNIA 8
STATE AND FEDERAL REGULATIONS 10
HUNTING REGULATION AS IT PERTAINS TO FALCONRY 10
PREY SPECIES TAKEN IN FALCONRY 10
USE OF WILD-CAUGHT AND CAPTIVE-BRED RAPTORS 14
LEVEL OF WILD RAPTOR CAPTURE IN CALIFORNIA 14
LEVEL OF CAPTIVE-BRED RAPTORS USED IN FALCONRY 16
ESCAPED FALCONRY RAPTORS 17
RELEASE OF FALCONRY RAPTORS BACK INTO THE WILD 18
CAUSES OF MORTALITY IN FALCONRY RAPTORS 19
POTENTIAL HARM TO DOMESTIC ANIMALS FROM FALCONRY BIRDS 20
POTENTIAL HARM TO HUMANS FROM FALCONRY BIRDS 20
POTENTIAL BENEFITS OF FALCONRY 21
CHAPTER 4 22
SPECIES INFORMATION 22
POPULATION STATUS OF FALCONRY SPECIES USED IN CALIFORNIA 22
STATUS OF OTHER TRADITIONAL FALCONRY SPECIES NOT USED IN CALIFORNIA 33
CHAPTER 5 40
ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT 40
EFFECTS OF FALCONRY ON WILD RAPTOR POPULATIONS 40
EFFECTS OF FALCONRY ON THE WELFARE OF THE INDIVIDUAL CAPTIVE RAPTORS 41
EFFECTS OF FALCONRY ON TARGETED PREY SPECIES, NON-TARGET SPECIES, AND LISTED SPECIES 41
EFFECTS OF CAPTIVE-BRED, HYBRIDS, OR NON-NATIVE FALCONRY RAPTORS ON NATIVE RAPTOR POPULATIONS 42

EFFECTS OF FALCONRY ON RECREATIONAL AND WILDLIFE VIEWING OPPORTUNITIES 42
CHAPTER 6 44
ANALYSIS OF ALTERNATIVES 44
ALTERNATIVE 1 – No Change in California Falconry Regulations 44
ALTERNATIVE 2 – Strict Adoption of Federal Regulations 44
PROPOSED PROJECT - Revision of California Falconry Regulations 45
LITERATURE CITED ..... **Error! Bookmark not defined.**
CHAPTER 7 64
RESPONSES TO COMMENTS REGARDING THE PROPOSED PROJECT 64

DRAFT ENVIRONMENTAL DOCUMENT, ATTACHMENTS, AND APPENDICES-
[Attached as a separate PDF to accompany Final Environmental Document]

LIST OF TABLES

Table 1 Current and Proposed California Falconry Regulation Matrix
Table 2 Summary of 2005 Falconry Game Survey Results
Table 3 Summary of 2011 Falconry Game Survey Results
Table 4 Level of Hunting Effort per County in 2010/2011
Table 5 Number of Active Falconers that Reported Game Take in 2011
Table 6 Number and Species of Raptors Captured from the Wild, 2006-2010
Table 7 Non-wild Raptors Used for Falconry, 2009-2011
Table 8 Number of non-wild raptors held and used in falconry, and number that escaped in 2009-2011
Table 9 Raptor species that escaped in 2009-2011
Table 10 Recommendations for Falconry Raptors to be Allowed for Wild Captrue
Table 11 Number of Raptors Captured, Percent of Total Capture, and Average Capture per Year
Table 12 Population Estimates for Raptors Allowed in Capture Showing Maximum Capture Rates
Table 13 Population Estimates For Kestrels Showing Maximum Capture Rates in California
Table 14 Population estimates and calculated maximum capture rates for kestrels in the Lake Tahoe Basin.
Table 15 The current 2011/2012 fees and the proposed adjustments to falconry fees for 2013 in Section 703
Table 16 Estimated Fees for Falconry Activities the Department will Conduct Related to Falconry Inspections
Table 17 List of Proposed Falconry Forms

LIST OF FIGURES

Figure 1 Wild Raptor Capture by County, 2006-2010
Figure 2 Age Class of Raptors Captured, 2006-2010
Figure 3 Age and Gender of Raptors Captured from the Wild, 2006-2010
Figure 4 Number of Wild Falconry Raptors that Escaped, 2006-2010
Figure 5 Number of Wild Falconry Raptors that were Released, 2006-2010
Figure 6 Causes of Mortality, 2006-2010
Figure 7 Mortality by Species, 2006-2010
Figure 8 Northern Goshawk Nestling Capture, 2006-2010
Figure 9 Cooper's Hawk Nestling Capture, 2006-2010
Figure 10 Sharp-shinned Hawk Capture, 2006-2010
Figure 11 American Kestrel Mortality, 2006-2010
Figure 12 Prairie Falcon Capture, 2006-2010
Figure 13 Great Horned Owl Capture, 2006-2010

LIST OF APPENDICES

Appendix A Summary of Public Comments Regarding the Environmental Document
Appendix B Proposed California Falconry Regulations, CCR Title 14, § 670
Appendix C An Historical Background of Falconry
Appendix D Current Federal Regulations, 50 CFR § 21.29
Appendix E Current California State Regulations, CCR Title 14 § 670
Appendix F Species Accounts
Appendix G Wildlife Habitat Relationship (WHR) Species Maps
Appendix H List of Individuals and Organizations Receiving Environmental Document

CHAPTER 1

SUMMARY

This environmental document is an informational document prepared by the Department of Fish and Game (Department) to inform the California Fish and Game Commission (Commission) regarding the environmental implications of the proposed regulatory changes to Section 670 of Title 14, California Code of Regulations (CCR).

The document addresses proposed regulatory changes as they relate to the use of falconry for taking raptors from the wild. The proposal would require falconers to transition from following federal falconry regulations that regulated the activity, to now following State of California regulations because the Federal Government is essentially transferring the regulatory responsibility for falconry to the states.

PROPOSED ACTION

Proposed Action: Revision of the California falconry regulations would modify Section 670 as noted in Chapter 2 below. In summary, the proposed regulations will be a combination of current California falconry regulations and incorporation of existing federally required regulations.

PROPOSED PROJECT

The Department is recommending that the Commission adopt regulations that will modify Section 670. The proposed regulatory package Initial Statement of Reasons for Regulatory Action (ISOR, Pre-publication of Notice) describes the proposed project and options, alternatives, or exemptions that the Commission will consider in their regulatory decision process. This Environmental Document categorizes those options, alternatives, and exemptions into alternatives that may be considered by the Commission. The primary objective sought by the proposed action is to revise the current state falconry regulations so that California falconers will be able to continue the practice of falconry, with appropriate consideration to the welfare of falconry birds and the stability of wild populations in the state.

INTENDED USE OF ENVIRONMENTAL DOCUMENT

This environmental document has been prepared to assess the potential impacts of altering the regulations governing falconry in California. It has been prepared pursuant to the CEQA (Section 21080.5, Public Resource Code) and the CEQA Guidelines (Section 15250, Title 14, CCR). Additionally, the document has been prepared because the Department and Commission desire to address and be prepared should any significant controversy arise over the regulatory proposal. This document is an informational item to aid the Commission in the decision making process and to inform the public of the potential effects of the proposed action. Although the analysis of the proposed project and the alternatives to the proposed project address a wide range of management issues, this document is intended to act as the environmental document analyzing the potential effects of the proposed project, the existing falconry regulations, as well as related factors.

Analysis of future falconry projects may refer to, and incorporate by reference, information contained in this document. Future proposed falconry regulations may not involve the preparation of environmental documents similar to this, but may include updates to this document. If substantial changes occur in the project itself or in the environmental conditions affected by the regulations, a supplemental or subsequent environmental document would be prepared.

THE FUNCTIONAL EQUIVALENT

CEQA requires all public agencies in the State to evaluate the environmental impacts of projects that they approve or carry out that may have a potential to significantly impact the environment. Most agencies satisfy this requirement by preparing an environmental impact report (EIR) or negative declaration (ND). However, an alternative to the EIR/ND requirement has been created for State agencies whose activities include the protection of the environment within their regulatory programs. Under this alternative, an agency may request certification of its regulatory program from the Secretary for Resources, after which the agency may prepare functionally equivalent environmental documents in lieu of EIRs or NDs.

The regulatory program of the Commission has been certified by the Secretary of Resources. Therefore, the Commission is eligible to submit this environmental document in lieu of an EIR or ND (Section 15252, CEQA Guidelines).

This environmental document contains a description of the proposed project (Chapter 2), background of the proposed project (Chapter 3), species information (Chapter 4), environmental effects of proposed project (Chapter 5), analysis of alternatives (Chapter 6), and responses to comments on the Draft Environmental Document (Chapter 7).

This environmental document presents information to allow a comparison of the potential effects of various actions considered by the Commission relative to the proposed project, as well as a range of alternatives. Although a given alternative may not achieve the project's objectives, it is considered to provide the Commission and the public with additional information related to the options available.

POLICY CONSIDERATIONS

Existing State law (Section 395, Fish and Game Code (FGC) designates the Commission to adopt regulations regarding the practice of falconry. State law (Section 207, FGC) requires the Commission to review regulations and the Department of Fish and Game (Department) to present recommendations for regulatory changes to the Commission at a public meeting.

The project being considered is described as a proposal to modify the regulations governing falconry in California. The objectives of the proposal are to maintain the State's raptor population in a healthy and viable condition for the enjoyment and use of all Californians, and to provide the public falconry opportunities.

PUBLIC INPUT AND AGENCY CONSULTATION

CEQA encourages public input. One of the primary purposes of the Draft Environmental Document is to solicit public comment, as well as inform the public and decision makers. It is the Department's intent to encourage public participation in this environmental review process. Chapter 7 of this Final Environmental Document includes the comments received on the Draft Environmental Document along with the Department's response.

Prior to developing this environmental document, the Department developed a Notice of Preparation (NOP). In November 2010, a scoping session was held to answer questions related to the environmental document and collect comments from attendees on the development of the environmental document. In December 2010, the NOP was provided to the State Clearinghouse for distribution. The NOP requested that any comments regarding input to the environmental document be submitted to the Department within 30 days of receipt of the NOP.

A public website dedicated to the falconry regulation process was created by the Department as a means to disseminate information regarding the regulation process, answer frequently asked questions, announce upcoming meetings, outline important dates, as well as provide an avenue for the public to submit comments to the Department during public comment periods.

In November 2011, the Department gave a brief update on the regulatory process at the Fish and Game Commission Meeting.

On April 27, 2012, an informal public telephone conference call was held. The purpose of the call was to give interested parties an update of where the Department is in the regulatory process, as well as take public comments and questions.

On August 10, 2012, an informal call with falconers representing the major falconry organizations was conducted to go over major proposed changes to the regulations and seek input on these proposed changes.

The Draft Environmental Document was prepared by the Department and benefited from the testimony of agencies, non-governmental organizations, falconers in the State of California, and other interested parties. The Draft Environmental Document was submitted to the State Registry and distributed to the public in November 2012 with an open public comment period through February 1, 2013.

On February 6, 2013, the Department gave a short presentation to the Fish and Game Commission regarding the proposed regulations and public comments were heard on the Initial Statement of Reasons and the Draft Environmental Document.

AREAS OF CONTROVERSY

The Department received emails and letters regarding California's falconry process and initial comments in the preparation of the Environmental Document. Comments were also received at the November 2010 scoping meeting. In addition, an online survey was made available from September 2010 to February 2011. Questions presented in the

online survey, comments received in the scoping meeting and comments received in the 30-day comment period preceding the NOP, are noted in Appendix A.

None of the comments received identified any new or unanticipated environmental consequences of the proposed project that would have an effect on the environment. A total of 64 individuals participated in the online survey. The majority of online survey respondents were from Southern California, but Northern California was also well represented. Seventy-eight percent (78%) who took the survey were familiar with both the federal and state falconry regulations; 19% were somewhat familiar; 3% were not familiar. Ninety-five percent (95%) were supportive of the practice of falconry, 2% were neutral, and 3% were opposed. Eighty-seven percent (87%) believed the states regulations should largely be tailored to the federal regulations; 11% believed state regulations should be stand alone; 2% had no opinion. Ninety-five percent (95%) believed the practice of falconry had no negative effect on wild raptor populations; 5% believed there was either a local or population-level effect. Most all respondents felt raptor species currently allowed for capture in California was appropriate.

Comments received via the online survey raised several points to be addressed in the Draft Environmental Document (see Appendix A for a more detailed summary of comments received). Statewide monitoring to identify current or future changes in population status, as well as monitoring level of capture from the wild, was brought out as a need for all raptor species used in falconry. There was some concern for the welfare of captive raptors and the appropriateness to use some species for falconry given their sensitivity to captivity and behavioral patterns. Specifically, it was noted that Cooper's hawks, ferruginous hawks and prairie falcons were better suited for experienced falconers due to their demeanor, while merlin may be well suited for beginner falconers. It was noted that great horned owls were not well suited for falconry due to their natural nocturnal habits and difficulty training to hunt. Due to questions in population numbers throughout the state, some suggested that population status needed to be determined and considered for prairie falcons, ferruginous and Northern goshawks. There was concern about escaped or lost captive-bred raptors effect on the wild population through hybridization. Additional suggestions noted in the online survey include:

- Allow wild capture of all raptor species
- Allow wild capture of all non-sensitive raptor species
- Allow wild capture of peregrine falcons
- Add red-shouldered hawk as a falconry bird
- Do not allow communal hunting using Harris's hawks
- Develop list of sponsors for Apprentice falconers
- Move to multi-year licenses, rather than one-year licenses
- Conduct population monitoring throughout the state

A summary of comments/suggestions received at the scoping meeting are as follows (see Appendix A for a more detailed summary of comments received):

- Use the USFWS regulatory documents for falconry
- Address the cumulative effects of renewable energy on raptor populations

- Address appropriateness of releasing rehab birds, such as golden eagles, to falconers
- Address take via falconry hunting methods of non-game species vs. game species
- Address the impact of falconry on other wildlife species
- Increase the range of species hunted and eliminate seasons
- Consider conformance with Migratory Bird Treaty Act (MBTA)
- Change reporting form to better address species captured and level of capture
- Include catch and release so uninjured wildlife can be let go
- Increase the number of raptors held by falconers at any one time
- Broaden the species of raptors allowable for capture
- Address the impact to individual birds, raptor populations, and targeted prey species
- Address the impact of removing wild birds on raptor populations
- Make a distinction between how wild and captive birds are used in falconry

During the public comment period for the Draft Environmental Document, several comments were received. These are addressed in Chapter 7 of this document.

ISSUES TO BE RESOLVED

As provided by existing law, the Commission is the decision-making body (lead agency) for the proposed project. The primary issues for the Commission to consider are:

- Which species of raptors to allow wild capture, and which species to exclude
- Whether to exclude or open the Tahoe Basin for the capture of Northern goshawk
- Whether to implement capture quotas for species statewide and locally
- Whether to restrict the location, age, timing ,and/or number harvested from the wild
- Specifying falconer class restrictions: age limit, species allowed, number of raptors allowed
- Implementing Department-only facility inspections

CHAPTER 2

PROPOSED PROJECT

PROJECT DESCRIPTION

According to the Federal Regulations (Title 50, Part 21, Subpart C, § 21.29), all states are mandated to submit falconry regulations that meet federal regulation standards on or before January 1, 2014. Once the state's regulations are approved by the FWS Director and by the state's regulatory process, falconry permits will be issued solely by the state.

The Federal Regulations (Title 50, Part 21, Subpart C, § 21.29) state:

> "A State (including the District of Columbia), tribe, or territory under the jurisdiction of the United States that wishes to allow falconry must establish laws and regulations (hereafter referred to as laws) that meet the standards established in this section." … "The U.S. Fish and Wildlife Service (Service) Director must determine that a State, tribal, or territorial falconry permitting program meets the requirements and standards of this section. The Director must certify no later than January 1, 2014, that a State, tribe, and territory willing to allow falconry meets the federal standards. At that time, all Federal falconry permits and the Federal permitting program will end. Falconry will not be permitted in a State or territory or by a tribe after this date until that State, tribe, or territory develops a permitting program the Director certifies to be in compliance with these regulations." … "State, tribal, or territorial laws may be more restrictive than these Federal standards but may not be less restrictive."

The proposed project considers the use of falconry activities in the state of California and addresses areas such as the application process, examination criteria, falconry class descriptions and limitations of each, species to be used in falconry, numbers and age of species captured from the wild, areas of concern for each species, reporting requirements, other uses for falconry birds, and more. The proposed state regulations are a combination of current state and federal regulations. Consideration was given to all reasonable alternatives. Based on alternative analyses, the proposed project is one in which will revise the current state falconry regulations to fall in line with federal regulations. Options within the preferred alternative are for consideration of the Commission.

SUMMARY OF PROPOSED REGULATIONS

Complete proposed California falconry regulations can be found in Appendix B. For a comparison between major changes between current and proposed regulations, see Table 1.

Component	Current CA Regulations	Proposed CA Regulations
Examination	Must score at least 80% to pass	Must score at least 80% to pass
License Term	One year	One year
Facilities Inspection	Equipment and housing shall be inspected and approved by the Department personnel or Department approved sponsor prior to	Equipment and housing shall be inspected and approved by the Department's Law Enforcement Officers prior to issuance of

Component	Current CA Regulations	Proposed CA Regulations
	issuance of license.	license.
Age	At least 14 years for Apprentice falconer At least 18 years for General falconer	At least 12 years for Apprentice falconer At least 16 years for General falconer
Species allowed for capture from the wild	Northern goshawk, Cooper's hawk, sharp-shinned hawk, red-tailed hawk, ferruginous hawk, merlin, American kestrel, prairie falcon and great horned owl. Apprentice falconers may only possess American kestrels or red-tailed hawks.	Northern goshawk, Cooper's hawk, sharp-shinned hawk, red-tailed hawk, red-shouldered hawk, merlin, American kestrel, prairie falcon, great horned owl and barred owl. Apprentice falconers may only capture and possess American kestrels or red-tailed hawks.
Number of birds in possession	Apprentice falconer may possess no more than 1 wild or captive-bred raptor. General falconer may possess no more than 2 wild or captive-bred raptors. Master falconer may possess no more than 3 raptors. Falconers may capture no more than 2 raptors from the wild for replacement birds during any 12-month period. No more than 2 nestlings may be captured by the same person during one year. At least one nestling shall be left in the nest at all times.	Apprentice falconer may possess no more than 1 raptor, and that raptor may not be captured from wild as nestling or imprinted on humans. General falconer may possess no more than 3 raptors, of which, only 2 may be wild-caught. Master falconer may possess no more than 5 wild-caught raptors, and any number of captive-bred or hybrid raptors. Falconers shall not obtain more than 2 raptors captured from the wild during the twelve-month regulatory period. No more than 2 nestlings may be captured by the same person during the twelve-month regulatory period. At least one nestling shall be left in the nest at all times.
Timing of capture from the wild	Eyass birds may only be captured by General or Master falconers from May 20 through July 15. Passage birds may only be captured from October 1 through January 31.	Year-round capture from wild, with exception merlin.
Restrictions on species removed from the wild	Northern goshawks prohibited in the Lake Tahoe Basin.	Year-long capture of Northern goshawks statewide. No more than 1 goshawk per year from the Tahoe Basin. Capture open for merlin August 15 to February 28. Year-long capture of prairie falcons. No more than 14 prairie falcon per year, cumulative, statewide.
Releasing falconry birds	None noted	Native wild-caught raptors may be released back into the wild only near original capture site if possible, or if not possible, in appropriate habitat for that species. Non-native raptors or a hybrid of any kind may not be released to the wild intentionally in California.

Table 1. Matrix comparing key components of the current California falconry regulations and proposed California falconry regulations

CHAPTER 3

BACKGROUND OF THE PROPOSED PROJECT

THE PRACTICE OF FALCONRY IN CALIFORNIA

Falconry is defined as the pursuit of wild quarry in its natural state and habitat by means of a trained raptor or bird of prey (Carnie and Rogers 1996). The sport of falconry is a hunting art that has been practiced worldwide by many different cultures in a variety of forms for well over 4,000 years, and is accepted and honored worldwide as a means of hunting and recreation (see Appendix C). In recognition of falconry's significant role in many cultures and its pervading influence today, The United Nations UNESCO Committee placed the sport of falconry on the Representative List of the Intangible Cultural Heritage of Humanity in November 2010 (IAF 2006, UNESCO 2012).

The quality of the flight and spectacle of the chase are the primary attractions of the sport to most falconers, with harvesting of game a secondary attraction. As a means of hunting, falconry is quite inefficient, and in recognition of this, many states including California, provide extended hunting seasons for falconry. For example, California falconers may hunt waterfowl and upland game outside the maximum 107 day season due to the low numbers of game taken by falconry birds. This extended season also allows falconers to be hunting outside of the regular gun hunting seasons. Falconers are required to possess a valid hunting license, purchase all applicable state and federal hunting stamps, and obey all hunting laws in addition to all falconry regulations. The number of prey captured by falconry birds in each regulatory year 2004/2005 and 2010/2011 is summarized below.

Falconers spend a tremendous amount of time and effort to obtain, train and care for a raptor used for falconry, as well as a significant financial investment on housing, equipment and modern radio telemetry tracking equipment. Because of the unique and often demanding requirements of keeping a raptor for falconry, the sport of falconry in the U.S. remains a self-limiting, low participation hunting activity (Carnie and Rogers 1986). For example, in 1985-86 there were approximately 550 falconers in California; currently, twenty-six years later, there are approximately 575 (CDFG 2012).

In comparison to the long history of falconry in other parts of the world, falconry in North America did not become firmly established until the 1930s, as is also true in California (Carnie 2011). Interest in falconry began to grow and spread in California after World War II. The formation of loosely organized falconry groups served as a means of sharing information and a mutual interest of the sport. In 1950's, the Southern California Falconer's Association established. In northern California, during the same period and into the 1960's, a group of falconers formed the California Hawking Club (CHC). The CHC is a recognized affiliate with the North American Falconers Association and now represents falconers statewide. Other falconry clubs in California have also since initiated, including the California Gamehawkers Association.

State falconry licensing in California began in the late 1960's and the skill level of many falconers began to increase. Many active falconers at the time centered their activities on the Los Angeles basin and the San Francisco Bay area. There was also an

increased interest from young people who were seeking information and guidance about falconry. However, at the same time licensing began and interest increased in California, the availability of native raptors and imported birds began to decline due to the pesticide crisis (e.g. DDT) and other factors.

In California, raptors used in falconry were mainly obtained from eyass and passage capture by falconers. Some early California falconers trapped and trained wild-caught passage peregrines, while the prairie falcon and Northern goshawk were commonly captured as eyasses. American kestrels, red-tailed hawks and cooper's hawks were also commonly used for falconry. The 1960's and 1970's saw many sweeping changes to the practice of falconry in California. The U.S. Fish and Wildlife Service listed the peregrine as endangered in 1970. The Department listed the peregrine falcon as endangered in 1971, and later delisted it in 2008. In addition, peregrines are categorized as Fully Protected species under Fish and Game Code, a statute affording stringent protections (see FGC Section 3511). Peregrine falcons were not open for capture from the wild because the state was uncertain about the status of the prairie falcon at the time, it was also closed to capture. The Bald and Golden Eagle Protection Act closed the capture of golden eagles as well.

When USFWS passed federal regulations in 1976 allowing the legal practice of falconry, Californian's and falconry clubs initiated a large-scale letter-writing campaign in support of the proposed regulations. The future of falconry changed and both State and Federal regulations solidified the legal standing of the sport.

Accompanying the 1976 federal regulations, the USFWS issued a negative declaration stating that the minimal capture of raptors by falconers had little or no impact on wild raptor populations. In 1986, federal falconry regulations were revised and restrictions were eased somewhat, with the State following suit (Boni 1988, Walton 1996). In 1987, restrictions were placed on capture of Northern goshawk in Inyo and Mono counties due to concern for declining goshawk populations in this part of the state, and potential interferences from falconry capture on research activities. In 1992, capture of goshawk was restricted for the Tahoe Basin as well due to ongoing research activities. At this time Mono and Inyo counties were opened back up. There have not been any major revisions to the California falconry regulations since that time.

Beginning in the late 1980s and continuing to the present day, falconry has witnessed changes that have improved the sport. Many of these changes have come in the form of new technology, improved falconry and medical techniques, and the captive breeding of birds for use in falconry. Continuing advances in the use of telemetry technology has produced light weight equipment that allows lost birds to be tracked over great distances and found more quickly. This technology has reduced the number of lost birds, as most are now more recoverable. Advances in the care and maintenance of falconry birds have resulted in improvements in the prevention and treatment of various raptor diseases and injuries, and has also led to improved housing and maintenance standards for falconry birds.

Advances in captive breeding methods and techniques are in large part due to the demand for falconry raptors. Today, the majority of raptors used in falconry are captive-bred. The use of captive-bred raptors has increased the number of species a falconer

is able to fly, and has allowed the falconers to choose which age of raptor is acquired. Hacking techniques developed by falconer and biologists have been improved over time and have been used in the re-introduction of rare species into the wild. Hacking has also been used to improve the flying ability of young inexperienced raptors to increase their athletic ability to the level of wild raptors.

STATE AND FEDERAL REGULATIONS

Changes to the Federal regulations governing falconry were finalized and published on October 8, 2008 (*Federal Register* Volume 73, pages 59448-59477). These regulations allow States or Tribes to adopt their own regulations that meet the standards in the final rule. The new regulations, however, do not take effect until the State or Tribe adopts their own regulations that are approved by USFWS. Upon certification, the Federal falconry permit requirement will be eliminated for that State. Although the Federal falconry permit will be eliminated, FWS will continue to have oversight responsibility for falconry, including enforcement authority over most aspects of falconry. FWS will continue to compile and evaluate information on all reported capture of raptors from the wild for falconry purposes.

Current federal falconry regulations are included in Appendix D and are contained in the Code of Federal Regulations (CFR), Title 50 Part 21.

Current California falconry regulations are included in Appendix E and are contained in Fish and Game Code, Section 670 “Practice of Falconry”. State regulations may be more restrictive, but not less restrictive than Federal guidelines/regulations, thereby ensuring that environmental consequencese will .

According to the current California falconry regulations, a licensed falconer may obtain from the wild the following native raptors for falconry: Northern goshawk (*Accipiter gentilis*), Cooper’s hawk (*A. cooperii*), sharp-shinned hawk (*A. striatus*), red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk (*B. regalis*), merlin (*Falco columbarius*), American kestrel (*F. sparverius*), prairie falcon (*F. mexicanus*) and great homed owl (*Bubo virginianus*). Capture of Northern goshawks is restricted from the Tahoe Basin.

HUNTING REGULATION AS IT PERTAINS TO FALCONRY

Falconers are mandated to abide by all state hunting laws and regulations, including bag limits and seasons. When hunting with raptors, falconers are required to obtain hunting licenses or permits (e.g. waterfowl, upland game, and sage grouse) in addition to a falconry license. Take of sensitive game species, such as sage grouse, is reported to the state annually through the Department’s hunting program. Hunting laws and regulations can be found on the Department’s website, http://www.dfg.ca.gov/licensing/hunting/, or by calling the License and Revenue Branch at (916) 928-5805.

PREY SPECIES TAKEN IN FALCONRY

Currently, falconers are not required to report the type, number, or location of prey taken by falconry birds. Any data regarding prey has to be recorded and willingly reported by falconers. Over the years the Department has sent out voluntary falconry

surveys and received data back regarding the number and type of prey taken from the practice of falconry. The last two voluntary surveys were conducted in 2005 and 2011.

In November 2005, the survey was mailed to the 635 licensed falconers in California. A total of 379 falconers responded (59%), and of that 247 (66%) hunted during the period of July 1, 2004, through June 30, 2005. Data from the 2005 survey is noted in Table 2.

Species	Total # of Hunters per Species	Total # of Days Hunted	Total Bagged per Species
American Crow	10	145	58
Blue Grouse	1	4	1
California Quail	17	249	35
Chukar	3	18	4
Chukar* (LGBC)	2	49	12
Common Snipe	1	25	0
Coot/Moorhen	16	428	71
Cottontail Rabbit	88	3680	1791
Dark Geese	0	0	0
Ducks	51	2541	678
Gambel Quail	2	46	3
Ground Squirrel	5	133	11
Jackrabbit	74	3218	1184
Mourning Dove Early Season	2	27	1
Mourning Dove Late Season	1	11	1
Mountain Quail	1	10	0
Pheasant	26	1031	118
Pheasant* (LGBC)	6	108	31
Ptarmigan	1	1	1
Tree Squirrel	3	134	8
White-winged Dove	0	0	0
Wild Turkey Spring	0	0	0
Wild Turkey Fall	0	0	0

Table 2. Summary of 2005 Falconry Game Survey Results
* Licensed Game Bird Club

In October 2011 the survey was mailed to the 575 licensed falconers in California. A total of 175 falconers responded (30%), and of that 109 (62%) hunted during the period of July 1, 2010 to June 30, 2011. Data from the 2011 survey is noted in Tables 3, 4 and 5.

Species	Total # of Hunters per Species	Total # of Days Hunted	Total Bagged per Species
American Crow	1	15	12
Blue (Sooty) Grouse	0	0	0
California (Valley) Quail	8	470	30
Chukar	1	150	180
Chukar* (LGBC)	0	0	0
Collard Dove	1	72	1
Common Snipe	1	72	0
Coot/Moorhen	11	203	93
Cottontail Rabbit	68	2703	1729
Geese	0	0	0
Ducks	29	1499	451
Gambel's (Desert) Quail	2	10	5
Ground Squirrel	4	195	5
Jackrabbit	50	2827	1220

Species	Total # of Hunters per Species	Total # of Days Hunted	Total Bagged per Species
Jerusalem Cricket	1	30	15
Mice/Vole/Rat	5	63	25
Mourning Dove Early Season	0	0	0
Mourning Dove Late Season	2	92	8
Mountain Quail	0	0	0
Other/Unknown	1	5	7
Pigeon	2	236	71
Pheasant	18	345	30
Pheasant* (LGBC)	4	48	30
Ptarmigan	0	0	0
Road Runner	1	63	1
Snake	2	59	5
Sparrow	8	395	128
Starling	4	262	140
Tree Squirrel	5	96	14
Western Fence Lizard	1	30	15
White-winged Dove	0	0	0
Wild Turkey	2	4	1

Table 3. Summary of 2011 Falconry Game Survey Results

Response rate was higher in 2005 (59%) then in 2011 (30%). Harvest numbers were similar between years for the top 3 harvested species (cottontail, jackrabbit, and ducks). In both survey years 2005 and 2011 the prey harvested most was cottontail rabbits (1,791 in 2005, 1729 in 2011), jackrabbits (1,184 in 2005, 1220 in 2011) and ducks (678 in 2005, 451 in 2011). In 2005 pheasant harvest was moderate (149), and in 2011 chuckar harvest was moderate (180). When considering response rates between the two years (59% of falconers responded to survey in 2005, and 30% in 2011), it appears that overall harvest rates were higher in 2011. In 2011, there were higher numbers of nongame harvested, with small birds being higher than others (sparrows at 128, and starlings at 140). No special status species were reported as taken in either the 2005 or 2011 surveys.

According to the 2011 survey, the total number of days falconers hunted was 6,901 days (Table 4). This number does not represent the number of successful hunts (e.g. prey was captured). Most hunting occurred in Riverside County (1,291 days); over twice as much as any other single county. Distribution of falconers throughout California varied. The counties with the most falconers included Los Angeles, San Diego, Orange, Riverside, San Bernardino, and Contra Costa (Table 4). This distribution may account for the number of days hunted in each county; however, falconers may be hunting outside their home county. Areas hunted are likely related to both availability of targeted prey and density of falconers in or near that county.

County	Number of Days Hunted	Percent of Total		County	Number of Days Hunted	Percent of Total
Riverside	1291	18.71%		San Luis Obispo	90	1.30%
Los Angeles	579.5	8.40%		Santa Cruz	72	1.04%
Kern	499.5	7.24%		Marin	51	0.74%
San Diego	429	6.22%		Orange	51	0.74%
San Bernardino	410	5.94%		Humboldt	50	0.72%
Solano	379	5.49%		San Benito	48	0.70%

County	Number of Days Hunted	Percent of Total		County	Number of Days Hunted	Percent of Total
Sacramento	366	5.30%		Shasta	44	0.64%
Sonoma	321	4.65%		San Mateo	29	0.42%
Ventura	223	3.23%		Colusa	28	0.41%
Yolo	214	3.10%		Mendocino	23	0.33%
Alameda	209	3.03%		Unknown	19	0.28%
San Joaquin	205	2.97%		Lake	16	0.23%
Santa Barbara	186	2.70%		Yuba	14	0.20%
Placer	184	2.66%		Sutter	12	0.17%
Santa Clara	133	1.93%		Glenn	11	0.16%
Fresno	132	1.91%		Merced	11	0.16%
Butte	123	1.78%		Napa	10	0.15%
Monterey	120	1.74%		Calaveras	6	0.09%
Kings	112	1.62%		Imperial	4	0.06%
Contra Costa	98	1.42%		Lassen	3	0.04%
Stanislaus	95	1.38%				
				Total Days Hunting	**6901**	**100.00%**

Table 4. Level of Hunting Effort per County in 2010/2011

County	Number of Falconers		County	Number of Falconers
Los Angeles	79		Shasta	6
San Diego	53		Siskiyou	6
Orange	49		Butte	5
Riverside	48		El Dorado	5
San Bernardino	32		Inyo	5
Contra Costa	30		Sutter	5
Sonoma	19		Lake	4
Ventura	18		Mendocino	4
Sacramento	17		Yolo	4
Santa Barbara	17		Humboldt	3
Placer	16		Kings	2
Fresno	15		Tuolumne	2
Kern	14		Amador	1
Solano	13		Coloma	1
Monterey	11		Del Norte	1
Santa Clara	11		Imperial	1
San Luis Obispo	10		Lassen	1
Stanislaus	10		Madera	1
Alameda	8		Napa	1
San Mateo	8		Nevada	1
Marin	7		San Benito	1
Merced	7		San Francisco	1
Santa Cruz	7		Trinity	1
Yuba	7		Tulare	1
San Joaquin	6			

Table 5. Number of Active Falconers in 2011, by County.

USE OF WILD-CAUGHT AND CAPTIVE-BRED RAPTORS

Falconers may use wild-caught or captive-bred raptors for falconry, and are required to report capture and subsequent disposition of all raptors acquired. The use of captive-bred raptors has been augmented due to their increased availability. However, the use of wild captured raptors makes up an important part of the art and tradition of falconry.

All raptors are captured according to regulations established by both State and Federal Wildlife agencies. Federal falconry regulations specify that a raptor may only be captured by trap or net in a way that does not injure the raptor in the capture process. Federal regulations only allow first-year or migrant (i.e., passage) raptors to be captured for falconry, as opposed to adult (i.e., haggard) birds, which are more likely to represent the wild breeding population. The exception to this is the American kestrel and great horned owl, which current federal regulations allow capture as adults. In addition to trapping a passage raptor, General or Master Class falconers may also capture a nestling (eyas) raptor, provided that at least one nestling is left in the nest. Federal regulations also limit number of raptors captured from the wild per falconer to two.

Under current Federal regulations, falconers may also acquire an exotic raptor bred in captivity. Exotic raptor species currently used in falconry include (but are not limited to), Barbary falcon *(Falco pelegrinoides pelegrinoides)*, Red-Naped shaheen *(F. p. babylonicus),* Lanner falcon *(F. biarmicus),* Saker falcon *(F.cherrug),* Teita falcon *(F. fasciinucha),* and ornate hawk-eagle *(Spizaetus ornatus).* Importation into the United States is restricted by CITES (Convention on International Trade in Endangered Species) and the Wild Bird Conservation Act, but once imported or bred in captivity, exotic raptors are not covered under the MBTA and no permit is needed unless it is classified as endangered.

LEVEL OF WILD RAPTOR CAPTURE IN CALIFORNIA

The level of capture of wild raptors in California was obtained from Department's License and Revenue Branch (LRB). Current state falconry regulations require falconers to report when and where a wild bird was captured, as well as the species and sex of the bird captured. Except for American kestrels, great horned owls, and red-tailed hawks, a map of trap location is also required. In addition to state reporting, falconers are required to report to the USFWS. This reporting requires a falconer to disclose the species, band number, sex, age class, and capture site location info, as well as release date, escape date, and mortality information.

In 2011 there were 575 active falconers in California. The Department has compiled California falconry forms from 2006 to 2010 to help determine level of capture from wild raptor populations, areas in California where capture occurs, and the species most utilized. The Department also compiled data on disposition of falconry birds (numbers released, escaped, and that died) from the USFWS forms reported. Results are summarized in Figures 1, 2 and 3.

In 2006 through 2010 there were 541 (108 per year) raptors captured from the wild for the purposes of falconry (Table 6). The species that was captured most often was red-tailed hawk (n=223), followed by Cooper's hawk (n=80), American kestrel (n=70), prairie falcon and Northern goshawk (both n=46), merlin (n=44), sharp-shinned hawk (n=17),

great horned owl (n=13) and ferruginous hawk (n=1). The highest level of capture was from Riverside (n=39), followed by Kern and Los Angeles (both n=36), San Bernardino (n=36) and Ventura (n=31) counties. Note, for prairie falcons, average capture was 9.2 individuals; however wild capture by year was 14 individuals in 2006, 10 individuals in 2007, 7 individuals in 2008, 6 individuals in 2009, and 9 individuals in 2010.

Species	Capture 2006-2010 (total over 5 years)	Average Capture (per year)
Red-tailed Hawk	223	44.6
Cooper's Hawk	80	16
American Kestrel	70	14
Prairie Falcon	46	9.2
Northern Goshawk	46	9.2
Merlin	44	8.8
Sharp-shinned Hawk	17	3.4
Great Horned Owl	13	2.6
Ferruginous Hawk	1	0.2
Total	541	108.2

Table 6. Numbers of raptors captured from the wild over 5 years (2006-2010), and average number of raptors captured per year.

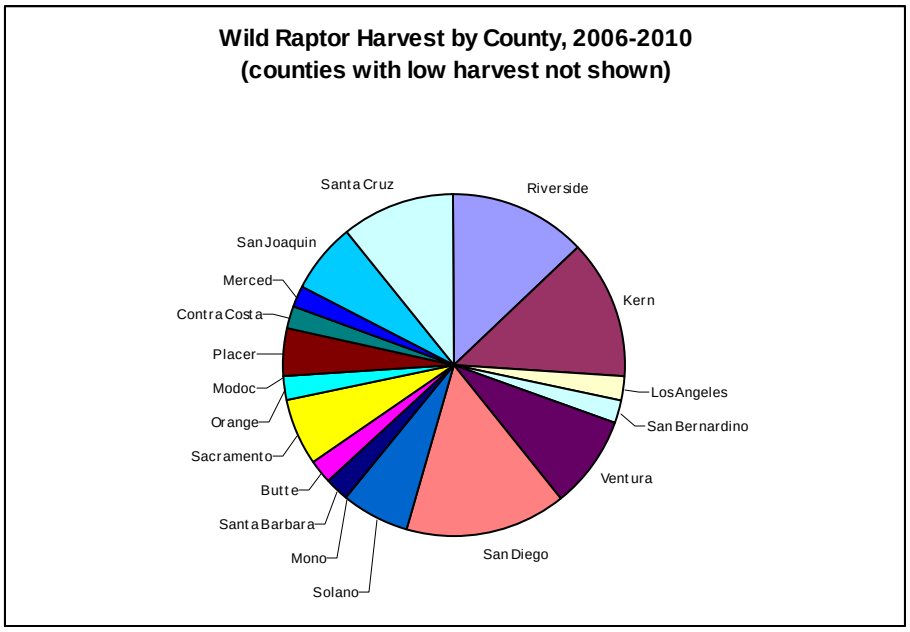

Figure 1. Wild Raptor Capture by County, 2006-2010

Of the species captured from the wild, the prairie falcon, merlin, Cooper's hawk and American kestrel had comparable numbers of immature birds captured from the wild (ranging between 34 and 44). Red-tailed hawks were the most obtained raptor and had a much larger number of immature birds captured then adults and nestlings. Adult birds captured from the wild, regardless of species, was small. More Northern goshawks and Cooper's hawks were captured as nestlings (n=36 for both). More Cooper's hawks were captured from Riverside, Orange and Los Angeles counties, while more goshawks were captured from Mono and Modoc counties. Across all age classes, females were captured more frequently than males. Immature raptors were captured more frequently than adults or nestlings.

