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VIA USPS and Electronic Mail

Brian Leahy, Director
bleahy@cdpr.ca.gov
Christopher Reardon, Chief Deputy Director
creardon@cdpr.ca.gov
Charles Andrews, Associate Director,
Pesticide Programs Division
candrews@cdpr.ca.gov
Marylou Verder-Carlos, Assistant Director,
Pesticide Programs Division
mverdercarlos@cdpr.ca.gov
Ann Prichard, Chief, Pesticide Registration
Branch, Pesticide Programs Division
aprichard@cdpr.ca.gov
Department of Pesticide Regulation
1001 I Street, P.O. Box 4015
Sacramento, CA 95812-4015
(916) 445-4000

Sally Jewell, Secretary of the Interior
U.S. Department of the Interior
1849 C. Street, NW
Washington, D.C. 20240

Ren Lohoefener, Regional Director
U.S. Fish and Wildlife Service
2800 Cottage Way, W-2606
Sacramento, CA 95825

Governor Edmund G. Brown Jr.
c/o State Capitol, Suite 1173
Sacramento, CA 95814

Matt Rodriquez, Secretary for
Environmental Protection
California Environmental Protection Agency
1001 I Street
P.O. Box 2815
Sacramento, CA 95812-2815
(916) 324-9214
Matthew.Rodriquez@calepa.ca.gov

February 21, 2013

Re: 60 Day Notice of Intent to Sue for Violations of Section 9 of the Endangered Species Act; Notice of Violations of the California Endangered Species Act, California's Fully Protected Species Laws, the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act

Dear Messrs. Leahy, Reardon, Andrews, Lohoefener, Brown and Rodriquez, and Mses. Verder-Carlos, Prichard, and Jewell:

We are writing to request that you take immediate action to remedy the California Department of Pesticide Regulation's ("DPR's") ongoing violations of the Endangered Species Act ("ESA"), 16 U.S.C. § 1531-1544, the California Endangered Species Act, Cal. Fish & Game Code § 2050 *et seq*., California's Fully Protected Species laws, Cal. Fish & Game Code § 3511, the Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-668c, and the Migratory Bird Treaty Act, 16 U.S.C. § 703-712, resulting from the take of protected species arising out of DPR's pesticide registration programs. Specifically, registration and approval of second

Jonathan Evans, Toxics and Endangered Species Campaign Director & Staff Attorney
351 California St., Ste. 600 • San Francisco, CA 94104
tel: (415) 436-9682 x 318 *fax:* (415) 436.9683 *email*: jevans@biologicaldiversity.org
www.BiologicalDiversity.org

generation anticoagulant rodenticides ("SGAR")–brodifacoum, bromadiolone, difethialone, and difenacoum–results in death and injury of the San Joaquin kit fox ("kit fox"), Pacific fishers, golden eagles, migratory birds and other animals that are protected under federal and state law.

This letter also serves as an official 60-day notice under the ESA's citizen suit provision, 16 U.S.C. § 1540(g), of our intent to file suit in federal court to enforce the ESA if you do not act within the next 60 days to remedy the on-going violations of the prohibition against "take" of threatened and endangered species under section 9 of the ESA. *Id.* § 1538(a)(1). This notice is submitted on behalf of the Center for Biological Diversity ("Center")— a national, nonprofit conservation organization that is headquartered in San Francisco with more than 450,000 members and online activists dedicated to the protection of endangered species and wild places. The Center's Pesticides Reduction Campaign aims to secure programmatic changes in the pesticide registration process and to stop toxic pesticides from contaminating fish and wildlife habitats. The Center has offices throughout the United States including offices in San Francisco, Los Angeles, and Joshua Tree, California.

The Center appreciates the work by DPR to initiate steps towards greater regulation of SGARs and the time that staff have taken to discuss this matter with the environmental community and affected stakeholders. However, we remain concerned that without immediate action further death, injury, harm, harassment, and disturbance of legally protected species will occur. Moreover, the Center maintains that both immediate and robust controls are necessary to fully address the problem of deaths and poisoning of non-target protected species.

Approximately 40% of active ingredients of SGARs used in California are applied by licensed applicators.[1] Regulation of SGARs as restricted use materials, which would permit continued use by licensed applicators, would still allow a large percentage of use of those products. Use by licensed applicators would also still allow SGARs to be consumed by non-target organisms and allow bio-accumulation in the food chain. DPR would still be liable for death, injury, harm, harassment and disturbance of protected species because there would be no controls on the consumption of SGAR poisoned rodents by upper level predators that would then succumb to rodenticide poisoning themselves. For this reason, more strict controls on the use of SGARs in California are necessary to avoid violations of the ESA.