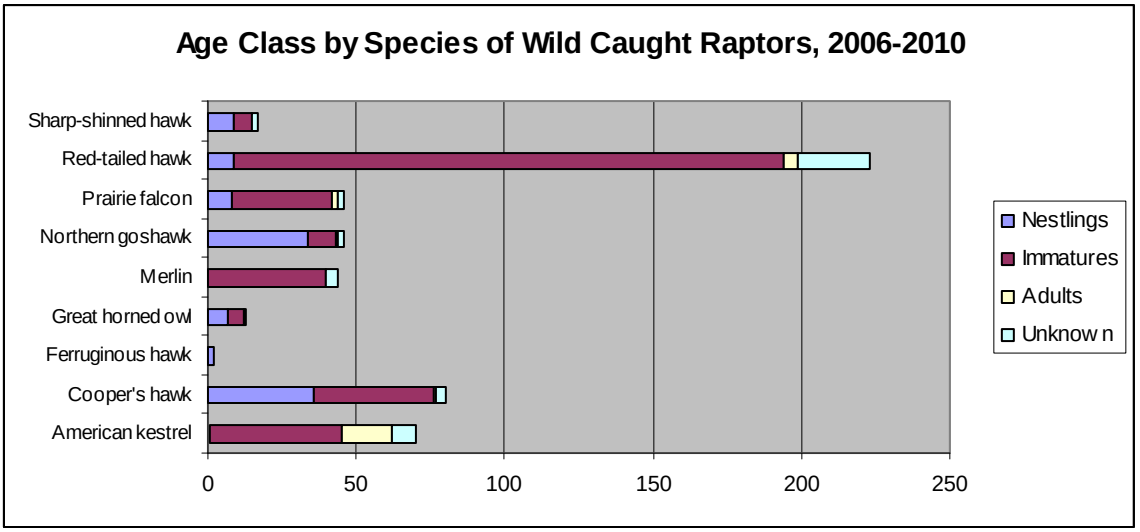

Figure 2. Age Class by Species of Wild Caught Raptors, 2006-2010

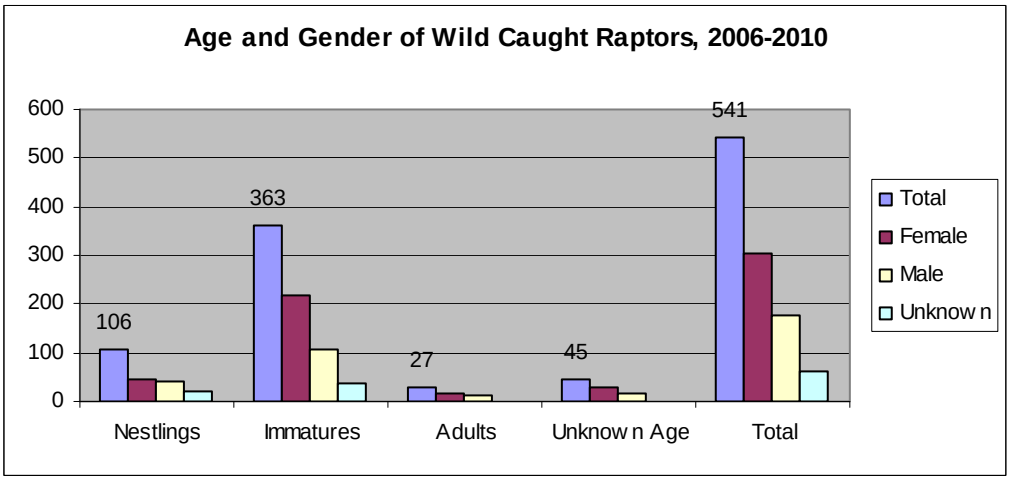

Figure 3. Age and Gender of Wild Caught Raptors, 2006-2010

LEVEL OF CAPTIVE-BRED RAPTORS USED IN FALCONRY

In the Department's data collection efforts of state and federal falconry forms, it was apparent that falconry birds were not solely obtained from the wild, but rather, obtained from captive breeders. The USFWS maintains a database that tracks each falconry raptor (wild and non-wild) by band number (USFWS 2012). Using this database, the Department was able to determine the level of non-wild raptor use in falconry, as summarized in Tables 7 through 10 below. In 2009-2011, 935 non-wild raptors were held by falconers in California (Table 7).

The following assumptions were made when analyzing the database: (1) transfers with "CITES" in the comment section were transfers out of the country; and (2) all raptors listed were held by California falconers. Only data from 2009 through 2011 was used due to the higher level of completeness. This summary does not account for all non-wild raptors held by falconers in 2009-2011 due to incomplete data entry, but gives a general indication as to the level of non-wild raptor use in California.

Year	Total Held
2009	287
2010	308
2011	340
2009-2011	935

Table 7. Summary of number of non-wild raptors held and used in falconry in 2009-2011

ESCAPED FALCONRY RAPTORS

The numbers of escaped non-wild and wild in California is shown in Table 8 and 9, and Figure 4. The total number of non-wild raptors that escaped from 2009 to 2011 was 53, equating to 6% (53/935) of the non-wild raptors held (Table 8). It is uncertain how many of these, if any, were recovered after being lost. Of the species that escaped, 17 were hybrid species (Table 9). The number of escaped falconry raptors between 2006 and 2010 totaled 45, with red-tailed hawks having the highest numbers (n=16). It is uncertain how many of these lost raptors were eventually recovered. Despite the level of non-wild and wild falconry raptors that escape to the wild, there is no evidence of an accidental establishment of an introduced population.

Data Summary for Non-wild Raptors 2009-2011			
Year	**Total Held**	**Escaped**	**Percent of Total Escaped**
2009	287	14	5%
2010	308	15	5%
2011	340	24	7%
2009-2011	**935**	**53**	**6%**

Table 8. Summary of number of non-wild raptors held and used in falconry, and number of these that escaped in 2009-2011

Escaped Raptors, 2009-2011	
Peregrine Falcon	25
Barbary Falcon	2
Goshawk	1
Harris's Hawk	7
Gyrfalcon	1
Gyrfalcon-Peregrine Hybrid	9
Gyrfalcon-Merlin Hybrid	1
Gyrfalcon-Barbary Hybrid	2
Gyrfalcon-Saker Falcon Hybrid	1
Gyrfalcon-Prairie Falcon Hybrid	1
Gyrfalcon-Peregrine-Prairie Hybrid	1
Gyrfalcon-Peregrine-Shaheen Hybrid	1
Peregrine-Prairie Falcon Hybrid	1
Total	**53**

Table 9. Raptor species that escaped in 2009-2011

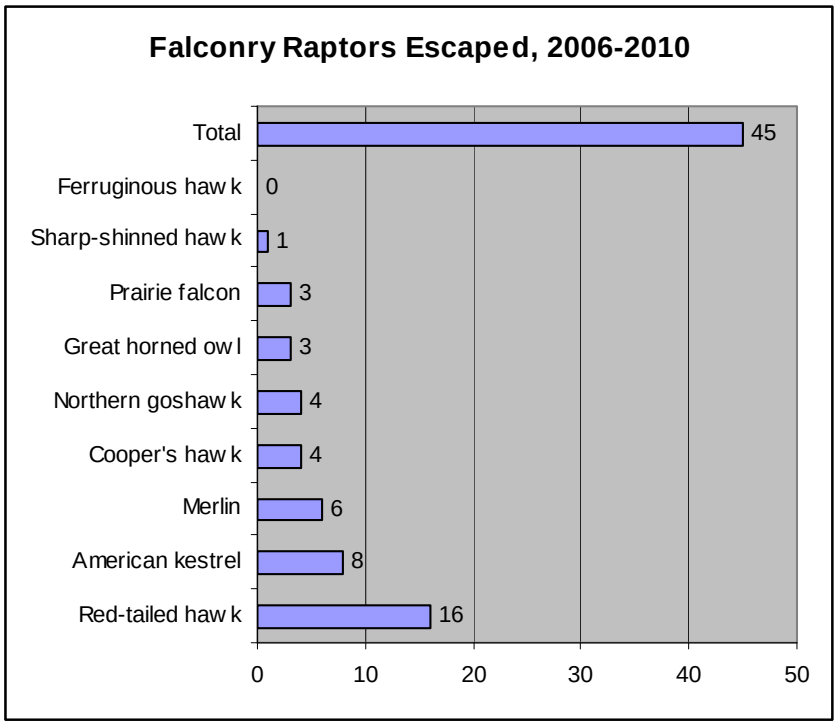

Figure 4. Number of wild falconry raptors that escaped during 2006-2010

RELEASE OF FALCONRY RAPTORS BACK INTO THE WILD

Many wild raptors obtained for falconry are eventually released back into the wild. The disposition of raptors once they are released is uncertain since these individuals are typically not monitored after release, other than incidental band return data. There is no statically robust method of ascertaining the survival rates of released raptors.

For the period of 2006 through 2010, raptors released back into the wild after time in captivity totaled 254, with red-tailed hawks the most commonly released (Figure 5). Falconers are not required to report release location, so an analysis of this was not possible.

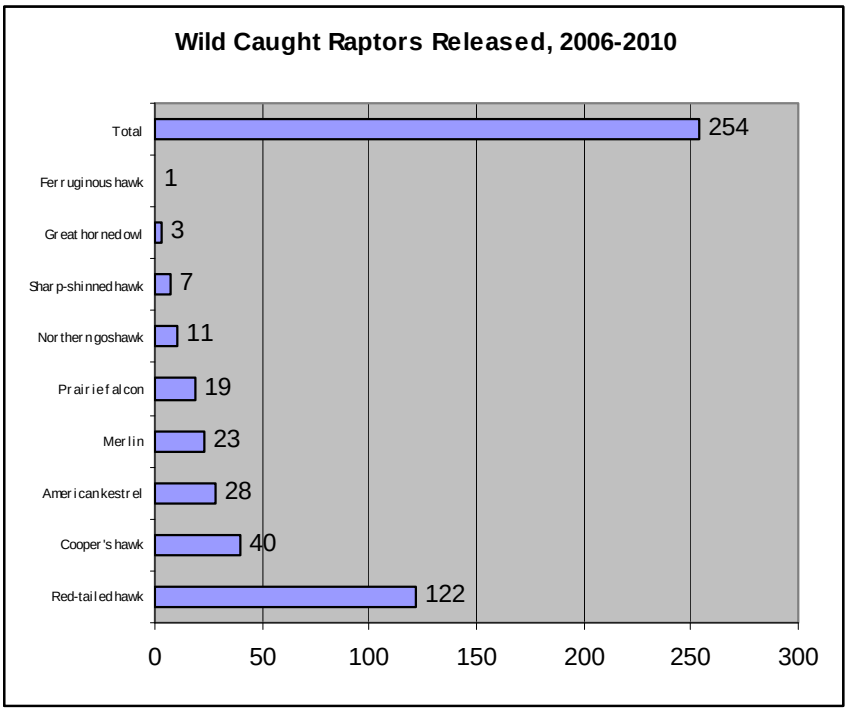

Figure 5. Number of wild falconry raptors release during 2006-2010

CAUSES OF MORTALITY IN FALCONRY RAPTORS

Wild raptor populations are exposed to and suffer from a wide array of disease and other causes of mortality, including but not limited to trichomoniasis, pneumonia, West Nile Virus, toxicoses due to ingestion of contaminants, and trauma (e.g. collisions or predation) (Wendell et al. 2002, Saito et al. 2007). Frequency of ailments depends on the state of the raptor, such as living in the wild, captive in zoos or use in falconry. For instance, wild raptor populations may experience greater occurrence of lead, pesticide, or rodenticide poisoning, whereas captive raptors may experience greater occurrence of aspergillosis (fungal infection of the respiratory system) or Bumblefoot (bacterial infection affecting the feet) (Remple and Forbes 1998, Abundis-Santamaria 2003). Occurrence rates largely depend on the location and exposure risk to disease or contamination, and the maintenance of sanitary housing facilities.

Mortality reported in 2006 through 2010 totaled 68 (13.6 animals/year) for all species and all causes of mortality. Causes of mortality were varied. Unknown causes were most common, with aspergillosis, predation and disease having comparable numbers (Figure 6). Red-tailed hawk, American kestrel and Northern goshawk had the highest level of mortality; and nestling and immature raptors accounted for approximately one-third of mortalities (Figure 7). Data from 2006-2010 shows 10 nestlings, 32 immature, 20 adults, and 6 raptors of unknown age died while in captivity (Table 7). Goshawks most frequently succumbed to unknown causes, aspergillosis, or predation. Kestrels succumbed to unknown causes, predation, disease or aspergillosis.

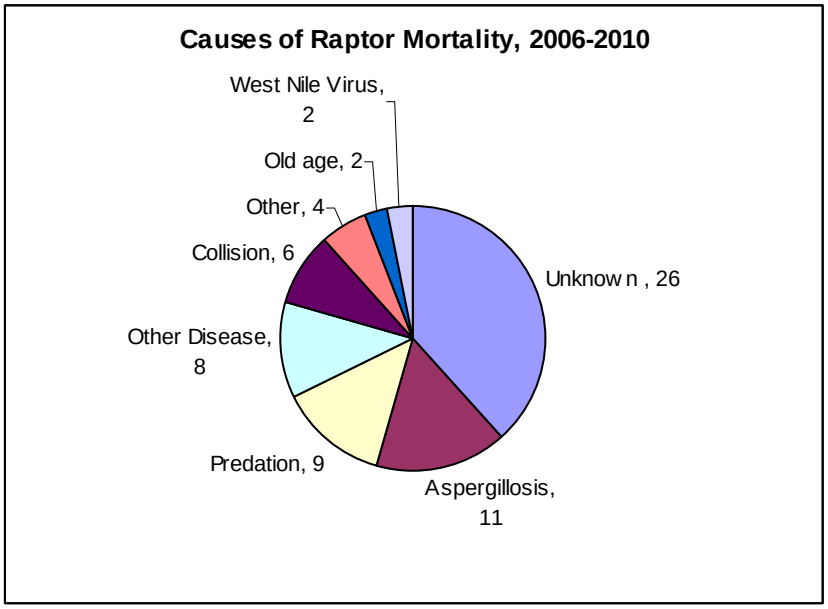

Figure 6. Causes of Mortality for all Falconry Birds, 2006-2010

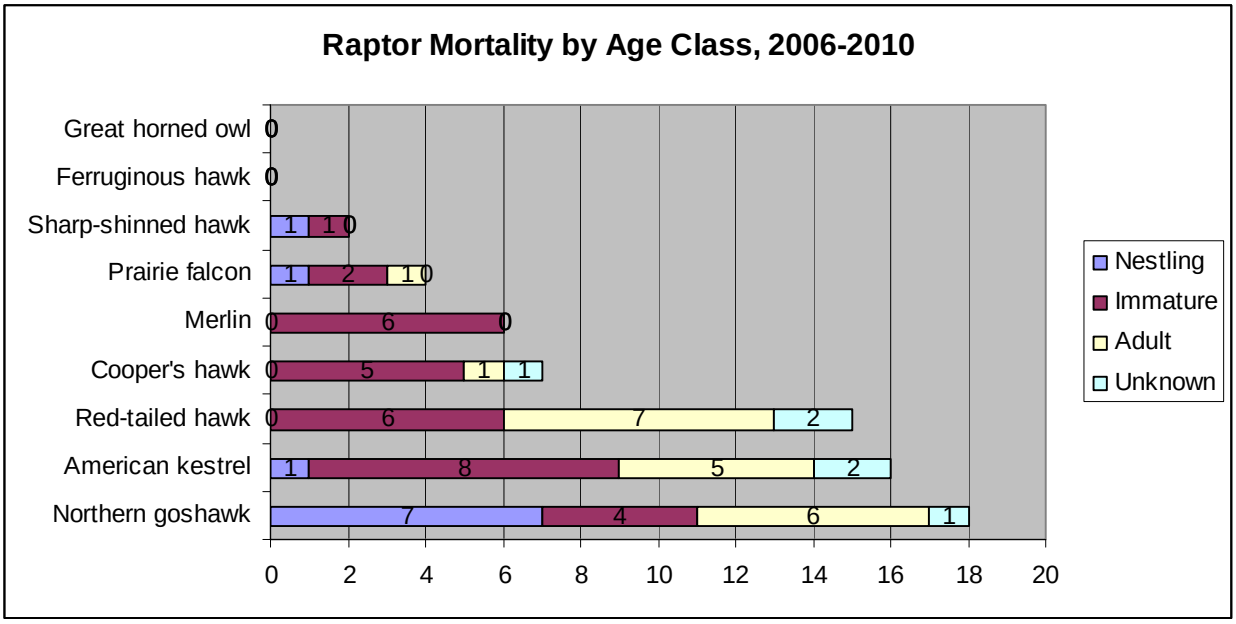

Figure 7. Raptor Mortality by Species and Age Class, 2006-2010

POTENTIAL HARM TO DOMESTIC ANIMALS FROM FALCONRY BIRDS

It is possible that raptors trained for falconry purposes may pose a threat to domestic animals, such as poultry, domestic rabbits, pigeons, and possibly some smaller pets, but the potential impacts from falconry raptors is considered insignificant compared to the threat posed by wild raptors. Attacks on domestic animals by falconry raptors are extremely unlikely, and there are no known record exists of attacks occurring.

POTENTIAL HARM TO HUMANS FROM FALCONRY BIRDS

Lost or escaped falconry birds could potentially inflict injuries to a person unknowledgeable in handling raptors should they attempt to catch or handle such a bird.

However, the likelihood of such an event would be extremely rare, and there are no known record exists of attacks occurring.

Although extremely rare, it is possible for some avian diseases known in raptors to be contracted by humans, such as Chlamydia, Salmonella, and Avian Tuberculosis. These diseases can be transmitted directly from handling tissues of infected birds, especially when performing necropsies, if proper precautions are not observed. Indirect transmission would typically occur through contact with or inhalation of contaminated fecal material or contaminated ground substrate. Owls have been documented as carriers of Newcastle Disease that is also transmissible to humans. Incidence of transmission from raptors to humans, however, is exceedingly rare and the likelihood of occurrence, especially to the general public, is highly unlikely.

POTENTIAL BENEFITS OF FALCONRY

Raptor abatement is one use of falconry raptors, and is now widely accepted as a natural and non-toxic approach to pest control for highly susceptible crops such as vineyards and berries. Abatement programs are also utilized for safety and public health benefits, such as at airports and water treatment plants in order to flush or haze bird flocks and mitigate potential health and safety hazard risks they represent. Any species of raptor that can be used for falconry can be used for abatement purposes with appropriate federal permits.

Falconry practices can also be beneficial for conserving wild raptor populations, and as a means to educate others regarding raptor conservation. Modern falconry has developed benefits for wildlife management, such as techniques used in captive breeding and hacking. Further benefits include, but are not limited to, advancing knowledge regarding housing of captive raptors and using captive-bred falconry birds as test subjects in various raptor research topic (e.g. disease, genetics). The sport of falconry is of keen interest to the public, providing an excellent opportunity to education the public on conservation issues and threats raptors face today.

CHAPTER 4

SPECIES INFORMATION

POPULATION STATUS OF FALCONRY SPECIES USED IN CALIFORNIA

The information below summarizes population abundance and trend on the nine falconry species currently used in California, as well as a summary of falconry use for each species from 2006-2010. See Appendix F and Appendix G for detailed species accounts, citations, and literature cited, and Wildlife Habitat Relationship range maps.

Northern Goshawk

Northern goshawks can be found in mature old-growth forests and prey on a variety of birds and mammals. The breeding season typically occurs between late March and mid to late August, although some goshawks may spend the whole winter in their breeding territory. The largest concentrations of goshawk occur in the northern and central Sierra Nevada, southern Cascades, Modoc Plateau, and Warner Mountains in elevations from approximately 305 m to 3290 m (1000 to 10,800 ft). Breeding occurs throughout the Sierra Nevada as far south as Isabella Reservoir in the Tehachapi Mountains, Kern County and east to Glass Mountain and the White-Inyo ranges in Mono County. Distribution in the north follows the montane forest zones extending south in the Coast Range to Hopland, Mendocino County, however it is largely restricted to drier forest types on the slopes of the Klamath Mountains and northern Coast Ranges.

Because this species has an extensive range with low densities in montane habitat, coupled with its low detection rate during annual surveys, exact population estimates are unknown. It is believed that the goshawk's populations have declined in California due to wildfire and forestry operations reducing its habitat and breeding grounds. In 1992, capture for falconry from the Tahoe Basin was prohibited due to declining goshawk abundance in the area and to limit disruption of a long term productivity study in the area. Today, the northern goshawk is listed as a Species of Special Concern (SSC) in California.

Bloom et al. (1986) estimated 1,300 breeding territories in California of which approximately 805 were active each year and 733 produced at least one fledgling. They suggested that this population was likely 25% to 50% smaller than the historical population due to habitat loss mainly as a result of logging. A more recent synthesis of breeding territory records from 1970 to 2001 estimated the number of territories to be 1,000. The current estimate of the number of territories depending on size is 1,445 to 1,922, of which more than half of these occur in the Sierra Nevada-Cascade Bioregion; however numbers for the Northern Coast bioregion may be overestimated due to data over ten years old. It is suggested that logging and intensive timberland management may have altered suitable habitat predicted by their model which could have inflated the overall statewide total. Also, this estimate only refers to an estimated total number of territories and not the number of occupied territories or breeding pairs.

The Partners in Flight (PIF) landbird population estimate for goshawk in California is 3000. The PIF estimate is based on Breeding Bird Survey (BBS) detections from

1990-1999 and were extrapolated from relative abundance at the route level. As noted below, a certain level of uncertainty and bias is associated with BBS routes for species that are not always detected during roadside surveys.

Population trend is also difficult to assess for goshawk. BBS data indicates an increasing population (1.7 % increase 1966-2000; 3.7% increase 2000-2010). BBS data credibility show an important deficiency for goshawk due to the low number of encounters (e.g. low abundance) per route and small sample size, both leading to imprecise trend results. Whereas Christmas Bird Count (CBC) survey data for the nonbreeding population, indicate a stable population (0.2) in California, with a slight decline in detections in recent years. Again, caution should be used with interpreting results due to low detection and abundance of this species on CBC routes.

In California falconers captured 46 goshawk from the wild from 2006 to 2010, 34 of which were nestlings, 9 immature, 1 adult, and 2 of unknown age. Of the 34 nestlings, nearly half (n=18) were captured from Mono and Modoc counties (Figure 8). Eighteen goshawks mortalities and 4 escapes were reported 2006 to 2010. Eleven goshawks were released back into the wild during the same period. Statewide, populations in California appear to be unaffected by capture, however negative effects may occur at the local level if these raptors are repeatedly captured (Woodbridge personal communication 2012, Keane personal communication 2012).

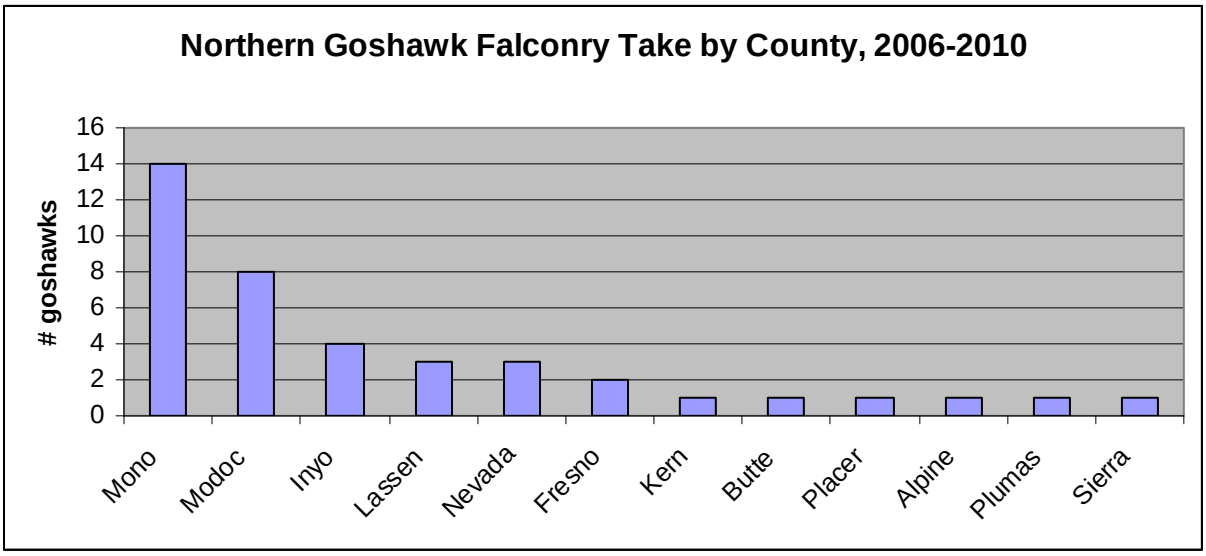

Figure 8. Northern Goshawk Nestling Capture by County, 2006-2010

Cooper's Hawk

Cooper's hawk can be found near sea-level to upwards of 6,500 feet throughout much of the Unites States, southern Canada, and northern Mexico. It utilizes a variety of habitat types ranging from urban to rural, dry upland to moist lowland, and from large mixed coniferous groves to narrow deciduous riparian strips. The Cooper's hawk preys largely on medium-sized birds (e.g. jays, robins, pigeons and doves), but will also take mammals, reptiles, insects, and even fish. In California, this hawk can be a year-round resident, seasonal breeder, or passing migrant. Breeding range spans from as north as

Mt. Shasta in Siskiyou County down to San Diego and Imperial counties, including the Farallones and Channel Islands.

Historically, the Cooper's hawk was one of the most common hawks in nearly all parts of the United States. Concern over this hawk populations increased in the mid 1900's, and was included as one of California's Bird Species of Special Concern in 1978 and 1992. Current California populations are believed to be increasing, especially near urban areas, but statistically robust monitoring to assess statewide abundance and trend is lacking for this species.

The PIF landbird population estimate for Cooper's hawk in California is 31,000. The PIF estimate is based on BBS detections from 1990-1999 and were extrapolated from relative abundance per route. However, a certain level of uncertainty and bias is associated with BBS routes for species that are not always detected during roadside surveys.

Population trend is also difficult to assess for Cooper's hawk. BBS data indicates a slightly increasing population trend (0.4 % increase 1966-2000; 1.2 % increase 2000-2010). BBS data credibility show an important deficiency for Cooper's hawk due to the low number of encounters (e.g. low abundance) per route and small sample size, both leading to imprecise trend results. CBC survey data for the nonbreeding population also indicate a slightly increasing population trend (1.0%) in California. Caution is warranted in drawing conclusions due to low detection and abundance of this species on CBC routes.

During 2006 to 2012, 80 Cooper's hawks were captured in California; 1 adult, 40 immature, 36 nestlings, and 3 of unknown age. Of the nestlings captured throughout the state, just under half were captured from Riverside, Orange and Los Angeles counties (Figure 9). Seven mortalities and 4 escapes were reported 2006 to 2010. Forty Cooper's hawks were released back into the wild during the same period.

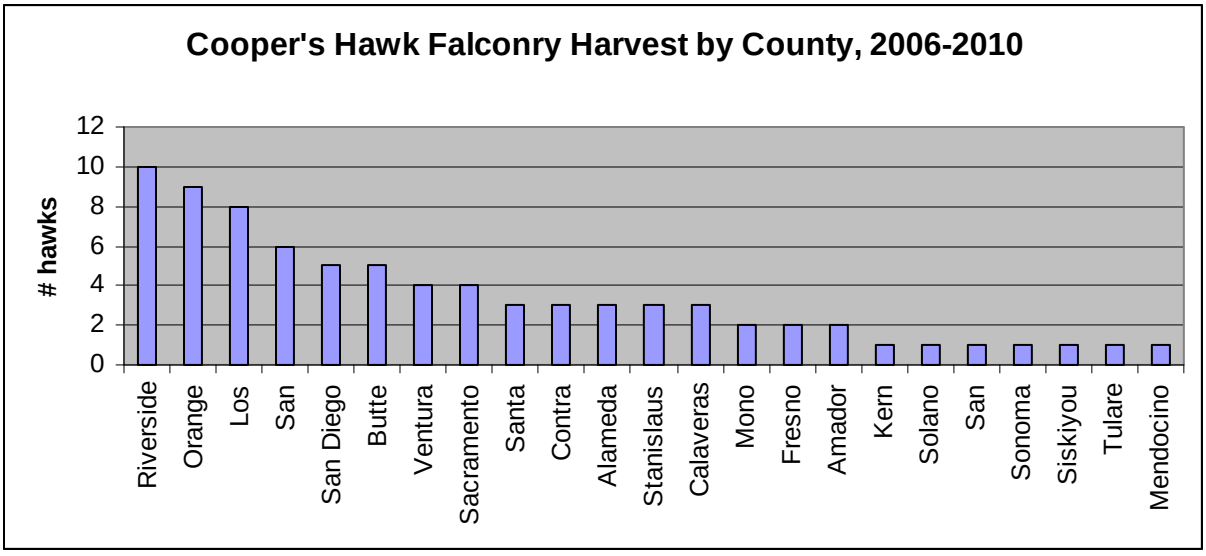

Figure 9. Cooper's Hawk Nestling Capture by County, 2006-2010

Sharp-shinned Hawk

Sharp-shinned hawks are a forest species that inhabit young to mid-aged conifers and mixed deciduous-coniferous stands from sea level to near alpine altitudes throughout the year. These hawks primarily prey on small birds but will also prey on mammals, reptiles, and insects. Sharp-shinned hawks generally have a northern distribution in summer but extend southward in the west and east wherever forest cover is sufficient. During winter, northern birds migrate south as far as Central America, the West Indies, and Costa Rica. In California, sharp-shinned hawks are widespread during fall and winter months as birds from higher elevations join migrants in the lowlands and southward.

Sharp-shinned hawks are considered one of the most difficult raptors in North America to census during summer months because they are rarely detected during the breeding season. Therefore, BBS data must be interpreted cautiously as bias is associated with roadside surveys. According to BBS criteria, sharp-shinned hawk data contains important deficiencies which make data imprecise. The PIF estimate for sharp-shinned hawks in California is 12,000, extrapolated from BBS data. A slight to moderate decline in the future suitability of breeding conditions in the Sierra Nevada, Central, and Coastal Region are predicted, while conditions in the northwestern portion of the state, including the coastal area north of San Francisco, are expected to remain stable.

In California, from 2001 to 2009 sharp-shined hawks were consistently the third most numerous species observed behind red-tailed hawks and turkey vultures during Golden Gate Raptor Observatory (GGRO) fall migration counts; however numbers banded decreases from 2006 to 2010, a phenomenon attributed to poor weather conditions.

Fifty years of CBC for California from 1960 to 2010 show an increasing trend up through the early-1980's followed by a stabilizing trend up until the last 10 years. The BBS data shows an increasing population trend in California (1.0 % 1966-2000; 1.7 % 2000-2010). Furthermore, BBS trend maps show detections increased more than 1.5 % from 1966-2010 on routes along the central coast of California, in Mendocino National Forest in the southern portion of the northern Coastal Ranges, and Klamath National Forest to the north in the southern Cascade Range and eastern Klamath mountains. Both BBS and CBC data show important data deficiency for sharp-shined hawks due to the low number of encounters (e.g. low abundance) per route and small sample size, both leading to imprecise trend results.

During 2006 through 2010 in California, 17 wild sharp-shinned hawks were captured for their use on falconry; 6 immature, 9 nestlings, and 2 of unknown age. Capture was well distributed across the state, with Modoc County having the highest level (n=4) (Figure 10). While in captivity, one nestling died due to predation and one immature male died from a respiratory disease (Aspergillosis). Seven sharp-shinned hawks were released back into the wild, and one escaped.

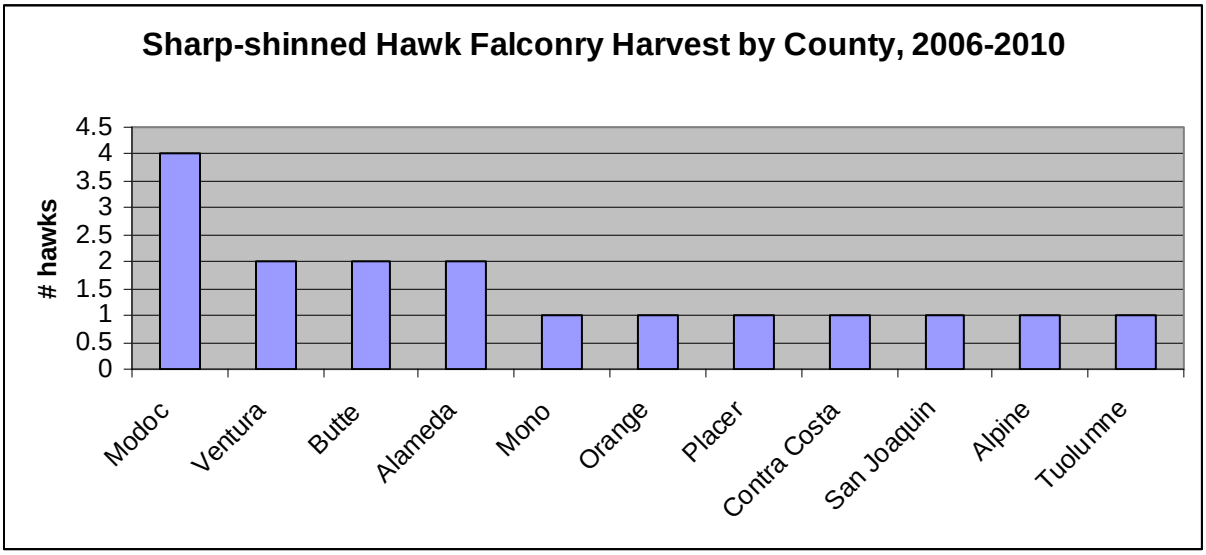

Figure 10. Sharp-shinned hawk falconry capture in California by County, 2006-2010

Red-tailed Hawk

In North America, the breeding range for the red-tailed hawk extends from coastal Alaska south to the Baja peninsula. Red-tailed hawks are widely distributed in California and inhabit a variety of open areas such as sparse woodlands, grasslands and agricultural areas. In California, red-tailed hawks prefer tall trees to place nests, with good accessibility and proximity to foraging areas. Prey of the red-tailed hawk is varied and consists of a variety of small rodents, snakes, and birds. Red-tailed hawks have also been known to feed on carrion (dead animals), especially in winter months.

The red-tailed hawk is one of the few raptors in North America that has maintained a stable or increasing population. PIF estimated a population size of nearly two million red-tailed hawks in North America, representing 89% of the global population; the population trend was considered stable or possibly increasing. The population of red-tailed hawks in California was estimated at 160,000 individuals, or 7.2% of the estimated global population. Data quality was rated as “good” in both North America and California estimates due to level of species coverage in BBS surveys.

From 1986 to 2009 red-tailed hawk have demonstrated an increasing trend in California based on GGRO migration counts. BBS trends show general increases over time from 1966 to 2010, with a significant increasing trend value of 0.8 % for California. The majority of California shows a strong increasing trend, with the exception of southern portions of the state, including much of the desert region, and portions of the north coast and the upper Sacramento Valley. CBC data shows similar upward trends for red-tailed hawks in California.

The red-tailed hawk is widely used in falconry due to their even temperament and their ability to hunt and obtain sizable game. Falconry capture data shows 223 red-tailed hawks were obtained from the wild from 2006 to 2010, 41% of all raptors obtained from the wild during this time frame. Capture was very well distributed throughout the state, with only 13 counties (out of 50) showing zero capture. Riverside, Kern, Los Angeles, San Bernardino, and Ventura counties had the highest level. Of the 223, 5 were adults,

185 were immature, 9 were nestlings, and sex was undetermined for 24. Fifteen red-tailed hawks died in captivity, 122 were released back into the wild, and 16 escaped.

Ferruginous Hawk

Ferruginous hawks inhabit grassland, scrubland, or sparse forest, with the preferred habitat being pinyon-juniper forest. Habitat usually includes features such as rock outcrops, isolated trees, and small groves. Ferruginous hawks will winter in grassland shrub-steppe habitats, as well as other open areas. Diet consists of ground squirrels, cottontail rabbits, and jackrabbits. In California, ferruginous hawks are almost exclusively wintering birds; breeding only known to occur in northeastern California, and possibly in the Mojave Desert region. Hawks begin to arrive in California after the onset of Fall migration, between September and October, and leave for their breeding territories in March and April.

Presently ferruginous hawk is considered a species of “least concern” by the International Union for Conservation of Nature (IUCN 2011). In Canada, the ferruginous hawk was formerly listed as threatened in 1980, delisted to vulnerable status in 1995, and is currently listed as endangered in Alberta, threatened in Manitoba, and threatened throughout Canada. In the United States, formal status (threatened) is granted to ferruginous hawk in the state of Washington, and is a Species of Special Concern in a few other states (Bechard and Schmutz 1995, Richardson 1996). Ferruginous hawk is considered a “bird of conservation concern” in U.S. Fish and Wildlife Regions 1 and 6; and in the Bird Conservation Regions (BCR) 9, 10, 16, and 17. BCR 9 encompasses the Great Basin, stretching from the eastern Sierra Nevada escarpment to the Modoc Plateau in California. Range-wide, NatureServe lists this species as “apparently secure-G4” and as “vulnerable-S3” in the state of California. The ferruginous hawk formerly was a California Bird Species of Special Concern, and currently a bird “taxa to watch” in the state.

PIF has estimated California’s breeding population to be 50 individuals, composing 0.2% of the North American population. The total North American population size is estimated to be 25,000 individuals using BBS extrapolated data (Rich et al. 2004). A more conservative population estimate is 11,500 individuals in North America, of which 3,450 (30%) are juveniles (Millsap and Allen 2006). Earlier population estimations (1984) were 3,000-4,000 breeding pairs in North America; 5,842-11,330 individuals (1993); and 14,000 individuals were estimated in the Great Plains (1992).

In the most recent analysis of BBS data for ferruginous hawk in California, no population trend data was made available. The extremely low abundance of individuals found during the summer BBS survey is too low to report trends. However, there appears to be an increasing summer trend since 1966 in a narrow corner of northeastern California.

An evaluation of CBC trends regarding distribution and abundance (from 1959 to1988) indicates significant increases (4.0 %) in the California wintering population of ferruginous hawk, however this trend may be misleading due to variations in ferruginous hawk migration patterns and increasing effort in CBC count circles in rural areas.

The ferruginous hawk is one of the least commonly used species in the sport of falconry throughout North America. There are only a few records of capture in California since the 1990's. From 2006 to 2010 only one ferruginous hawk nestling was captured in Lassen County.

Merlin

The merlin is a small, agile falcon native to Europe, Asia, and North America. Three subspecies of merlin are commonly found in North America: the prairie merlin (*F. c. richardsonii*), the black merlin (*F. c. suckleyi*), and the taiga merlin (*F. c. columbarius*). Merlins rarely nest in California but are regular winter visitors. Between September and May, they can be found in almost every region of California. Black merlins wintering in the state concentrate along the coast and in the northern regions while prairie merlins are more likely to be found in southern California. Taiga merlins may be found throughout the length of the state but are more common west of the Sierra Nevada mountain range (Grinnell and Miller 1944). The taiga merlin is by far the most common subspecies of merlin found in California during the winter months. Wintering prairie merlins and black merlins have also been reported throughout the state, though in much lower numbers. The preferred prey species of the merlin differ depending on habitat and tend to be small birds, typically weighing less than 50 g, that are locally abundant and that forage in the open.

PIF estimated 600,000 merlins in North America; a California estimate was missing as PIF models used BBS data which is lacking for California. A comparative analysis of BBS, CBC and data from various monitoring sites, concluded that merlin numbers have "increased dramatically" since the 1970's and 1980's. In California, where merlins overwinter, CBC data show a significant increase in the number of merlins counted per party hour from 1960 to 2010. The San Diego County Bird Atlas concurs with this apparent increasing trend, reporting a noticeable increase in wintering merlins in the 1990's. Daily counts from the Golden Gate Raptor Observatory also show an increase in the number of merlins migrating past the Marin Headlands every year, with only slight decreases seen since 2007.

The merlin gained popularity among falconers as a "lady's hawk" in medieval Europe and was a favorite of both Catherine the Great of Russia and Mary, Queen of Scots, and is still a highly sought after species in falconry today. During 2006 through 2010 in California, 44 wild merlins were captured for their use on falconry; 40 immature and 4 of unknown age. Because merlins are primarily found in California in the non-breeding season, no nestlings were captured. Capture was well dispersed throughout the state, with the highest levels from Solano, Santa Barbara, and Riverside counties (7, 7, and 6 respectively), accounting for nearly half of all captured individuals. While in captivity, 6 merlins died due to proventriculitis, aspergillus, heat exhaustion, and predation by a red-tailed hawk; all six were immature birds. Twenty-three merlins were released back into the wild 2006 thru 2010, and 6 escaped.

American Kestrel

The American kestrel is a small, widespread falcon ranging from the northern treeline in North America, down through much of Central and South America). In California, American kestrels use a variety of open to semi-open habitats throughout their life cycle, including grasslands, meadows, savannah, oak woodland, pinyon-juniper

woodland, riparian woodland, subalpine forest, montane forest, coastal forest, early succession burned forest, marshland, desert scrub, sagebrush flats, broken chaparral, alpine tundra, oases, fields, lake shores, islands, sea-coasts and agriculture lands. These small falcons do not build their own nest, but rather, are considered secondary-cavity nesters (using old woodpecker cavities) requiring large trees in areas lacking a thick forest canopy. Prey consists of insects, birds, mammals, reptiles, and amphibians.

The PIF population estimate for kestrels in California is 240,000 individuals; which is 5.6% of the estimated North American population of 4.3 million individuals. Population estimates for BCR in California are: 150,000 individuals in Coastal California (inclusive of the entire Central Valley, surrounding foothills, and coastal counties from the north Bay Area to border of Mexico); 6,000 for the northwestern coniferous forest; 8,000 for the Sierra Nevada; 50,000 for the southeastern deserts; and 150,000 for the Great Basin.

Range-wide declines in North America were first detected in 2004 and have continued to be a concern since that time. Various studies have reached similar conclusions, that this once common raptor may be moving in the direction of scarce abundance. While no formal listing exists in California, American kestrel is considered a “Species of Special Concern” by the GGRO, where a long term decline has been observed in fall and winter raptor migration counts. Migration counts, BBS data, and CBC data all point to a decline in trend for kestrels in California since at least the 1980s.

An analysis of 20 different raptor migration sites showed moderate to strong declines in kestrel populations (4 to 12% decline per year) from 1995-2005 in the western United States. The GGRO showed a significant decline in kestrel observations of 2% per year since1989, a result that supports the nationwide decline of about 5% per year. Current kestrel migration counts at GGRO were below average for 2011.

The overall BBS trend for the state of California shows a decline of 1.9% for the period of 1966-2010. The overall California trend for the period of 2000 to 2010 shows a 2.1% decline. The most alarming declining trend for the period of 2000 through 2010 is in the Coastal California BCR (-3.6%), which contains approximately 50% of all California BBS routes (n = 107/215). The Sonoran/Mohave Desert BCR represents the only positive trend in California from 1966-2010, although this trend is not statistically significant. A recent CBC trend analysis, using log-linear regression, found declines in trend from 1983 to 2005 (-1.3% per year) and from 1995 to 2005 (-2.3% per year) in Western North America. Besides a few locations in California that show an increasing trend (e.g., Salton Sea), wintering kestrels have experienced a long shallow decline since the 1960s, close to -1% per year.

According to the Federal Environmental Assessment for falconry, approximately 100 kestrels per year were reported captured from the wild throughout North America (Millsap and Allen 2006). In California, American kestrel is a commonly used in falconry, with 70 individuals captured from the wild in 2006 through 2010. Of the 70, 8 were adults, 26 immature, 1 nestling, and 4 were of unknown age. Capture was well dispersed throughout the state, with no one county where capture dominated. While in

captivity, 16 kestrels died during the period 2006 to 2010 (Figure 11). Twenty-eight kestrels were released back into the wild from 2006 thru 2010, and 8 escaped.

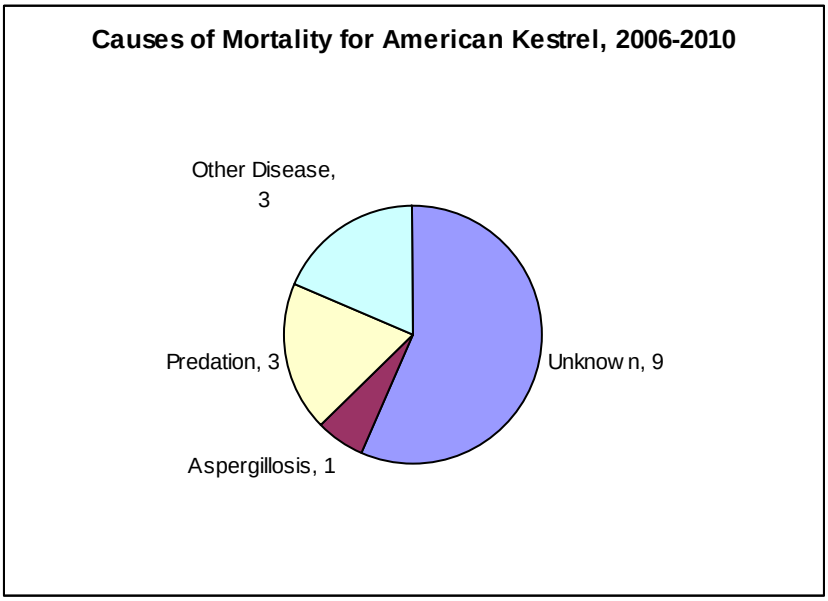

Figure 11. Causes of Mortality for American Kestrel, 2006-2010

Prairie Falcon

The prairie falcon is found throughout dry ecosystems of western North America, distributed from southern Canada to central Mexico and from the Great Plains to the Pacific Ocean. The prairie falcon utilizes a variety of habitats including prairies, valleys, foothills, semi-forested areas, plains, pastures, grasslands, buttes, canyons, river bluffs, high mountain meadows, desert shrubsteppe, marshland, cropland, and ocean shores. Prey consists of medium to small sized animals including ground squirrels, other rodents, birds, reptiles, and insects. Where it is common, California ground squirrels comprises a majority of the prairie falcon diets. Nest-sites include escarpments, shelves, bluffs, and outcroppings near suitable foraging areas.

In 1968 prairie falcons, along with peregrine falcons, were prohibited for capture in falconry due to declining populations. In 1980, the prohibition of prairie falcon capture for falconry was lifted due to apparent population stabilization. The prairie falcon is listed as a Bird Species of Special Concern in1992, but failed to make the most recent list in 2008 due to apparent population stability as shown in CBC data. Today, the prairie falcon is on the federal Bird of Conservation Concern (BCC) list for the Mohave/Sonoran Bird Conservation Region (BCR).

Early range-wide estimates of population size (1964) indicated a nationwide population of 2,000-3,000 prairie falcons in North America. A compilation of 18 population studies across the entire range (1998), with results totaling at least 4,273 pairs. A more recent population size extrapolated from Breeding Bird Survey results in the 1990s, estimated 17,280 individuals in North America. A 2006 estimate, using the same BBS data from the 1990s, was more conservative at 8,640 prairie falcons, of which half were estimated to be juveniles.

California statewide abundance has been estimated to be 300 to 500 breeding pairs and 650 to 1,100 fledglings per year, based on observations at nesting territories over a ten year period in the 1970s. The PIF estimate of population size, using 1990s BBS data, was 2,900 individuals for California. Within California BCR's, the population estimate by PIF indicates, with moderate BBS coverage, that 500 individuals exist in the Coastal California BCR, 1,200 in the Great Basin BCR, and 1,100 in the Mojave/Sonoran BCR. Populations for the Sierra BCR and north coast BCR both are estimated at 20 individuals based off adjacent BCR's.

The latest population trend map from the BBS indicates both declining and increasing trends depending on location in California. CBC data showed a statistically significant positive trend for wintering prairie falcons from 1959 to 1988. Overall, the population has seemed stable since the early 1980s. The GGRO data shows small sample sizes and sharp variations in observations from year-to-year during 1986 to 2009.

From 2006 to 2010, 46 prairie falcons were captured from the wild; 2 adults, 34 immature, 8 nestlings, and 2 of unknown age. Four died while in captivity, two from collision with automobiles, 1 from old age, and one from unknown causes. Three prairie falcons escaped, and 19 were released back to the wild. Capture was spread throughout the state, as shown in Figure 12, with Kern and Los Angeles counties at 7 falcons each.

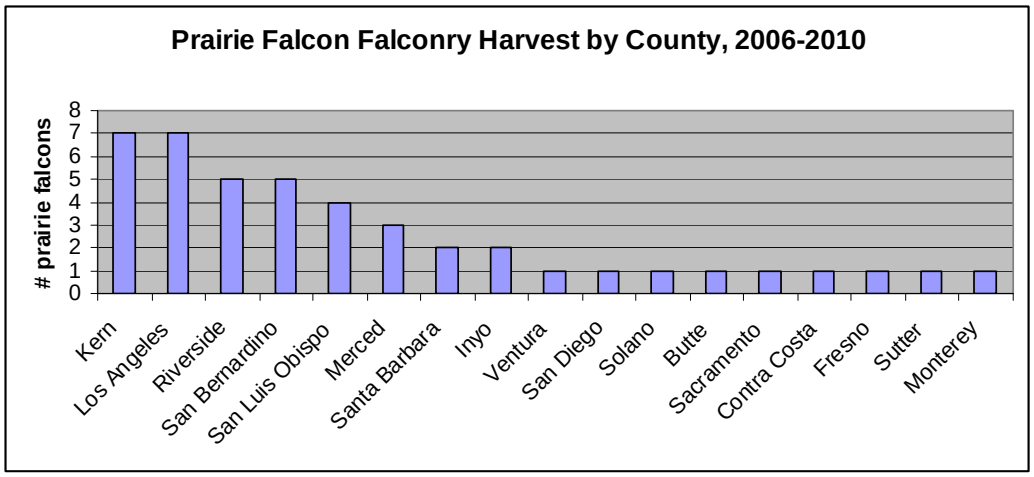

Figure 12. Prairie falcon falconry capture in California by County, 2006-2010

Great Horned Owl

The great horned owl is highly adaptable and can be found in most habitat types, but prefer to occupy open or second growth forests. Great horned owls are remarkably adaptable to habitat change as long as new nests as are available; the same is true from human disturbance. They have no true annual migration, although small scale local movements are sometimes noted and are usually tied to a shift on prey availability. The great horned owl is a nocturnal feeder that has the most general diet of any North American owl, consisting of rabbits, hares, mice, waterfowl, reptiles, insects, scorpions, and other birds.

The breeding territory is occupied by both the male and female throughout the year. Nests are located in trees and are typically old nests used by other raptor species. Nests may also be located in snags, deserted buildings, artificial platforms, and on the ground. As soon as a nest site is chosen, eggs are laid between November and March. Incubation generally lasts 30-37 days. Seven weeks after hatching, the fledglings are able to fly short distances and are able to forage and live independently of the adults by October of their first year.

The great horned owl is widespread across North America and thinly distributed everywhere except the northernmost parts of Canada and Alaska. The number of these owls reported on surveys, such as CBC and BBS, has increased over time. Due to the stable or increasing population, the great horned owl is a species of least concern according to the IUCN. The PIF population estimate for kestrels in California is 110,000 individuals, projected to be 2.1% of the world population.

From 2006 to 2010, 13 great horned owls were captured from the wild; 1 adult, 5 immature, 7 nestlings. During this same period, three owls were released back into the wild, and 3 escaped. No deaths were reported. Capture was distributed mostly through central and southern California counties (Figure 13).

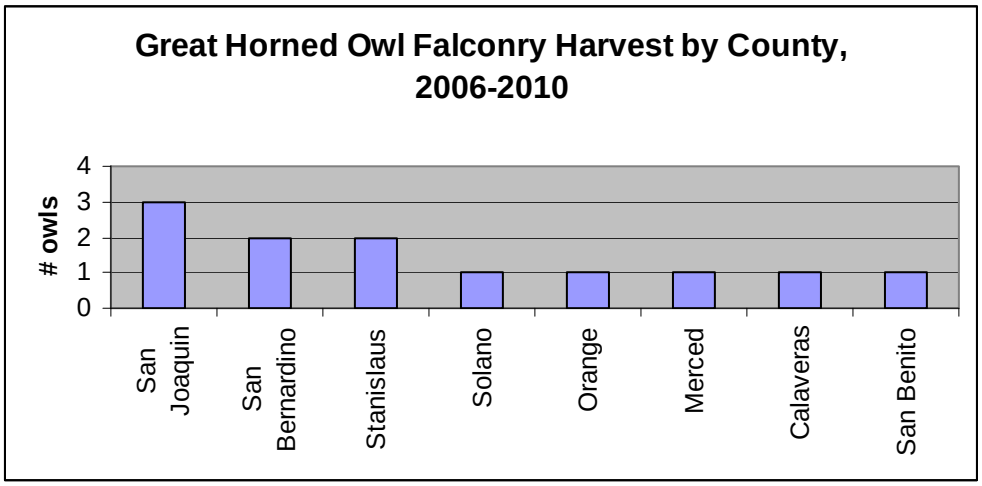

Figure 13. Great horned owl falconry capture in California by County, 2006-2010

STATUS OF OTHER TRADITIONAL FALCONRY SPECIES NOT USED IN CALIFORNIA

Golden Eagle

The golden eagle (*Aquila chrysaetos*) occupies a wide range of habitats, including desert scrub, grasslands, oak woodlands and savanna, and open shrublands (Preston and Beane 2009). This eagle is classified as Fully Protected in California; a classification that affords the most stringent protections. Golden eagles once bred throughout most of California, excluding the temperate rainforest north of San Francisco (Grinnell and Miller 1944), but are now thought to be in decline throughout much of their range in North America (Kochert and Steenhof 2002). Data from migration monitoring and unpublished data from nest site monitoring, along with past mortality data, suggest that a population decline in much of western North America is currently under way (Dixon 1937, Scott 1985, Unitt 2004, Bildstein et al. 2008, Page et al. 2010). Braun et al. (1975) estimated a North American population of perhaps 100,000 individuals in the early 1970s. Good et al. (2004) estimated just over 27,000 golden eagles in the western states in late summer and early fall in 2003. A systematic survey was conducted by WEST Inc. in 2003, and results showed an estimated 27,392 individual eagles in the area surveyed (Northern and Southern Rockies, Great Basin, Colorado Plateau, and the northern prairies and badlands), however this study excluded much of California. The Partners In Flight (PIF)-based U.S. and Canada population estimate is 40,000 with a “fair” accuracy rating and a “very high” precision rating (USFWS 2007). The BBS data for California shows no trend for this species (Sauer et al. 2011).

Osprey

The osprey (*Pinion haliaetus*) is distributed across North, Central and South America. Due to its unique dependence on live fish as their main prey item, osprey’s can be found near any open water body with an available prey source such as rivers, lakes, reservoirs, bays, estuaries, and surf zones. The PIF-based U.S. and Canada BBS population estimate for this species is 40,000 (moderate data quality); and a 7,500 estimate for California (good data quality) (Rich et al. 2004). BBS data for California further indicates an increasing trend of 4.6% from 1966-2010, and 6.0% from 2000-2010 (Saucer et al 2011).

White-tailed Kite

The white-tailed kite (*Elanus leucurus*) is a yearlong resident in California. It inhabits coastal areas and valleys, and is rarely found away from agricultural areas. The kite has extended its range and increased in numbers in recent decades. The breeding range stronghold in North America is California, with nearly all areas occupied from the coast to the Sierra Nevada foothills, through the Central Valley, and down through portions of the deserts and Imperial County (Preston and Beane 2009). As a yearlong resident, migrations are usually minimal with some seasonal range expansion. The PIF-based U.S. and Canada BBS population estimate for this species is 200,000 (moderate data quality); and an 8,000 estimate for California (good-moderate data quality) (Rich et al. 2004). BBS data for California further indicates a decreasing trend of 1.4% from 1966-2010, and 2.9% from 2000-2010 (Saucer et al 2011).

Peregrine Falcon

The peregrine falcon (*Falco peregrinus*) is a widespread raptor found throughout North America. Peale's falcon (*F. p. pealei*) is a year-round resident of the Pacific Northwest, while the American peregrine falcon (*F. p. anatum*) occurs throughout much of North America from Alaska and Canada south to Mexico. Both subspecies can be found in California, with Peale's falcons being more limited to the northern portion of the state. Peregrine's have faced precipitous declines in the past and were listed federally endangered in 1970, and California endangered in 1971. Due to diligent conservation and recovery efforts, this raptor was federally delisted 1999, and state delisted in 2009. In California this species is still classified as Fully Protected; a classification that affords the most stringent protections. In 2002, it was estimated that there were over 2000 pairs of American peregrine falcons breeding annually in the U.S (White et al. 2002). The PIF-based U.S. and Canada population estimate for the peregrine falcon is 138,000, a "poor" accuracy rating (USFWS 2007). The PIF-based California estimate for the peregrine falcon is 500, a "moderate" accuracy rating (Rich et al. 2004). Migration data in the western U.S. indicate an increasing population (Hoffman and Smith 2003). BBS data for California further support this with a 3.6% annual increase (Saucer et al 2011).

Northern Harrier

The Northern harrier (*Circus cyaneus*) breeds throughout North America from northern Alaska and Canada south to northern Baja California, and occurs year round throughout its breeding range (Shuford et al. 2008). This low-flying raptor inhabits areas with upland grasslands, croplands, desert shrub-steppe, riparian woodland, open wetlands, pastures, and freshwater and brackish marshes (Preston and Beane 2009). Harriers primarily feed on a variety of small to medium-sized rodents and passerines (Shuford et al. 2008). The PIF-based U.S. and Canada BBS population estimate for this species is 40,000 (moderate data quality); and a 19,000 estimate for California (good data quality) (Rich et al. 2004). BBS data for California indicates a decreasing trend of 1.7% from 1966-2010 and a slight increasing or stable trend of 0.5% from 2000-2010 (Saucer et al 2011). Coastal California shows a 1.7% decrease (Saucer et al 2011). While local declines in breeding numbers have been documented in some regions of California, declines elsewhere in the state can only be inferred by loss or degradation of suitable breeding habitat.

Harris's Hawk

Harris's hawk (*Parabuteo unicinctus*) historical range has been reduced, and now U.S. populations are scattered across Arizona, New Mexico, and Texas. This hawk's cooperative hunting behavior is a unique trait not found in other raptors. Habitat includes upland desert, or mesquite, willows and cottonwood woodlands in the Colorado River valley. These hawks may inhabit open habitat in urban areas as well. In some locations, Harris's hawks will breed year-round. Small breeding populations of up to 50 individuals can be found in southern California and northern Baja California (Patten and Erickson 2000). The Harris's hawk is not listed or designated as a species of concern in California; however, it is a Species of Conservation Concern in the Chihuahuan Desert area of southern New Mexico (USFWS 2002). The PIF-based U.S. and Canada population estimate for the species is 19,500; a "poor" accuracy rating and a "good" precision rating (USFWS 2007). BBS data for California does not indicate a trend;

however BBS data for North American show a 1.8% per year decline (Sauer et al. 2011).

Red-shouldered Hawk

The red-shouldered hawk (*Buteo lineatus*) is resident in California. Populations in California are generally non-migratory, but some movements have been observed in the central portion of the state (Goodrich and Smith 2008). Preferred habitat includes riparian, oak woodlands, eucalyptus groves, and residential areas (Preston and Beane 2009). Prey consists of small mammals, reptiles, and amphibians, birds, and occasionally invertebrates (e.g. earthworms) (Preston and Beane 2009). The PIF-based U.S. and Canada population estimate for the red-shouldered hawk is 411,000; a "fair" accuracy rating and a "very high" precision rating (USFWS 2007). However, Preston and Beane (2009) noted that the PIF estimate excludes the breeding population in Baja California. The western population of red-shouldered hawks is considered stable, and has recently expanded its range northward and eastward into Oregon and Arizona (Preston and Beane 2009). Breeding Bird Survey (BBS) data for California indicates a 6.0% annual increase from 1966-2010, and 4.9% from 2000-2010 (Saucer et al 2011). The PIF-based California estimate for the red-shouldered hawk is 55,000, a "good" accuracy rating (Rich et al. 2004).

Rough-legged Hawk

The rough-legged hawk (*Buteo lagopus*) is a full migratory species, only found during the non-breeding season in California. This hawk uses a variety of open habitats during winter months, such as grasslands, fields, and marshlands, and inhabits the Modoc Plateau, Central Valley, along the coast, northern desert areas, Salton Sea, Antelope Valley, and southern California lakes. Prey consists of a variety of small mammals, with a preference for voles and mice, but also takes small birds, game birds, and occasionally fish, insects, and reptiles (Preston and Beane 2009). Winter distribution appears to be dependent of food availability. Abundance estimates across its range are generally lacking, but this raptor is thought to be one of the most abundant raptors in the northern latitudes (Preston and Beane 2009). The PIF-based U.S. and Canada BBS population estimate for this species is 8,000 (Rich et al. 2004). CBC data shows an increasing trend of 1.3% (1959-1988) (Sauer et al. 1996).

Barred Owl

The barred owl (*Strix varia*) has recently expanded its range into California; first being detected in 1981 and first recorded breeding in 1991. Today, this owl is found throughout the Cascades and Klamath ranges, south along the coastal mountains, and more recently south into the Sierra Nevada mountain range. Original distribution included much of eastern North America. This range expansion has put the barred owl in conflict with the federally threatened Northern spotted owls, and the California spotted owl. Like the spotted owl, barred owls remain territorial throughout the year. Habitat includes coniferous and mixed-deciduous forests, with a preference for old growth due to increased cover and available nest sites, and higher prey abundance (Preston and Beane 2009). This species hunts primarily for small mammals (mice, squirrels, hares) day or night, but is also a prey-species generalist and takes a variety of small mammals, rabbits, small- to medium-sized birds (e.g. grouse), amphibians, reptiles, and invertebrates (Preston and Beane 2009). Although there are few population estimates available, field research for spotted owls in California have documented an increase of

barred owl abundance, so much that spotted owls are often displaced by the larger more aggressive barred owl. The PIF-based U.S. and Canada population estimate for the barred owl is 600,000; a "moderate" quality rating (Rich et al. 2004).

Spotted Owl

There are two subspecies of spotted owl found in California: Northern spotted owl (*Strix occidentalis caurina)* and California spotted owls (*Strix occidentalis occidentalis*). In California, their distribution includes the northwestern portion of the state south to Marin County, with the southeastern boundary of its range being the Pit River area of Shasta County. The Northern spotted owl is federally listed as Threatened. The California spotted owl distribution includes mountains in the southern Cascade Range of northern California south along the west slope of the Sierra Nevada and in mountains of central and southern California nearly to the Mexican border (Shuford and Gardali 2008). The California spotted owl is listed as a Species of Special Concern in California. Both subspecies utilize forested habitat with variable structure and species composition, moderate to high canopy closure, downed woody debris, large trees with cavities and snags, an abundance of large dead wood on the ground, and open space within and below the upper canopy for the owls to fly (Shuford and Gardali 2008, USFWS 2011). Small to medium-sized mammals, primarily rodents, are this owl's main foods. Northern Flying Squirrels (*Glaucomys sabrinus*) and woodrats (*Neotoma* spp.) are usually the predominant prey items, but the owls will take other prey species such as the red tree vole (*Arborimus longicaudus*), red-backed voles (*Clethrionomys gapperi*), mice, rabbits and hares, and birds (Shuford and Gardali 2008, USFWS 2011). Both subspecies are experiencing population declines throughout their entire range (USFWS 2011, SNAMP 2012).

Barn Owl

The barn owl (*Tyto alba*) is a year round resident across multiple habitats from sea level to 1680 m (0-5500 ft) in California, including grassland, chaparral, riparian, wetlands, and urban/suburban areas. Dense forest and desert habitat is typically avoided. Primarily feeds on mice, rats, voles, pocket gophers, and ground squirrels, but will also take shrews, insects, crustaceans, reptiles, and amphibians. Small birds are an important food source in the winter. The PIF-based U.S. and Canada BBS population estimate for this species is 300,000 (moderate data quality); and a 60,000 estimate for California (good-moderate data quality) (Rich et al. 2004). BBS data for California indicates a decreasing trend of 3.8% from 1966-2010, and 13.8% from 2000-2010 (Saucer et al 2011). However, BBS data for this species is noted with considerable deficiencies due to the nocturnal behavior of the species. Noted declines throughout North America have been attributed to use of pesticides, reduced availability of nests sites, severe winter weather, and loss of foraging areas (Preston and Beane 2009).

Short-eared Owl

The short-eared owl (*Asio flammeus*) inhabits grassland, marshlands and agriculture land in certain areas of California. Small resident populations inhabit the Great Basin region and the Sacramento–San Joaquin River Delta, whereas breeding in the central coast and the San Joaquin Valley has been sporadic (Shuford et al. 2008). Numbers in the state can vary significantly due to vole cycles making population abundance and trend hard to estimate; as many as 50 pairs breed in the state when vole numbers are low, and 500 breeding pairs when vole numbers are high (Shuford et al. 2008). The

PIF-based U.S. and Canada BBS population estimate for this species is 500,000 (moderate data quality); and a 5,000 estimate for California (moderate data quality) (Rich et al. 2004). BBS data for California indicates a decreasing trend of 7.5% from 1966-2010, and 7.6% from 2000-2010 (Saucer et al 2011). However, BBS data for this species is noted with considerable deficiencies due to the nomadic nature and overall low abundance of this species.

Long-eared Owl

The long-eared owl (*Asio otus*) is distributed widely across North America, from central Canada through northern Baja California, and occurs in California year round (Shuford et al. 2008). Northern California appears to be the population stronghold for this species, however, the range in California has retracted along the southern coast and has apparently become more broad, but still rare, in the Central Valley (Shuford et al. 2008). Breeding habitat consists of conifer, oak, riparian, pinyon-juniper, and desert woodlands that have open foraging habitat or are adjacent to open habitat such as grasslands, meadows, or shrublands (Preston and Beane 2009). Preferred prey include voles and other rodents, but occasionally birds are taken as well (Preston and Beane 2009). The PIF-based U.S. and Canada BBS population estimate for this species is 40,000 (moderate-poor data quality); and a 3,000 estimate for California (moderate data quality) (Rich et al. 2004). It is difficult to determine abundance and trends for this species, but quantitative evidence points to declines in California. Declines are likely due to the loss of riparian habitat throughout its range (Preston and Beane 2009).

Burrowing Owl

The burrowing owls (*Athene cunicularia*) is broadly distributed throughout North American, and a year round resident throughout much of California such as the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley (Shuford et al. 2008). This owl species nests underground typically in ground squirrel or prairie dog burrows. Habitat includes open areas gently sloping areas with low vegetation, such as grassland, steppe, and deserts; however human environments are utilized too, such as agriculture fields, golf courses, cemeteries, airports, and vacant lots (Preston and Beane 2009). Primary prey includes insects (grasshoppers, crickets, moths, beetles) and small mammals (mice, voles, shrews), but will take other prey they can capture as well (Preston and Beane 2009). The PIF-based U.S. and Canada BBS population estimate for this species is 600,000 (good-moderate data quality); and a 170,000 estimate for California (good-moderate data quality) (Rich et al. 2004). The Imperial Valley holds one of the largest concentrations of breeding burrowing owls. BBS data for California indicates a decreasing trend of 1.5% from 1966-2010, and 0.2% decrease from 2000-2010 (Saucer et al 2011). Declines may be due to loss of habitat, habitat alteration, and land maintenance.

Western Screech Owl

The Western screech owl (*Megascops kennicottii*) ranges across the western U.S, and is thought to be non-migratory throughout much of its range. It inhabits low elevation woodlands, deserts, riparian forests, and parks or large gardens in suburban areas (Preston and Beane 2009). Prey consists primarily of small rodents, but birds, amphibians, reptiles, fish, insects, slugs, snails, and worms will also be taken (Preston and Beane 2009). There are some concerns about population declines due to habitat

loss (Cannings and Angell 2001). And in the Pacific Northwest, some evidence suggests the recent arrival of the barred owl is putting some predation pressure on screech owl populations (Preston and Beane 2009). The PIF-based U.S. and Canada population estimate for this species is 270,000; a "guesstimate" accuracy rating and a "good" precision rating (USFWS 2007). BBS data for California indicates a 0.9% annual decrease, and the survey-wide trend indicates a 1.9% annual decrease (Saucer et al 2011).

Flammulated Owl

The flammulated owl (*Otus flammeolus*) is highly migratory and breeds in the North Coast and Klamath Ranges, the Sierra Nevada, and in mountains of southern California, finding nest sites in old woodpecker cavities. This owl inhabits coniferous forest, from lower elevation ponderosa pine to higher elevation red fir forests, preferring low to intermediate canopy closure and areas with small openings and edge habitat (Preston and Beane 2009). Prey is almost exclusively insects and other arthropods, including moths and beetles (Preston and Beane 2009). Scientific data is lacking for this species, and further studies are needed to understand demography, population dynamics, seasonal movement, prey relations, and habitat preference. Abundance estimates and population trends are hard to determine for this species due to lack of information and lack consistent monitoring efforts over time. The PIF-based U.S. and Canada BBS population estimate for this species is 300,000 (Rich et al. 2004). BBS estimate is noted as "very poor" for this species.

Northern Saw-whet Owl

The Northern saw-whet Owl (*Aegolius acadicus*) is resident throughout much of California, except the southeastern desert regions. Movement patterns consist of altitudinal movements in response to weather conditions (Preston and Beane 2009). It inhabits most mature forested habitats with intermediate canopy closure, including riparian, oak, pine and fir (Preston and Beane 2009). Small mammals, primarily mice, make up the majority of the diet throughout the year, with small passerines taken often during migration (Preston and Beane 2009). Scientific data is lacking for this species, and further studies are needed to better understand population dynamics, seasonal movement, behavior, and breeding biology. Abundance estimates and population trends are hard to determine for this species due to irregular movement patterns, the secretive nature, and the variability across its range (Preston and Beane 2009). The PIF-based North American population estimate for this species is 2 million (Rich et al. 2004). This is a rough extrapolation from 2001-02 owl survey data from British Columbia, Alberta, Manitoba, Ontario, New Brunswick, Nova Scotia and Prince Edward Island. The population is probably declining as suitable habitat loss, but evidence for such a decline is lacking. Data obtained for BBS and CBC are not reliable because these owls are not frequently detected during surveys.

Northern Pygmy Owl

The Northern pygmy owl (*Glaucidium gnoma*) inhabits coniferous and mixed forests in western North America. Migration patterns are relatively unknown for this species, but altitudinal shifts likely occur in response to weather conditions (Preston and Beane 2009). During the breeding season they inhabit open forests with a selection of snags with old woodpecker cavities. Forest edges along openings are used to perch while hunting. The pygmy owl is rarely seen during the breeding season, but more frequently

seen in the winter months as it infiltrates urban/suburban areas to hunt (Preston and Beane 2009). This tiny owl feeds on a variety of small prey, including small mammals, birds, and insects, and occasionally reptiles and amphibians. Voles make up the bulk of their diet, with birds comprising most of the rest. Prey, including quail, captured can be as much as 3 times its own body weight (Preston and Beane). Abundance estimates and population trends are hard to determine for this species as they are difficult to locate and there are few targeted studies for this species. The PIF-based U.S. and Canada BBS population estimate for this species is 90,000 (good-moderate data quality); and a 25,000 estimate for California (good data quality) (Rich et al. 2004). BBS data for California indicates an increasing trend of 0.2% for both periods 1966-2010 and 2000-2010 (Saucer et al 2011). However, BBS data for this species is noted with considerable deficiencies. Data obtained for BBS and CBC are not reliable because these owls are not frequently detected during surveys.

CHAPTER 5

ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

EFFECTS OF FALCONRY ON WILD RAPTOR POPULATIONS

The level of capture of raptors from the wild (average of 108 birds per year statewide) is non-significant and minimal compared to the population as a whole; however local-level population impacts could be possible if a particular area were targeted for capture and therefore resulting in decreases productivity below a sustainable level. However, there is no scientific information available to indicate this is occurring anywhere in the state for any of the falconry species. A potential impact may be heightened if there are other impacts to the population, such as climate change, chemical contamination, habitat loss, or other disturbance factors. County-level data obtained from federal and state falconry reports in 2006-2010 show capture distributed across the state. For some species certain counties that have dominant capture, but due to incomplete reporting and follow-through it is difficult to determine specific locations falconers capture wild birds from across California. By way of better reporting of wild raptor capture as proposed in this project, the Department can assess potential impacts to local populations. If at any time it is determined that a local population is experiencing high capture levels due to falconry, impacts to that population should be analyzed and appropriate restrictions enacted.

Such was the case for Northern goshawk populations in the Tahoe Basin. In 1992, capture from the Tahoe Basin was prohibited due to declining goshawk abundance in the area and to limit disruption of a long term research study in the area. Currently, goshawk population numbers in the Tahoe Basin are small and productivity is average. The Tahoe Basin goshawk population is not a closed population, meaning immigration and emigration between other goshawk population centers are possible. However, this small population could be sensitive to disturbance and over-capture, especially during the breeding season.

Breeding populations of ferruginous hawks are rare and largely unmonitored throughout California, and capture of these individuals may impact California's breeding population. Also the ferruginous hawk is rarely used in the practice of falconry.

Migration counts and annual summer and winter survey data (i.e. BBS and CBC) all point to decline in trend for American kestrels in California since at least the 1980s. Habitat alteration, degradation, and loss may have the largest negative impact on kestrel populations in the state. Other threats include pesticide or rodenticide poisoning, decreased prey abundance, and collisions with aircraft and wind turbine blades. These cumulative impacts, combined with falconry capture may affect local populations; but until further research is conducted, it is impossible to say what level of impact that may be. Current capture levels of wild kestrel populations are relatively small and evenly distributed across the state indicating that current level of falconry capture is minimal.

The prairie falcon shows increasing trends in California according to CBC survey data, whereas BBS survey data is inconclusive. However, some local populations may be

experiencing declines (e.g., Inyo/Mono region, Lake Tahoe, Klamath Basin) while others have been experiencing increases (e.g., Mojave Desert, coastal ranges in California, Modoc Plateau). Given these variances in statewide population centers, the location and level of falconry capture may affect local populations; but until further research is conducted, it is impossible to say what level of impact that may be. The falconry hunting and authorized capture of wild raptors proposed in these regulations will continue the existing capture of wild raptors by licensed falconers at similar levels to the present. There is anticipated to be an increased level of monitoring and tracking of wild raptor capture and possession by falconers because of the proposed regulations and reporting requirements.

EFFECTS OF FALCONRY ON THE WELFARE OF THE INDIVIDUAL CAPTIVE RAPTORS

The Department is unaware of any data to suggest that individual raptors in captivity would be compromised physically or behaviorally provided adequate housing and care-giving standards are followed. Falconers are required to meet housing and facility standards mandated by the USFWS, and must be knowledgeable on the care and upkeep of raptors prior to obtaining a bird, as well as the practice of falconry. New falconers, at the Apprentice-level, are sponsored by experienced falconers only.

Data obtained from the state and federal falconry reporting forms for 2006 through 2010 do not show a significant number of deaths attributed to the practice of falconry. Mortality reported in 2006 through 2010 totaled 68 individuals, and causes varied from disease, predation, and automobile strikes. Red-tailed hawk, American kestrel and Northern goshawk had the highest level of mortality; and nestling and immature raptors accounted for approximately one-third of mortalities. In general, mortality rates for raptors in the wild are quite high, especially for first year birds. In contrast, mortality rates for wild raptors in captivity were low. The falconry hunting and explicit care and treatment standards for raptors proposed in these regulations will continue the possession of captive raptors by licensed falconers. There is expected to be an increased level of care and treatment of captive raptors, increased enforcement and compliance with regulations, and improved collection of data on captive raptors with the implementation of this proposed project.

EFFECTS OF FALCONRY ON TARGETED PREY SPECIES, NON-TARGET SPECIES, AND LISTED SPECIES

Falconers are required to comply with state hunting regulations (species, seasons and bag limits), and acquire appropriate hunting licenses. Some falconers suggested revision of hunting regulations to broaden the species that can be hunted and to lengthen the hunting season. However, this type of regulation change is separate from the purpose of this document.

A large portion of targeted prey from falconry consists of cottontail rabbits and jackrabbits. Few instances of non-targeted prey take, and no listed species take, were reported in the game surveys of 2005 and 2011. The falconry hunting proposed in these regulations will continue the sport and take of a limited number of prey species (as described in the environmental setting background). There is not expected to be any substantial change from the current baseline capture of prey species in California.

EFFECTS OF CAPTIVE-BRED, HYBRIDS, OR NON-NATIVE FALCONRY RAPTORS ON NATIVE RAPTOR POPULATIONS

Concerns about the potential for lost or escaped birds, whether captive-bred, hybrid, or exotic, to successfully establish and breed in the wild have been considered and evaluated by various experts in raptor biology, genetics and population management. Potential impacts include competition wild populations for resources (food and habitat) and altering the genetic pool if breeding is successful and hybrid individuals are fertile.

Hybridization between raptor species and between escaped raptors has been documented; however, the impacts on wild populations have been inconclusive (Morris and Stevens 1971, Oliphant 1991, Clark and Witt 2006, Fleming et al. 2011). Offspring of hybrids face many barriers to establishment, including behavioral and physiological barriers, genetic barriers, inexperience, and imprinting on humans. Fleming et al. 2011 points out that lost falconry raptors are generally dispersed across the landscape and thus would be less likely to establish in the wild due to decreased ability to find food, shelter, and mate in the wild. Other research has shown that captive raptors have lower survival in the wild than wild-reared raptors, and that most escaped falconry raptors likely die within days of being lost (Brown et al. 2006, Fox and Chick 2007). Conversely, some research has shown that captive-bred raptors, such as the peregrine falcon, have successfully established in the wild (Holroyd & Banasch 1990, Kenward et al. 1981).

Falconers are required to fly hybrid, non-native and captive-bred raptors with telemetry units to allow more successful and expeditious return. Sometimes hundreds to thousands of dollars are used to purchase telemetry tracking equipment for falconry birds. Raptors that escape from housing facilities, without telemetry units, are less likely to be found. In either case, typically falconers go to great lengths to recover lost birds, due in part to the tremendous amount of time and effort that a falconer expends to train a raptor for falconry.

It is unclear how many lost raptors are recovered. This uncertainty points to the need for better reporting and tracking capability as proposed in this project. Overall, the effects of raptors on native wild populations of raptors is considered insignificant in California as a result of falconry practices.

EFFECTS OF FALCONRY ON RECREATIONAL AND WILDLIFE VIEWING OPPORTUNITIES

The practice of falconry in itself does not pose a negative impact to recreational or wildlife viewing opportunities. On the contrary, falconry is a recreation in itself. Potential impacts to wildlife viewing only arise as falconers access wild nests to obtain birds, or when immature or adult birds are trapped, and only when these activities are done in areas with high recreational value. There is a potential that falconers will access nests that are in optimal public viewing areas. Current regulations do not restrict where a falconer collects there birds.

There is no substantial change in recreational or viewing opportunities anticipated as a result of the proposed action.

EFFECTS OF FALCONRY ON PUBLIC SAFETY

There are no known impacts to public safety.

CHAPTER 6

ANALYSIS OF ALTERNATIVES

ALTERNATIVE 1 – No Change in California Falconry Regulations

Advantages of This Alternative

Apart from saving state money and time, not changing the California Falconry Regulations would have no advantages.

Disadvantages of This Alternative

If California regulations are not revised to meet the federal standard by January 1, 2014, the practice of falconry will cease to be legal in the state. Falconers practicing this sport in the state would lose their licenses and their captive birds would be subject to repossession. If repossession of raptors occurred the state would have no resources to properly care for raptors now in the care of licensed falconers. In addition, the Department would lose revenue from the licenses falconers are now required to possess.

Conclusions Regarding This Alternative

This alternative is disadvantageous to both falconers and the Department and is not considered the preferred alternative.

ALTERNATIVE 2 – Strict Adoption of Federal Regulations

Advantages of This Alternative

Adopting the federal falconry regulations strictly would save the state resources and time. Such a change would be an administrative project rather than an environmental project as no changes from the present situation as it relates to wildlife and species management would occur.

Disadvantages of This Alternative

There are several state laws in addition to federal laws that the Commission must comply with before adopting new falconry regulations. First and foremost are the California Environmental Quality Act (CEQA, Public Resources Code, § 21000 et seq.) and the Administrative Procedure Act (APA, Government Code, § 11340 et seq.). Both of these acts require the Commission to provide notice of the proposed rulemaking to interested parties and consider public comments it receives during formal public comment periods. CEQA may also require the Commission to prepare one or more environmental documents, which can take many months, which evaluate various potential environmental impacts. In addition, after it is adopted, the APA requires another government agency, the Office of Administrative Law, to review the falconry regulations and all other newly adopted rules to determine each rule's necessity, authority, clarity, consistency, reference, and nonduplication. If OAL finds that the new falconry regulations do not meet one or more of these standards, the Commission might have to start the rulemaking process over. While both of these acts can lengthen the rulemaking process considerably, they also allow members of the public and the

Commission to become better informed and help the Commission to adopt rules that carefully consider known impacts.

Other state laws and regulations give certain protections to raptors beyond the federal regulations, and hence, there are some items in the federal regulations that the state cannot strictly adopt straightaway. For instance, the state has a fully protected statute (see Fish and Game Code Section 3511) that gives added protection to golden eagles and peregrine falcons. The federal regulations allow capture of both of these species.

Adopting the federal regulations without first assessing the populations of raptors within the state of California may lead to allowance of species that are in local or statewide decline.

Regulation that would be unique to the state would not be addressed if federal regulations were adopted strictly.

Conclusions Regarding This Alternative

To meet the conditions of state law and regulations, an environmental assessment of falconry should be conducted. This assessment will benefit the states resources by thoroughly considering effect to the species involved, as well as the details of implementing falconry within the state. This includes the development of a database and online reporting system, assessment of fees, logistics of inspections, restrictions or access to raptor populations, etc. Therefore, this alternative is not considered the preferred alternative.

PROPOSED PROJECT - Revision of California Falconry Regulations

Advantages of This Alternative

This alternative meets the conditions of state law and regulations, as well as federal directives to the state. Revising the state regulations will serve to assess all aspects surrounding the implementation of falconry by the Department, including the development of a database and online reporting system, assessment of fees, logistics of inspections, restrictions, and access to raptor populations. Additionally, the proposed project will enhance the Department's ability to collect additional data on falconry practices in California so that future management can be based on improved knowledge of the practice.

Disadvantages of This Alternative

The primary disadvantage of this alternative is as a result of the federal USFWS vacating their oversight in falconry regulations and turning the regulatory process over to the state. This creates new and added burden to the state, for which cost recovery is necessary. For the Department to implement the proposed action requires extensive workload on the part of the Department to develop and recommend new regulations for the Commission to consider. This workload will require higher fees from falconers so that the program adequately recovers costs.

Conclusions Regarding This Alternative

The following summarizes suggestions for the Commission to consider for inclusion in the state falconry regulations.

License Term

The Fish and Game Code, Section 396(a), states, “The falconry license shall be valid for a license year beginning on July 1 and ending on the last day of June of the next succeeding calendar year. If issued after July 1 of any year, a falconry license is valid for the remainder of that license year.”

Tracking falconry licensees and activities will become more automated and less burdensome for the Department once the falconry program is completely on the Automated License Data System (ALDS). The Department recommends implementing a multi-year license term to help alleviate added reporting and processing for both the falconer and Department staff. However, changing the license term from a one year to multi-year license would require a legislative action as the falconry license term is defined in Fish and Game Code.

Examination

Both federal and California falconry regulations state that in order to be issued a falconry license, applicants must score at least 80 percent on the state examination to pass. The Department recommends this standard remain the same.

Complete Prohibition of Capture from the Wild

Complete prohibition of capture from the wild raptors would mean that falconers would only be able to obtain captive-bred, hybrid or exotic raptors for use in falconry. However, obtaining wild birds is intrinsic to the culture of falconry. Imposing this type of restriction would obstruct the traditional practice of falconry. The Department recommends continuing to allow capture from the wild for the purposes of falconry.

Falconry Classes

The USFWS recently changed the age of Apprentice falconers to at least 12 years, and General falconers to 16 years (USFWS 2007). Current California falconry regulations state Apprentice falconers must be at least 14 years of age, and General falconers must be at least 18 years of age. There was some concern for allowing 12-year olds to practice falconry as an Apprentice. However, falconry has a sponsorship program that creates a high level of oversight by experienced falconers, and the parent(s) or legal guardians would be legally responsible. Therefore, the Department recommends consistency with federal guidelines and decreasing the minimum age for Apprentice and General falconers to 12 and 16, respectively.

Federal falconry regulations state that Apprentice falconers may possess any species of raptors except threatened and endangered species, American swallow-tailed kite, Swainson’s hawk, ferruginous hawk, prairie falcon, peregrine falcon, northern harrier, flammulated owl, burrowing owl, and short-eared owl, any threatened or endangered species, and any species of eagle. General falconers may possess any species of raptors except threatened and endangered species and any species of eagle. And Master falconers may possess any species of raptor except threatened and endangered species and bald eagle.