I. FACTUAL BACKGROUND

A. Rodenticides and Second Generation Anticoagulants

Rodenticides are designed to kill mammals, so their effects on humans and non-target mammals are qualitatively the same as their effects on target pests. Poisoning occurs by ingestion of bait, or via consumption of poisoned animals. Rodenticides can be divided into three broad classes in terms of their effects: first generation anticoagulants, second generation anticoagulants, and nonanticoagulants. SGARs pose the greatest ongoing threat to wildlife.

1 2013 CDPR, Second Generation Anticoagulant Registration, Sales & Use Information (February 14, 2013)

The first- and second generation anticoagulants interfere with blood clotting and death results from hemorrhage. For both first generation and second generation anticoagulants, primary manifestations include nosebleeds, bleeding gums, hematuria, melena, and extensive ecchymoses (bruises). Animals may also have symptoms of anemia, including fatigue and difficulty breathing on exertion. If the poisoning is severe, the animal may progress to shock and death.

SGARs, which include brodifacoum, bromadiolone, difenacoum, and difethialone, are acutely toxic and have a high risk of severe unintended poisoning for children, pets, and other non-target wildlife. This is due to the fact that second-generation anticoagulants remain in the body longer than first generation anticoagulants, with half-lives of up to 350 days, and may also accumulate in an animal's body when consumed during multiple feedings. As a result, predatory birds and mammals that feed on dead poisoned rodents or live rodents that have received a sub lethal dose are especially vulnerable to secondary poisoning from SGARs.

B. Second Generation Anticoagulants Lead to Direct Mortality of Non Target Wildlife

SGAR's contribute to deaths of significant numbers of non target wildlife because the physiological effects of anticoagulants are not limited to the target animal or the animal that originally ingests the anticoagulant. SGAR's greater acute toxicity increases the potential for primary poisoning amongst non-target species, meaning that the non-target species may be killed after only one feeding of rodenticide bait.[2] In addition, the longer tissue half-lives of SGARs enhance the potential for bioaccumulation in non-target predators in particular and increase the risk of secondary poisoning.[3]

Non target wildlife deaths due to the exposure to SGARs are well documented in the scientific literature.[4] Studies of upper level predators have shown anticoagulant rodenticide toxicosis in 6% of raptors tested.[5] A study conducted on bobcats and mountain lions discovered a highly significant correlation between anticoagulant rodenticides and death from notoedric mange.[6] In the study, 31/39 bobcats had detectable levels of brodifacoum.[7] One bobcat died directly due to brodifacoum toxicity, and 4/4 mountain lions had detectable levels of brodifacoum – with two of the lions dying from direct exposure to anticoagulant rodenticides.[8]

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2 Thomas et al. 2011, Second generation anticoagulant rodenticides in predatory birds: probabilistic characterization of toxic liver concentrations and implications for predatory bird populations in Canada. Environment International 37:914–920.
3 *Id*.
4 Eason et al 2002. Assessment of Risks of Brodifacoum to Non-target Birds and Mammals in New Zealand, Ecotoxicology, 11, 35-48 2002.
5 Murray 2011. Anticoagulant rodenticide exposure and toxicosis in four species of birds of prey presented to a wildlife clinic in Massachusetts, 2006-2010. J Zoo Wildl Med. 2011 Mar;42(1):88-97.
6 Riley S.P.D. et al. (2007) Anticoagulant Exposure and Notoedric Mange in Bobcats and Mountain Lions in Urban Southern California. J. Wildlife Management 71(6) 1874–1884.
7 *Id*.
8 *Id*.