For Apprentice falconers, red-tailed hawks and kestrels have been used historically for learning the techniques of falconry and how to care for raptors in possession. Some concern was expressed about the use of kestrels by Apprentices as these small raptors

can be high-strung and harder to maintain. However, the Department is unaware of any scientific information demonstrating decreased fitness or increased mortality of kestrels held in captivity by Apprentice falconers (Mullenix and Milsap, undated). Therefore, the Department has proposed that kestrels continue to be used by Apprentice falconers.

The Department proposes that Apprentice falconer may possess only red-tailed hawks or American kestrels, and General and Master falconers may possess from the wild any species allowed for wild capture in California. In addition, the Department proposes that General and Master classes of falconers be allowed to possess captive-bred or hybrid raptors that he/she is allowed to possess according to federal falconry regulations, with the exception of any state threatened and endangered species.

Current California falconry regulations allow Apprentice falconers to possess no more than 1 wild or captive-bred raptor, General falconers to possess no more than 2 wild or captive-bred raptors, and Master falconer to possess no more than 3 wild or captive-bred raptors. The new federal falconry regulations allow Apprentice falconers to possess no more than 1 wild, captive-bred, or hybrid raptor annually (raptors must not be imprinted on humans or captured from wild as nestling), General falconers to possess no more than 3 raptors, of which only 2 may be wild-caught, and Master falconers to possess no more than 5 wild raptors and any number of captive-bred or hybrid raptors. The Department concurs with the federal standards and recommends enacting the same limitations on number of raptors possessed by each falconry class.

Number Captured from the Wild

The federal regulations limit the number of raptors that can be captured from the wild to 2 annually per falconer. The Department feels it is in the best interest of raptor populations in California to limit the numbers to be captured from the wild. The Department concurs with this restriction and recommends implementation of this in the new state regulations.

Capture in Areas of High Recreational Viewing or Research Areas

Data available is not sufficient to determine whether capture of raptors impacts recreational viewing opportunity, and the Department has no information to indicate an effect. With proposed reporting requirements, the Department will be able to better assess this topic in the future if needed. The proposed falconry regulation prohibits capture on public land where falconry activities are prohibited, and private land without the permission from the land owner. This will likely limit falconry capture in some areas where there is ongoing research and recreational viewing.

Fully Protected Species

Golden eagles, bald eagles, white-tailed kites and American peregrine falcons are listed as Fully Protected species pursuant to Fish and Game Code section 3511(a)(1), “Except as provided in Section 2081.7, fully protected birds or parts thereof may not be captured or possessed at any time. No provision of this code or any other law shall be construed to authorize the issuance of permits or licenses to take any fully protected bird, and no permits or licenses heretofore issued shall have any force or effect for that purpose. However, the Department may authorize the taking of those species for necessary scientific research, including efforts to recover fully protected, threatened, or endangered species, and may authorize the live capture and relocation of those species

pursuant to a permit for the protection of livestock." Fully Protected species cannot be obtained from the wild for use in falconry.

Species Allowed For Wild Capture

Currently, species allowed in capture include: Northern goshawk, Cooper's hawk, sharp-shinned hawk, red-tailed hawk, ferruginous hawk, merlin, American kestrel, prairie falcon, and great horned owl. Table 10 lists raptors found in California, along with their population status, and recommendation for inclusion as a falconry species.

Eagles, peregrine falcon, and white-tailed kite are excluded from wild capture in falconry due to their Fully Protected status, as well as any threatened and endangered species. All other species that are not currently used for falconry in California were assessed based on population status or uncertainties, threats, use as a falconry species, and usefulness for hunting game.

Species	Population Status	Recommendation for Use in Falconry
Bald Eagle	State Endangered; Fully Protected	**No**, due to Fully Protected status. In addition, this species is not traditionally used in falconry practices.
Golden Eagle	Fully Protected; possible population declines in California	**No**, due to Fully Protected status, and population uncertainties.
Osprey	California "Watch List"; populations increasing in California	**No**, this species is not traditionally used in falconry practices.
White-tailed Kite	Fully Protected; possible population declines in California	**No**, due to Fully Protected status, and population uncertainties.
Peregrine Falcon	Fully Protected; stable or increasing population in California	**No**, due to Fully Protected status.
Prairie Falcon	Formerly a Species of Special Concern; declining abundance in some portions of California	**Yes**, however population status should to be monitored and use in falconry reassessed periodically
American Kestrel	High abundance, with overall decreasing population trends range-wide and in California.	**Yes**, however population status needs to be monitored and use in falconry reassessed periodically
Merlin	Stable, possibly increasing trend of wintering birds in California; unconfirmed accounts of rare breeding events in California	**Yes**
Northern Harrier	California Species of Special Concern; population status unknown	**No**, due population uncertainties
Swainson's Hawk	State Threatened	**No**, due to Threatened status
Harris's Hawk	California "Watch List"; limited distribution in California; possible population declines in North America	**No**, due to limited distribution in the state and possible population declines across their range.
Red-tailed Hawk	Stable population trend and abundance	**Yes**
Red-shouldered Hawk	Stable or increasing population in California	**Yes, recommend adding** as new falconry species.
Ferruginous Hawk	Population concerns in northern portions of its range (Canada and Washington); low breeding abundance in California	**No, recommend eliminating** as falconry species due to population declines in the north, low breeding abundance in California, and this species limited use in falconry.
Rough-legged Hawk	Winter migrant to California; populations seem to be stable	**No**, as this species is not typically used in falconry practices.
Northern Goshawk	Population stable statewide, with some concern in localized areas (e.g. Lake Tahoe Basin) where population numbers are largely unknown.	**Yes**, however population status needs to be monitored, especially in the Lake Tahoe Basin, and use in falconry reassessed periodically
Cooper's Hawk	Stable population trend and abundance	**Yes**
Sharp-shinned Hawk	Increasing population trend and stable abundance	**Yes**

Species	Population Status	Recommendation for Use in Falconry
Great Grey Owl	State Endangered	**No**, due to Endangered status
Great-horned Owl	Increasing population trend and abundance	**Yes**
California Spotted Owl	California Species of Special Concern; noted declines throughout the range.	**No**, due to population uncertainties
Northern Spotted Owl	Federally Threatened	**No**, due to Threatened status
Barred Owl	Increasing populations throughout western North America	**Yes, recommend adding** as new falconry species
Barn Owl	Possible population declines in California	**No**, due to population declines, in addition, this species is not traditionally used in falconry practices
Short-eared Owl	California Species of Special Concern; breeding population low in California; declines throughout western North America	**No**, due to population uncertainties, in addition, this species is not traditionally used in falconry practices
Long-eared Owl	California Species of Special Concern; population status unknown	**No**, due to population uncertainties, in addition, this species is not traditionally used in falconry practices.
Burrowing Owl	California Species of Special Concern; population declines in California	**No**, due to population declines, in addition, this species is not traditionally used in falconry practices.
Elf Owl	State Endangered	**No**, due to Endangered status
Western Screech Owl	Population status uncertain	**No**, due to population uncertainties, in addition, this species is not traditionally used in falconry practices.
Flammulated Owl	Population status uncertain	**No**, due to population uncertainties, in addition, this species is not traditionally used in falconry practices.
Northern Saw-whet Owl	Population status uncertain	**No**, due to population uncertainties, in addition, this species is not traditionally used in falconry practices.
Northern Pigmy-Owl	Population status uncertain	**No**, due to population uncertainties.

Table 10. Recommendations for Falconry Raptors to be Allowed for Wild Capture in California

Level of Wild Raptor Species Capture

Regulating the capture of raptors from the wild for use in falconry is warranted. A reasonable strategy is to allow capture of wild raptors, but restrict the number of animals that can be possessed and the species allowed to those that are not experiencing population declines, those that are not experiencing significant threat (e.g., habitat loss, human disturbance), and those that are typically used in falconry.

Capture numbers for falconry raptors in California are summarized in Table 11. In 2006 through 2010 there were 541 (108/year) raptors captured from the wild for the purposes of falconry. By far, red-tailed hawks were the most captured species, at 41% of the total.

Species	Capture 2006-2010 (total over 5 yrs)	Percent of Total Capture	Average Capture (per yr)
Red-tailed Hawk	223	41%	44.6
Cooper's Hawk	80	15%	16
American Kestrel	70	13%	14
Prairie Falcon	46	9%	9.2
Northern Goshawk	46	9%	9.2
Merlin	44	8%	8.8
Sharp-shinned Hawk	17	3%	3.4

Great Horned Owl	13	2%	2.6
Ferruginous Hawk	1	0.002%	0.2
Total	541	100%	108.2

Table 11. Numbers of raptors captured from the wild over 5 years (2006-2010), and average number of raptors captrued per year.

Accurate population estimates of many raptor species in California are for the most part lacking. Most species have PIF population estimates for California, but many of these estimates are somewhat inaccurate due to variable species detection rates on BBS roadside surveys. In the federal Environmental Assessment for the practice of falconry (USFWS 2007), the USFWS used deterministic matrix model to assess how falconry capture affects raptor populations. Proportion of juveniles in the population (essentially the proportion of the population that is able to be captured) was estimated from observed population structure in species-specific population models at equilibrium. The best demographic data was used where available; giving a preference to studies that had long-term mark-recapture or radio tracking data. Maximum capture rates were set at up to 5% of the annual production for species with sufficient demographic data, and down to 1% for species without sufficient demographic data.

By emulating the federal process for falconry raptors currently allowed we were able to estimate maximum sustainable capture level for raptor populations in California. Accordingly, each species has a maximum capture level in California as reported in Table 12. These maximum capture levels represent capture levels for these species for purposes of determining whether anticipated capture resulting from the project will be significant. Best available data were used for California-specific population estimates.

Species	California Population Estimate	Proportion of Juveniles	Number of Juveniles Available for Capture	Max Capture Rate[e]	Max Capture Level	Average Annual California Capture[f]
Red-tailed Hawk	160,000 [a]	.30	48,000	4.5%	2160	44.6
Cooper's Hawk	31,000 [a]	.50	15,500	1%	155	16
American Kestrel	240,000 [a]	.60	144,000	1.5%	2160	14
Prairie Falcon	2,900 [a]	.50	1,450	1%	14.5	9.2
Northern Goshawk	3,000 [a] 2890-3844 [b]	.30	1,010	5%	50.5	9.2
Merlin	N. Amer. - 600,000 [a, c] BCR 5 - 10,000 [a, d]	.60	6,000	1%	60	8.8
Sharp-shinned Hawk	12,000 [a]	.50	6,000	1%	60	3.4
Great Horned Owl	110,000 [a]	.30	33,000	1%	330	2.6
Ferruginous Hawk	50 [a]	.30	15	1%	0.15	0.2
Red-shouldered Hawk	55,000 [a]	.30	16,500	1%	165	N/A
Barred Owl	N. Amer. - 600,000 [a,c] BCR 5 - 3,000 [a]	.30*	900	1%*	9	N/A

Table 12. Population estimates and calculated maximum capture rates for California, and comparison of actual annual capture in California

[a] Estimate from Partners In Flight (Rich et al. 2004)

[b] Dunk et al. (in prep.a) estimated 1445-1922 suitable breeding territories in California. This estimate of the population assumes every territory accounts for 2 individuals. This estimate does not account

for floaters and subadults. For capture maximum calculations, the 3367 estimate was used (average of 2890-3844
[c] There are no California specific population estimate available
[d] PIF estimates the merlin and barred owl populations for BCR 5 (Pacific northwest coast of California); this estimate was used in calculations
[e] Recommended capture rate is from USFWS (2007)
[f] Annual capture in California was averaged according to reported capture levels over 5 years (2006-2010)
*Proportion of juvenile and percent young values were used from great horned owl values

To ensure falconry capture remains negligible for the health of raptor populations, the federal Environmental Assessment recommended that population size estimates, demographic parameters, and falconry capture rates should be reassessed and recalculated for each species over time. It was suggested that for species with declining BBS trends, this reassessment should happen every 3 years, and every 6 years for other species.

Red-tailed Hawk. From 2006 through 2010 an average of 44.6 red-tailed hawks has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 1260 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for red-tailed hawks is over 48 times the average annual capture of this species, and would allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is far below the threshold of significance for this species, the project will not significantly affect red-tailed hawk populations.

Cooper's Hawk. From 2006 through 2010 an average of 16 Cooper's hawks has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 155 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for Cooper's hawks is nearly 10 times the average annual capture of this species, and would allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is far below the threshold of significance for this species, the project will not significantly affect Cooper's hawk populations.

American Kestrel. There is a documented decline for American kestrel populations across western North America. The only abundance estimate for California is extrapolated from BBS survey data, and indicates 240,000 kestrels. From 2006 through 2010 an average of 14 American kestrels has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 2160 birds statewide. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for American kestrels is just over 154 times the average annual capture of this species, and would allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is far below

the threshold of significance for this species, the project will not significantly affect American kestrel populations.

BCR-level population estimates and associated and associated maximum capture level at the BCR-level based on the USFWS (2007) model are noted in Table 13. By BCR, annual capture ranges between 54 and 1350 birds. BCR 5, 9, 32 and 33 include areas outside of California and cannot strictly be applied to California alone. BCR 15 (Sierra Nevada) lies completely within California and has maximum capture rate of 72 birds annually. Due to the way falconry data is reported, we cannot determine how many of the kestrels historically captured were in the Sierra Nevada.

BCR	California Population Estimate	Proportion of Juveniles	Number of Juveniles Available for Capture	Max Capture Rate[e]	Max Capture Level
5 – Northern Pacific Rainforest	6,000	.60	3,600	1.5%	54
9 - Great Basin	150,000	.60	90,000	1.5%	1350
15 - Sierra Nevada	8,000	.60	4,800	1.5%	72
32 - Coastal California	150,000	.60	90,000	1.5%	1350
33 – Sonora and Mojave Desert	50,000	.60	30,000	1.5%	450

Table 13. Population estimates and calculated maximum capture rates for kestrels in California

The threshold of significance level for kestrels is below the average annual capture statewide and in BCR 15 for this species, and would allow for unforeseen increases in capture in the future. Therefore, the project will not significantly affect American kestrel populations. However, if kestrel numbers continue to decline statewide or regionally at a precipitous rate then the Department should reassess maximum allowed for capture.

Prairie Falcon. From 2006 through 2010 an average of 9.2 prairie falcons has been captured annually in California (Table 11). Note, average capture was 9.2 individuals; however wild capture by year was 14 individuals in 2006, 10 individuals in 2007, 7 individuals in 2008, 6 individuals in 2009, and 9 individuals in 2010. This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 14.5 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for prairie falcons is nearing the average annual capture rate, and would not allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is nearing the threshold of significance for this species, the Department recommends enacting a capture quota of 14 birds statewide annually for this species.

Northern Goshawk. From 2006 through 2010 an average of 9.2 Northern goshawks has been captured annually in California (Table 11). This level may increase by one under the proposed project by opening the Lake Tahoe Basin for falconry capture. The maximum capture level based on the USFWS (2007) model noted in Table 12, would allow for an annual capture of 50.5 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for Northern goshawks is nearly 5 times the average annual capture of this species, and would allow for unforeseen increases in capture in the future. Therefore, because the expected capture is below the threshold of significance for this species, the project will not significantly affect Northern goshawks

populations at the statewide level. However, if goshawk numbers are noted to decline statewide or regionally, or if annual falconry capture approaches the recommended maximum capture, then the Department should reassess maximum allowed capture at a statewide or regional level.

Lake Tahoe Basin

Restrictions on goshawk capture in Lake Tahoe Basin were enacted in 1992 due to the documented decrease in the breeding population, and conflicts with ongoing research efforts in the area. The specific research study that was ongoing at the time of the restriction has concluded. It is uncertain whether the breeding population has stabilized in the Lake Tahoe Basin because no long-term monitoring effort has been implemented in that area, and much of the monitoring in this area is associated with project-level surveys (USFS Tahoe Basin Management Unit personnel, personal communication 2012). Disturbance from human recreational activities has also been documented to impact goshawks in this area (Dunk et al.in prep. b, Morrison et al. 2011). The goshawk population statewide seems stable or increasing, but this trend may not represent the population status in the Tahoe Basin.

Current data from the U.S. Forest Service, Lake Tahoe Basin Management Unit (LTBMU) has documented 12 reproductively active pairs at least once during 2009 to 2011; and another 6 pairs that have been reproductively active at some point during 2002 to 2008, but not during 2009 to 2011 (USFS Tahoe Basin Management Unit personnel, personal communication 2012). It is difficult to determine the numbers of nonbreeders in the Tahoe Basin as goshawks are less territorial when not breeding, and therefore difficult to detect. Four areas in the Tahoe Basin have documented regular year-round use by single goshawks. Therefore, a population estimate based in LTBMU monitoring is 40 individuals. According to habitat suitability models produced by Dunk et al. (in prep.a), it appears much of the Lake Tahoe Basin has moderate to high quality habitat. If all moderate to high suitable habitat were occupied, this would suggest that more goshawk pairs and single residents exist in the Lake Tahoe Basin. However, until a long-term monitoring plan is implemented or a habitat suitability model is developed specific to the Lake Tahoe Basin, it is difficult to estimate population abundance or trend for this area.

The maximum capture level was assessed for a population estimate of 40 in the Lake Tahoe Basin (Table 14). At an estimated population of 40 individuals, maximum capture level is 0.6.

Population Estimate	Proportion of Juveniles	Number of Juveniles Available for Capture	Max Capture Rate	Max Capture Level
40	.30	12	5%	0.6

Table 14. Population estimates and calculated maximum capture rates for kestrels in the Lake Tahoe Basin.

The Department's recommendation is to re-open the Lake Tahoe Basin up to falconry capture. Limit capture to one goshawk annually in the Tahoe Basin. When more data is available on goshawk abundance and trend for the Lake Tahoe Basin, the maximum capture level for this area should be reassessed.

Merlin. The population estimate used to determine maximum capture levels for merlin was the estimate from BCR 5 (Pacific Northwest Coast), which equaled 10,000 individuals. BCR 5 was used in analysis because there is no California specific estimate available. BBS data for merlin is insufficient since it only occurs mainly during winter months and is rarely detected during BBS surveys. There are rare, but unconfirmed, breeding records of merlin within California.
From 2006 through 2010 an average of 8.8 merlins has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 60 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for merlin is nearly 7 times the average annual capture of this species, and would allow for unforeseen increases in capture in the future. Therefore, because the expected capture is below the threshold of significance for this species, the project will not significantly affect merlin populations. There is some unconfirmed data that merlins may breed in California in very small numbers. Even limited capture of nestlings or juvenile merlins produced in California may impact California's breeding population.
Therefore the Department also recommends that capture be limited to outside the breeding season (August 15 to February 28) to ensure any breeding individuals do not risk capture.

Sharp-shinned Hawk. From 2006 through 2010 an average of 3.4 sharp-shinned hawks has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 160 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for sharp-shinned hawks is 47 times the average annual capture of this species, and would allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is far below the threshold of significance for this species, the project will not significantly affect sharp-shinned hawk populations.

Great-horned Owl. From 2006 through 2010 an average of 2.6 great horned owls has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Even so, maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 330 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. The threshold of significance level for great horned owls is nearly 127 times the average annual capture of this species, and would allow for large unforeseen increases in capture in the future. Therefore, because the expected capture is far below the threshold of significance for this species, the project will not significantly affect great horned owl populations.

Ferruginous Hawk. During 2006 to 2010 only one ferruginous hawk nestling was captured from the wild from Lassen County, which equates to an average of 0.2 ferruginous hawk has been captured annually in California (Table 11). This level is not expected to increase under this alternative. Maximum capture level based on the

USFWS (2007) model noted in Table 12, allows for an annual capture of 0.15 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. Even with the low numbers captured in California, the threshold of significance level for ferruginous hawks is over the average annual capture rate, and would not allow for unforeseen increases in capture in the future.

A few breeding pairs have been documented in this the Northeast corner of California; however abundance during the breeding season is unknown. There may also be a small breeding population in the desert region of California, but this is unconfirmed. Therefore, because the expected capture is over the threshold of significance for this species, because California only has a small breeding population, and because this species is experiencing population uncertainties in their northern range, the Department recommends eliminating ferruginous hawks from the species allowed for wild capture in California.

Red-shouldered Hawk. Red-shouldered hawks have not historically been captured in California. The maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 165 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. Annual capture levels are not anticipated to exceed the maximum capture level under the proposed alternative. Therefore, the project will not significantly affect red-shouldered hawk populations. The Department recommends adding red-shouldered hawk as a species allowed for capture due to stable populations in California.

Barred Owl. The population estimate used to determine maximum capture levels for barred owls was the estimate from BCR 5 (Pacific Northwest Coast), which equals 3,000 individuals. BCR 5 was used in analysis because there is no California specific estimate available. Barred owls have not historically been captured in California. The maximum capture level based on the USFWS (2007) model noted in Table 12, allows for an annual capture of 9 birds. This threshold level is the number of birds the Department believes could be captured from the wild without impacting the population. It is not expected that annual capture levels will exceed the maximum capture level under this alternative as their use in falconry is expected to be similar to great horned owl capture. Therefore, the project will not significantly affect barred owl populations. Since the barred owl has not been captured in California before, it is uncertain the interest falconers will capture in this species. It is reasonable to assume that interest will be somewhat similar to that of the great horned owl which currently experiences low capture rates in California. It is important to note that the barred owl population in California is likely higher than the estimate used in the analysis that determined maximum capture rate under this alternative. Data indicates barred owls are expanding their range in California. The Department recommends adding barred owl as a species allowed for capture due to increasing populations in California.

Drawings for Capture of Prairie Falcon and Northern Goshawk

The Department proposes that prairie falcon and Northern goshawk in the Tahoe Basin have an annual capture quota. The Department proposes to implement a random

drawing, whereby 14 applicants and one (1) applicant, respectively, will be awarded a capture permit for prairie falcon and Northern goshawk during the license year. The Department proposes to administer an annual random drawing for capture of these species in each regulatory year (July 1 to June 30).

The Department will accept applications from residents and nonresidents that possess a General or Master falconry license at the time of application. Unsuccessful and successful applicants will be notified by the Department as soon as practical. Successful applicants may choose whether or not to accept the Special Raptor Capture Permit. The Department will award unclaimed permits to alternates in the order they were drawn.

Wild Nestling Capture

Under current regulations, falconers may access nests for wild capture of raptors. This includes raptors from one day old nestlings to young just prior to fledgling. Available literature suggests that the most sensitive time of the nesting cycle is during incubation and early nestling phases. During this time some raptors are more likely to abandon the nest if disturbed. Behavior and responses vary in individual birds and among species, but generally this period remains the most sensitive. To avoid nest abandonment and impacts to productivity, nest access and nestling capture by falconers should be limited until after nestling are at least three weeks old. It will be the responsibility of the falconer to monitor the nest to determine the best time to access nests given age of nestlings and behavior of the breeding pair. In addition, the federal falconry regulations state that falconers may capture no more than two nestlings during the license term, and at least one nestling must be left in the nest at all times. The Department concurs with federal limitations on the number of nestlings to be captured per year and per nest.

Timing of Capture from the Wild

It is not clear why a passage bird and eyass bird restriction was in place in California. It may have been initiated to alleviate stress on breeding and wintering populations by limiting the time frame falconers could obtain a wild raptor. However, this practice is not required since there is an annual limit of two wild raptors per year per falconer. In addition, the short time frame has been an issue for many falconers wishing to obtain pre-fledge raptors. The time frame has forced falconers to obtain raptors younger than desired. The Department proposes that the capture season for passage and eyass raptors be eliminated.

Hacking

The new federal regulations allow falconers the option of hacking their falconry raptors for the purpose of conditioning and training a young raptor to hunt, and as a method of “soft release” back into the wild. The Department does not have any concerns with allowing this activity. However the Department proposes that hybrid, captive-bred, and exotics that are not intended for release back into the wild are flown with radio tracking devices so they may be found if lost.

Raptors from Rehabilitation Facilities

The new federal regulations allow falconers the option of assisting wildlife rehabilitators with conditioning an injured raptor for release back into the wild. The federal regulations stipulate how long a raptor can be in the possession of a falconer for these purposes

(i.e. 120 days). There is also the option for a falconer to obtain a raptor from a wildlife rehabilitator as long as the falconer can possess that species according to his/her falconry class and the rehabilitator approves the transfer. The Department does not have any concerns with allowing this activity or transfer according to federal regulations.

Release Back Into the Wild

Falconers often release wild raptors back into the wild after some period in captivity. To ensure that raptors are released in the appropriate habitat, the Department recommends falconers be required to release at or near the site that the raptor was originally captured. If the original site cannot be accessed or the habitat has changed significantly, the raptor should be released in an area with appropriate habitat for that species of raptor. A quick release back into the wild can be stressful to a raptor, and level of stress depends on amount of time the raptor has spent in captivity. Ensuring release in the proper habitat will help limit this stress to the extent possible.

Reporting

The new federal regulations require that all reporting on Federal Form 3-186A now be done at the national computer electronic reporting system on-line via the web site at https://migbirdapps.fws.gov/Falconry/srv/index.htm. The Department requires some reporting above and beyond what a falconer can enter on the online 3-186A form; therefore the falconer will have to report both electronically to the USFWS, and with paper forms to the Department. Once falconry licensing and reporting is made available via the ALDS, license, reporting, data entry and data tracking can be streamlined.

The Department recommends that falconers report take of targeted and non-targeted game species annually so that the Department can track this hunting practice as it does with other more common hunting practices in the state. Immediate reporting of incidental take of listed species is a current requirement of falconers.

Fees

The Fish and Game Code, Section 396(b) and (c), states, “For the license years beginning on or after March 1, 1987, the fee for a falconry license is a base fee of thirty dollars ($30) as adjusted under Section 713.” For the 2011/2012 fiscal year, the license fee is $75.45 (includes a 3% license buyer surcharge). A change to the license fee requires legislative action to modify Fish and Game Code; therefore at this time the license fee will not change, except as adjusted annually according to Fish and Game Code Section 713. Other fees associated with falconry will be addressed in CCR, Title 14, Section 703 at a later time as this process is the Department’s regulatory action rather than a Fish and Game Commission action . A summary of current 2011/2012 fees and proposed 2013/2014 fees are in Table 15.

Fee Title	Current Fee	Proposed Fee
Examination	None	$45.00
Application	$13.50	$13.75
Nonresident Falconer Rapture Capture Permit	$310.00	$319.00
Inspection Fee for up to 5 enclosures	None	$215.00
Inspection Fee for every enclosure over 5	None	$12.00
Fee for re-inspections	None	$175.00

Administrative Processing	None	$10.00
Drawing Application	None	$12.50
Special Raptor Capture Permit	None	$8.50

Table 15. The current 2011/2012 fees and the new proposed adjustments to falconry fees in Section 703.

Examination. The examination given to applicants wishing to obtain a falconry license will require oversight by Department staff. Exams are given at various Department offices throughout the state. The Exam Administrator will have to verify the identity of applicant through photo identification; verify the applicant provides all required information on the exam; verifying applicant is 12 years of age or older; search office records of previously taken falconry exams to verify that the applicant has not taken this examination within the previous three months; and must supervise the applicant during the exam. It is estimated that to address these needs at the time of an exam, the Department staff administering the exam will spend approximately 90 minutes, which will cost the Department approximately $45.

Application. Application fee for new licenses or renewals is in current regulations and will be set at $13.75 for the 2013/2014 fiscal year. The Department is not proposing to change this fee.

Inspections. Current California falconry regulations state that housing facility and equipment inspections may be conducted by a designee of the Department. Typically a General or Master falconer, the sponsor to the Apprentice, would inspect and approve the Apprentice's facilities. However, the Department recommends that inspections be conducted by Department personnel as the Department is ultimately responsible for the well-being of the raptor and the permit issued to the falconer, and is therefore proposing to utilize the Department Law Enforcement Officers to inspect falconry facilities. The Department has assessed the anticipated costs to implement this inspection program and based on its professional judgment, has estimated the annual costs for inspection of facilities and associated administrative work.

Permitted individuals and facilities for falconry occur throughout the state. Currently, the Department has approximately 575 active falconers throughout the state. On average, 20 facilities inspections occur per year. Typically these inspections are for new Apprentice facilities, and relocation of facilities for California licensed falconers. However inspections may also occur for new residents to California that wish to continue to practice falconry, re-inspections for facilities that do not pass initial inspections, or for violations or non-compliant issues. The estimated number of re-inspections per year is five. Falconry housing facilities typically have fewer than five enclosures to house falconry raptors, but some have more. Falconry facilities can vary from simple indoor facilities to large outdoor areas.

It is estimated that one Officer can inspect facilities with between 1-5 enclosures in his/her District, plus equipment and any associated falconry records, in approximately 60 minutes, and that one additional enclosure can be inspected in approximately 12 minutes.

An Officer may have to conduct a re-inspection for a wide variety of reasons. Some non-compliant issues or violations may be easily resolved and others may require a site

visit. Due to the complexities of a re-inspection, an estimate for the cost is difficult to assess. It was determined that the average time spent in re-inspections is 20 minutes.

Calculations for technology are difficult to assess. In the interest of simplicity and because determining actual costs is difficult, the Department is using a fee mainly based on use of computer, cell phones, office space, fax, administrative support; and office supplies.

Activity	Time	Cost
Inspection (up to 5 enclosures)	60 min inspection	$60.00
	2 hrs drive time	$120.00
	15 min processing paperwork	$15.00
	Materials and Supplies	$20.00
	Total	$215.00
Inspection (every enclosure over 5)	12 min per enclosure	$12.00
Re-inspection	20 min inspection	$20.00
	2 hrs drive time	$120.00
	15 min processing paperwork	$15.00
	Materials and Supplies	$20.00
	Total	$175.00

Table 16. Estimated Fees for Falconry Activities the Department will Conduct Related to Falconry Inspections

Administrative. The federal falconry regulations (CFR, Title 50, Section 21.29) require that falconers report activities to the electronic database. For falconers that are unable to enter activities into the electronic database, Department staff will enter it for them. Falconers wishing to have Department staff enter falconry activities for them may mail a completed hardcopy or email a completed electronic copy of federal form 3-186A, or falconers may call the Department to give them data directly. Either way, it is estimated that it will take Department staff approximately 20 minutes to enter the data for the falconer, which will cost the Department approximately $10.

Random Drawing. The Department is proposing to limit the number of prairie falcons per year to 14 annually, and to open Lake Tahoe Basin to one goshawk annually. The Department anticipates an increased interested in capture for the Tahoe Basin and have assumed approximately 50 licensed falconers may apply to participate in the drawing for these three species. The application fee and permit fee associated with the random drawing was determined to be $7.50 and $12.50, respectively, to cover Department staff time to process fees, administer the drawing, and notify all applicants, as well as supplies needed (paper, envelopes, ink, use of computer).

Forms

There are a suite of forms associated with falconry and are addressed in CCR, Title 14, Section 703. A list of proposed forms is in Table 17 below.

Form Title	Form #
New Falconry License Application	FG 360b
Falconry License Renewal Application	FG 360
Falconry Hunting Take Report	FG 360h
Apprentice Falconer's Annual Progress Report	FG 360c
Resident Falconer Resident Falconer Raptor Capture Recapture and Release Report	FG 360f
Raptor Facilities and Falconry Equipment Inspection Report	FG 360d
Special Raptor Capture Drawing Application	FG 360i
Nonresident Falconer Application for Raptor Capture Permit	FG 361
Nonresident Falconer Raptor Capture Permit and Report	FG 361a

Table 17. List of Proposed Falconry Forms (CCR, Title 14, Section 703)

LITERATURE CITED

Abundis-Santamaria, E. 2003. Aspergillosis in birds of prey. <www.aspergillus.org.uk> Accessed 2012 April 17.

Boni, Bill. August 1988. California Hawking Revisited. Pp. 10-15. California Hawking Club Newsletter.

Brown J.L., M.W. Collopy, E.J. Gott, P.W. Juergens, A.B. Montoya, W.G. Hunt. 2006. Wild-reared aplomado falcons survive and recruit at higher rates than hacked falcons in a common environment. Biological Conservation, 131: 453–458

California Department of Fish and Game. 2012. Falconry capture data 2006-2010. Unpublished data. Calif. Dept. Fish & Game, Nongame Wildlife dept. 1812 Ninth St. Sacramento, CA. 95811-7012.

California Hawking Club. 2008. The Journal of the California Hawking Club. California Hawking Club.

Carnie, S. Kent. 2011. A Brief History of Falconry in North America. North American Falconers Association (NAFA) website. http://www.n-a-f-a.com.

Carnie, S.K., and R.R. Rogers. 1996. A Quarter Century of American Falconry Regulation: An Example of Management/User Cooperation. In Wadsworth, K. G. and R. E. McCabe (Ed.): Transactions of the North American Wildlife and Natural Resources Conference, March 22-27, 1996, Bulletin of the Ecological Society of America, v.71, n.2 SUPPL., (1990): 78., pp. 142-149 Wildlife Management Institute Year and place: 1996 Washington, U.S.A.

Clark, W.S., and C.C. Witt. 2006. First Known Specimen of a Hybrid Buteo: Swainson's Hawk (*Buteo swainsoni*) and a Rough-legged Hawk (*B. lagopus*) from Louisiana. The Wilson J. of Ornithology, 118(1): 42-52.

Dunk et al. (in prep. a) chapter title in The Northern Goshawk in California: A Technical Assessment of Its Ecology and Status.

Dunk et al. (in prep. b) Experimental effects of recreation on Northern Goshawks.

Fleming, L.V., A.F. Douse, and N.P. Williams. 2011. Captive breeding of peregrine and other falcons in Great Britain and implications for conservation of wild populations. Endangered Species Research, 14: 243-257

Fox N.C., J. Chick. 2007. Falconry in the United Kingdom: an audit of the current position prepared by the Hawk Board. Hawk Board Publications. Available at www.hawkboard-cff.org.uk/uk_falconry_audit.pdf (accessed May 25, 2012)

Holroyd, G. L. , and Banasch, U. 1990 . The Reintroduction of the Peregrine Falcon, Falco-Peregrinus-Anatum, into Southern Canada. Canadian Field Naturalist, 104: 203-208.

International Association for Falconry and Conservation of Birds of Prey (IAF) website. 2006. http://www.iaf.org.

Kenward RE, Marquiss M, Newton I. 1981. What happens to goshawks trained for falconry? J. of Wildlife Management, 45:802–806

Millsap, B.A. and G.T. Allen. 2006. Effects of falconry harvest on wild raptor populations in the United States: theoretical considerations and management recommendations. Wildlife Society Bulletin 34(5):1392-1400.

Morris, J., and R. Stevens. 1971. Successful crossbreeding of a peregrine tiercel and a Saker falcon. Captive Breeding of Diurnal Birds of Prey, 1: 5-7.

Morrison, M.L., R.J. Young, J.S. Romsos, and R. Golightly. 2011. Restoring forest raptors: influence of human disturbance and forest condition on Northern Goshawks. Restoration Ecology 19:273-279.

Mullenix, M., and B.A. Millsap. Undated. Should Apprentice Falconers Be Allowed to Fly American Kestrels? Article on American Falconry Website, access June 27, 2012. http://www.americanfalconry.com

Oliphant, L.W. 1991. Hybridization between a Peregrine Falcon and a Prairie Falcon in the Wild. J. of Raptor Research, 25(2): 36-39/

Saito, E.K., L. Sileo, D.E. Green, C.U. Meteyer, G.S. McLaughlin, K.A. Converse, and D.E. Docherty. 2007. Raptor Mortality Due to West Nile Virus in the United States, 2002. J. of Wildlife Diseases, 43(2): 206-213

Sierra Nevada Adaptive Management Project (SNAMP) Owl Team website http://snamp.cnr.berkeley.edu/teams/owl, accessed August 2012

Remple J.D., N.A .Forbes. 1998. Antibiotic-Impregnated Polymethylmathcrylate Beads in the Treatment of Bumblefoot in Raptors. In : Raptor Biomedicine II.

Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo-Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY. Partners in Flight website. http://www.partnersinflight.org/cont_plan/ (VERSION: March 2005).

United Nations Educational, Scientific, and Cultural Organization (UNESCO) website http://www.unesco.org, accessed June 2012

United States Fish and Wildlife Service (USFWS). 2011. Revised Recovery Plan for the Northern Spotted Owl (*Strix occidentalis caurina*). U.S. Fish and Wildlife Service, Portland, Oregon. xvi + 258 pp.

United States Fish and Wildlife Service (USFWS). 2007. Final Environmental Assessment: Take of Raptors from the Wild Under the Falconry and Propagation Regulations. Division of Migratory Bird Management, 4401 North Fairfax Drive, Arlington, Virginia

United States Fish and Wildlife Service (USFWS). 2012. Non-wild Falconry Data. Unpublished data. Division of Migratory Bird Management, Sacramento, California

Walton, Brian J. 1996. Falconry in California 1971-1995, The Journal of the California Hawking Club. California Hawking Club.

Wendell, M.D., J.M. Sleeman, and G. Kratz. 2002. Retrospective Study of Morbidity and Mortality of Raptors Admitted to Colorado State University Veterinary Teaching Hospital During 1995 to 1998. J. of Wildlife Diseases, 38(1): 101-106

CHAPTER 7

RESPONSES TO COMMENTS REGARDING THE PROPOSED PROJECT

The Fish and Game Commission as the CEQA lead agency has evaluated the comments received during the scoping period for the environmental document, as well as comments on the draft. Each of those comments on the draft is responded to below. Where comments and suggestions have not been accepted, reasons for doing so have been set forth.

In general, the Commission did not find that significant environmental issues were raised in the comments that required revisions to the proposed project or that required the adoption of a project alternative or additional mitigation. In part, this is because these California's falconry regulations may only be more restrictive (protective) than those adopted by the federal government in their management of this activity; these regulations are more restrictive and do not result in significant adverse impacts on the environment; and most of the proposal is transferring existing federal regulatory language to state regulatory language. Furthermore, as the environmental document indicates, the sport of falconry in the State is very limited both in terms of the number of participants as well as the numbers of birds used in the sport.

The following is the comment and the Department's response.

Falconry DED Comments Received with DFW Responses

Morgan Campbell, Dec 12, 2012 (email)

"I see the part the says we can take one goshawk from the tahoe basin and the defineing areas for the taho basin but it does not say we can take goshawks anywhere else? are we not going to be allowed a goshawk take other than 1 bird?"

DFW RESPONSE: One goshawk (via random drawing) would be allowed to be taken from the Tahoe Basin. The rest of the state is open to harvest without a quota.

Richard Hoyer, Dec 15, 2012 (email)

"I am aware that my comments are unlikely resonate or have any impact. Nevertheless, for what it is worth, I offer the following.

From my review of the DED and species account documents, it is not clear as to how a decision was made to establish a Prairie Falcons quota of 14 for falconry take in California. I found nothing of substance nor of scientific validity in those documents that remotely supports the notion that the Prairie

Falcon in Calif. (or throughout the species distribution in the U.S.) is anything but at equilibrium and neither appreciably increasing or decreasing.

The following DED paragraph contained some data of interest.

"California statewide abundance has been estimated to be 300 to 500 breeding pairs and 650 to 1,100 fledglings per year, based on observations at nesting territories over a ten year period in the 1970s. The PIF estimate of population size, using 1990s BBS data, was 2,900 individuals for California. Within California BCR's, the population estimate by PIF indicates, with moderate BBS coverage, that 500 pairs exist in the Coastal California BCR, 1,200 in the Great Basin BCR, and 1,100 in the Mojave/Sonoran BCR. Populations for the Sierra BCR and north coast BCR both are estimated at 20 individuals based off adjacent BCR's."

A partial analysis of the above is as follows:

1970s: The Prairie Falcon population in Calif. was estimated to have ranged between 1250 and 2100 immediately after the breeding season (600 adults + 650 fledgling, and 1000 adults + 1100 fledglings). It was noted that these figures did not include the floater population which is considered to be sizable in most species of raptors.

1990s: The Prairie Falcon population in Calif. was estimated to be 2900 individuals. This figure is puzzling in light of the data given in the paragraph that immediately follows.

From the last paragraph listing pairs of Prairie Falcon in various regions: 500 + 1200 + 1100 +20 = 2820 pairs X 2 = 5640 Prairie Falcons in California. Note the last sentence mentions 20 individuals (not pairs) or 5 pairs each in the last two regions. (floater population not included).

Being involved in research and having published in peer reviewed journals, considering some of the sources your agency has used (BBS, CBC, etc.), from a scientific perspective, the above information is less than reassuring. Nevertheless, if there is any trend to be gleaned from the above, it is an upward trend.

Let me briefly examine one other aspect. Back in the 1970s, reproduction was estimated at between 650 and 1100 fledglings / yr. If we take the means of 875 fledglings for that period of time and divide that figure into 14, that results in a 1.6% harvest quota as currently proposed.

In the 1970s, the mean Prairie Falcon population of 400 pairs produced a mean of 875 fledglings or 2.1875 fledglings / pair. By extrapolation, 2820 pairs calculated from the last paragraph would produce 6169 fledglings. Therefore, the proposed quota of 14 divided by 6169 represents a harvest of 0.23%

Comparing that figure with the harvest data for Black Bear in Calif. and the Mt. Lion in some western states such as Oregon and Utah indicates just how unrealistic is the proposed quota of 14. If my memory serves me correctly, the data on Cougar harvests for a number of years in Utah was at or exceeded 5% for that apex predator with a much lower mean reproductive output than the Prairie Falcon. And the Cougar has been sustaining their population year after year after year in Utah and elsewhere where states allow harvest. As a matter of fact, I recall the Utah wildlife agency advocating an increase in the Cougar harvest.

Perhaps I didn't search far enough in the links that were available. If I have overlooked some critical information, please feel free to point that out as I would appreciate knowing just where I may have erred.

However, from what I did review, I was not able to find the data by which the quota of 14 Prairie falcons was derived by using some USF&WS model. If the USF&WS model used was found in the publication by Millsap and Allen or related federal publication, there likely is a flaw in the methodology used in order to arrive at raptor harvest quotas. That is yet another analysis I won't attempt here due to the length such an explanation would require.