Wildlife mortality incident poisoning reports and necropsies have also indicated the persistent problem of mortality to non target organisms from anticoagulant rodenticides. Recent studies in California by DPR found that brodifacoum was likely involved in 13% of reported animal mortalities and bromadiolone was likely involved in approximately 3% of reported animal mortalities.[9] Nationwide wildlife mortality incident reports compiled by the U.S. Environmental Protection Agency ("EPA") demonstrate poisoning and deaths to non-target wildlife for several decades.[10]

C. Sublethal Effects of Second Generation Anticoagulants Contribute to Wildlife Deaths

Even if exposed wildlife survive after anticoagulant rodenticide intoxication, the animal still may suffer possible disruptions in vital physiological processes. Damage to the heart muscle has been shown in both birds and mammals following brodifacoum exposure.[11] Liver damage, disruptions of physiological processes leading to osteoporosis, or calcium remobilization and deposition in the circulatory system are all possible because of the impact upon vitamin K biochemistry.[12] Unusual ranging behavior in bobcats was positively associated with increased levels of antocuagulant rodenticides. The presence of anticoagulants is also associated with other diseases and may act synergistically with natural environmental stressors to increase susceptibility to naturally occurring lethal diseases.[13] Multiple studies have shown that even sub-lethal doses can cause clotting, biochemical abnormalities (including glucose and liver function markers), and physiological abnormalities (including statistically significant decreased body weight, increased liver size, increased heart size, and increased kidney size), which could or did cause mortality in the laboratory setting.[14]

Other sub lethal effects at dose levels orders of magnitude below lethal levels have been reported.[15] Sub-lethal doses of brodifacoum caused abortions and reduced lambing rates in sheep.[16] Several studies also indicate that sub-lethal concentrations of second generation anticoagulants may cause mortality to embryos.[17] The increased sensitivity of exposed wildlife

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9 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012).
10 EPA 2013, Compilation of Rodenticide Wildlife Mortality Incident Reports Between 1971-2012 (January 29, 2013).
11 Rahmy 1993, Myocardial alterations in animals intoxicated with an anticoagulant rodenticide. J. Egypt. Ger. Soc. Zool. 12C: 87-98.
12 Knopper et al 2007, Bone Density and breaking strength in UK raptors exposed to second generation anticoagulant rodenticides. Bull Environ Contam Toxicol 78:249–251.
13 Riley et al. 2007, Anticoagulant Exposure and Notoedric Mange in Bobcats and Mountain Lions in Urban Southern California, J. Wildlife Management 71(6) 1874–1884.
14 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012).
15 USEPA 1998, Reregistration Eligibility Decision (RED) Rodenticide Cluster, EPA738-R-98-007; USEPA 2004, Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach (July 2004).
16 Godfrey 1985, Non-target and secondary poisoning hazards of "second generation" anticoagulants. Acta zoologica fennica 173: 209-212.
17 Laas et al. 1985, Retention of brodifacoum in sheep tissues and excretion in faeces, New Zealand J. Agric. Res. 28:357-359; Godfrey et al. 1989, Preliminary dosing trials of a new anticoagulant, brodifacoum, as a toxicant for the

following a re-exposure is expected given the cumulative mode of action demonstrated with all the anticoagulant rodenticides.

The majority of some raptor species like red tailed hawks and great horned owls in proximity to the human population now carry multiple rodenticide residues, primarily second generation anticoagulants.[18] This extensive pre-exposure in wildlife populations can lead to a general increase in susceptibility to anticoagulation and hemorrhaging resulting from consumption of anticoagulant rodenticides. Current rodenticide assessments are carried out on individual compounds and fail to acknowledge that the second-generation anticoagulants (as well as some of the first generation anticoagulants) act on the same receptors as they bioaccumulate in the animal making their impact additive.

A particularly worrisome research finding has been the report of brodifacoum toxicosis in neo-natal dogs following a past sub-lethal exposure in the mother.[19] The risk of trans-placental transfer is of obvious concern given the high proportion of mammals found carrying residues, including endangered species such as the San Joaquin kit fox.

D. Wildlife is Broadly Exposed to Second Generation Anticoagulants

Second-generation anticoagulant rodenticides have long been of concern for wildlife.[20] In 1999, the California Department of Fish and Wildlife was sufficiently concerned about one of the second-generation anticoagulants – brodifacoum – that it requested DPR to reevaluate all rodenticides containing that active ingredient.[21] Between 1994 and 2000 in California, second-generation anticoagulants were detected in 70% of mammals and 68% of birds examined; signs of intoxication were seen in 43% of exposed wildlife.[22] In 2000, the list of potentially affected mammals was already extensive including coyote, red and gray fox, raccoon, bobcat, mountain lion as well as the endangered San Joaquin kit fox. As for raptors, golden eagles and barn owls were showing the highest exposure levels.