Last, I doubt if the demand by the falconry community in California for the Prairie Falcon will increase by an substantial number in the near future So with an average take of 9.2 Prairie Falcons / year over the last number of years, other than from a biological and philosophical perspective, I am not certain why some in the falconry community are concerned as the proposed quota of 14 is not likely to cause any near-term hardship. But I must add, that if such a proposal if adopted, it establishes a badly flawed precedence."

DFW RESPONSE: As this topic came up multiple times, we have included the specific response to it at the end of this appendix in the final section identified as: "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates". It is also referred to in other comments below. CDFW agrees with the commenter that all wildlife should be managed using the best available demographic data and parameters unique to each species. CDFW believes that biological life history data for large carnivores such as bears and mountain lions should not be compared to a cliff-nesting falcon. There are too many variations in the life history and species-specific characteristics to make such a comparison.

Richard Hoyer, December 16, 2012 (email)

"I see a few glitches cropped up in the message I sent yesterday. Where I refer to 'paragraphs' should really read 'sentences'.

Those and other glithces aside, I urge you get in touch with Frank B. Isaacs, formerly affiliated with the Dept. of Fisheries and Wildlife at Oregon State. The past three years, Frank has been leading an Oregon Golden Eagle Monitoring Project. He and Dr. Anthony accomplished similar long term Bald Eagle nesting survey in Oregon. In the past, I believe Frank has also been involved with Peregrine Falcon nesting surveys in this state.

It is my belief that an examination of the protocols and overall process whereby Frank has accomplished these types of studies could be of benefit to CDFG efforts with raptors in your state. Frank's contact information is as follows:

Frank B. Isaacs Oregon Eagle Foundation, Inc. 24178 Cardwell Hill Drive Philomath, OR 97370-9735 541-929-7154 fbisaacs@peak.org

As can be noted, I have included Trent Seager in this and my prior message. Trent is a wildlife biologist, working towards his PhD at Oregon State, and currently Oregon Falconer's Assn. Vice President who first informed me of possible change in Prairie Falcon quota in Calif."

DFW RESPONSE: The DFW is very familiar with ODW and Frank Isaacs monitoring work for golden eagles in the state of Oregon. Where applicable, information from this work has been considered in developing California's program. We are currently coordinating with Mr. Isaacs and FWS staff in Oregon to see if a similar program would work in California for eagles.

Morgan Campbell, December 18, 2012 (email)

"Can you tell me why the dept want to bring back banding of all wild birds? I had to deal with that 20 years ago the zip tie bacs where one size fits all so they do not fit well on small raptors and they are also easy for the raptors to remove.

My redtailed hawks tore them off frequently which would result in excess paperwork just to keep replaceing all the broken bands.

Also metal bands like those used in migration tracking pose a health risk in birds wearing Jesses as they can get caught up in the jess and cause damage to the tarsus during a bate."

*DFW RESPONSE: Regarding the requirement to band all raptors, the DFW recognizes that banding all raptors with black plastic falconry band is not appropriate for all species. Therefore we removed this from the proposed regulations and made this requirement in line with federal regulations. In the future, we will be assessing the proper type of marking device to be compatible with our needs and the needs of the falconers.***Morgan Campbell, December 18, 2012 (email)**

"I see a major problem with the bands already besides the practical problems of bands on captive raptors.

the proposed regs state that bands may only be removed by dept employees and that all falconry bands must be removed before release.

this is creating a situation where either we have to transport a bird to a dfg employee and have the band removed then transport an unbanded bird to the relsease site or we will have to have a dfg employee meet us at said release site.

This is not practical or even do able.

I can also tell you this is something we had to do in the 80's and early 90's and the dept got rid of it. it has also riled up every falconer in the state and while the main regs have followed the fed regs as we have asked, the support from the falconry community you had after the conference call is gone with all the added law enforcement requirements.

pretty much the entire falconry community in the state and in the U.S. feels like dept is trying to pull a fast one on us by delaying till the end so the can put through such restrictive laws. it is getting rather ugly out here.

I will continue to try and help out of course just wanted to let you know to expect a lot of comments."

DFW RESPONSE: Regarding the requirement to band all raptors, the DFW recognizes that banding all raptors with black plastic falconry band is not appropriate for all species. Therefore we removed this from the proposed regulations and made this requirement in line with federal regulations. In the future, we will be assessing the proper type of marking device to be compatible with our needs and the needs of the falconers. The commenter is correct that DFW has proposed regulations that involve the use of DFW staff because of their knowledge and skill in handling birds, and to ensure that the regulations are being properly administered. DFW has involved the falconry community in the development of these regulations as much as possible, in light of DFW staffing constraints. DFW will work with the falconry community to continue to educate them about the new regulations and to improve communication.

Morgan Campbell, December 18, 2012 (email)

"I like the new regulations stating falconers work with rehab facilities but I see an issue

Currently Dr Vikki Joseph of Californa foundation for birds of prey has special permission to allow apprentice class falconers work with red tails and Kestrels. many of my own apprentices have given their time to train young red tails to hunt prior to release these birds come into the facility as nestling raised as non imprints and then sent out to select apprentices to be conditioned and trained to hunt.

this has been very successful under the new proposed regs this would eliminate this practice which has worked so well."

DFW RESPONSE: The purpose of assisting rehabbers with raptors is to condition the birds for release back into the wild. The DFW believes that Apprentice falconers do not have the expertise in flying wild birds for this purpose. The Federal regulations similarly allow only General or Master falconers to hack a falconry raptor.

Morgan Campbell, December 18, 2012 (email)

"you know the exam fee just might be the door I have been looking for to allow falconer/hunter ed instructors to proctor the exam

by the way the new exam will take longer than 20 min"

DFW RESPONSE: The new falconry exam will be 100 multiple choice questions and DFW agrees with the commenter that the exam will likely take longer than 20 minutes. The fee for the exam will be assessed in a separate regulatory process.

Wade Eakle, December 19, 2012 (email)

“I've reviewed CDFG's DED for new falconry regulations and greatly commend CDFG for producing such a comprehensive analysis and reasonable regulatory scheme for the continued practice of falconry in CA. However, I do have a few comments to offer and suggestions for CDFG and the CFGC to consider in finalizing and adopting new state falconry regulations, almost all related to which raptor species should be allowed for use in falconry in CA.

RAPTOR SPECIES CURRENTLY ALLOWED

Ferruginous Hawk - This species should be allowed for continued use for falconry in CA, largely based on the same reasons that the use of Merlins will be continued, with take allowed only outside of the breeding season. CA is largely outside the breeding range of the Ferruginous Hawk (just like Merlin), but supports wintering populations of Ferruginous Hawks (just like Merlin). Falconry demand and use of Ferruginous Hawks is low in CA, but well justified as a raptor suitable for the sport, so take of Ferruginous Hawks outside the breeding should be allowed (just as proposed for Merlin).

Merlin - I fully concur with this species continued take for falconry in CA, with such take allowed only outside of the breeding season given CDFG's concern for any limited breeding populations in CA.

Prairie Falcon - Given the relatively low demand and use of wild Prairie Falcons in falconry in CA, the added regulatory burden on the falconry community from CDFG's proposed harvest limit of 14 seems unjustified. As an alternative, if the concern is potential impacts to breeding populations of Prairie Falcons in CA, then limit take to outside the breeding season (just like Merlin).

TRADITIONAL FALCONRY SPECIES NOT USED IN CA

Osprey, White-tailed Kite, and Northern Harrier, as well as all of the owls (with the exception of Great Horned Owl), would not be considered to be traditional falconry species by the falconry community given their foraging habits and unsuitability in the practice of the sport.

Rough-legged Hawk and Swainson's Hawk - Both of these species should be allowed for take for falconry in CA, since both are well justified as suitable for the sport, with take allowed only outside of the breeding season based on CDFG's concern for Swainson's Hawk breeding populations in CA. Rough-legged Hawks, just like Merlins and Ferruginous Hawks, are found in CA primarily during the winter, when take is biologically justified and should be allowed, even with the demand likely low.

Red-shouldered Hawk - I fully agree with CDFG adding this raptor for use in falconry.

Barred Owl - CDFG's basis for adding Barred Owl for use in falconry makes little sense. Barred Owls have expanded their range into CA, and there are sound biological concerns for that range expansion and impact on Spotted Owl populations in CA, but given their nocturnal habits, it's highly unlikely Barred Owls will attract any use by falconers in the practice of the sport. In fact, if CDFG is really considering allowing the take of any additional owl species for falconry purposes in CA, owl species more suitable to the practice would be Short-eared Owl, Burrowing Owl, and Northern Pygmy-owl, as well as Great Horned Owl as currently allowed, given their more diurnal habits.”

DFW RESPONSE: The analysis of species population levels and level of wild raptor capture can be found in the DED, Chapter 4 (pages 22-39) and pages 49-55. Ferruginous hawks were excluded because of their

limited use in the practice of falconry, their small nesting population size in California, and their questionable/declining population trend north of California. It is noted that osprey, white-tailed kite, and harrier are not "traditional species" used in falconry. Additionally, white-tailed kites are a fully protected species and may not be taken for falconry purposes. Rough-legged hawks were excluded due to their limited use in the practice of falconry. Swainson's hawks are listed as Threatened in California and as such will not be allowed for take. Barred owl was included due to their increasing numbers in California and their similarities to great horned owls, which are currently used in California for falconry. Many of the other owls mentioned were excluded due to uncertainties in their population numbers. Burrowing owls are a Species of Special Concern and many landowners, government agencies and others are working to recover their numbers, secure habitat, and help assure their population viability.

Given the small population size of prairie falcon in California, relative to other species of raptors, a harvest limit is justified. Previous regulations allowed for unlimited take of prairie falcon from the wild, which if left unchecked, could potentially reach levels that would have a negative impact on the breeding population, especially in the context of many threats facing the species (see prairie falcon species summary, page 23, and the full species account in Appendix F).

Prairie falcons were noted to be a "permanent resident" in California by Grinnell and Miller (1944). Continuing unregulated take outside the breeding season could still have an adverse impact on the year-round resident prairie falcons of California. Assessing the population impact from falconry during the winter would be difficult, potentially requiring a prairie falcon migration monitoring program (e.g., Golden Gate Raptor Observatory at a statewide level) to determine the true number of winter-only prairie falcons. Even then, estimates of breeding populations via monitoring would still be required to account for year-round resident falcons, and the impacts of unlimited falconry take on the breeding population during the winter.

Richard Hoyer, December 19, 2012 (email)

"Another factor you might consider is as follows:

All three states on the west coast are known to be have an influx of raptors during fall and winter months, Marlins, Red-tails, Prairie Falcons, Rough-legs, Gyrfalcons, Coops, etc. Where I live in Corvallis and the Willamette Valley in northwestern Oregon, the Prairie Falcon is not known to breed. Yet, the Prairie Falcon is a frequent winter resident as shown by the tally of the species on various CBC throughout the Willamette Valley over many years.

I suggest that just like Oregon, California is home to a sizable contingent of non-resident Prairie Falcons during the winter season. I believe the quota of 14 you have proposed is based on the resident Prairie Falcon population in Calif. whereas in reality, falconers would be trapping both resident and non-resident Prairie Falcons during the fall and winter trapping season."

DFW RESPONSE: The commenter is correct that the proposed quota is based on the prairie falcon population that occurs and breeds in California during the breeding season. See pages 5-6 of the prairie falcon species account in Appendix F regarding seasonal movements of these falcons. During the winter, prairie falcons that bred in California are not as restricted to the vicinity of their nest site. There have been few studies on winter movements of prairie falcons that are known to nest in California, and some

California researchers have found their breeding prairie falcons remain as winter residents. The DFW recognizes that prairie falcons from outside of California may winter here and be subject to falconry take. DFW is cautious in its management of those individuals in order to avoid impacts to populations that breed in other states. Small (1994) reported that migrant prairie falcons outnumber resident breeding falcons 4 to1 in California, but it was an anecdotal account with no citations or additional supporting data. Because prairie falcons are thought to be permanent residents in California (Grinnell and Miller 1944), and young-of-the-year birds temporarily raise the statewide population level after the breeding season, it is impossible to determine the difference between a resident breeder and a winter migrant.

Richard Hoyer, December 29, 2012 (email)

"My Dec. 15 message contained a paragraph from the Draft Environmental Document. I noted an inconsistency in numerical abundance figures as contained in the last two sentences. During a recent re-examination of documents, I discovered a problem you may wish to address.

Page 31 of the DED contains the following:

"Within California BCR's, the population estimate by PIF indicates, with moderate BBS coverage, that 500 pairs exist in the Coastal California BCR, 1,200 in the Great Basin BCR, and 1,100 in the Mojave/Sonoran BCR."

Page 19 of 41 of the Species Acct. document pertaining to the Prairie Falcon, is the following.

"Using Bird Conservation Regions (BCR) within California, the population estimate by Partners in Flight indicates, with moderate BBS coverage, that 500 individual prairie falcons exist in the Coastal California BCR, 1,200 individuals in the Great Basin BCR, and 1,100 individuals in the Mojave/Sonoran BCR (Rich et al. 2004).

Note: Where the Species Acct. document mentions "----500 individual prairie falcons----", the DED mentions "--500 pairs--"."

DFW RESPONSE: The commenter is correct. This inconsistency will be fixed.

Jennifer Brown (USFWS), January 17, 2013 (email)

"U.S. Fish and Wildlife Service Migratory Bird Depredation Permit conditions allow depredating raptors to be legally placed under a falconry permit (or with an AZA-accredited zoo or aquarium) if it is too difficult to relocate the depredating raptor and/or the depredating raptor is likely to return if released. We would like California to consider authorizing this under the revised California falconry regulations."

DFW RESPONSE: The DFW agrees with the USFWS comment that allowing falconers to temporarily or permanently possess depredating raptors as long as this practice is consistent with federal falconry regulations may be reasonable. DFW may consider this change if state falconry regulations are reopened at a later date.

Charlie Kaiser, January 18, 2013 (email)

"Hello. I am a Master falconer with over a dozen years of experience flying raptors at wild game. I have been vice president of the California Hawking Club and am currently president of the Arizona Falconers Association, having moved to Arizona about 7 years ago. I remain connected to California in numerous ways and visit frequently.

I would like to provide my comments on the proposed falconry regulations.

I have a background in legislative analysis and regulations evaluation, and have conducted a thorough review of the proposed regulations. I have found numerous items that require attention. Some of these items place unnecessary burdens on the falconers of California, others present problems for CA DFG, and others present constitutional challenges. Some of the items I have found are most likely typographical errors or the like, but others are more troublesome.

Falconry is a non-impact sport to the wild populations of raptors, prey species, and other tangential species. This has been proven beyond a shadow of a doubt through environmental studies at the highest levels. Given this fact, along with the stable number of falconers in CA of around 600, it is clear that falconry presents no threat or concern to wildlife in CA.

Captive-bred raptors are a big part of falconry these days. It is estimated that upwards of 70% of all falconry raptors in the US are captive-bred.

These birds have been declared private property by legal avenues, and USFWS agrees that captive-bred raptors should not be considered part of the wild resource. While appropriate care and husbandry must be provided, regulatory agencies have no need to be concerned about captive-bred birds as an impact on the wild resources.

Therefore, falconry regulations should be looked at as a means to provide a framework for the dedicated individuals who practice the art and sport of falconry to do so legally, protect the wild raptor populations, and ensure that CA DFG is protected from liability.

As these regulations are modified and tuned, these thoughts should be kept in mind to avoid over-complicating the regulations. Given that the Federal EA and regulations are the over-arching criteria for falconry regulation, allowing all the freedoms provided for in the new Federal regulations should be forefront in the design. Additional restrictions beyond the Federal requirements should be implemented only if there is a compelling cause having to do with wild resource protection, departmental dependencies, or state regulation dependencies. If none of these criteria are met, the restrictions should be removed from the regulations.

This is a model that is working well in numerous other states and there is no reason to suggest that it would be different in California. Falconers have a history of being law-abiding citizens, with citation and prosecution rates far below those of the general hunting and fishing licensees. Placing unwarranted

restrictions upon these practitioners does nothing but burden them and create additional work for CA DFG.

As these regulations are written, there are a number of extreme restrictions that may be inadvertent. As written, all Peregrine or Peregrine hybrids would no longer be allowed. All wild-trapped birds from other states, such as Harris' hawks from AZ or TX, would be disallowed. Any raptor on any state's threatened or endangered list would be disallowed (this results in only red-tailed hawks and great-horned owls being allowed, despite the listing of other species elsewhere in the regs). No attempt has been made to separate wild take from possession. An individual bird legally taken in another state or captive-bred that is of a species of concern in CA does not affect wild populations and should be allowed. A visiting falconer from AZ with a wild-trapped Harris' hawk could potentially be found in violation for possessing a raptor that is legal in his home jurisdiction.

There are numerous items that conflict with the Federal regs and could delay or prevent certification. These should all be addressed. And there are several constitutional issues that leave the Department open to legal action by parties unjustly affected by those provisions.

All of these items and more have been addressed in my analysis.

I have attached a document that details my analysis of the proposed regulations. My recommendation is that all of the changes be implemented into the next iteration of the proposed regulations. If you have questions or comments on this analysis, please feel free to contact me either by email or phone. I will be glad to discuss it with you.

I have worked with USFWS and AZ GFD on their regulations, and we have come up with very good regulations so far. The California regulations, as proposed, are unnecessarily punitive, restrictive, and complex. I strongly urge you to rewrite these regulations keeping the above-mentioned criteria in mind.

Please verify receipt of this email and your ability to open and read the attachment."

DFW RESPONSE : The DFW received your edited version of the proposed regulations as presented in the Draft Environmental Document, Appendix B. We have made some minor nonsubstantive changes to the regulations attached to the DED in Appendix B. These include:

(1) Allowing falconers to carry copies of their authorizations/permits/licenses instead of original copies;

(2) Changing "listed" to "threatened and endangered" species in Section (d);

(3) Referencing "CFR 50, SECTIONS 21.29 THROUGH 21.30" rather than just the " federal Migratory Bird Treaty Act" in the signed certification;

(4) Allowing applicants to retake the examination as soon as the next day rather than wait for 3 months:

(5) Corrections to references to other sections of the regulations within the text of the regulations;

(6) The wording was revised in the denial, suspension, revocation sections to say "…department for failure to comply with regulations adopted pursuant to the Fish and Game Code related to raptors, Fish and Game Code Section 1054, or Penal Code Section 597";

(7) The application date for the random drawing was moved to January 31;

(8) Section (h)(6)(C), revised to say, ") A licensee may not intentionally and permanently, release a non-native raptor, hybrid, or native captive-bred raptor to the wild in California, unless authorized by the department.";

(9) Section (h)(7) on hacking now includes language saying "…except native captive bred raptors shall have a minimum of one functioning transmitter.";

(10) Section (h)(8) on reporting loss of a raptor includes language saying "…within 10 calendar days of the loss if you lose a raptor to the wild and you do not recover it within 30 days.";

(11) Section (h)(9) on carcass disposition, the language, "Sent to a qualified pathologist or veterinarian to perform a necropsy. If a necropsy was performed" was deleted;

(12) Section (h)(14) on other uses of falconry raptors, was revised to read, "A licensee may transfer a wild-caught raptor to a raptor propagation permit, but the raptor shall have been used in falconry for at least two years or except one year for a sharp-shinned hawk, merlin, Coopers hawk and American kestrel. A wild caught raptor may be transferred to another permit type other than falconry only if it has been injured and can no longer be used in falconry.";

(13) Receiving payment for abatement activities with Special Purpose Abatement Permit was added to Section (h)(14)(C);

(14) Banding requirement was changed to only include goshawk, peregrine, gyrfalcon or Harris's hawk. Other proposed changes are more substantive and beyond the current scope of the proposed action, and may be addressed at a later time if there is need in the future. DFW does not believe that the commenter's are necessary at this time because they do not appear to provide greater environmental protection nor improvement of DFW's regulatory oversight of falconry.

Valerie Baldwin, January 19, 2013 (email)

"I would like to write you in support of the new Falconry Regulations. They are fair and will work well for our State. Falconry has been shown to have no impact on our native wildlife and may, in fact, be beneficial. The few falconers who capture animals from the wild, usually take hatch-year birds and release them after greatly improving their hunting skills, cured them of any illness, and turned them loose. These birds surely have a much better survival outlook than those 70% of birds of prey that do not survive their hatch year.

So please, go ahead with adopting the federal regulations for Falconry and ignor those who think Falconry is bad. Falconry, as proposed, is good for California."

DFW RESPONSE: Comment noted.

Steve Watson, January 22, 2013 (email)

DFW RESPONSE: The DFW received commentor's edited version of the proposed regulations as presented in the Draft Environmental Document, Appendix B. DFW has made some small adjustments to the regulations attached to the DED in Appendix B. These include:

(1) Allowing falconers to carry copies of their authorizations/permits/licenses instead of original copies;

(2) Changing "listed" to "threatened and endangered" species in Section (d);

(3) Referencing "CFR 50, SECTIONS 21.29 THROUGH 21.30" rather than just the " federal Migratory Bird Treaty Act" in the signed certification;

(4) Allowing applicants to retake the examination as soon as the next day rather than wait for 3 months:

(5) Corrections to references to other sections of the regulations within the text of the regulations;

(6) The wording was revised in the denial, suspension, revocation sections to say "…department for failure to comply with with regulations adopted pursuant to the Fish and Game Code related to raptors, Fish and Game Code Section 1054, or Penal Code Section 597";

(7) The application date for the random drawing was moved to January 31;

(8) Section (h)(6)(C), revised to say, ") A licensee may not intentionally and permanently, release a non-native raptor, hybrid, or native captive-bred raptor to the wild in California, unless authorized by the department.";

(9) Section (h)(7) on hacking now includes language saying "…except native captive bred raptors shall have a minimum of one functioning transmitter.";

(10) Section (h)(8) on reporting loss of a raptor includes language saying "…within 10 calendar days of the loss if you lose a raptor to the wild and you do not recover it within 30 days.";

(11) Section (h)(9) on carcass disposition, the language, "Sent to a qualified pathologist or veterinarian to perform a necropsy. If a necropsy was performed" was deleted;

(12) Section (h)(14) on other uses of falconry raptors, was revised to read, "A licensee may transfer a wild-caught raptor to a raptor propagation permit, but the raptor shall have been used in falconry for at least two years or except one year for a sharp-shinned hawk, merlin, Coopers hawk and American kestrel. A wild caught raptor may be transferred to another permit type other than falconry-only if it has been injured and can no longer be used in falconry.";

(13) Receiving payment for abatement activities with Special Purpose Abatement Permit was added to Section (h)(14)(C);

(14) Banding requirement was changed to only include goshawk, peregrine, gyrfalcon or Harris's hawk, similar to federal requirements. Other proposed changes are more substantive and beyond the current scope of the proposed action, and may be addressed at a later time if there is need in the future. DFW does not believe that the commenter's are necessary at this time because they do not appear to provide greater environmental protection nor improvement of DFW's regulatory oversight of falconry.

Glenn Stewart, January 22, 2013 (email) and February 5, 2013 correspondence

"As we discussed today, information on the current status of prairie falcons is probably inadequate. Garrett's study was conducted when damage from DDT was at its peak and breeding Bird Survey and Christmas Bird Count data are fraught with problems. Still, we need to use the information that we have."

DFW Response: Information to address comment about the Prairie Falcon population is contained in the record for this rulemaking in the document entitled "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates" and the Department's response to comments, dated February 5, 2013.

"As I reviewed the documents related to prairie falcons in the proposed falconry regulations I found a conflict between the text in the Draft Environmental Document and the prairie falcon entry in the Species Account. Please see this entry on page 31 of the DED: "Within California BCR's, the population estimate by PIF indicates, with moderate BBS coverage, that 500 pairs exist in the Coastal California BCR, 1,200 in the Great Basin BCR, and 1,100 in the Mojave/Sonoran BCR."

Now please turn to page 19 of the Species Account document pertaining to the prairie falcon:

'Using Bird Conservation Regions (BCR) within California, the population estimate by Partners in Flight indicates, with moderate BBS coverage, that 500 individual prairie falcons exist in the Coastal California BCR, 1,200 individuals in the Great Basin BCR, and 1,100 individuals in the Mojave/Sonoran BCR (Rich et al. 2004).

Please note that where the Species Acct. document mentions "----500 individual prairie falcons----", the DED mentions "--500 pairs—.'

To confirm, I went to the original data referenced: The Partners in Flight Breeding Bird Survey estimates found at this link: http://rmbo.org/pif_db/laped/PED3.aspx

When you reach this link:

Select: Prairie Falcon

Select: USA

Select: California

Click: Submit Query

The population estimate for prairie falcon in California is 2900. Place your cursor over the words: "population estimate" and these words are revealed:

"Estimated breeding population in the region, (Province/State, Territory) individuals, not pairs."

Therefore, this is the PIF estimated breeding population, and not an estimate of breeders, plus juveniles, plus influx of wintering individuals from other states (all of which are sure to contribute additional birds)—it is just the breeding population."

DFW Response: The commenter is correct . The Department will make corrections.

"If we then halve the 2900 individuals to arrive at a number of territories or breeding pairs, we have 1450 prairie falcon pairs according to PIF. We can arrive at an estimate of juveniles in the population that might be available for harvest in a couple of ways.

First, we can assume an average productivity per nest at 2.5 young (a five egg clutch is typical for prairie falcons).

1450 * 2.5 = 3625

If we agree on a harvest level of 1% (the feds allow up to 5%) the allowable harvest for California falconers would be 36 birds."

DFW Response: The PIF population estimate for prairie falcon (Rich et al. 2004) is an extrapolation from a small sample size. Additionally, the scientific source of 2.5 young per nest in your equation is not cited, making it difficult to determine if this productivity number is a California-specific measure, what the sample size was, and what methods were used to derive this number.

The PIF population estimate from BBS data uses a modifier called "pair adjustment" (Rich et al. 2004). This results in a doubling of the raw BBS detection numbers for prairie falcon, and is expressed as the number of breeding individuals (not pairs, and not including juveniles or floaters). According to Millsap and Allen (2006) and USFWS (2007: page 11), this adjustment results in an overestimate of population size for prairie falcon and other raptors. Therefore, Millsap and Allen (2006) and USFWS (2007) chose to use the more conservative unadjusted estimates of population size.

Relative to your equation noted above, using BBS/PIF data and the methods from Millsap and Allen (2006) and USFWS (2007), the number of breeding individuals would actually be 1450 (725 breeding pairs). However, your equation does not use the deterministic matrix model found in Millsap and Allen (2006), or the 1% Maximum Sustainable Yield (MSY) of juveniles (falcons less than one year old), for species without adequate demographic data.

"Another way to evaluate the Partners In Flight estimate is to reference Dr. Karen Steenhof's work on Idaho (Steenhof et.al. Condor 1999) here:
http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1050&context=usgsstaffpub&seiredir=1&referer=http%3A%2F%2Fscholar.google.com%2Fscholar%3Fhl%3Den%26q%3Daverage%2Byoung%2Bproduced%252C%2Bprairie%2Bfalcon%26btnG%3D%26as_sdt%3D1%252C38%26as_sdtp%3D#search=%22average%20young%20produced%2C%20prairie%20falcon%22)

Over the course of 23 years (1974-1997) the study found that an average 63% of pairs successfully raised young and that the successful pairs produced an average 3.9 young per nesting attempt in all years."

DFW Response: Applying the productivity rate of 3.9 "young" per pair, statewide in California is a large assumption. While this productivity rate is helpful for comparison purposes, and is from a long-term data set, Steenhof's study was located in the Snake River Birds of Prey National Conservation Area in Idaho, not California. This study area is unique from all others, because it harbors the largest concentration of nesting prairie falcons throughout the entire range of the species (up to ~200 pairs).

Also, Steenhof et al. (1999) did not use PIF data (Rich et al. 2004); rather, they used species-specific survey data for prairie falcon.

Furthermore, Steenhof et al. (1999) defined reproductive terms for prairie falcon pairs, such as "laying" and "successful." "Laying" was determined by incubating behavior and laying pairs were considered "successful" when ≥1 nestling reached 30 days of age (Steenhof 1987 in Steenhof et al. 1999). While the number of "successful" pairs fledged an average of 3.9 young throughout the study period, "laying" pairs "successful" at fledging young averaged 2.76±0.74 fledglings and all pairs (subset of years) that were "successful" averaged 2.46±0.61 fledglings (Steenhof et al. 1999). Though the reported average was 63% of all pairs successfully raising young, the number of pairs nesting in the Snake River NCA also declined significantly over the study period (Steenhof et al. 1999). Prairie falcon reproduction was found to be positively correlated to ground squirrel abundance (Steenhof et al. 1999), and percentages of reproductive output should therefore be applied to prairie falcons from California-specific prey base studies.

A long-term study at Pinnacles National Park by Emmons (2012) has shown productivity values similar to that of Steenhof et al. (1999), but is a geographically isolated nesting location, heavily protected by park staff and rock-climbing closures, averages only 11.9 territorial (exhibiting nest defense behavior) pairs per year, and should not be applied statewide for prairie falcon. From 1984-2011, "successful" pairs averaged 3.42 fledglings, nesting (not necessarily successful) pairs averaged 2.7 fledglings, and all territorial pairs averaged 2.24 fledglings. In contrast, Boyce et al. (1986) determined 2.18 fledglings per pair in California during surveys in the 1970s, similar to the latter estimate by Emmons (2012). Because of this variability, current reproductive parameters are still needed for prairie falcons in California (as discussed in "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates"). Furthermore, standardized methods to determine occupancy and reproductive success are needed to be able to compare values for each geographically distinct prairie falcon population in California.

"If we then estimate that 63% of California's estimated 1450 territories are successful (914 pairs) and use Steenhof's average productivity figure we can estimate an acceptable harvest level based on a 1% take of the young produced.

914 * 3.9 young = 3563 young produced annually. 1% = 36 young per year harvest."

DFW Response: This is an incorrect application of Steenhof et al. (1999), partly because they utilized species-specific focused surveys and not BBS data. See also Steenhof and Kochert 1982 for raptor survey methods. As noted earlier, your equation does not use the deterministic matrix model found in Millsap and Allen (2006), or the 1% Maximum Sustainable Yield (MSY) of juveniles (falcons less than one year old), for species without adequate demographic data.

"Either way that we estimate the number of available prairie falcons for harvest—based on the Breeding Bird Survey data—we arrive at a very conservative 1% harvest level of thirty-six (36) birds.

Over the five years referenced (2006-2010), falconers harvested 9.2 per year and almost half (22 of 46) were released or escaped. I suggest that we delay instituting a restricted harvest or lottery until falconers reach the allowable 1% take limit of 36 birds. If that level is reached in a given year then the

Department may respond with creation a lottery unless more recent prairie falcon population data becomes available to influence the take limit."

DFW Response: See response to comments above and the analysis contained in "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates". BBS is likely an overestimate of the true population size, and the proposed limit of 36 is not determined from methods described in Millsap and Allen (2006).

"It is January. My hope is that by September we can "fix" the issues large and small that we discussed today so that we do not have to re-visit them again in the future. I know that you were not sure at the meeting what could/could not be done in the short-term. I'm sure that you can understand how knowing what issues the Department plans to immediately address will influence what we say to the Commission on February 6. I look forward to learning more about the process ahead. Thanks for meeting with us."

DFW Response: Comment noted.

William Ferrier, DVM, January 25, 2013 (email)

I am a UC Davis veterinarian and from 2002 – 2012 I have been the Director of the California Raptor Center on the UC Davis campus. I am writing in support of the revisions to the falconry regulations to bring said regulations into compliance with the new federal standard. However, before the new regulations are adopted in California, there are several issues which need to be corrected. Further, biological "facts" should be taken into consideration and should be the driving force which generates new regulations. Please take the following comments into consideration:

• Banding of all wild raptors should not be required. Banding can be detrimental to many species, especially smaller raptors, and from a biological standpoint, there is not any need to further identify abundant species.

• Lottery for Prairie Falcon take is simply silly and biologically not justified. This is an abundant species in California and the demand is low. They should not be treated differently than any other abundant species.

• Out of state falconry licenses should be honored in California. All domestic falconry licenses need to be in line with the federal standard. This is no different than out of state individuals obtaining out of state hunting and fishing licenses in California.

• The new regulations are riddled with redundant reporting and paperwork. I personally was in Washington DC assisting the USFWS when the federal standards were generated. One of the goals for all parties was to decrease unneeded paperwork, which represents a net cost savings to all parties.

• These regulations appear to be infringing upon 4th Amendment Rights under the Constitution. The Department should be placed on notice that illegal search and seizure laws violate Federal Law, and further, requiring individuals to agree to such a Constitutional infringement as a requirement to be permitted represents coercion.

• Facility requirements for traveling falconers and visiting falconers from out of state needs to be clarified.

In summary, please consider these suggestions and I would urge you to take the recommendations of the California Hawking Club as the regulations are further edited.

DFW Response: Regarding the requirement to band all raptors, the DFW recognizes that banding all raptors with black plastic falconry band is not appropriate for all species. Therefore we removed this from the proposed regulations and made this requirement consistent with federal regulations (banding of 4 species as commented above). In the future, we will be assessing marking devices to meet our needs and the needs of the falconers. Regarding the capture quota and lottery system for prairie falcon, the DFW believes this is the appropriate action to take based on the best scientific data available. For detailed rationale, see our response to comments regarding prairie falcon and the analysis contained in the document in the record entitled "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates". Regarding out of state licenses, the DFW must ensure that any persons practicing falconry in the state have a full knowledge of state requirements. Regarding redundant reporting between federal and state forms, the DFW will be requiring its own information to ensure California has the appropriate and needed information related to falconry. DFW plans to develop a fully functional electronic reporting system for all state forms in close coordination with USFWS, and in this way much of the redundancy should be eliminated in the future. Regarding the issue of unannounced visits to a falconer's facility, DFW law enforcement officers do have the right to search premises when the activity is permitted by the state. A discussion of this topic was addressed more fully at the February 6, 2013, Fish and Game Commission meeting – see agenda item number 4. Regarding clarity for temporary facilities for traveling falconers, the state regulations have been harmonized with the federal regulations on this point.

Rocky Montgomery, falconer and USFWS employee, January 29, 2013 (email)

"1. The proposed regulations provide for the accidental take of Federal and State listed threatened and endangered species by falconry raptors, but does not provide for the accidental predation of other Federal or State protected species, or game species taken out of their regular season. The CDFW should recognize that these events are an inherent risk of falconry and provides for these occurrences. In order to provide for these events I recommends that the proposed regulations include the following:

"A falconry bird that inadvertently takes a protected prey item, including an animal taken outside of a regular hunting season, can be allowed to feed on the animal, but the remains will be left at the site and not taken into possession." [§21.29 50 CFR Ch.1 (10-1-11 Edition); page 102, (19)]

2. I am concerned with wording that would limit the possession of legally obtained species that may be listed as Federal or California threatened or endangered by General and/or Master Falconers. This clause is not included in the Federal Regulations for General and Master Falconers. The State's inclusion of this from the Apprentice provisions, likely was inadvertent. The State already controls which raptors are permitted to be captured from the wild in California, and the USFWS does not permit take of listed species for falconry. It is not the intent of the USFWS to prohibit the possession of listed species for General or Master Falconers if the raptor is obtained legally (e.g., captive bred offspring, or from a place

of origin where the species is not listed). I recommend the following language for the POSSESION OF RAPTORS section for General and Master Falconers:

Page 5; (B) GENERAL FALCONER; 2. POSSESSION OF RAPTORS.; 2. A General falconer may possess for falconry purposes any wild raptor species listed in subsection (g)(7), and any captive-bred or hybrid any species of Order Falconiformes, Accipitriformes, or Strigiformes, except a golden eagle, bald eagle, white-tailed eagle, or a Stellar's sea-eagle. A General falconer shall possess no more than three raptors for use in falconry at any one time, regardless of the number of state, tribal, or territorial falconry licenses in possession; and only two of these raptors may be wild-caught. Only eyas or passage raptors may be wild-caught; except American kestrel (Falco sparverius) or great horned owl (Bubo virginianus) may be captured at any age. [§21.29 50 CFR Ch.1(10-1-11 Edition); page 88 (ii)(E)]

Page 5; (C) MASTER FALCONER; 1. POSSESSION OF RAPTORS; A Master falconer may possess for falconry purposes any wild raptor species listed in subsection (f)(7), and any captive-bred or hybrid of any species of Order Falconiformes, the Order Accipitriformes, or the Order Strigiformes. A Master falconer may possess any number of raptors except he/she shall possess no more than five wild-caught raptors for use in falconry at any one time, regardless of the number of state, tribal, or territorial falconry licenses in possession. Only eyas or passage raptors may be wild-caught; except American kestrel (Falco sparverius) or great horned owl (Bubo virginianus) may be captured at any age. [§21.29 50 CFR Ch.1(10-1-11 Edition); page 88 (ii)(E)]

3. The CDFW should recognize that many family members of falconers are very experienced at handling raptors in captivity by virtue of having spent years closely associated with them. CDFW should also acknowledge that in the setting of organized falconry meets raptors are weathered in designated fenced areas with appointed volunteers to supervise (typically licensed falconers). Federal regulation [page 92; §21.29 50 CFR Ch. 1(10-1-11 Edition), (D), (3), (iii)] allows a family member, who may not be a licensed falconer, and a designated individual at a falconry meet to watch over weathering raptors. The proposed regulations would not allow either and may be unnecessarily restrictive for real-life situations and the functioning of traditional falconry meet protocol. I recommend that the proposed regulations follow the Federal regulations and allow for both situations:

Page 18; FACILITIES, EQUIPMENT, AND INSPECTIONS; (C) Falconry raptors may be kept outside in the open (such as a weathering yard) at any location, only if they are in the immediate presence of a licensed falconer. Change this to:…, if they are under the watch of a licensed falconer or a family member.

4. Page 17, (1) banding birds captured from the wild in California other than Gyrfalcons, Peregrines, Northern Goshawks and Harris' Hawks with black plastic locking bands. I feel that the reasons for eliminating banding in 1993 are still legitimate reasons not to start banding in 2014. The USFWS recognized that the bands were not well suited for small raptors such as Sharp-shinned Hawks, Cooper's Hawks, kestrels, and Merlins. They would like to find a supplier who can print the band numbers closer to the locking tab; however, there will always be a gap, which means that the band must be left longer than it should on a small raptor. In addition, the band may not be able to be adjusted to be properly small enough for the smaller raptors. On such small species, the birds sometimes pick at the bands and cause leg abrasions. The USFWS has determined that these bands are not optimum for these species. That's one of the reasons that they do not require that these species be banded when taken from the

wild. I recommend that the proposed regulations restrict the use of the black bands to wild captured Gyrfalcons, Peregrine Falcons, Northern Goshawks, and Harris' Hawks, or at least limited to bird species larger than Cooper's Hawks.

5. Page 11, (g) CAPTURING RAPTORS FROM THE WILD, (7) (H) PRAIRIE FALCON. I have reviewed the proposed limits and restrictions for the take of wild raptor species in California. I do support the role of the CDFW to manage and protect the wildlife species of the State, and where warranted, to set the appropriate limits and restrictions for the take of specific species. I have reviewed the information provided by the CDFW in the Draft ED and have other current scientific literature available regarding the Prairie Falcon populations in California and the surrounding western States. When I add up the population numbers provide by the CDFW in the Draft ED, I see a very substantial and stable population. According to Partners in Flight (PIF) estimates based on USGS Breeding Bird Surveys (BBS) the numbers for California's Bird Conservation Regions (BCR) are 500 pairs exist in the Coastal California BCR, 1,200 pairs in the Great Basin BCR, and 1,100 pairs in the Mojave/Sonoran BCR, this is a total of 2,800 pairs of Prairie Falcons. If I use a very conservative production number of 1.5 fledglings produced per pair of Prairie Falcons (2.0 fledglings produced per pair is actually the prevailing consensus) I have an annual juvenile population of about 4,200. Additionally, it is known that a substantial number of Prairie Falcons winter in California coming from breeding territories outside the State. The Christmas Bird Count (CBC) has shown a statistically significant positive trend for wintering Prairie Falcons in California. During the period between 2006 and 2010, 46 Prairie Falcons were taken in California, of those 46, 22 were returned to the wild either by release (19) or escape (3) that amounts to a total loss for the wild population of 24 birds over the five year span. During that five year span about 21,000 juvenile Prairie Falcons were produced from the three BCRs in California. The Service feels that the CDFW should reevaluate the need for the proposal to set a quota of 14 Prairie Falcon per year, and to establish a lottery and special permit system along with this quota. The numbers (average take of Prairie Falcons in California between 2006 and 2010 is 9.2 per year) and the stable robust populations of Prairie Falcons don't appear to warrant the need for the restrictions being proposed."

DFW Response: The proposed regulations have taken out the reference to "listed" species in Section (d), and have restated as "threatened or endangered". The requirement to remove the prey from the raptor and leave on site, and the requirement to take injured prey to a rehabilitation center has been retained. It is not the intent of the regulations to limit the possession of raptors General and Master falconers can possess, with the exception of possession of wild raptors. General and Master falconers can possess captive-bred raptors or raptors legally imported from another state of any species allowed by the federal regulations. The temporary short-term care of raptors by family members is specifically addressed in state regulations ("Temporary care of a raptor by an unlicensed person shall not exceed a 45 consecutive calendar day period."). Regarding the requirement to band all raptors, the DFW recognizes that banding all raptors with black plastic falconry band is not appropriate for all species. Therefore we removed this from the proposed regulations and made this requirement in line with federal regulations. In the future, we will be assessing the proper type of marking device to be compatible with our needs and the needs of the falconers. Regarding the capture quota and lottery system for prairie falcon, the DFW believes this is the appropriate action to take based on the best scientific data available. For detailed rationale, see our response to comments regarding prairie falcon and the analysis contained in the document in the record entitled "Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates".

USDA Forest Service, Lake Tahoe Management Unit, January 29, 2013 (email)

"1) General comments:

a. Lake Tahoe Basin Management Unit will be notified by California Department of Fish and Wildlife when and where falcons have been taken from and/or released into the forest.

DFW Response: DFW acknowledges this request and will work on a mechanism for reporting take of raptors to the Forest Service. However, this request can be addressed between the two agencies and is outside the scope of the regulations.

b. The DED states that "advances in captive breeding methods and techniques are in large part due to the demand for falconry raptors. Today, the majority of raptors used in falconry are captive-bred." But it also says "...the use of wild captured raptors makes up an important part of the art and tradition of falconry." If captive breeding and rehabilitating practices can provide falconry raptors and the majority of raptors used in falconry are already captive-bred, then it seems that wild capture for the purposes of falconry is already an outdated practice and does not need to be continued. Especially considering modern stressors placed on all wildlife species.

DFW Response: The point made in the portions of the DED you referenced above is not in conflict. The use of captive-bred raptors is becoming more common; however the use of wild raptors is an intrinsic part of the practice and tradition of falconry. The intent of DFW oversight and associated reporting is to monitor the level of removal of wild raptors to ensure removal does not compromise wild raptor population numbers. There is no scientific evidence that DFW is aware of, to indicate falconry places added stress on wild raptor populations.

c. The DED states (pg. 18, pp 1) that "many wild raptors obtained for falconry are eventually released back into the wild". The DED later states (pg. 42) that "captive raptors have lower survival in the wild than wild-reared raptors, and that most escaped falconry raptors likely die within days of being lost" . Strongly recommend a release program wherein raptors are monitored or at least an analysis of ways to better identify survival of released raptors. At a minimum, such a program should include limitations on when a raptor can be released (i.e., maximum length in captivity after which release isn't an option, seasonal timing of release to maximize success of survival, combined release of multiple individuals, etc.).

DFW Response: DFW believes that the requirements in the proposed regulations to release raptors at the site of capture if at all possible, or at least in appropriate habitat that doesn't contain other raptors will help address the concerns raised by the commenter about the survival of released raptors. A further discussion about the incidental release of wild raptors can be found on page 57 of the DED.

d. Species with "low numbers statewide or locally" should not be included in the program (Pg. 40, pp1). If the Department of Fish and Wildlife will not agree, the revised DED should include a list of which species the document refers to and a thorough analysis of the potential effects of harvesting individuals from these populations that are already considered to have "low numbers". This analysis should be species-specific for each species with low numbers.

DFW Response: Full species accounts can be found in Appendix F of the DED. A summary of species information, including population trend and estimates, can be found in the body of the DED on page 22-39. A table summarizing whether a species was included for wild capture or not is included in the DED on page 38-49. These sections assess wild capture considering species status, population numbers, and use in falconry. Low numbers and the impact of falconry take is relative. For no species, is the anticipated level of removal from the wild greater than 0.5 percent, an insignificant percentage.

e. Analysis of effects (pg. 42, pp 1-4) does not analyze effects of non-native species, including the risk of escape on native populations. Request inclusion of an analysis of effects of non-native (exotic) species used for falconry with citations from current literature and species-specific where literature exists. The analysis of hybrids (pg. 42, pp 2) is biased and does not disclose the potential effects of hybrids which must be addressed in the revised draft environmental document - the analysis currently "writes off" any effects of hybridization but the fact of the matter is that hybridization occurs and the potential effects must be disclosed. With reference to the following statement on pg. 17: "there is no documentation of an accidental establishment of an introduced population [from escaped hybrids]", the DED should be clear in this document that there is also no evidence that hybrid have NOT established populations because Department of Fish and Wildlife do not track these individuals and have no data to support the statement as written.

DFW Response: The DED recognizes that hybrids, exotics and captive-bred raptors occasionally escape into the wild. The impacts of such are addressed on page 42 of the DED. Here it is noted that no impacts to wild populations have been detected, and potential impacts are unknown as they have not been studied. Falconry has not been identified as a significant threat to wild populations from a scientific basis. Until hybridization or competition in the wild has been observed or detected and shown to have an impact on wild raptor populations, there is no reason to believe incidental loss of hybrids, exotics or captive-bred raptors has a negative impact on wild populations. Potential effects on the gene pool of wild raptors due to the release of hybrids is unknown, because there are no past or current studies on this in California. See also pages 18 and 57 in the DED. DFW agrees there is little evidence in California (aside from the specialized case of the peregrine falcon) that wild-caught birds released after some time in captivity will successfully reproduce. This is why falconry take has been considered a mortality event in the models used by Millsap and Allen (2006) and USFWS (2007).

Falconry take is based on allowing a percentage of "excess" young-of-the-year to be removed from the wild, without causing a decline in equilibrium or stability of a given species. Generally, captive breeding is reserved for the conservation of critically imperiled species, and should only be used as a last resort management tool (e.g. peregrine falcon, and California condor). Furthermore, the DED stated that it is not known if falconry birds released from captivity actually survive, reproduce, and contribute to the next generation unless there is active monitoring of released birds via telemetry. Additionally, there have been no studies, and there is no scientific evidence from continuous falconry take and occasional release practices in California that demonstrates wild raptors benefit from captivity and would have otherwise died in their juvenile year, or that releasing them contributes to conservation of the species. It is unknown if the released raptor will survive, and reproduce, or become a non-breeding floater. Their long term reproductive value is unknown and unstudied.

2) Specific to Northern Goshawk comments:

a. The DED states that Northern Goshawk populations are in decline in the state of California (pg. 22, pp4-5) with an estimated 3,000 individual state wide (this is later contradicted on pg. 53 pp2 and must be fixed in the revised DED). The species is listed as a sensitive species by the Pacific Southwest Region of the Forest Service, a species of special concern by the agency writing this document and a special interest species by the Tahoe Regional Planning Agency. Clearly there is concern for their population numbers. For these reasons Northern Goshawk should not be allowed to be captured from the wild from the Lake Tahoe Basin Management Unit. The same should go for any raptor species that is in decline.

DFW Response: The allowable removal of Northern goshawk from the Tahoe Basin is proposed to be one animal per year.DFW is unaware of any scientific information to conclude this would have a significant effect on the local population given the capability for emigration/immigration of birds. In authorizing take of one bird, the Department will be gaining location information and response to removal from other birds, thus increasing our knowledge base on the species.

b. Citations needed in revised DED. Below are instances where citations are required to support statements made:

• Pg. 22, pp4, lines 6-9: "The current estimate of the number of territories…over ten years old".

• Pg. 22, pp4, lines 9-11: "It is suggested that logging and intensive timber management may have altered suitable habitat….statewide total".

• Pg. 40, pp2: entire paragraph "Such was the case….especially during the breeding season".

DFW Response: In the introduction to Chapter 4, at the top of page 22, it is noted to "See Appendix F and Appendix G for detailed species accounts, and literature cited, and Wildlife Habitat Relationship range maps." All citations for the portions noted above can be found in the full species account. Chapter 4 was intended to summarize the full species accounts and therefore does not include citations.

c. The DED states that the Northern Goshawk population in the Lake Tahoe Basin is small and extremely sensitive to disturbance and over-capture (pg. 40, pp2). Keane's Northern Goshawk study that took place in the Lake Tahoe Basin 1991-1995 estimated 17-24 territories. Our current data estimates 18-22 territories. While it is true that there has been no long-term population monitoring in the Lake Tahoe Basin, our current data does include three years of data where every known territory was visited. Additionally, our project-level surveys have been wide spread within the basin. My professional opinion is that this data is a reasonable estimate of the territories in the Lake Tahoe Basin. For these reasons the ban on wild collection of Northern Goshawks in the Lake Tahoe Basin should not be lifted.

d. Statistics in the DED ranks Northern Goshawk fifth out of 9 species for total number captured over a five year period (46 out of 541 birds) (table 6) yet they are still listed as being in the top three for mortality (pg. 41 pp3). This suggests that Northern Goshawk are not well suited to life in captivity. For this reason wild capture of Northern Goshawks should not be allowed.

e. Table 10 column 3 states that Northern Goshawk are recommended for use in falconry but that population status needs to be monitored, especially in the Lake Tahoe Basin, but does not suggest who or when this monitoring should be done and does not suggest a funding source, therefore it is not likely

to be done. For this reason wild capture of Northern Goshawk in the Lake Tahoe Basin should not be allowed until the population is sufficiently monitored.

f. Page 53 pp3 states that much of the Lake Tahoe Basin has moderate to high quality habitat (based on Dunk's model) and uses this model to guess that if all of that habitat were occupied there must be more than the estimated 40 individuals in the basin. The revised DED should be clear about how this number was calculated. The fact is that our own survey data does not suggest that all of the moderate to high quality habitat is occupied and it is not clear if this model takes into account other pressures such as a high level of recreational activity that occurs in the Lake Tahoe Basin. Wild capture should not be allowed in the Lake Tahoe Basin based on conjecture. At the estimated 40 individuals the allowable capture rate is less than one (table 14). This should be the statistic used to determine whether capture is sustainable."

DFW Response: A full species account for goshawks can be found in the DED, Appendix F. A summary account, including population trends and estimates, can be found in the body of the DED, page 22-23. Pages 53-54 of the DED addresses limitations on the level of capture for goshawk, including a discussion of how the level of capture was arrived at.

Pages 22-23 of the DED notes the population estimate based on PIF analysis, and describes the population trend. And excerpt from the DED states, "Population trend is also difficult to assess for goshawk. BBS data indicates an increasing population (1.7 % increase 1966-2000; 3.7% increase 2000-2010). BBS data credibility show an important deficiency for goshawk due to the low number of encounters (e.g. low abundance) per route and small sample size, both leading to imprecise trend results. Whereas Christmas Bird Count (CBC) survey data for the nonbreeding population, indicate a stable population (0.2) in California, with a slight decline in detections in recent years. Again, caution should be used with interpreting results due to low detection and abundance of this species on CBC routes." Here the DED acknowledges that data shows increasing trend, and that the data may be misleading due to low detection rates. However, this remains the best scientific data available.

Your statement above states that the Tahoe Basin likely has 18-22 territories based on the project-level monitoring that occurs in the Basin. This equates to 36-44 breeding individuals and some unknown number of juveniles/floaters. Data obtains from the LTBMU staff last year stated that Forest Service "has documented 12 reproductively active pairs at least once during 2009 to 2011; and another 6 pairs that have been reproductively active at some point during 2002 to 2008, but not during 2009 to 2011" (see page 53 of the DED). This data was used to calculate the estimated 40 individuals in the Basin, an estimate falls within the range of 36-44 individuals noted above. Reassessing the level of take based on the full range of the estimates (36-44) is shown in the table below. In any case, capture of one individual per year from the Basin is considered sustainable according to this analysis.

Population Estimate	Proportion of Juveniles	Number of Juveniles Available for Capture	Max Capture Rate	Max Capture Level
36	.30	10.8	5%	0.54
40	.30	12.0	5%	0.60
44	.30	13.2	5%	0.66

The DFW believes that level of harvest (46 out of 541) and level of mortality (18; in the top three) does not suggest that goshawks are ill-suited to life in captivity. As noted in page 19-20, causes of mortality reported are wide, from West Nile Virus, collision, old age, disease, and predation. In the case of goshawks, 18 individuals were reported as deceased from 2006-2010: 3 from predation by another raptor, 3 from collision with a car, 1 from electrocution, 1 from West Nile Virus, I from an unknown disease, 1 from frounce, 3 from Aspergillius, and 5 from unknown causes. The causes are varied and cannot be linked solely to life in captivity, with the exception of Aspergillius which may have a higher incidence in captive birds.

DFW concurs that additional monitoring would be beneficial. Reassessing the population in the future, and therefore reassessing capture level, will be needed for goshawk as well as other falconry raptor species. However, the lack of monitoring data does not substantially impact the conclusions in the environmental document. All of the available scientific data is consistent with the proposed regulations.

Dunk's model is more thoroughly assessed in the full species account found in Appendix F. The model noted that a fair amount of high to moderate quality habitat does exist in the Basin. However, the DED stated there is no way of knowing if all quality habitat is filled because of the lack of a full monitoring plan. We merely suggest the potential for more goshawks than the estimated 40 individuals based on available habitat. The estimate of 40 individuals was calculated from LTBMU data alone, and does not consider Dunk's model. Dunk's model was not intended for statewide use, and therefore does not to drill down to the local level. As for most of the other species assessed in the Environmental Document, we used best available data in the analysis of capture levels. In the case of goshawks, we used the PIF estimate of 3000 statewide. In the Basin we used the estimate of 40. The DED does acknowledge the additional pressures of recreational activity, and therefore recommends reassessing capture of goshawks in the Basin at regular intervals.

Morgan Campbell, January 31, 2013 (email)

I support the continued practice of falconry in CA. this ancient art of training birds of prey to work with humans in cooperative hunting with humans is a treasured skill. UNESCO has declared falconry as an intangible cultural heritage of humanity we as citizens of CA and the United states as members of NATO must protect these intangible heritages. California has a rich history in advancing the care and training of raptors for falconry and many falconers myself included volunteer our skills to help rehabilitate wild raptors. California falconers also contributed greatly to the re population of the peregrine falcon. the ealry pioneers of captive breeding of peregrines and the leaders of the santa cruz predatory bird research group have all been falconers . USFWS studies have shown that falconry is a non impact sport. Please help protect and further falconry in CA

DFW Response: Comment noted.

Neil Hunt, January 31, 2013 (email)

I am a California Resident, and avid hunter and fisherman, and currently in the process of becoming a Hunter Safety Instructor. I purchase numerous licenses, stamps, tags, and draw application fees every year. I am also a member of several conservation organizations including Ducks Unlimited.

I am writing in support of continuing the guidelines for falconry as they currently stand. While I do not participate in falconry, I have a deep admiration for those who do. It is a tradition that goes back to ancient times that requires dedication, patience, and a love of raptors. Many of those who participate are some of the most active in working to preserve all wild raptors.

In addition to the proposed regulations, I have also heard that there are those that would like to ban all hunting with raptors. This is merely the continued effort of largely urban animals rights activists who have little connection to land or animals other than as a political ideology. It would be a shame for these people to undermine the rights of those who take part in falconry, simply because their numbers are small. Please help preserve our outdoor heritage, including falconry.

DFW Response: Comment noted.

Peggy Ritcher, February 1, 2013 (email)

I am writing to you in support of the sport of falconry and I respectfully request that the federal regulations be adopted.'

1. while I am not a falconer, I live in a rural area and have encountered injured raptors (hit by car, fledgling mobbed by crows?) and have found that it was the local falconer, not the local vets, who was the one willing to help these birds and who managed to return one of them to the wild.

2. There is no reason for CA to have it's own set of laws separate and distinct from Federal laws. It just costs the State extra money to have unique requirements and personnel to enforce these requirements. Falconers are few and far between and represent ZERO threat to endangered species in CA.

3. it wasn't that long ago that some of the airports (including LAX, I believe) were looking for someone to help them manage birds that present a threat to aviation by collision with aircraft or intake into the engine.

4. Falconers have helped SAVE some of the raptor species, including peregrine falcons. Additional regulations and restrictions would not be beneficial to the State.

DFW Response: We recognize the importance of the falconry sport. DFW needs to ensure the falconry program runs efficiently while ensuring that the wildlife resources we are responsible for are considered appropriately. For this reason we have included language in the proposed regulations that is more restrictive (protective) than the federal regulations.

Monica Engebretson, Born Free, January 30, 2013 (email and letter)

"These comments are a supplement to our comments submitted on behalf of Born Free USA and others. These additional comments outline some specific concerns relevant to Born Free USA's participation in the scoping process and, as such, were omitted from the joint comments.

DFW Response: Many of the points made in this comment letter overlapped with ones made in the February 1, 2013, letter submitted by Born Free, Audubon Society, WildEarth Guardians, Project Coyote, Avian Welfare Coalition, The Humane Society. In addition to the responses below, please see DFW responses to the points noted in the February 1 letter.

While we appreciate the considerable effort that has gone into the development of the DED and the Department's efforts to provide opportunities for involvement from the public and interested parties in the development of the DED and proposed regulations, we have some substantive concerns that need to be stated.

DFW Response: DFW received scoping comments from Monica Engebretson during the scoping period via email on November 15, 2010. These same comments were also sent via U.S. Mail and are captured in Appendix A of the DED. The email/letter asked that the DED address the following items.

1. *Effects of wild nestling collection on the genetic strength of the wild population*
2. *Effects of removal of the largest or smallest nestling from wild nests*
3. *Survivability of remaining siblings in nests predated by falconers vs survival levels of nests not visited by humans, or if visited, nests in which the young may be banded, but are all left in place*
4. *Annual range of species population changes and the effects of falconry nest predation on those ranges*
5. *Effects and potential impacts of hybridization as result of intentional or unintentional release of captive hybrids into the wild*
6. *Effects on non-game species including threatened and endangered unintentionally taken by falcons used by falconers*
7. *Are provisions in place to prevent raptors flown by falconers adequate to prevent taking of endangered species*
8. *Ability of law enforcement to adequately enforce compliance with regulations and potential impact of non-compliance*
9. *Welfare of birds used and kept for falconry*
10. *Species specific considerations*

DFW is unaware of any studies that address the potential for effects on genetic strength and survivability by collecting nestlings. Consequently, this was not specifically addressed in the DED. Despite this lack of data, DFW does not believe that the proposed regulations have a significant adverse impact on the issues raised in points 1-4 above because the number of practicing falconers is low and annual take from the wild is nonsignificant in consideration of the overall population level for each species. Population information, including trend, was addressed based on best available science within the species accounts in Appendix F of the DED. Potential impacts of escaped/released hybrid, captive-bred or non-native species was addressed on page 42 of the DED (point 5 above). Impacts to listed species and other prey

species is addressed on page 41 of the DED (point 6 and 7 above). There is not expected to be a change in baseline as a result of the proposed regulations because the level of removal from the wild has been occurring for several decades, is very likely decreasing as the number of falconers in the state decrease over time, and the overall level of removal in relation to the species population estimates is extremely low. In addition, Appendix B of the DED is the proposed regulations. Section (d) of these proposed regulations say, "A licensee shall ensure that falconry activities do not cause the take of state or federally listed wildlife, for example, by avoiding flying a raptor in the vicinity of the listed species. Any listed bird or mammal taken by a raptor shall be removed from the raptor as soon as practical, and left at the site where taken if dead, or taken to the nearest wildlife rehabilitation center if injured. The take shall be reported by the licensee to the nearest U.S. Fish and Wildlife Service (USFWS) Ecological Services Field Office or the nearest department regional office (www.dfg.ca.gov/regions/) within 10 calendar days of the kill. The licensee shall report their name, falconry permit number, date, species and sex (if known) of the animal taken, and exact location of the kill." This language was included to ensure the continued protection of T&E species. The proposed project will result in law enforcement being more involved in the falconry program, mainly by putting the inspections of facilities, equipment and records back in the hands of the DFW law enforcement staff. In addition, the proposed project will increase reporting standards for falconers thereby increasing our ability to appropriately track activities and individual birds. The welfare of birds was addressed on page 41 of the DED (point 9 above). Species specific considerations in the comments submitted by Monica Engebretson included comments on species population status, migratory patterns, accessibility of nests, potential prey species and perceived behavioral issues for goshawk, sharp-shinned hawk, red-tailed hawk, ferruginous hawk, merlin, kestrel, prairie falcon and great horned owl (point 10 above). An extensive account for each of these species is given in Appendix B of the DED. Chapter 4 of the DED summarizes population status of each of these species as well as their use in falconry over the 5 year period, 2006 to 2010. Starting on page 48 of the DED, DFW recommends the use of species for falconry based on population status or uncertainties, continuing threats, its tradition as a falconry species, and its usefulness for hunting game.

The email/letter also requested that the following alternatives be considered:

1. *Prohibition of wild collection of birds for falconry*
2. *Prohibition on captive breeding of birds for falconry*
3. *Prohibition on the practice of falconry*
4. *Prohibition on the take and/or keeping of species that are not common, and/or are not typically used to take legal "game,' and/or that pose a risk of hybridization or otherwise compromising the integrity of wild population if released , and/or those whose use raises special welfare concerns*
5. *Prohibit take from certain nests of high value wildlife viewing opportunity and/or that are part of on-going agency approved research efforts*

The DFW considered three alternatives: No revision to state regulations, strict adoption of the federal regulations, and some form of revision to the current regulations. No revision to the state regulations would essentially be equivalent to prohibiting falconry in the state since our current regulations do not meet federal standards and would therefore not be approved (point 3 above). This alternative would not meet a project objective of having a falconry program in California. Strict adoption of the federal regulations would not have allowed for some further restrictions, for example limiting the species allowed for wild capture. Since California's proposed regulations are more restrictive (protective) than the federal government's regulations, they would not accomplish the project objective as well as the proposed project, that being having a falconry program in California that adequately protects the species. Some form of revision to the current regulations was the proposed project. This included

assessment of a suite of revisions (see page 45 to 60 of the DED). This includes an assessment of:

- *Prohibition of wild collection; point 1 above (see page 46 of the DED)*
- *Prohibition of certain species based on population status and use in falconry; point 4 above (see page 48-56)*
- *Prohibition of collection from high value wildlife viewing areas; point 5 above (see page 42 and 47 of the DED)*

This suite includes a reasonable range of alternatives. The only alternative suggested by the commenter that was not analyzed in the environmental document was a prohibition on the captive breeding of birds for falconry. DFW did not evaluate prohibition of captive breeding as the activity itself is ongoing in both state and federal regulations, it contributes to the practice of achieving the project objectives of continuing falconry in the state, it contributes to fewer birds being taken from the wild, and the activitiy has no direct impact on the environment.

Concerns about the DED Development and Presentation

1. The DED fails to include and consider all concerns submitted during the scoping process.

Under "Areas of Controversy" the DED explains that the Department received emails and letters regarding the process and comments in preparation for the ED, and that comments were also received during the scoping period. The comments from all of these public comment opportunities, including an online survey, were said to be noted in Appendix A.

Upon reviewing Appendix A, after the DED was published for public review, Born Free USA noticed that written comments received during the public comment period that were not part of the online survey were not included. We alerted the department about this matter and were informed a week later that the "wrong version" of Appendix A was posted to the web and a "correct version" was provided and later posted on the website.

The new Appendix A does include a summary of Born Free's comments as well as other written comments, including a request from an affiliate with the USFWS requesting that the release of golden eagles from rehab centers to falconers be addressed. The majority of written comments were from falconers (frequently multiple identical e-mails from the same individual) primarily asserting that falconry regulations must be adopted by the January 1, 2014 deadline.

While the updated Appendix A summarizes the written comments received, the DED still fails to evaluate them. Notably in the "Areas of Controversy" section of the DED there is a summary and discussion of comments and suggestions received via the online survey as well as a summary and brief discussion of the comments/suggestions received at scoping meetings. A similar summary and discussion of written comments/suggestions received is not included. As a result there are multiple comments/suggestions from Born Free that are not presented in the DED.

The written comments from Born Free are vaguely captured (but not completely) in some instances where similar concerns were raised via the online survey and scoping meetings. Points included in the DED that vaguely capture the written comments from Born Free include:

- Conduct population monitoring throughout the state

- Address take via falconry hunting methods of non-game species vs. game species
- Address the impacts of falconry on other wildlife species
- Address the impact to individual birds, raptor populations, and targeted prey species
- Address the impact of removing wild birds on raptor populations

DFW Response: There is no record of some of the issues listed above as having been raised during the scoping period for the DED. Regarding statewide raptor monitoring, existing monitoring by outsidegroups is discussed in the DED (see Appendix F), such as the use of BBS and CBC data. This constitutes the available scientific information on population monitoring. The GGRO raptor migration count is also included as a measure. DFW recognizes that other harvested species have some population monitoring (e.g., waterfowl, extrapolated from aerial count surveys, not CBC/BBS data). Level of nongame and game species, impacts to prey species, and removing wild birds form the wild are addressed in the DED as previously described. The DED presents and analyzes the known data sources on the populations of the species covered by the proposed regulations. As it relates to take of nongame, listed species, or non-target species, the information available, based on reporting, to the Department indicates that this is insignificant. Additionally, take of several of the classes of species that the commentor is concerned about is illegal. Because the overall number of practicing falconers in California is low, the Department has concluded that the take of wildlife is nonsignificant to any of the species populations.

Comments and suggestions presented by Born Free but not captured in summary of the online survey or scoping meeting review and/or not addressed in the DED include:

- Evaluate specific impacts of nest predation by falconers
- Evaluate the ability of law enforcement to adequately enforce compliance with regulations and evaluate the impact of non-compliance
- Evaluate the welfare of birds kept for falconry including housing and care requirements
- Prohibit captive breeding of birds for falconry
- Prohibit the take and/or keeping of species based on their utility in hunting, hybridization risk, risk to wild population, or specific welfare concerns.

Both the California Environmental Quality Act (CEQA) and the Administrative Procedures Act (APA) require the Commission to provide notice of the proposed rulemaking to interested parties and to consider public comments it receives during formal public comment periods. In light of the above, we question whether these requirements have been met?

2. The DED does not present or evaluate a range of reasonable alternatives.

The DED appears to be largely a self-serving document to support the Department's preferred alternative, with no comparable alternative presented to provide the Commission with a balanced view of options available or the ability to be aware of the concerns of individuals or organizations with no vested interest in the practice of falconry. In some instances the DED appears to merely present opinions but does not weigh them.

The "Analysis of Alternatives" in the DED presented only 3 alternatives, 1) No Change in California Falconry Regulations, 2) Strict Adoption of Federal Regulations, and 3) the Preferred Alternative.

*DFW Response: DFW disagrees with the commenter and believes that the DED assessed a reasonable range of project alternatives. See page 45 to 60 of the DED. The primary purpose of the project is to convert federal regulations to state regulations to continue the ongoing falconry activity. The DFW has evaluated the effects of falconry on each of the species potentially affected, and the consequent proposed regulations provide for the care and housing of raptors consistent with federal regulations, provides for the legal requirements of conducting falconry, and provides for the enforcement of falconry regulations. As with any regulation or law, enforcement is always limited by available resources to enforce. Captive breeding has been addressed above in response to the commentor's previous comment.*Moreover, the first and second alternatives are presented in an overtly negative and limited way, thus effectively presenting them as non-options with both ultimately leading to the abolition or possible abolition of falconry in the state, something that neither the Department nor the Commission are likely to support. Regardless, the DED should have provided a more unbiased evaluation of the very limited alternatives presented.

The First Alternative lists "saving the state time and money" as the only advantage. The disadvantages included disappointment of individual falconers in not being able to practice falconry as well as the possible "repossession" of "their" captive birds. It further warns that if repossession occurs the state would not have the resources to care for raptors currently in the care of licensed falconers. It is also stated that the Department would lose revenue from the falconry licenses

It is unclear whether the loss of revenue from falconry licenses would outweigh the costs currently associated with regulating and licensing falconers under the existing program. Evidence to support whether cessation of falconry would be a net financial loss or net financial gain to the state is not presented.

Further the analysis of this alternative fails to consider that if repossession does not occur, falconers could be given licenses to keep the birds they currently have, as is frequently done in states where regulations or law as are passed that prohibit the private possession of other wild and exotic animals.

Alternatively, falconers could apply for restricted species permit for the keeping of wild animals listed under Title 14 of the CCR which includes species typically used in falconry. In this case the funding lost from falconry permits would be replaced by funding from the issuance of the restricted species permits.

The evaluation also does not consider the possibility that falconers could be allowed to transfer their birds to falconers in other states, or move out of state with the birds in their possession (provided any necessary permits are allocated).

DFW Response: The first alternative (no revision of current regulations) would result in the elimination of falconry in California. The fees falconers pay are intended to cover the cost of the program, thereby ensuring the cost to run the program is negligible. This includes law enforcement and administrative time spent on the program. It should also be noted that the state currently has a falconry program and this should be considered baseline for any assessment. If falconry were to be eliminated, there is not capability of the Department to receive the currently authorized falconry raptors in possession of falconers. The DFW believes that requiring falconers to transfer ownership of birds to falconers in other states, or to move out of state, is overly complicated and burdensome to falconers in California.

Similarly, Alternative 2 is given scant consideration citing few advantages apart from the saving of state resources. The primary argument against Alternative 2 is that the process could take longer.

Also cited under the disadvantage is that Alternative 2 would "allow more time for the members of the public and the Commission to become better informed and help the Commission to adopt rules that carefully consider known impact." How this could be considered a "disadvantage" is unclear. It seems that this point warranted mention in the "advantages" section.

Also cited as a disadvantage is "Adopting the federal regulations without assessing the populations of raptors within the state of California may lead to allowances of species that are in local or statewide decline." This is a valid point, but there is no discussion about what species specifically do federal regulations allow that could be of concern in California and that are not already protected by other state laws such as those protected as fully protected species (i.e. peregrine falcon and golden eagle). Or if they are not already protected what steps could be taken to protect them, as needed.

DFW Response: The point of the discussion under "disadvantages to this alternative" on page 44 of the DED was meant to describe the process California must go through to appropriately consider a project such as falconry, and note that we cannot just adopt the federal regulations without doing such an analysis. The discussion of what species to include or limit is in the proposed project analysis. Federal regulations are mentioned on page 10 of the DED and fully cited in Appendix D where it is noted the species allowed for capture from the wild.

3. Unsubstantiated claims presented as fact in the DED

We noted some instances where the DED appears to repeat falconry dogma as fact without taking an objective view.

Contribution to Conservation of the Species in the Wild

The standard argument frequently put forth by falconers that captive breeding contributes to conservation needs to be addressed. Disturbingly the DED fails to take an objective view of this claim and merely repeats it without evaluation or supporting evidence.

None of the species used in falconry in California are threatened by lack of an ability to breed in the wild. It is incorrect to therefore suggest that falconry, or the establishment of self perpetuating captive populations, contributes to the survival of any of these species. There is a massive effort underway to prevent extinction of the California condor through captive breeding and multi-jurisdictional release, but the factors that led to the reduction of the condor to the status of critical endangerment do not include an inability to breed in the wild. The condor is a classic "K selection" species (referencing what ecologists now consider to be an outdated paradigm, but useful for our purposes), in that it is a large animal with a long lifespan, slow to reach sexual maturity and with a very low recruitment rate, all of which maintains viable populations so long as mortality is not significantly increased. Such increase happened for the condor as a result of a variety of factors that apply minimally or not at all to those species used by falconers. It is far too soon to know if the scheme will work, but Born Free USA agrees that it was a last ditch effort needed in light of an extraordinary situation in no way applicable to other vultures, nor other raptors (none of which fit into ecological niches in any way similar to the condor, and indeed, latest DNA analysis shows that the condor and New World vultures are not even raptors).

A better example of a California raptor declining and then rebounding when factors leading to the decline were significantly reduced would be the white-tailed kite (see http://www.prbo.org/calpif/htmldocs/species/grassland/wtkiacct.html), which was thought to be about to become extinct in California in the 1930s, but the state now contains the largest population of the species of any of the four or five U.S. states where it breeds. A conspicuous bird, it was deemed deleterious to human interest and driven to near extirpation by direct persecution. When the persecution was halted, its population did rebound, and while it is still vulnerable to reduction due to various changes that reduce the availability of prey or sufficient nesting sites, when sufficiently protected it thrives.

This is no less true of all the other species of raptor, including all the ones desired by falconers. Whatever their status in the wild, all lay a sufficient number of eggs and raise a sufficient number of young to maintain populations, so long as other factors (such as human predation and habitat destruction) that can and do contribute to declines are minimized. Even the peregrine falcon, widely cited by falconers as a species that was "saved" from extinction through captive breeding and release, was never endangered throughout its range, and rebounded in the wild when direct persecution and the widespread use of persistently bioaccumulative DDT was significantly reduced.

There are two sides to the coin. If, as is claimed, falconry does not contribute to the reduction of species that exist in the numbers their respective environments can support, then neither is there a problem with any of those species being able to maintain their respective populations without any need for captive breeding and release. Claiming otherwise is simply disingenuous.

DFW Response: Appendix C is the historical background of falconry, and where it is mentioned that falconers assisted in conservation efforts through the captive breeding program for the peregrine falcon (see page 6 of App C). A statement is also made in the DED on page 21 saying conservation of raptors is a benefit of falconry. DFW recognizes the history falconers played in the conservation of the peregrine falcon in California and recognizes that other conservation efforts also played a role in that species recovery (e.g. ban on DDT). It should be noted that DFW does not rely on the practice of falconry for conservation efforts for raptors, and all captive breeding programs to aid in conservation/recovery are only approved by the DFW considering ongoing recovery efforts (e.g. California condor captive breeding and release program).

Conservation Education

In addition the DED presents the unsupported and subjective assertion that falconry can be beneficial for conserving through public education.

First it is important to point out that falconers are not required to participate in public education efforts as a condition of their license and there are no data on how many falconers participate in meaningful education programs nor the content or impact of any programs they do participate in. If such a claim is to be stated in the DED is should be evaluated.

While it is often assumed that viewing animals in a captive setting contributes to meaningful conservation education there is little evidence to support this assumption. To our knowledge, there still exists no behavioral research demonstrating an association between viewing animals in a captive setting

and either gaining knowledge about the animal or forming any intention to take action to conserve the animal in the wild. Indeed, a recent study commissioned by the American Zoo and Aquarium Association[1] found that "…research specifically documenting the impact of conservation messages in zoos, and by extension aquariums, is in its infancy;" and that, "…little to no systematic research has been conducted on the impact of visits to zoos and aquariums on visitor conservation knowledge, awareness, affect, or behavior."

DFW Response: DFW disagrees, and while no study has been conducted, DFW has repeatedly observed the educational value that falconers provide to the public through demonstrations of bird behaviors and natural history. Coincidentally, DFW staff noticed that the February 1, 2013 "above the fold" photograph and caption of the Davis Enterprise in California illustrates this educational value (http://www.davisenterprise.com/local-news/this-event-is-truly-for-the-birds/). The practice of falconry may lead to a greater knowledge of raptor ecology, population status, disease, and threats. In addition, falconers may choose to participate in education efforts with proper permits.

Regulatory Issue

Inconsistency in Regulations: Private Possession and Commercial Use of Wildlife

In addition to our concerns specific to the DED, we would like to point out that there is an unexplained inconsistency in how the possession and use of falcons by private individuals is regulated by the department.

Title 14 (CCR) Section 671 sets forth restrictions for the importation, transportation, and possession of "Live Restricted Animals." Section 671 (b) states,

"The commission has determined that below listed animals are not normally domesticated in the states. Mammals listed to prevent depletion of wild populations and to provide for animal welfare are termed "welfare animals", and are designated by the letter "W". Those species listed because they pose a threat to native wildlife, the agricultural interests of the state or to public health or safety are termed "detrimental animals" and are designated by the letter "D". The department shall include the list of welfare and detrimental wild animals as part of DFG MANUAL NO. 671 IMPORATION, TRANSPORTATION AND POSSESSION OF RESTRICTED SPECIES, to be made available to all permittees and other interested individuals."

All species of the Order Falconiformes (falcons, eagles, hawks, vultures) and all species of the Order Strigiformes (owls, including barn owls) are included in the restricted species list and are designated "D" – detrimental animals. Clearly, this suggests that the Department has determined that the private possession of falcons for personal use in the state is detrimental. However the DED for the proposed project puts forth an argument that the private and commercial possession of these same species is not detrimental when in the possession of a licensed falconer.

The only material difference between a falconer and a restricted species permit holder is the type of license they hold. The biology and natural history of the species remains unchanged likewise any impact on "native wildlife, the agricultural interests of the state or to public health or safety," remains unchanged.

There is little objective difference in how captive raptors are used by both types of permit holders. However, restricted species permit holders are not typically allowed to remove animals from the wild and face greater restrictions and limitations in how the animals can be used and bred especially in light of the new restricted species permit requirements recently adopted by the Commission (which Born Free USA supported).

Moreover, there is little subjective difference in the motivations for keeping captive raptors between falconers and others who are also interested in keeping captive wildlife for personal use.

Those who seek to keep captive wildlife in their personal possession frequently do so out of commercial motivation either through the profits to be had by exhibiting the animal or by breeding the animal and selling the offspring and or parts to others interested in possessing captive wildlife. In addition to commercial motivations individuals are attracted to possessing wildlife for a variety of reasons such as companionship, entertainment, the animal's beauty or uniqueness. A "spiritual connection" to the animal is also frequently cited, this being an emotional consideration that we suggest is no more, if no less, valid than the spiritual connection many people have to raptors as wild animals, meant to live wild and free. Without a doubt wild animals may fill some social, esteem, and cognitive needs and desires of those that posses them. Not surprisingly the private possession of wild animals for personal use has a long history in human cultures around the world. Historically native and exotic wildlife species were frequently kept much as live trophies or signs of social status, and this still happens.

A look at the motivations of falconers for possessing raptors reveals little or no difference. The possession of raptors has a long history in some cultures (although a relatively short history in North America), particularly those that displayed (and still display) deep levels of social stratification, whereby one's status was reflected in the species one was or was not allowed to possess. Falconers often wax philosophical about history, culture and art of falconry. There are also some commercial motivations in the breeding of raptors for falconry. One difference that stands out between falconers and other wildlife possessors is the use of the birds as a hunting tool. As such, falconry is frequently treated as a form of hunting and without the possession of birds (the tool of the hunt) this form of hunting would be impossible. However, the DED points out that "as a means of hunting, falconry is quite inefficient" and that the "quality of the flight and the spectacle of the chase are the primary attraction of the sport to most falconers, with harvesting of game a secondary attraction." Indeed many of the species kept for falconry do not typically or naturally take game species and, as such, the desire to keep these species has little to do with the take of legal game for consumption or trophy. In fact, the possession and in some cases capture of the bird from the wild seems to be an end in itself and, in this way the raptor is akin to a live trophy. The so-called "charismatic megafauna", of which raptors are a prime example, tend to fulfill this psychological need. While "cute" animals are appealing to those with nurturing interests, species considered to be dangerous or predatory seem to fulfill a specific emotional need, presumably as a function of the ability of the "owner" to control or dominate, utilize or even bond with such species.

We can find no reason for the inconsistency in regulations that apply to the keeping of wild raptors deemed detrimental under Title 14 (CCR) Section 671. We can see no reason why the interests and desires of falconers to capture and possess raptors for personal use or profit should be treated any differently than the interests and desires of any individual who seeks to possess wildlife for personal use or profit, for example, colorful songbirds coveted by aviculturists. Further, we can find no reason why

the personal use, possession and breeding of raptors (including exotics and hybrids) is considered "detrimental" when conducted by one regulated special interest group but not another.

At minimum the practices of falconers should be held to the same level of scrutiny and restriction as the practices of restricted species permit holders, including but not limited to, annual facility inspections, exhibiting permits and emergency action plans.

DFW Response: Restricted species and falconry were established by the Legislature under two different statutory schemes: falconry is addressed in Fish and Game Code section 395 specifically for the "possession or training, and the capture, importation, or intrastate transfer [of raptors] used in the practice of falconry" and restricted species are addressed in Fish and Game Code section 2116 et. Seq. specifically for the importation, possession, or transport of thousands of other species for a wide variety of other purposes. Moreover, in part because of the diverse variety of restricted species, their uses, and the particular hazards that certain restricted species pose to the health and safety of the public, agriculture, and native species, restricted species are subject to additional statutory requirements and more extensive regulations than falconry: for example, thirty seven sections of the Fish and Game Code address restricted species permitting while only two sections specifically address falconry.

DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to inspections, emergency action plans, and other matters.

Conclusion: We feel that the DED has failed to adequately present and discuss potential environmental impacts of the proposed project and that public input and areas of controversy were not fairly weighed and presented and that a wider range of reasonable alternatives should have been presented for consideration by the Commission.

Please refer to our other set of comments for a discussion of concerns relevant to Wild Capture, Captive Breeding and Hybridization, Enforcement, Unintentional Take, Welfare of Birds, and Species Specific Considerations.

Born Free USA and our supporters are committed to the concept that wildlife belongs in the wild. We are fundamentally concerned about the collection of wildlife from the wild and keeping of wildlife in captivity for personal use. The wildlife of California is held in trust by the state for the benefit of the citizens of California and should not be reduced to private ownership."

Born Free, Audubon Society, WildEarth Guardians, Project Coyote, Avian Welfare Coalition, The Humane Society, February 1, 2013 (email and letter)

On behalf of Born Free USA, Sacramento Audubon Society, WildEarth Guardians, Project Coyote, The Avian Welfare Coalition and The Humane Society of the United States, we are writing to express concerns about the Draft Environmental Document (hereafter DED) regarding the proposed falconry regulations. The DED was prepared to comply with the California Environmental Quality Act (CEQA) process to assess the environmental impacts of the California Department of Fish and Wildlife (DFW's)

proposed falconry regulation changes to Section 670 of Title 14, California Code of Regulations (CCR). These changes have been prompted as a result of the Federal Government's transfer of regulatory responsibility for falconry to the states.

As outlined in the DED, the purpose of the environmental document is to assess the potential impacts of altering the regulations governing falconry in California, to address any significant controversy over the regulatory proposal, and to aid the Commission in the decision-making process. The DED is also supposed to allow a comparison of the potential effects of various actions considered by the Commission relative to the proposed project as well as a range of alternatives.

We feel that the DED failed to present a satisfactory range of alternatives for consideration and failed to give robust evaluation of the proposed project and preferred alternative. We ask the Commission to consider the following issues and areas of concern.

- Wild Capture
- Captive Breeding and Hybridization
- Enforcement
- Unintentional Take
- Welfare of Birds
- Species Specific Considerations

Wild Capture:

We believe the potential ecological impacts of wild capture for use in falconry deserve closer scrutiny. The DED acknowledges that data on impacts of wild capture are lacking and that reporting on wild raptor capture from falconers has been poor and inadequate. Specifically the DED notes that "…due to incomplete reporting and follow-through it is difficult to determine specific locations falconers capture wild birds from across California." Further the DED indicates that in 2011 the Department compiled data from California falconry forms to help determine the level of wild capture from 2006 to 2010. This suggests that prior to 2011, the Department had not been in the practice evaluate data annually to aid in determining capture quotas or to aid in detecting population trends in species exploited by falconers.

Lack of data due to failure to collect them or failure to analyze existing data is not an indication that no impact exists.

DFW Response: DFW has acknowledged some problems with the lack of reported take location by further refining reporting requirements in the newly revised "Resident Falconer Raptor Capture, Recapture and Release Report" form. As for other species with take report cards (e.g. abalone, sturgeon, scientific collecting, etc.), compilation and scientific use of this take data relies heavily upon honesty by the permit holder. There is currently no method or resources in place to confirm all take locations are legitimate (e.g., no on-the-ground follow-up to determine if there is an active nest in the reported location, and with a time-lag in reporting, a nest may have already been vacated or failed by the time anyone from DFW could confirm nest activity). Data collected from 2006-2010 indicates raptor capture occurs throughout the state rather than concentrated in a particular region/area (DED, p. 40.).

DFW has not been intensively monitoring or analyzing the level of reported take every year due to the minimal level of falconry take in California and higher priorities, but DFW does review the annual take report forms. Falconry take has been reported on existing forms since the early 1990s; and some data compilations exist from before the 2005-2010 time frame. This data will be incorporated into future falconry management activities to determine long-term trends for falconry take for each species (and location of take) and falconry licenses issued.

Some raptor species allowed for wild take in falconry are currently considered Species of Special Concern (northern goshawk) or "taxa to watch" (prairie falcon, Cooper's hawk, sharp-shinned hawk), and more effort will be expended on monitoring these species in the future (e.g., input of new and updating existing records based on valid take locations into the California Natural Diversity Database (CNDDB)).

However despite the lack of data, the proposed alternative allows wild capture to continue without significant increase in enforcement or supervision by the Department of wild take by falconers. In fact, the proposed alternative will allow an increase the number of birds removed from the wild by increasing the number of wild-caught birds that may held by a master falconer by 2 birds.

DFW Response: Under the proposed regulations, each falconer may only take up to two raptors from the wild each regulatory year, which has not changed. Thus, the proposed regulation will not impose additional significant impacts on raptor populations. The DFW will be able to track take, possession and release under the new regulations and make adjustments in the future, as needed.

Several outstanding questions remain unanswered. For example, while it is often asserted that predation by falconers simply removes "surplus" chicks because frequently only one chick in a nest of two will survive to adulthood, we question how this reduction of nestlings to a single bird per nest affect the genetic strength of the wild population? It would seem to that the falconer would select the biggest or most robust bird thus removing its superior genes from the wild population.

Moreover the concept of "surplus" should be more closely examined. Natural selection does not encourage the energy wastage that would go into the production of un-needed young. If the second chick serves no biological purpose, then it would seem that natural selection would favour smaller brood sizes or the production of just one egg, with the entire energy budget of the parents directed toward one egg and one chick. A possible demographic function of "extra young" is dilution of effects of nest predation. A snake or raven may snatch one baby without having the impact that would occur if it was the only one - in other words the impact is diluted by virtue of there being several "spares".

In addition, younger birds that typically don't survive might serve at least some functions that are critical to the survival of the species. For example, where young birds are "staggered" in their age (thus sizes) so that there are smaller ones with lesser food requirements than their larger siblings and may serve as "insurance" against times when there is a food shortage. In times of food shortage, the younger birds may survive when the bigger ones do not, as such, even the collection of the younger chick may have adverse impacts on the population. Of course, there is no guarantee that falconers take the youngest. The predation patterns and habits of falconers whether they take the oldest, youngest, most robust,

weakest, or exercise random selection should be considered in terms of the impact on the wild population and its genetic integrity.

DFW Response: Because DFW anticipates that capture levels will continue to remain minimal compared to populations as a whole and geographically dispersed, take at individual nests do not significantly impact raptor populations on a statewide level. (DED, "Effects of falconry on wild raptor populations" page 40.) Furthermore, the proposed regulation does not make any changes to the removal of "surplus" chicks. However, when combined with cumulative impacts (recreational disturbance, disease outbreaks, etc.) repeated take at localized levels may have potential impacts that DFW acknowledges, will monitor, and adapt regulations to in the future if data warrant a change (DED, page 40.) The proposed project will result in raptor captures far below the estimated maximum capture levels in California. (DED, pages 50-51.) and would not significantly impact raptor species. If concern that overharvest may be possible for a particular species, then appropriate restrictions may be considered for the regulatory year. The Commission additionally has the capability to implement emergency regulations to protect a species if necessary, however, the DFW authorized take is so conservative, that we do not anticipate that ever being necessary.

Also, see "Wild nestling capture" section of the DED, page 56, for a description on the take of eyas birds. Additionally, because there is a limit on the number of nestlings that may be taken from the wild each year (two/general and master falconer, limit of 14 prairie falcon for take each year), the cumulative take of nestlings is expected to be low, unless the number of practicing falconers increases significantly.

At minimum, if wild collection is to be allowed, DFW should conduct research into the survivability of remaining siblings in nests predated by falconers vs. survival levels of nests not visited by humans, or if visited, nests in which the young may be banded, but are all left in place. However the preferred alternative provides no mechanism for such information to be collected.

DFW Response: DFW agrees that California-specific studies on nestling survival/manipulation for species allowed for take would be advantageous to better understand the impacts of falconry take. Each raptor species differs in clutch size, incubation timing, predation factors, food habits, threats, and other factors that affect productivity and survivorship, and we currently do not have the resources to conduct such studies. Given limited resources, it might be preferable to focus research on better understanding breeding distribution, productivity, and population size and trend for at least goshawk and prairie falcon. There have been some studies on nestling survival post-nestling take in other states for prairie falcon (see Conway et al. 1995, cited in the prairie falcon species account).

Data presented on the DED indicates that fledged immature raptors are the most frequently obtained wild raptors by falconers. The capture of birds of this age also raises similar concerns. The process of natural selection is thwarted by arbitrarily removing young, pre-breeding birds. This may actually select against the individuals most prone to otherwise survive. Most wild-caught raptors are captured as young adults, just as they are looking for new territories. This guarantees that they have been trained by their parents, their personalities are well developed, and they are ready for the most dangerous year of their life, the year of their independence. In other words the ones most demographically important are selected against.

DFW Response: A maximum capture percentage (see page 50 of the DED) has been applied to the juvenile California population estimate for each species allowed for take, based on a model developed by Millsap and Allen (2006). When comparing the average number of birds reported being captured over a 5-year period (majority passage) versus the number considered sustainable by the falconry take model, only 2 species were expected to exceed allowable take levels. One of those species (Ferruginous hawk) has been proposed to be prohibited from take and another (prairie falcon) has been proposed to have a take limit of 14/year. Therefore, because anticipated capture levels are so low, any impacts on raptor populations caused by taking younger birds should not be significant.

Lastly, most raptors exhibit reversed sexual dimorphism, (females larger than the males) in addition for many species females are regarded as less high-strung than males. Larger size and calmer disposition might result in a higher percentage of females taken than males. In fact data on wild capture presented in the DED revealed that across all age classes, females were captured more frequently than males. However the DED does not evaluate or address this potential impacts female raptor predation by falconers.

DFW Response: The concern may be an issue if capture for falconry was ONLY females, potentially disrupting local sex ratios. See page 16, Figure 3, of the DED for a summary of age and gender of wild raptors captured from the wild in the 5 year period, 2006-2010. Both females and males are captured from the wild, with females having a slightly higher capture rate. However, for nestling take, sex ratios at the nest need to be considered. It is possible to enter a nest where all or a majority of nestlings are male or female, the ratio is not always 50/50. As noted earlier, if take levels remain low (small number of licensed falconers) and geographically dispersed, this preference for female raptors is probably negligible and should not significantly impact raptor populations. Furthermore, the proposed regulation would not add new provisions that would directly or indirectly change which sexes are captured. There is no evidence to indicate that the small amount of falconry take has affected wild populations in California.

Captive Breeding and Hybridization

We do not feel that the DED gives adequate attention to the impacts and risks posed by the possession and use of captive-bred, exotic or hybrid raptor species in California. Buyers of birds of prey seek attributes such as speed and power in the birds they purchase, leading to hybridization. The genes of other raptors like Merlin, gyrfalcon and red-tailed hawk may be commingled in birds bred for sale. The release of hybrids into the wild population is an accident waiting to happen.

DFW Response: As noted on page 17 of the DED, despite the level of non-wild and wild falconry raptors that escape to the wild, there is no documentation of an accidental establishment of an introduced population. However, DFW recognizes that although a wild hybrid population has not been documented, it does not mean such does not exist or could yet occur.

Peregrine falcons rebounded in part due to release after captive propagation (though hacking was involved), similar to some aspects of captive propagation used for falconry at this time in California. Thus, there is the potential for captive-bred raptors to become established in the wild, including hybrids. Of note, 25 of 53 non-wild raptors reported as escaping (2009 to 2011) were peregrine falcons, and many others were hybrids (see page 17 of the DED).

While hybrids are generally sterile and cannot reproduce, DFW has taken a cautionary approach against release of captive-bred, hybrids and non-native species into the wild. See "Effects of Captive-bred, Hybrids, or Non-native Falconry Raptors on Native Raptor Populations," page 42 of the DED for a more detailed analysis. While DFW believes that, overall, the effects of hybrid raptors on native wild populations of raptors is not anticipated to be significant, DFW recognizes that impacts on the gene pool of wild raptors due to the release of hybrids is unknown, because there are no past or current studies on this in California. However, there is neither any evidence that hybrids have affected wild raptor populations in California or North America that DFW is aware of. The proposed regulation would not make changes to existing law with respect to the ability of falconers to possess hybrids.

In addition, there is no guarantee that a released wild-caught raptor will become part of the effective population due to maladaptive behaviors acquired while in captivity. For example, birds raised in captivity can sexually imprint on their human caretakers. If released these birds may try to mate with and/or aggressively defend their territory against humans when they reach sexual maturity. Imprinted birds may also retain food begging behaviors as adults. They may be considered "dangerous" by virtue of their lack of fear of humans. Of course all of these behaviors are maladaptive to a wild situation should these birds escape or be released into the wild.

DFW Response: See pages 18 and 57 in the DED. DFW agrees there is little evidence in California (aside from the specialized and purposeful case of the peregrine falcon, noted earlier) that wild-caught birds released after some time in captivity will successfully reproduce. This is why falconry take has been considered a mortality event in the models used by Millsap and Allen (2006) and USFWS (2007).

Transmitters can be mounted on a bird's leg, tail, back, or around its neck to aid in tracking escaped birds. The devices deliver a frequency that can be picked up with a receiver and antenna. One receiver and antenna can be used with multiple transmitters, thus reducing costs to falconers with multiple birds and should be required for use on all birds used in falconry. Other than requiring the use of transmitters on hacked birds the DED and proposed alternative do not discuss this as potentially useful enforcement and data collection tool for all captive raptors.

DFW Response: Agreed, it would be helpful to be able to track escaped raptors, and to distinguish between captive bred raptors and wild caught raptors to avoid any false reporting by falconers. Specialized marking and radio-marking will be evaluated and considered for future regulatory change if needed.

In addition, the assertion the captive breeding by falconers contributes to conservation needs to be evaluated if it is going to be presented as a benefit of falconry in the DED.

None of the species used in falconry in California are threatened by lack of an ability to breed in the wild. It is incorrect to therefore suggest that falconry, or the establishment of self perpetuating captive populations, contributes to the survival of any of these species. Imperiled raptor species rebound when the factors leading to the decline are reduced or eliminated.

One example of California raptor declining and then rebounding when factors leading to the decline were significantly reduced would be the white-tailed kite which was thought to be near extinct in California in the 1930s, but the state now contains the largest population of the species of any of the

four or five U.S. states where it breeds. A conspicuous bird, it was deemed deleterious to human interest and driven to near extirpation by direct persecution. When the persecution was halted, its population did rebound, and while it is still vulnerable to reduction due to various changes that reduce the availability of prey or sufficient nesting sites, when sufficiently protected it thrives.

This is no less true of all the other species of raptor, including all the ones desired by falconers. Whatever their status in the wild, all lay a sufficient number of eggs and raise a sufficient number of young to maintain populations, so long as other factors (such as human predation and habitat destruction) that can and do contribute to declines are minimized. Even the peregrine falcon, widely cited by falconers as a species that was "saved" from extinction through captive breeding and release, was never endangered throughout its range, and rebounded in the wild when direct persecution and the widespread use of persistently bioaccumulative DDT was significantly reduced.

DFW Response: DFW's examples of falconry contributions to conservation (DED, page 21) were specific and did not indicate that falconers are directly contributing to wild raptor population stability or growth. Falconry take is based on allowing a small number of young-of-the-year to be removed from the wild, without causing a decline in a given species. Generally, captive breeding is reserved for the conservation of critically imperiled species, and should only be used as a last resort management tool (e.g., peregrine falcon, and California condor). Furthermore, the DED stated that it is not known if falconry birds released from captivity actually survive, reproduce, and contribute to the next generation unless there is active monitoring of released birds via telemetry. Additionally, there have been no studies, and there is no scientific evidence from continuous falconry take and occasional release practices in California that demonstrates wild raptors benefit from captivity and would have otherwise died in their juvenile year, or that releasing them contributes to conservation of the species. It is unknown if the released raptor will survive, and reproduce, or become a non-breeding floater. Their long term reproductive value is unknown and unstudied. Because of imprinting after being captive and trained to respond to humans, their survival potential and ability to breed is likely compromised. DFW recognizes that falconry is a hunting method that is allowed with proper license for pursuing authorized game species, and is not meant to be used as a tool to enhance wild raptor populations.

Enforcement

A major risk of falconry is that it allows for the commercial trade of birds of prey that are taken out of their habitats. When, the breeding of wild animals for the captive trade (whether as "pets" or novelties and uses) is allowed, the door for the illegal trade is opened wide.

The whole operation of falconry is built on a very weak foundation of trust. There is no DFW agent at the site when a falcon is taken from the wild. To our knowledge there are no regularly scheduled visits to falconers in possession of wild birds. Visits occur only when it is suspected that the falconer may be out of compliance with the law.

DFW Response: While DFW has insufficient resources to have an employee present whenever a wild raptor is taken, DFW will consider and evaluate an official, signed-off validation as part of reporting take in the future, similar to the process for completing deer tags. This could tested as a pilot program for the more regulated species (northern goshawk and prairie falcon), and could involve biologists of government agencies where take is likely to occur (e.g., USFS, BLM, NPS), to help alleviate costs to DFW.

This option may be considered in future revisions of falconry regulations if determined to be needed. Even so, the proposed regulation would not be different from the existing regulation in that DFW must still rely on falconers to follow falconry laws when enforcement staff is not present. Generally, most falconers follow falconry laws, because of an interest in the welfare of the birds and in retaining their privilege to continue falconry. Moreover, serious falconers have proven to be valuable allies to enforcement staff by reporting violations.

Moreover there appears to be little or no provisions for identifying individual birds thus providing easy system of laundering illegally obtained or collected birds into the trade. It seems a falconer could easily set up a facility wherein a number of legally obtained birds are kept. As those birds are sold on the black market, they are replaced by illegally obtained birds that are passed off as the ones listed. Similarly, if the facility is for breeding, then eggs and chicks illegally taken from wild nests can be placed in the captive facility with the claim that they were bred there. Presently no marking system, including closed-ring banding schemes (which are easily applied to poached wild chicks), can reliably distinguish legal from illegally obtained birds, or identify illegally collected birds that are 'laundered' through permitted collection. Reliably distinguishing between legally and illegally collected individuals requires a well-documented pedigree and tissue samples for DNA analyses. Microchipping or tattoos might provide some level of insurance but to our knowledge neither method is commonly used in birds and neither is required under current regulations.

Raising birds in captivity is a lucrative pursuit and wild blood in a bird raised in captivity has to be a strong selling point for the breeder, and as such, a strong incentive for breaking the law especially if chances of getting caught are as low as they appear to be.

Lastly much of the current and propose regulations governing the practice of falconry in California relies on voluntary compliance and self-reporting by licensed falconers. We question the reliability of this approach. As illustrated in the DED, the responsiveness and willingness of falconers in California to cooperate with the DFW in data collection seems to be in decline. An October 2011 survey mailed to 575 licensed falconers in California garnered a 30% repose rate. In 2005 the response rate was 59%. If the majority of licensed falconers can't be bothered to return a survey on the number and type of prey taken in the course of their falconry activities, we question how the Department can have confidence in the compliance with regulations and self reporting under the preferred alternative.

<u>DFW Response</u>: DFW is aware that illegal take practices have occurred in California, and will be working to improve its enforcement capacity with the proposed regulatory requirements. While recognizing that some level of illegal take may occur, there is no evidence of it affecting species populations. DFW acknowledges the need for more information on captive breeding and illegal trade in such birds that may involve hybridization with wild-caught birds. DFW relies on licenses to complete various reports pertaining to the management of many species that have higher commercial value than raptors, including salmon, abalone, and deer and for various pollution laws where the potential harm to an entire population caused by a single incident can be severe. In comparison, the impact caused by failing to report the harvest of raptors by a few falconers would be negligible. Since enforcement staff cannot be present at all places at all times there is simply not a practical, feasible alternative to voluntary compliance. Moreover, in contrast to the voluntary survey mailed in 2011, the reporting

provisions in the proposed regulation would be required: failure to comply with these provisions would violate the regulation and could result in criminal penalties and/or suspension or revocation of the license. Therefore, DFW anticipates that the licensees would comply with the regulations.

DFW Response to comments specific to illegal take of peregrine falcon and golden eagle:

Falconry take of peregrine falcons from the wild has been prohibited since 1968. After the initial listing of the peregrine falcon under the California Endangered Species Act, the Department noted "illegal taking by falconers" as a contributing factor to the decline of the species in California (CDFG 1972). Other Department publications have mentioned the need to protect active peregrine falcon eyries from illegal take and the hiring of observers to provide surveillance around these nest sites (Herman 1970, Jurek 1989). More recently, falconry take was not discussed as a threat to wild peregrine falcons due to the take prohibition as a Fully Protected species; however, the effects of illegal falconry take, trade, or hybridization of peregrines was not discussed (Comrack and Logsdon 2008). It is known that DFW law enforcement officers have encountered at least one attempt to take wild peregrines, and one attempt to take golden eagles, despite their fully protected status (Nongame Wildlife Program Files, 2013).

Response to comments specific to illegal take of Northern goshawk:

While conducting a statewide survey to determine the status of northern goshawk, Bloom et al. (1986) determined four breeding territories had young illegally removed by falconers, three of which had all young removed. There is evidence that illegal take of goshawk continued in the years following these statewide surveys (Nongame Wildlife Program Files, 1993), and the current level of illegal take for this species, and others, is unknown because DFW law enforcement is not heavily engaged in falconry activities, and DFW biologists are not able to monitor nest sites due to limited resources.

Summary

Determining illegal falconry take levels of various raptor species requires different methods of detection. Take of a tree nesting raptor (e.g., goshawk) can be more easily confirmed by evidence of tree climbing spike marks, but a cliff nesting raptor (e.g., prairie falcon, peregrine falcon) or a ground/shrub nesting raptor (e.g., ferruginous hawk) may have young illegally "scooped" without any evidence to confirm or deny other causes of nest failure (e.g., predation, starvation, etc.). Of the three example species mentioned, one is prohibited from take(peregrine falcon), one has a proposed capture limit on take (prairie falcon), and the third is proposed to be prohibited from take (ferruginous hawk) in California.

DFW law enforcement has not been heavily involved in monitoring activities or issuing citations for illegal aspects of captive-bred raptors or hybrids, or take of fully protected species such as the peregrine falcon or golden eagle. However, communication does occur with U.S. Fish and Wildlife Service law enforcement in this regard, and joint law enforcement efforts are sometimes conducted.DFW acknowledges that if additional resources were available, more time could be spent on enforcement of falconry and captive breeding regulations.

Literature Cited:

Bloom, P.H., G.R. Stewart, and B.J. Walton. 1986. The status of the Northern Goshawk in California, 1981-1983. California Department of Fish and Game, Wildlife Management Branch, Administrative Report 85-1. 25 pp + appendices.

California Department of Fish and Game (CDFG). 1972. At the Crossroads, A Report on California's Endangered and Rare Fish and Wildlife. Sacramento, CA.

Comrack, L.A. and R.J. Logsdon. 2008. Status review of the American peregrine falcon (Falco peregrinus anatum) in California. California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2008-06. 36 pp + appendices.

Herman, S.G. 1970. The peregrine falcon: a vanishing Californian. Special Wildlife Investigations, California Department of Fish and Game, Sacramento, California.

Jurek, R. M 1989. Five-year status report: American peregrine falcon. Nongame Bird and Mammal Section Report, California Dept. of Fish and Game, Sacramento, CA.

Other sources of Information:

Nongame Wildlife Program Files. 1993-2013. California Department of Fish and Game, Wildlife Branch, Sacramento, CA..

Unintentional Take

Once set loose a bird cannot entirely be controlled, which can result in the killing of protected species. While falconers using raptors to hunt may send them after legal "game," there is no guarantee that the raptor will go after what the falconer intends. The DED did not acknowledge or discuss the issue.

For example it is impossible to fly Accipiters and Merlins without putting migratory birds (protected songbirds, shorebirds etc.) at risk. If a captive falcon is being used as a hunting tool, what difference is it if a songbird is killed by a falconer's hawk or a shotgun? Killing songbirds is illegal and the method is not stipulated.

DFW Response: Agreed; there is the potential for falconry raptors to take non-target species. However, the DED does address these concerns. See "Effects of Falconry on Targeted Prey Species, Non-target Species, and Listed Species", page 41 of the DED.

Unintentional take is a risk under the existing regulations too. However, under the proposed regulation, additional prey reporting requirements will result in DFW obtaining better information on incidental take from falconers and land managers in order to ensure take levels are not excessive, especially in regard to any threatened, endangered, or fully protected species, or Species of Special Concern, and in regard to particular geographical areas where take could be more concentrated during the falconry hunting seasons due to limited access for hunting purposes. In the proposed regulations, included in Appendix B of the DED, states, "A licensee shall ensure that falconry activities do not cause the take of state or federally listed wildlife, for example, by avoiding flying a raptor in the vicinity of the listed (threatened or endangered in the final regulation proposal) species." Reporting of incidental take is also addressed in

the proposed regulations: "Any listed bird or mammal taken by a raptor shall be removed from the raptor as soon as practical, and left at the site where taken if dead, or taken to the nearest wildlife rehabilitation center if injured. The take shall be reported by the licensee to the nearest U.S. Fish and Wildlife Service (USFWS) Ecological Services Field Office or the nearest department regional office (www.dfg.ca.gov/regions/) within 10 calendar days of the kill. The licensee shall report their name, falconry permit number, date, species and sex (if known) of the animal taken, and exact location of the kill." In order to help minimize incidental take, we can also direct falconers to web pages and other sources of information to educate them, and to help insure they know how to identify special status species, and know the habitat and range of such species. In addition, the proposed regulation adds protections for species listed as threatened or endangered that are unintentionally injured by a falconry raptor by requiring licensees to bring such animals to licensed rehabilitation facilities. This requirement should reduce the potential for mortality.

Welfare of Birds

We are disappointed that the DED gave little consideration to the welfare of individual birds and by and large limited the discussion to mortality and survival in captivity as a measure of welfare. However survival and successful breeding alone do not indicate whether welfare needs are adequately met, as many animals are successfully bred under captive conditions that are found to have severe welfare problems.1

The DED states that "there is little factual data that suggests the individual raptor in captivity would be compromised physically or behaviorally as long as strict housing and care-giving standards are followed." There are three key problems with this statement.

First, absence of data does not indicate absences of a problem. While there is a dearth of welfare studies directed specifically at captive raptors, substantial data on the welfare of captive wildlife including captive birds is available2. Secondly, the preferred alternative does not require "strict housing and care-giving standards," existing housing standards are minimal and do not set forth any guidelines for assessing and measuring welfare. Third, common sense tells us that a raptor kept in captivity is to some degree compromised physically or behaviorally.

Birds used in falconry may find themselves in an 8'x 8' enclosure with perches and bath pan, or tethered to a perch for long periods of time. In addition they may be kept blind, with a hood, depriving them of visual stimuli. While such housing and treatment may be standard in the falconry industry it is hardly capable of accommodating and/or facilitating natural behavior. In the wild raptors are continually stimulated by their infinitely and intricately complex surroundings, their ability to perform their natural behaviors such as hunting, breeding, and migrating, and the interactions they have with other organisms. In captivity the lack of social and environmental stimulation can lead to behavioral problems such as feather plucking, pacing, aggression, and stress-related medical problems3. Human-imprinted birds may also be more sensitive to management changes and may be more likely to become destructive or resort to feather plucking behavior if stressed or bored4.

While flying the birds in the course of practicing falconry does provide some exercise and stimulation for captive raptors, the amount of time spent flying and hunting under the control of the falconer represents a tiny fraction of the time spent in barren restrictive enclosure and small percentage of the amount of activity and stimulus the bird would naturally experience in the wild.

There are many options available for providing enrichment for captive falcons, however the current and proposed falconry regulations do not require that falconers provide enrichment or prepare and enrichment plan for the birds in their possession. Housing requirements should be revised to provide better welfare for captive raptors.

The Department has not proposed new or updated care and housing requirements for the keeping of captive birds of prey used in falconry. The proposed alternative simply adopts federal standards in Title 50 CFR, Section 21.29(d), which are minimal. The regulations stipulate that raptors must be held in "humane and healthful conditions" but does little to define what these conditions are, or require specific actions to ensure these "humane and healthful conditions" are met.

For example, cage sizing for captive raptors need only be large enough to allow the bird to fully extend his/her wings, have one opening for sunlight. Birds may be kept tethered to perches for unlimited amount of time and as permanent and primary means of containment. Providing access to a pan of clean water is required, but there are multiple exceptions to this rule.

The primary focus of the housing requirements is avoiding escape and predation of raptors and allowing for proper sanitation and human access for feeding. Care requirements require at least one covered perch to protect the raptor from "weather." Many raptors used in falconry migrate from cold climates and should be provided with an additional heat source when temperatures in their housing fall below 20 degrees F5 however, current falconry regulations make no mention of this and it is not required.

As outlined below there are many species-specific welfare related issues that could be addressed in regulations but are not. Many raptors such as red-tailed hawks are very susceptible to West Nile virus and should be housed with appropriate mosquito protection. Vaccination is also recommended. Neither mosquito protection nor vaccination is required under current or proposed falconry regulations.

Aspergillosis is a common disease in raptors held in captivity and the prognosis for infected birds is poor 6. Aspergillosis is an opportunistic infection, causing disease when the bird is exposed to an overwhelming number of spores often associated with poor sanitation and poor ventilation of captive environments. Stress is also appears to be a major predisposing factor in the development of the disease which can be caused by shipping, heat, recent capture, or changes in management 7.Northern goshawks and immature red tailed hawks are highly susceptible to aspergillosis in captivity 8. It is recommended that captive goshawks be put on a preventative course of treatment when first acquired and anytime a major source of stress is experienced such as a change in management 9, again this is not addressed in the DED or proposed regulations.

Lastly, captive raptors are prone to many physical injuries directly related to their captivity or use in falconry. In captivity many bird of prey are described as having hyperactive dispositions and are prone to sustaining injuries to their ceres and wrists as result hitting the sides of enclosure in attempts to escape or after being startled. Tethered birds may also develop or aggravate leg injuries from repeatedly hitting

the end of the tether when bathing. Birds used in falconry are frequently placed at risk of physical injury when being used to hunt. Wild raptors normally take prey that is easily subdued. Falconers like to pit their birds against prey that is larger than the average prey size for the species of raptor involved. And they do so again and again (since falcons hit their prey with their feet, they often eventually sustain foot injuries by hitting large prey so often). While the Department was presumably unable to find data on the frequency of such injuries and it is unlikely that falconers collect such data, it remains a serious welfare concern that should have been mentioned in the DED. Again, absence of data does not indicate absences of a problem.

DFW Response: These comments go beyond what the proposed regulation addresses. Generally, the proposed regulation does not specifically address changes to caging, enrichment, or the other health or welfare concerns. Falconers are already required to comply with humane treatment of animals through various state and federal regulations. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, and other health and welfare issues that are not addressed in the proposed regulation. Nonetheless, welfare concerns are addressed on page 41 of the DED, "Effects of Falconry on the Welfare of the Individual Captive Raptors."

Species Specific Considerations

Northern Goshawk: This species reaches the southern limit of its range in California and only occurs in mountain forests in this portion of its range. This species is very much in demand as the largest and fiercest of the Accipiters, capable of taking prey up to the size of pheasants and sage grouse. When a wild take of nestlings is allowed, it is possible that every nest will be found as it is easy for falconers to locate nests by tracking the defensive adults, who are easily seen circling above their nesting territory, and loudly defending it with shrill vocalization. We suspect that this species is quite rare in the breeding range in California counties where it occurs. This species is also somewhat migratory, so during the winter months the number of birds that inhabit California may appear higher thereby skewing any counts taken at that time. Regardless, this species in not common thought its entire range and we are concerned that that the demand is high enough to put every nest that can be reached from roads, at risk.

In captivity Northern Goshawks, like other Accipitors, are known to exhibit hyperactive and nervous behavior which can lead to injuries. Their energy and aggression can be targeted toward hunting when flown in falconry; however the amount of time spent flying and hunting when kept for falconry represents only a tiny fraction of their time spent in captivity and an even smaller fraction of the activity they would naturally experience in the wild on a daily basis. As a result, the restrictions of captivity are likely a chronic source of stress. Northern goshawks are also highly susceptible to aspergillosis in captivity. It is recommended that captive goshawks be put on a preventative course of treatment when first acquired and anytime a major source of stress is experienced such as a change in management. The DED and the propose falconry regulations do not address these issues.

DFW Response: While it is possible that "every single nest will be found," as described in the DED (pages 53-54), an average of only 9.2 Northern Goshawks were taken annually from the wild from 2006 through

2010. The proposed regulation would strictly limit the number of Northern Goshawks captured by requiring falconers to enter into a drawing allowing for capture. Thus, the worst case scenario described in the comment is unlikely, and anticipated levels of take based on historical levels is far below the 50.5 birds that the USFWS model predicts could be sustainably taken. Thus, the proposed regulations should result in no significant impact on Northern Goshawk populations.

Generally, the proposed regulation does not change existing law related to diseases, stress, or other welfare concerns addressed above. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW welcomes suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues for evaluation of need.

Cooper's Hawk: Like other Accipiters they commonly exhibit hyperactive, nervous and self destructive behaviors in captivity. They are prone to panic and often injure themselves as they hit the walls and ceilings of enclosures. As a result captive Cooper's hawks commonly sustain injuries to the soft tissue of their ceres, eye ridges and head in adding to broken wing and tail feathers. They are also very susceptible to West Nile virus and should be housed with appropriate mosquito protection. Vaccination is also recommended. Neither mosquito protection nor vaccination is required under current or proposed falconry regulations. Because most Cooper's hawks migrate from cold climates they may benefit from an additional heat source if the temperatures in their housing fall below 20 degrees F. Again, current falconry regulations make no mention of this.

DFW Response: Generally, the proposed regulation does not change existing law related to diseases, stress, or other welfare concerns addressed above. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

Sharp-shinned Hawk: These small Accipiters feed heavily on protected birds. We question what legal "game" species these birds would be used for. This species is too small to reliably take anything bigger than a robin or oriole or other federally protected migratory song bird. In addition, these birds appear to be rare as breeding birds in California. We question whether birds collected in California may actually be migrants from other states and, as such, question whether the wildlife departments of other states will be consulted before the exploitation of this species is allowed in California. In captivity, Sharp-shinned hawk are described as having nervous and hyperactive dispositions and are prone to sustaining injuries to their cere and wrists. Because most sharp-shinned hawks migrate from cold climates they may benefit from an additional heat source if the temperature in their housing falls below 20 degrees F. Again, current falconry regulations make no mention of this.

DFW Response: The DED addresses the effects of the proposed regulation on sharp-shinned hawks on page 54. Because take levels have historically been quite low—3.4 birds annually 2006-2010--DFW does not anticipate any significant impact on sharp-shinned hawk populations, as take locales are spread-out geographically and take levels are low. Falconry regulations address the legal take of prey species (game) as well as species that will be illegal to be taken. Additionally, other regulations in Title 14 provide for levels of protection for all wildlife species. If sharp-shinned hawks used in falconry were to take species otherwise prohibited, it will be illegal.

Generally, the proposed regulation does not change existing law related to stress, housing, or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

The Red-tailed Hawk: This species shows enormous variation in colours and patterns across the continent, with several different subspecies. As such, we question what provisions are planned to prevent introducing non-California birds into the wild California gene-pool? If it is legal to have the species, presumably a legally obtained bird from another race can legally be kept in California, but a certain percentage are bound to enter the wild population. In addition, because these birds are very common in California and are not highly valued by falconers, they are frequently used for "practice" and viewed as "disposable, "or as "starter birds" for new falconers. All of these factors raise serious welfare concerns that should be considered. Red-tailed hawks are very susceptible aspergillosis and to West Nile virus and should be housed with appropriate mosquito protection. Vaccination is also recommended. Neither mosquito protection nor vaccination is required under current or proposed falconry regulations.

DFW Response: Red-tailed hawks are discussed in detail on page 51 of the DED; see above for a discussion of escaped birds. The proposed regulation restricts the area where a raptor may be released to "near the site that raptor was originally captured, thus minimizing the risk of mixing of subspecies and rendering such risk insignificant.

DFW is not aware of any data showing that red-tailed hawks are viewed as "disposable" and are thus treated inhumanely. Moreover, the proposed regulation generally does not change existing law related to diseases, housing, or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

Red-shouldered Hawk: This species preys primarily on small rodents, birds, amphibians and snakes- none of which are considered game species in California. As a result we question how this species would be used for hunting. They are also prone to panic and injury to their ceres, wrists, and feathers as result of hitting the walls of their enclosures. The birds should also be monitored for cold stress and may require supplemental heating. None of these welfare considerations are outlined in the proposed regulations.

DFW response: Generally, the proposed regulation does not change existing law related to stress, housing, or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation. Take of non-target or otherwise protected species is addressed above and similar to the sharp-shinned hawk response.

Merlin: There are a fair number of this species in California however they do not breed in the state. In addition, this species is too small to take traditional "game" preying mostly on birds including sandpipers and other protected species. If falconers are allowed to fly these birds what assurances can be provided that they are not taking protected species? Merlins have been reported to self mutilate their wings and legs in response to highly stressful situations. They are also highly susceptible to trichomaniasis and avian malaria. For this reason a wild bird diet is not recommend and mosquito-proof housing is considered essential. Merlins also require additional heat source if temperature in their housing falls below 20 degrees F. None of these welfare considerations are outlined in the proposed regulations.

DFW Response: Unintentional take of species is addressed above.

Generally, the proposed regulation does not change existing law related to stress, diseases, housing, or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

American Kestrel: It is suspected that this species is in decline in some parts of its range and we question whether this species is also in decline in California. This species is also too small to take any legal "game," so we question to what purpose this species would be kept or sought after by falconers outside of serving as a "starter bird" for new falconers, which raises welfare concerns. American Kestrels must be provided with supplemental heat if the temperature in the housing dips below 20 degrees F. Current California falconry regulations do not require this.

DFW Response: Unintentional take of species is addressed above and similar to sharp-shinned hawk. DFW has no evidence that the contention from the commentor may be true. Raptors may also take "nongame" species for which there is no protections. Generally, the proposed regulation does not change existing law related to housing or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

Prairie Falcon: This species is quite rare throughout is range and reaches the end of its normal range in California as such is not a common species in any county where it occurs. This species is also bred in captivity which also raises questions of what impact release or escape of captive-bred birds might have on the small wild population. Prairie falcons are also considered high-strung birds that require expert and patient handling. They are prone to a parasitic infection in the wild of nematodes called serratospiculum (air sac worms) and should be treated in captivity. They have also been known to develop an untreatable "star gazing" neurological disorder. Prairie falcons can also develop frostbite on their feed in cold temperatures and may require additional heat source below freezing temperatures.

DFW Response: The DED addresses the population of prairie falcons in the species accounts, resulting in the recommendation to provide a cap on the removal of birds from the wild to ensure there is no

significant impact to the population. The proposed regulation generally does not change existing law related to diseases, housing, or other welfare concerns. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW welcomes suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues for future consideration of their need.

As noted on page 17 of the DED, despite the level of non-wild and wild falconry raptors that escape to the wild, there is no documentation of an accidental establishment of an introduced population. However, DFW recognizes that although a wild hybrid population has not been documented, it does not mean such does not exist or could yet occur.

Peregrine falcons rebounded in part due to release after captive propagation (though hacking was involved), similar to some aspects of captive propagation used for falconry at this time in California. Thus, there is the potential for captive-bred raptors to become established in the wild, including hybrids. Of note, 25 of 53 non-wild raptors reported as escaping (2009 to 2011) were peregrine falcons, and many others were hybrids (see page 17 of the DED).

While hybrids are generally sterile and cannot reproduce, DFW has taken a cautionary approach against release of captive-bred, hybrids and non-native species into the wild. See "Effects of Captive-bred, Hybrids, or Non-native Falconry Raptors on Native Raptor Populations," page 42 of the DED for a more detailed analysis. While DFW believes that, overall, the effects of hybrid raptors on native wild populations of raptors is not anticipated to be significant, DFW recognizes that impacts on the gene pool of wild raptors due to the release of hybrids is unknown, because there are no past or current studies on this in California. The proposed regulation would not make changes to existing law with respect to the ability of falconers to possess hybrids.

Great Horned Owl: There are many subspecies and we question what provisions are in place to assure that the practice of falconry does not result in the mixing of subspecies. This species is also not particularly well suited for hunting legal "game" but is sought after by falconers because they are common and fierce. These reasons do little to justify the risks and welfare concerns associated with the hobby. Great horned owls are very susceptible to West Nile virus and should be housed with appropriate mosquito protection. Vaccination is also recommended. Neither mosquito protection nor vaccination is required under current or proposed falconry regulations.

DFW Response: Some comments from falconers tend to agree that owls will not be highly sought by falconers. Consequently, DFW anticipates the impact to them to be nonsignificant. If data reporting indicates that great horned owls, or any of the species, are not sought by falconers, they could be removed from the authorized list of raptors for falconry. The proposed regulation generally does not change existing law related to diseases, housing, or other welfare concerns, nor would it change the number of animals captured or released. The proposed regulation also restricts the area where a raptor may be released to "near the site that raptor was originally captured, thus minimizing the risk of mixing of subspecies. Therefore, the proposed regulation would not significantly impact these areas of concern. DFW is considering proposing new falconry regulations in the near future and would welcome

suggestions pertaining to caging, enrichment, stress, diseases, and other health and welfare issues that are not addressed in the proposed regulation.

Barred Owl: Barred owls prey on small rodents, birds, and crustaceans. They are also nocturnal hunters. It is difficult to imagine how this species would legitimately be used for hunting legal game species. Barred owls are prone to feather breakage and if jesses are used their feathered feet should be monitored for feather-wear and subsequent irritation of the tarsus.

DFW Response: DFW considers the barred owl to be a rapidly expanding opportunistic species that is outcompeting other owls (such as northern spotted owl). While DFW agrees that barred owls may not be the most desirable falconry species, gaining knowledge of its behavior and habits through falconry could prove useful for management (control) of the species expansion and for understanding its competitive interactions with other native species. Active control (take) of barred owls is being done experimentally and is being considered by the USFWS to facilitate conservation of endangered species.

Suggested Changes to the Preferred Alternative

We understand that the Commission may consider the proposed project. We have many concerns about the proposed project and areas of concern that we feel have not been adequately addressed. We strongly encourage the Commission to consider following measures.

Alternatives to be Considered

- Prohibition of wild collection of birds for falconry
- Prohibition on captive breeding of birds for falconry
- Prohibition on the take and/or keeping of species that are not common, and/or are not typically used to take legal "game,' and/or that pose a risk of hybridization or otherwise compromising the integrity of wild population if released.
- Prohibit take from certain nests of high value wildlife viewing opportunity and/or that are part of on-going agency approved research efforts
- Require that new housing and welfare requirements be adopted for the keeping of captive raptors. Perhaps convene a captive raptor welfare working group to make recommendations.

DFW Response: Some of these comments were previously addressed in these responses. DFW considered three alternatives: No revision to state regulations, strict adoption of the federal regulations, and some form of revision to the current regulations. No revision to the state regulations would essentially be equivalent to prohibiting falconry in the state since our current regulations do not meet federal standards and would therefore not be approved (point 3 above). Strict adoption of the federal regulations would not have allowed for some further restrictions, for example limiting the species allowed for wild capture. Some form of revision to the current regulations was the proposed project. This included assessment of a suite of revisions (see page 45 to 60 of the DED). This includes an assessment of:

- *Prohibition of wild collection; point 1 above (see page 46 of the DED)*
- *Prohibition of certain species based on population status and use in falconry; point 4 above (see page 48-56)*

- *Prohibition of collection from high value wildlife viewing areas; point 5 above (see page 42 and 47 of the DED)*

Conclusion

Human fascination with birds of prey likely predates written history. From the ancient Greeks, Romans and Egyptians who incorporated raptors into their mythology, to native people throughout the Americas who viewed raptors as spiritual guides and messengers. Today many people feel a seemingly innate connection to these birds. To most that connection manifests in a desire to see and protect these birds in the wild while to a few others, this connection manifests in a desire to possess and control them. The desires of the former should not be simply dismissed. Sacramento Audubon Society joins Born Free USA and others in requesting that the Commission reject the proposed regulations as inadequate to serve the Commission's or CDFW's most basic duty to oversee and protect the welfare of the wildlife of the State of California in the public interest.

The a range of suggestions and alternatives presented in this letter offers the Commission a chance to better balance the diverse interests of the public as well as provide a more cautious approach to the commercial exploitation of raptors for falconry."

DFW Response: DFW has evaluated the concerns and viewpoints of both the falconry stakeholders and other stakeholders. It is clear that falconry is a unique type of hunting sport in the state, and not all viewpoints of the various stakeholders are easily reconciled, especially where scientific data is lacking. We acknowledge the need for more scientific data to provide stronger assurance for self-sustaining raptor populations, especially in regard to increased human population growth in the state, and further loss of habitat for raptors. As a result of compiling and analyzing information for this draft environmental document, we recognize the need for closer population monitoring of the species authorized for falconry take, especially those with smaller population size and under pressure from habitat modification and loss (i.e., prairie falcon and northern goshawk).

Public Interest Coalition, February 1, 2013 (email and letter)

"We appreciate the Department of Fish and Wildlife's (DFW) stated intent to proceed with establishing the regulations without controversy. To avoid controversy, we urge DFG to consider our comments, include provisions for revisiting all regulations on a regular, semi-annual basis to change as needed, and require falconry revenue/fees/fines sufficient enough to cover all enforcement and administration activities and retribution.

I. Extend Comment Deadline

Due to both the postponement of the "2014 Falconry Regulations" (from Fish and Game Commission's (FGC) earlier agenda to its October 3, 2012 meeting), as well as the upcoming FGC discussion agenda item (Feb 6) which will occur AFTER the public comment deadline (Feb 1), we urge that the comment deadline also be extended so that the public may be more informed of all the issues, especially as they may be revealed at the Feb 6 FGC meeting. We realize meeting the federal deadline is important to avoid consequences; however, it is much more critically important that the 2014 Falconry Regulations

(FR) be properly processed, vetted, and reviewed to protect natural resources, rather than speeding up the process and risk jeopardizing those natural resources.

DFW Response: The falconry regulation process has been underway for over two years. A 15-day re-notice of the ISOR will be done prior to the adoption by the Fish and Game Commission in March 2013 and opportunity for public involvement has been abundant. The DFW needs to have fully adopted regulations by September 2013 in order for the USFWS to approve these regulations by the deadline of January 1, 2014. Additional changes can be assessed for need in the future if the DFW has scientific information to indicate they are warranted. Currently, there are no specific indications that the proposed project will significantly impact any species.

We are gravely concerned at the apparent lack of any scientific data as to the environmental impacts that falconry may have on the prey taken by falconry activities, and/or on other wildlife that must utilize that same prey-taken species for survival. The public is not provided with any solid data in order to evaluate any of the proposed changes in the regulations. Thus we strongly urge that DWF circulate a supplemental or subsequent ED to cover this most basic of information (scientific studies, reports, impacts where falconry is practiced, etc.) that is needed before any regulations can be adopted.

As mentioned during the October FGC presentation, the passion of the falconers may be high, but that is not a scientific reason to adopt any rushed regulations, let alone speed up the process or omit the very data needed for analysis.

DFW Response: The DFW does not have sufficient data on prey numbers taken by falconry species, other than the data presented in the DED (see page 10-13; Table 2 and Table 3). This is the major reason we added the requirement for falconers to report prey species taken annually, in addition to the incidental take of T&E species or game species taken outside the hunting season. Once we have this basic data from year to year, we can better assess impacts of falconry over several years. Currently, there are no specific indications that the proposed project will significantly impact any species.

II. Adopt Precautionary Principle Approach—Rather than lock-step federal regulation adoption

Because the overarching federal regulations may allow an activity, DFW may be under pressure to assume a position of automatically adopting it also. We cannot disagree strongly enough with such a position—one that "merely duplicates" fed regs. Adhering to a federal falconry regulation in a Nevada deserts or Rocky Mountains cannot be juxtaposed or applied to California's vast and diverse habitat and species.

The feds acknowledge these variables by allowing for more restrictive regulations. We urge DFW to not adopt federal regulations nor use them as validation for a particular change, but instead proactively adopt more restrictive regulations that will responsibly protect our natural resources.

DFW Response: DFW is not merely adopting the federal regulations. The proposed state regulations have additional requirements and species protections due to California's unique needs. We take the utmost care, based on the data we have, to protect California's wildlife resources.

III. Postpone any regulator change adoptions until all concerns addressed.

Our major concerns are listed below. We urge DFW and FGC to address each of our concerns and to adopt the 2014 regulations with full consideration of our positions and those of others that support stronger restrictions to protect natural resources.

1—No elimination of a "season" for falconry activites or for harvest of wild chicks for use in falconry. To eliminate the season and allow year-round taking is unacceptable, both due to a lack of scientific studies showing the impacts such a monumental change would have on both prey (intended and unintended) and on other predators (of all species). In addition to possibly allowing the taking of wild chicks in a specified season (should scientific studies support it), there needs to be strong restrictions on where such wild-chick taking may occur. Only research will allow for wise decision making so that one rookery will not be depleted to specie stress levels. What are the impacts when wild chick(s) have been removed from nests, but the last surviving chick(s) dies? If that is followed by a late breeding/nesting, what are the increased risks of having no chicks survive? What impacts may that have on future use of the once-viable area for breeding/nesting?

Are there cumulative impacts when falconers take from one area, year after year?

What will "no season" stresses or impacts be on other wildlife species that rely on the same specific prey for consumption and rearing of their young or juvenile dependent offspring? What will year-round falconry activities have in reducing the species that other wildlife consume and rely on for survival? Combined with climate changes to habitat and migratory food sources, will year-round falconry become the tipping point in endangering other struggling species? Maintaining and strongly enforcing a specific season for both falconry activities and wild-chick taking must be adopted to better manage and preserve existing natural resources.

DFW Response: Falconers are limited to the capture of 2 wild raptors per year. In addition, falconers are required to leave at least one nestling in the nest. With a seasonal restriction in place, falconers are forced to trap during very specific time frames. These time frames often do not allow for the capture of specific species or age classes. For instance some species may breed earlier in the year, and thus capture of chicks is impossible for these species. See page 56 of the DED for a discussion of the removal of the seasonal restriction of capture from the wild. The proposed regulations also require more specific reporting data back from falconers. This data will allow DFW to assess the potential impacts statewide and locally to wild raptor populations.

2—No reduction of falconer age minimums. Reducing the age (apprentice falconers from 14 to 12 years; general falconers from 18 to 16 years) may be extremely problematic and create significant negative impacts. Minors simply do not have enough experience or environmental and natural resource knowledge to fully understand all the impacts falconry brings to other species and habitat. The skill and judgment levels of a 12 year old or a 16-year old, supervised or not, are not sufficiently developed to justify a lowering of the age limit. California should adopt more restrictive regulations than the feds. Also, the safety of the minor may become an issue, but without any data or rationale to support the proposed change, the public is in the dark. Please provide via a supplemental or subsequent ED.

DFW Response: After much discussion with the public, the DFW believes, as does the USFWS, that the reduction in age for Apprentice and General falconers does not pose a risk to birds held in possession. The Apprentice sponsor program is intensive and requires oversight by the sponsor. Advancement from

one class to the next requires approval from the sponsor and from DFW. In addition, any person under the age of 18 is required to get a parent or legal guardian signature taking on full responsibility. See page 46 of the DED for discussion of age limits for falconry classes.

3—No General falconer possession of a captive-bred or hybrid raptors. To allow the use of captive-bred or hybrid raptors presents risks that are not just merely "significant," but rather have the potential for monumental devastation in raptor populations. The preference should be to adopt regulations that do not allow any falconry activities with captive-bred or hybrid species. Barring that, with a proper permit, such a falcon/raptor may be possessed but should not be released in any open habitat where there may be any species of concern—any falconry activity in or near any area where there are species of concern must be a prosecutable violation. The ramifications of just one loss and/or cumulative losses on the natural resources are too detrimental, yet entirely possible, to allow this regulation to stand. Although the regulations may mandate reporting of "lost" raptors, true enforcement can/will be impossible. Possession requirements must be tightened.

DFW Response: The DED addresses the potential impacts of hybrids (see page 42). The proposed regulations also prohibit the release of hybrid, captive-bred or exotic species into the wild without permission from DFW. Accidental loss is also to be reported to the USFWS and DFW. To help with the recapture of lost raptors, the proposed regulations also require hybrid, captive-bred or exotic species to be flown with transmitters.

4—Reduce number of wild-caught possessed raptors. Possession of 2 raptors is plenty for any one General falconer; the increase to 3 is not justified, or at least we find no data to support this change. Furthermore, to allow 2/3 of the possessed raptors to be wild caught is unsustainable and unacceptable. Reduce General falconers total possession to 2 and only 1 of which can be wild caught, or provide studies to support the higher numbers.

Master falconers should be limited to 2 wild-caught raptors (reduced from the present limit of 3). To consider increasing the wild caught to 5 raptors is irresponsible and cannot be justified when considering the potential impacts. Possession of any number of captive-bred or hybrid raptors is a recipe for disaster.

Where are the studies to support such a policy/regulation change? How will enforcement and/or lack thereof exacerbate the impacts to the species populations in the wild? It is a known fact that poaching and other illegal activities, coupled with reduced funding for hiring DFW Wildlife Officers, have already stretched our natural resources to precipitous levels. This recommended regulation has the potential to severely impact raptor populations and other species. It must not be adopted, or substantial evidence must be provided to prove it will not have significant impacts. Furthermore, we recommend that any new possession of wild caught should be suspended until all ramifications of climate change have been studied for at least the next decade. At the very least, this regulation should have a renewable sunset clause that requires annual revisiting to evaluate the impacts.

The logic that because a species is "doing well" in California, that therefore it follows that it can be added to the wild-caught/wild harvest list is illogical and unsustainable. Merely because a wild species is doing well does not, and should not, put a price tag on its head for catching and using in falconry. By that reasoning, then every species should be evaluated multiple times per year to assure no significant

or severe impacts are occurring by such a broad policy. Without the research, to apply the principle of "doing well" to the state for take purposes is unacceptable. Please justify, other than "doing well," any releasing of the Northern goshawk for possession in the Lake Tahoe Basin. What will the impacts be for both its targeted prey and subsequent impacts on other wildlife in the Basin that consume that same, possibly reduced, prey.

Please address the impacts possibilities of this very real scenario: A General or Master falconer possesses the maximum number of wild-caught raptors. Subsequently, a previously restricted raptor is added to the "wild harvest" list. Will the falconer "dispose" of one wild-caught to obtain a desired retailed hawk? Or if a falconer has the limit of wild-caught, but a more desirable raptor is added to the list (e.g., red tail hawks or barred owls), what are likely actions on the part of the falconer? Please examine all the possibilities and impacts that may occur in different scenarios as to how/when/where that falconer can or will either reduce his/her existing possessed raptors to stay within compliance limits? What are the implications with regard to care of possessed raptors when falconers want to possess a new allowable possession? Will a falconer merely reduce care for the ones that cannot be used but may be permitted for possession. Please look at all the enforcement challenges with such a loosening of an important regulation, and please consider making the regulation more restrictive instead of less. Please consider not adopting this regulation change at all.

DFW Response: The increase in possession limits for General and Master will not overburden capture from the wild due to restrictions already in place. As stated above, falconers are limited to the capture of 2 wild raptors per year. The proposed regulations also require more specific reporting data back from falconers. This data will allow DFW to assess the potential impacts statewide and locally to wild raptor populations and will allow the DFW to track transfers and releases. In addition, all falconers must meet standard housing requirements set forth by the USFWS. These standards are set forth to ensure raptors are cared for properly while in captivity. There is no indication that falconers would abuse raptors in their possession whether they had one or several. See page 46-47 in the DED for a discussion of possession limits for falconry classes. DFW believes the concern for raptor species is unwarranted given the small number of falconers, small number of birds taken annually, and the size of the wild raptor populations in California. Far fewer than one percent of any of the species is proposed for capture annually.

5. Make reporting meaningful with greatly increased fines and penalties for noncompliance. Please more fully address the annual falconry reporting required at license renewal. How is this data verified? How does DFW guarantee that all data is being submitted, let alone its accuracy? Does DFW have the personnel and resources to validate the data as accurate, truthful, or complete if/when a "conflict of interest" with the reporting process may exist? How will DFW be aware of discrepancies and trends that may have impacts if they are not verifiably reported? To rely on "trust" and/or "self policing" is irresponsible and unacceptable when the consequences are so potentially dire.

"Housing facility inspections" are critical, yet will DFW have the resources to enforce this important regulation when all housing of captive wildlife should be inspected—not just for proper "housing" but for discrepancies in the possession reports?

With reduced funding, it would be reasonable to conclude that DFW's resources will not support either rigorous examination of the annual data or the facility inspections. Thus, please study stricter

restrictions to ensure enforcement and provide stronger fines and penalties and much larger fees for any non-compliant falconry activities.

DFW Response: DFW proposal requires more detailed reporting than the USFWS. One reason for this is to assess impacts to wild raptor populations and prey species taken by falconry raptors. We have also reestablished authority in the proposed regulations to conduct inspections ourselves via law enforcement officers, both planned and unannounced, to ensure falconers are in compliance. In addition, the denial, suspension, and revocation sections in the proposed regulations are substantially fortified, giving the DFW more authority to act on issues of noncompliance. Given the nature of the sport of falconry, reporting cannot be continually monitored or verified by DFW staff. For instance, it is virtually impossible to require DFW staff to be present at the time of all capture or release activities since falconers often do not know exactly when or where they will be capturing a targeting raptor species until the opportunity arises.

6—Require permanent identification on each possessed raptor. All possessed captive-bred, wild-caught, or any other type of possessed raptor or prey bird should have required, consistent, and easily accessed identification—whether it be a microchip or other permanent means. The possession limits should be per year only. Thus, if a falconer "loses" a possessed bird, he/she should be required to report that fact immediately (and in year-end inventory reports), provide the bird's identification reference, and not be allowed to replace that bird for a minimum of one year. Otherwise, the less-than-skillful falconer, who overworks, neglects, or otherwise causes a possessed raptor to be "lost," will merely "take" more—either from the wild or by other means, and no one will be the wiser. This is another reason why the regulations should allow DFW officials to carry scanners and have the capacity to access the falconers' possession database to verify in the field or at the site of housing whether the data is accurate or not.

The regulations should require that noncompliance or the discovery of inaccurate possession or year-end reports, intentional or not, shall result in (a) the immediate revocation of all falconry and/or housing permits for a period of not less than five years, (b) prohibition of ever being classified as a Master falconer, (c) prohibition from accompanying any other licensed falconer on a hunt or being at any falconry event, and (d) payment of large fines for each violation to cover all enforcement and administration costs as well as retribution in the form of a significant specified contribution to wildlife rehabilitation facilities.

DFW Response: See Appendix B, proposed regulations, in the Draft Environmental Document. Per federal standards, all captive-bred, hybrid and exotic species are required to have unique identifiers/bands, and several wild species are also required to have falconry bands. The proposed regulations in Appendix B required all wild raptors to be banded. However, during the public comment period it became apparent that banding of all raptors with black plastic falconry bands is inappropriate for all species, causing some species harm. In revised regulation DFW will change language to be consistent with federal regulations regarding banding wild raptors. Lost raptors are required to be reported to the DFW and to USFWS. In addition, proposed regulations require captive-bred, hybrid and exotic to be flown with transmitters. There is a restriction in place to limit take of wild raptors to two per year. According to federal regulations, the use of ISO chips is voluntary, and only required under certain circumstance. In Appendix B you will see language pertaining to the denial, suspension, and revocation of falconry license. These sections are substantially fortified, giving the DFW more authority to act on issues of noncompliance.

7—Irrelevant Reference to History of Falconry.

The adoption of any regulations that are designed to preserve California's natural resources should give little to-no weight to historical essays or claims of heritage. However, if a historical perspective is presented in an ED, then DFW has an equally compelling obligation to present the dark side of the history of falconry. An Appendix should be provided to inform the public of the known abuses and violations (underground) activities of rogue falconers and poachers.

A "Historical Background of Falconry" (Appendix C) has no bearing on whether a regulation should/should not be adopted with regard to impacts on natural resources.

Only scientific data and facts that pertain to conserving natural resources should be considered in the environmental review. Including Appendix C may provide the public with an interesting bedtime read, but it is irrelevant in establishing regulations. DFW must provide balanced information in the form of an addendum appendix with historical abuses and negative impacts from falconry. To not do so, is to present a biased position to the public as well as withholding important information.

DFW Response: The historical background of falconry was included in the DED for background on the proposed project and the setting for the proposed project, not as a means to analyze potential impacts. Historical background on the proposed project is in the body of the DED on pages 8-10 and in Appendix C. Information on some abuses and impacts from falconry were provided earlier in response to Born Free and others (February 1, 2013 letter), and are repeated here:

DFW Response to comments specific to illegal take of peregrine falcon and golden eagle:

Falconry take of peregrine falcons from the wild has been prohibited since 1968. After the initial listing of the peregrine falcon under the California Endangered Species Act, the Department noted "illegal taking by falconers" as a contributing factor to the decline of the species in California (CDFG 1972). Other Department publications have mentioned the need to protect active peregrine falcon eyries from illegal take and the hiring of observers to provide surveillance around these nest sites (Herman 1970, Jurek 1989). More recently, falconry take was not discussed as a threat to wild peregrine falcons due to the take prohibition as a Fully Protected species; however, the effects of illegal falconry take, trade, or hybridization of peregrines was not discussed (Comrack and Logsdon 2008). It is known that DFW law enforcement officers have encountered at least one attempt to take wild peregrines, and one attempt to take golden eagles, despite their fully protected status (Nongame Wildlife Program Files, 2013).

Response to comments specific to illegal take of Northern goshawk:

While conducting a statewide survey to determine the status of northern goshawk, Bloom et al. (1986) determined four breeding territories had young illegally removed by falconers, three of which had all young removed. There is evidence that illegal take of goshawk continued in the years following these statewide surveys (Nongame Wildlife Program Files, 1993), and the current level of illegal take for this species, and others, is unknown because DFW law enforcement is not heavily engaged in falconry activities, and DFW biologists are not able to monitor nest sites due to limited resources.

Summary

Determining illegal falconry take levels of various raptor species requires different methods of detection. Take of a tree nesting raptor (e.g., goshawk) can be more easily confirmed by evidence of tree climbing spike marks, but a cliff nesting raptor (e.g., prairie falcon, peregrine falcon) or a ground/shrub nesting raptor (e.g., ferruginous hawk) may have young illegally "scooped" without any evidence to confirm or deny other causes of nest failure (e.g., predation, starvation, etc.). Of the three example species mentioned, one is prohibited from take(peregrine falcon), one has a proposed capture limit on take (prairie falcon), and the third is proposed to be prohibited from take (ferruginous hawk) in California.

DFW law enforcement has not been heavily involved in monitoring activities or issuing citations for illegal aspects of captive-bred raptors or hybrids, or take of fully protected species such as the peregrine falcon or golden eagle. However, communication does occur with U.S. Fish and Wildlife Service law enforcement in this regard, and joint law enforcement efforts are sometimes conducted.

DFW acknowledges that if additional resources were available, more time could be spent on enforcement of falconry and captive breeding regulations.

Literature Cited:

Bloom, P.H., G.R. Stewart, and B.J. Walton. 1986. The status of the Northern Goshawk in California, 1981-1983. California Department of Fish and Game, Wildlife Management Branch, Administrative Report 85-1. 25 pp + appendices.

California Department of Fish and Game (CDFG). 1972. At the Crossroads, A Report on California's Endangered and Rare Fish and Wildlife. Sacramento, CA.

Comrack, L.A. and R.J. Logsdon. 2008. Status review of the American peregrine falcon (Falco peregrinus anatum) in California. California Department of Fish and Game, Wildlife Branch, Nongame Wildlife Program Report 2008-06. 36 pp + appendices.

Herman, S.G. 1970. The peregrine falcon: a vanishing Californian. Special Wildlife Investigations, California Department of Fish and Game, Sacramento, California.

Jurek, R. M 1989. Five-year status report: American peregrine falcon. Nongame Bird and Mammal Section Report, California Dept. of Fish and Game, Sacramento, CA.

Other sources of Information:

Nongame Wildlife Program Files. 1993-2013. California Department of Fish and Game, Wildlife Branch, Sacramento, CA.

IV. Comments submitted by reference

From the dfg.ca.gov website (a.gov/wildlife/falconry/docs/AppA.pdf —

"Appendix A," Summary of Public Comments on the falconry survey), we incorporate by reference into the record all the issues listed in "Table 3. Comments received via email or in letter format," as submitted by Monica Engbretson [spelled incorrectly, we believe, in the Table], affiliated with Born Free

USA. Our concerns regarding the new state regulations are reflected and more expertly articulated in the list provided by Born Free USA and Ms Engbretson. Please address each of those concerns.

In summary, although we can appreciate a need to meet a federal deadline, we urge DFW to proceed only at a rate that will resolve all issues in favor of vigorous review and wise decisions based only on scientific data. Fears that falconry activities might have to wait for future approvals or be postponed should not result in shabby regulations that will be difficult or expensive to enforce, especially if subject to loose interpretation. We ask that each of the above considerations and those submitted by reference be addressed in the Environmental Document (CEQA process), and that the regulations be strengthened accordingly with re-circulations or circulations of supplemental or subsequent ED info as required."

DFW Response: Please see DFW responses to Born Free individual letter dated Jan 30 and the joint letter dated Feb 1 above.

Steve Watson, February 2, 2013 (email)

I have one thing to ad to the comments I sent in a while back. After some thought and discussion with other falconers here in Ca. there needs to be some changes made to the apprentice program and the over sight by DFG between sponsor and apprentice beyond a one year written report. Whether this effort is put on the shoulders of the state clubs who claim to help in introductions between apprentice and sponsors or if DFG needs to over see these relationships themselves more closly by perhaps giving a second test before apprentices move on to general status or perhaps requiring the apprentices to fly and catch game before at least 3 general status or master level falconers who can sign a form for advancement, something needs to be done. Personally I believe at least both of these measures need to be put in place. You could even charge for the test and additional forms.

I say this because as a Harris hawk breeder, I meet and sell birds to a good number of first year generals and I have been forced to turn various people away over the years due to lack of basic skills and knowledge they need in order to move on to the general level. This lack of skills and knowledge is due to what is commonly known as the "paper sponsor" syndrome. Were an apprentice locates a sponsor who is to far away or simply not interested in teaching and only sign's the forms to pass that apprentice person on. This problem is larger than you might think and is growing. I know this is due to lack of basic regard for the sport in general by people who many times have no hunting experience before they enter the program and that is the fault of the falconers themselves. Please set this right.

DFW Response: This suggestion was not considered in the DED or regulations as it was not brought up in the scoping process. We can evaluate this at a later date to determine need for regulatory change.

Douglas Bristol, February 3, 2013 (email)

I obtained my first falconry license in CA in 1983 after taking the test, obtaining the required equipment, having an inspection, finding a sponsor, and getting a Red Tailed Hawk.

Over the ensuing years, I have successfully hunted with a variety of birds of prey, and have many friends who do the same.

Falconry is the most restricted hunting sport and very few have what it takes to pursue this sport. But those who do are "hard core" and like other sports, have a particular love of falconry and the birds and in wildlife in general.

As you probably know, it was the husbandry and breeding techniques in falconry that in large part was responsible for the successful breeding and reintroduction of the peregrine falcon throughout the USA, to the point now where the peregrine is de-listed and has thriving populations in places where they were absent.

A friend of mine recently "lost" his 9x intermewed peregrine when it was killed by a Red Tailed hawk, and I was there when we found her. It was a devastating event and was much like losing a member of the family.

I encourage you to continue not only allowing falconry to be practiced in CA, but to encourage the use of the resource(s) so that the very few falconers can continue to pursue this wonderful sport.

DFW Response: Comment noted.

Douglas Cummins, February 4, 2013 (email)

Please keep falconry legal in my home state of California. I know a large number of members of the falconry community who are dedicated to practicing this ancient sport, in humane, respectful ways and honoring the wildlife of our state. Adoption of federal regulations would be appropriate for safeguarding wildlife and ensuring sustainable practice of the sport in California. I have been a responsible practicing falconer for 43 years in California, and hope to continue in this sport that is a magnificent blend of human interaction with wildlife! Your attention to details in adoption of the Federal regulations is greatly appreciated by us all, please continue in a positive and constructive manner!

DFW Response: We recognize the importance of the falconry sport to falconers. DFW needs to ensure the falconry program runs efficiently while ensuring that the wildlife resources we are responsible for are considered appropriately. For this reason we have to include language in our regulations beyond that of the federal regulations.

437 Emails received with the following text (or slight variations of) as of February 7, 2013

“I am concerned that the department has failed to evaluate properly the proposed falconry regulations both in terms of the ecological consequences of removing birds from the wild or introducing exotic raptor species, and of the ethical considerations of keeping wild birds captive for personal use or profit.

History has shown that the increased popularity of captive wildlife for private use, whether wild-caught or captive-bred, often leads to a subsequent increase in the illegal trafficking of their wild counterparts within the United States and abroad. The presence of "legal" native falcons makes enforcement of laws

against illegal poaching harder. In addition, buyers of birds of prey seek attributes such as speed and power in the birds they purchase, leading to hybridization. The release of hybrids into the wild population is potentially dangerous to individual birds as well as the native bird population.

Moreover, much of the current and proposed regulations governing the practice of falconry in California rely on voluntary compliance and self-reporting by licensed falconers.

I urge the department to strive to better balance interests of California residents who care about wildlife and to take a precautionary approach to the exploitation of wild raptors, especially at a time when the state budget precludes robust data collection and adequate enforcement of new or expanded consumptive programs.

The department has a responsibility to California residents to manage wildlife in an ethical, humane and biologically sound manner that emphasizes animals' ecological importance and not their "entertainment" value for a privileged few.

Thank you for your consideration of my views"

DFW RESPONSE: The DFW feels that the DED appropriately addresses concerns regarding the use of wild raptors in falconry, as well as the accidental release of hybrids or exotics and the potential impacts to wild raptor populations (see page 42 and 57). The proposed regulations offer more oversight and more reporting than previously required. The proposed regulations reference federal regulations concerning the standards for proper housing and care of captive of raptors. Responses to these comments are similarly addressed above.

DFW Response: Comparison of Breeding Bird Survey and Focused Prairie Falcon Population Estimates

The justification to establish a cumulative falconry take of 14 prairie falcons (*Falco mexicanus*) per year throughout California can be found on page 49 of the draft falconry Environmental Document (ED), under the subheading "**Level of Wild Raptor Species Capture"**.

The Breeding Bird Survey (BBS) data presented in the draft ED (page 30) and the prairie falcon species account (page 19) was collected in BBS count circles throughout California, using data gathered from 1990 through 1999. This data was used in the Partner's In Flight (PIF) analysis to estimate a population of 2900 breeding individuals (or 1450 breeding pairs) in California (found at: http://rmbo.org/pif_db/laped/query.aspx). The PIF analysis also estimates prairie falcon population levels for each Bird Conservation Region (BCR) in California.

The raw BBS data is listed in the table below (found at: https://www.pwrc.usgs.gov/BBS/PublicDataInterface/index.cfm?fuseaction=PublicDataInterface.viewStateSummaryReport), and includes the numbers of observations of presumed breeding prairie falcon for each year of BBS surveys in California (1966-2011). Data used in the PIF analysis are in **bold**, and were collected from 33 BBS routes (out of 200 total routes) in the 1990s.

Year	#	Year	#	Year	#	Year	#	Year	#	Year	#	Year	#	Year	#
1966	-	1972	4	1978	5	1984	9	**1990**	2	**1996**	12	2002	14	2008	5
1967	-	1973	2	1979	3	1985	4	**1991**	4	**1997**	8	2003	4	2009	8

1968	0	1974	2	1980	8	1986	6	**1992**	4	**1998**	8	2004	11	2010	9
1969	0	1975	8	1981	7	1987	6	**1993**	15	**1999**	14	2005	6	2011	7
1970	3	1976	8	1982	5	1988	6	**1994**	10	2000	3	2006	10		
1971	3	1977	3	1983	2	1989	4	**1995**	20	2001	8	2007	10		

The PIF population estimate of 2900 breeding adult prairie falcons in California greatly contrasts with the population estimate derived from long-term, species-specific surveys conducted by Boyce et al. (1986) in the 1970s. The BBS data used by PIF represent extremely small samples sizes. BBS methodology is not designed to survey for nest site occupancy, reproductive success, or population size at unique cliff and rock formation breeding habitat of an uncommon raptor such as the prairie falcon.

Using species-specific methods to detect prairie falcon breeding territories, Boyce et al. (1986) reported observations of 1,250 nesting attempts at 520 territories in California from 1970-1979. The entire state was covered in great depth, ultimately leading Boyce et al. (1986) to estimate "300 to 500 breeding attempts may occur annually within the state." Productivity rates from the study were then applied to the latter population estimate to determine "between 650 to 1,150 fledgling falcons maybe produced annually in California."

Analysis of California Natural Diversity Database Records of Prairie Falcons

As of January 28, 2013, the California Natural Diversity Database (CNDDB 2013) indicates there are 456 known breeding territories (or "element occurrences") for the prairie falcon, throughout 35 counties. Each territory is "presumed extant." From 2000 to 2008, however, only 37 (8.1%) of these known breeding territories have been updated with recent observations of occupancy, or observed re-occupancy of historically documented sites. These more recent CNDDB records (2000-2008) were reported by prairie falcon expert biologists in California, including data from a long-term breeding season study by Emmons (2012) at Pinnacles National Park, and various other locales (e.g., east San Francisco Bay Area).

From 1983 to 2008, 75 (of 456 total) prairie falcon breeding territories have been reported as occupied, which is only 16.4% of the total records (CNDDB 2013). The remaining breeding territories were all documented prior to 1982 (381 of 456), which corresponds with the end of the Department's "Prairie Falcon Harvest Program" and the extensive data collection beginning in 1970 (Garrett and Mitchell 1973, Schlorff 1981, Boyce et al. 1986, CNDDB 2013).

No records have been added to the database since 2008, leaving the Department to rely on historical nest site information from 1970-1981. This time frame of observations accounts for 83.6% of all known prairie falcon breeding territories in California (CNDDB 2013).

While the Department possesses 456 CNDDB records that are considered "extant," there is a need to verify occupancy and reproduction at these historical nest sites. An unknown proportion of breeding territories documented in CNDDB may or may not be consistently occupied (or successful) each year. Additionally, an unknown amount of the territories designated as "presumed extant" may now be permanently vacant due to loss of essential foraging habitat surrounding the sites.

A prime example: a breeding territory was declared vacant in the Monterey Breeding Bird Atlas due to permanent removal of foraging habitat in the northern tip of the Sierra de Salinas coastal mountain range (Roberson and Tenney 1993). A housing development likely caused the breeding territory vacancy, and resulted in permanent habitat loss. Only 3 of 18 CNDDB element occurrences for Monterey County have been updated since publication of the aforementioned atlas, (two records are from Pinnacles NP). Under the "threats" attribute section (in CNDDB) for the Monterey nests, there is

no documentation of potential urban expansion, nor documentation of territory extirpation (CNDDB 2013).

Another example from Unitt (2004): "…At least one former nest site on the fringe of San Diego has apparently been abandoned however: Fortuna Mountain (P11), active at least in 1980 (Calif. Dept. Fish and Game data)." This nest site is still considered "presumed extant" in CNDDB (CNDDB 2013).

There are also nesting territories from pre-Grinnell and Miller (1944) times, shedding light on historical distribution of prairie falcon in California prior to extensive coastal development by humans. These sites include, but are not limited to: (1) Santa Ana Canyon, Orange County (Hamilton and Willick 1996); and (2) the southern or seaward slope of the Santa Ynez Range, near Santa Barbara (Dawson 1916).

All territories previously determined active, but now long-vacant and/or unsuitable due to loss of surrounding foraging habitat (see Threats section of prairie falcon account, page 23), should be considered "extirpated" and made note of in CNDDB.

There may also be information to be gathered on active territories not yet documented in CNDDB from the 2009-2012 breeding seasons, warranting an update of the database. Furthermore, **520** nesting territories were reported by Boyce et al. (1986), but only **456** are documented by CNDDB, creating a discrepancy of **64** breeding territories that were not reported to the Department. These missing records should be found and incorporated into CNDDB.

Conclusion

In summary, all available scientific information is used to determine the population distribution, abundance, and productivity of prairie falcons in California. CNDDB (2013) records represent the most up-to-date dataset for this purpose, adding to the extensive breeding territory dataset from the 1970s (Garrett and Mitchell 1973, Schlorff 1981, Boyce et al. 1986).

The main limitation in determining population trend for prairie falcon in California is the lack of an annual or periodic statewide monitoring program with a scientifically-based survey protocol. Long-term datasets for prairie falcon are generally localized, and therefore biased by regional biotic and abiotic factors (Steenhof et al. 1999, Emmons et al. 2011). Given the diversity of California's ecoregions where prairie falcon can nest, a stratified sampling approach is desirable.

While an enormous effort by Boyce et al. (1986) was focused on locating nesting prairie falcons in all regions of the state, including re-examination of pre-1970 historical territories, this took a decade to complete. Every known nesting territory was not visited every year, lending room for error, hence the range of 300 to 500 breeding attempts estimated by Boyce et al. (1986).

The prairie falcon tends to be faithful to a breeding territory (Bent 1938), but is not always present at each historic breeding territory every year (Boyce et al. 1986). Because of this behavior, saturation of all known breeding territories with successful fledging is unlikely. Occupancy and breeding success at a given historic nesting site is complex because prairie falcons must compete with other cliff nesting species for nest sites (e.g., ravens, golden eagles, and great horned owls). With the increase in abundance of peregrine falcon (*Falco peregrinus anatum*) in recent years (Comrack and Logsdon 2008), displacement of prairie falcons may become more common in the future. The historical interaction between these two falcon species is largely unknown; however, there is information to suggest nest site competition occurs (Walton 1978).

Long-term territory fidelity and productivity is further hampered by threats to the species, including habitat destruction, mortality due to wind turbines, eradication of prey base, human disturbance, etc. (refer to prairie falcon species account, page 23). Furthermore, prairie falcons are limited by available

nest sites (i.e., cliffs and large rocky outcrops), which are geographically limited across the landscape and mostly unchanged through time (Runde and Anderson 1964, Boyce 1987, Boyce et al. 1986, Peeters and Peeters 2005).

Therefore, it should not be assumed that all 456 breeding territories documented in CNDDB, or all 300-500 breeding attempts reported by Boyce et al. (1986), have 100% successful reproduction with optimal fledging rates per nest each year. In light of the breeding population estimate from Boyce et al. (1986), and little information gathered since then, one must use great caution and understand the full ramifications of applying PIF's extrapolated population estimate to California. Doing so would result in at least a three-fold increase in prairie falcon breeding bird abundance (utilizing the mid-range of 400 pairs from Boyce compared to 1450 pairs from PIF), and is likely an overestimate based on a small sample size.

To reliably assess effects of falconry take, and assure long term population viability of prairie falcon throughout their breeding range, current estimates of breeding pairs, productivity, and survivorship by age class are needed, based on valid sample sizes from more than one breeding population in California. There is potential for differences in productivity and survivorship between the distinct biogeographic areas where prairie falcon are known to nest in California. While future nest site use and productivity at traditional eyries is probably not adversely affected if take for falconry is small, occasional, and geographically spread apart to the greatest extent feasible (Conway et al. 1995); continued take from local populations that are small or experiencing declines from various threats can exacerbate local population declines and local extirpation (Milllsap and Allen 2006, Bousman 2007). Obtaining current, California-specific demographic data is important to confidently authorize a scientifically defensible level of take that will not become additive to all known and future cumulative threats to prairie falcons in California.

In response to Richard Hoyer's comments (Dec. 15, 2012) on bear and mountain lion quota similarities with prairie falcon:

All wildlife should be managed using the best available demographic data and parameters unique to each species. Biological life history data for large carnivores such as bears and mountain lions should not be compared to a cliff-nesting falcon.

Literature cited

Bent, A.C. 1938. Life histories of North American birds of prey, order Falconiformes. Part 2. Unites States National Museum Bulletin 170. Pages 18-42.

Boyce, D. A., Jr., R.L. Garrett, and B.J. Walton. 1986. Distribution and density of Prairie Falcons nesting in California during the 1970s. Journal of Raptor Research. 20:71-74.

Bousman, W.G. 2007. Prairie falcon. Page 190 in W.G. Bousman, editor. Breeding Bird Atlas of Santa Clara County, California. Santa Clara Valley Audubon Society, Cupertino, California. 547 pp.

Boyce, D.A., Jr. 1987. Nest site characteristics of prairie falcons in the Mojave Desert, California. Journal of Raptor Research 21(1):35-38.

Buranek, S.C. 2006. Prairie falcon home range and habitat use at Pinnacles National Monument, 2002 to 2004. Thesis. California State University, Sacramento, CA.

Comrack, L.A. and R.J. Logsdon. 2008. Status review of the American peregrine falcon (*Falco peregrinus anatum*) in California. Wildlife Branch, Nongame Wildlife Program Report 2008-6. 36pp + appendices.

Conway, C. J., S. H. Anderson, D. E. Runde and D. Abbate. 1995. Effects of experimental nestling harvest on Prairie Falcons. Journal of Wildlife Management 59:311-316.

[CNDDB] California Department of Fish and Wildlife, Natural Diversity Database. 2013. Element Occurrence Reports for prairie falcon. Unpublished cumulative data current to July 07, 2008. Accessed January 28, 2013.

Dawson, W.L. 1916. A personal supplement to the distributional list of the birds of California. Condor 18:26.

Emmons, G. J. Patterson, M. Koenen, D. Press. 2011. Prairie falcon monitoring protocol for Pinnacles National Monument: standard operating procedures – version 2.2. Natural Resource Report NPS/SFAN/NRR-2010/217. National Park Service, Fort Collins, Colorado.

Emmons, G. 2012. 2011 Breeding season report for the Pinnacles National Monument—Prairie falcons and other raptors. Natural Resource Technical Report NPS/FAN/NRTR—2012/614. National Park Service, Fort Collins, Colorado.

Garrett, R.L. and D.J. Mitchell. 1973. A study of Prairie Falcon populations in California. Wildlife Management Branch Administrative Report No. 73-2. California Department of Fish and Game.

Grinnell, J. and A.H. Miller. 1944. Prairie falcon. The distribution of the birds of California. Pacific Coast Avifauna 27. Pages 108-109.

Hamilton, R.A. and D.R. Willick. 1996. The birds of Orange County, California: status and distribution. Sea and Sage Press, Sea and Sage Audubon Society, Irvine, CA. Page 68.

Harlow, D., B.J. Walton, and D.A. Boyce. 1979. Reproductive status of American peregrine falcon in California. Paper presented at the 1979 Annual Meeting of the raptor research foundation, Davis, California, November 8-12, 1979.

Herman, S.G., M.N. Kirven, and R.W. Risenbrough. 1970. The peregrine falcon in decline in California: 1. A preliminary review. Audubon Field Notes 24(4):609-613.

Jurek, R.M. 1989. 5-year status report, American peregrine falcon. Nongame Bird and Mammal Section Report. Wildlife Mngmt. Division, Calif. Dept. Fish and Game, Sacramento, CA.

Kiff, L.F. 1988. Commentary: changes in the status of the peregrine in North America: An overview, in Peregrine falcon populations, their management and recovery (T.J. Cade, J.H. Enderson, C.G. Thelander, and C.M. White, editors), Peregrine Fund, Boise, ID, pp. 123-139

Millsap, B.A. and G.T. Allen. 2006. Effects of falconry harvest on wild raptor populations in the United States: theoretical considerations and management recommendations. Wildlife Society Bulletin 34(5):1392-1400.

Peeters, H. and P. Peters. 2005. Prairie falcon. Pages 249-253 in P.M. Faber and B.M. Pavlik (editors). Raptors of California. California Natural History Guide Series Number 82, University of California Press, CA.

Polite, C. and J. Pratt. 1990 updated 2005. Prairie falcon. Pages 150-151 in D.C. Zeiner, W.F. Laudenslayer, K.E. Mayer, and M. White, editors. California's Wildlife, Volume 2. Calif. Dept. Fish and Game.

Rich, T. D., C. J. Beardmore, H. Berlanga, P. J. Blancher, M. S. W. Bradstreet, G. S. Butcher, D. W. Demarest, E. H. Dunn, W. C. Hunter, E. E. Iñigo-Elias, J. A. Kennedy, A. M. Martell, A. O. Panjabi, D. N. Pashley, K. V. Rosenberg, C. M. Rustay, J. S. Wendt, T. C. Will. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology. Ithaca, NY. Partners in Flight website. http://www.partnersinflight.org/cont_plan/ (VERSION: March 2005).

Roberson, R. and C. Tenney.1993. Prairie falcon. Atlas of the breeding birds of Monterey County, California. Monterey Peninsula Audubon Society. 438 pp.

Runde, D.E. and S.H. Anderson. 1986. Characteristics and nest sites used by breeding prairie falcons. Journal of Raptor Research 20(1):21-28.

Schlorff, R.W. 1981. Prairie falcon harvest program. Nongame Wildlife Investigations, Department of Fish and Game, Sacramento, CA.

Shuford, W.D., editor. 1993. Marin County Breeding Atlas: a distributional history of the coastal California birds. Bust Tit, Bolinas, CA.

Small, A. 1994. California Birds: their status and distribution. Ibis Publishing Co., Vista, CA. Page 80.

Steenhof, K. 1998. Prairie falcon (*Falco mexicanus*). In the Birds of North America, Number 346, editor. The Birds of North America, Inc., Philadelphia, PA.

Steenhof, K. and M.N. Kochert. 1982. An evaluation of methods used to estimate raptor nesting success. Journal of Wildlife Management 46(4):885-893.

Steenhof, K., M.N. Kochert, L.B. Carpenter, R.N. Lehman. 1999. Long-term prairie falcon population changes in relation to prey abundance, weather, land uses, and habitat conditions. Condor 101:28-41.

Unitt, P. 2004. San Diego County Bird Atlas. Proceedings of the San Diego Society of Natural History. Page 171 and 179.

Walton, B.J. 1977. Development of techniques for raptor management, with emphasis on peregrine falcon. Calif. Dept. Fish and Game, Wildlife Management Branch, Administrative Report 77-4. 26 pages.

Walton, B. J. 1978. Peregrine Prairie Falcon interaction. Raptor Res. 12:46-47.