EPA found that incident reports have identified many taxa of non-target animals exposed to rodenticides, including strict carnivores such as mountain lions, bobcats, hawks and owls; omnivores such as coyotes, foxes, skunks and raccoons; and granivores and herbivores such as squirrels and deer. EPA's ecological incident report documents anticoagulant residues in 27 avian species and 17 mammalian species.[23]

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rabbit, *Oryctolagus cimiculus* (L.). New Zealand J. Exper.Agric. 8:1-5; Munday et al 2003, Brodifacoum toxicosis in two neonatal puppies. Vet Pathol. 40:216.

18 Thomas et al. 2011, Second-generation anticoagulant rodenticides in predatory birds: Probabilistic characterisation of toxic liver concentrations and implications for predatory bird populations in Canada. Environment International 37:914–920.

19 Munday et al. 2003, Brodifacoum toxicosis in two neonatal puppies. Veterinary Pathology 40:216.

20 Alterio 1996, Secondary poisoning of stoats (*Mustela erminea*), feral ferrets (*Mustela furo*), and feral house cats (*Felis catus*) by the anticoagulant poison, brodifacoum, New Zealand Journal of Zoology, 1996, Vol. 23: 331-338.

21 DPR 1999, Notice of proposed reevaluation of pesticide products, California Notice 99-7 (December 30, 1999).

22 Hosea 2000, Exposure of non-target wildlife to anticoagulant rodenticides in California. In: Salmon, T.P. and A.C. Crabb, (eds.) Proceedings of the Nineteenth Vertebrate Pest Conference. University of California, Davis, CA. 236-244.

23 USEPA 2008, Risk Mitigation Decision for Ten Rodenticides (May 28, 2008).

Recent data from DPR indicates that there has been an increase in rodenticide exposure in California. Between 1995 and 2011, approximately 73% of animals tested had residues of at least one SGAR.[24] Difethialone residues were found in approximately 8% of the animals analyzed.[25] Bromadiolone residues were found in approximately 37% of the animals analyzed, and bromadiolone was likely involved in approximately 3% of animal mortalities.[26]

Brodifacoum was the most widespread and lethal SGAR. Brodifacoum residues were found in approximately 69% of the 492 animals tested by DPR, and brodifacoum was likely involved in 13% of animal mortalities.[27] The 2011 Scientific Advisory Panel convened by the United States Environmental Protection Agency also concluded that terrestrial food chains were widely contaminated with brodifacoum, the most studied SGAR to date. Birds of prey are especially subject to secondary poisoning from brodifacoum via ingestion of contaminated animals.[28]

Recent data from Canada indicate that it is becoming difficult to find uncontaminated great horned owls or redtailed hawks, and that the majority of birds in proximity to the human population now carry multiple rodenticide residues, primarily second generation anticoagulants.[29] California's large percentage of wildlife within close proximity of the wildlife-urban interface create similarly negative correlations between populated centers and rodenticide poisonings. A spatial analysis of raptor incidents in San Diego, Fresno, Kern and Madera counties in California suggested a higher number of rodenticide detections in urban areas with higher population density.[30] Similarly, a study of bobcats and mountain lions in the Santa Monica area showed exposure rates to SGARs near urbanized areas of southern California pervasive.[31] The prevalence of rodenticide poisoning and exposure is also indicated in wildlife mortality incident reports compiled by the EPA demonstrating poisoning and deaths to non target wildlife for several decades.[32]

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24 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012).
25 *Id*.
26 *Id*.
27 *Id*.
28 Thomas 2011, Second generation anticoagulant rodenticides in predatory birds: probabilistic characterization of toxic liver concentrations and implications for predatory bird populations in Canada. Environment International 37:914–920.
29 *Id*.
30 Lima et al. 2010. Assessing some potential environmental impacts from agricultural anticoagulant uses. Proc. 24th Vertebr. Pest Conf. (R.M. Timm and K.A. Fagerstone, Eds.) University of California; Earthjustice 2012, Comments on Notice of Proposed Decision to Renew Pesticide Product Registrations for 2013, Director's Findings and Public Report, California Notice 2012-14 (December 7, 2012).
31 Riley 2007, Anticoagulant Exposure and Notoedric Mange in Bobcats and Mountain Lions in Urban Southern California. J. Wildlife Management 71(6) 1874–1884.
32 EPA 2013, Compilation of Rodenticide Wildlife Mortality Incident Reports Between 1971-2012 (January 29, 2013).

E. Legally Protected Wildlife is Frequently Poisoned and Killed by SGARs

The pervasive nature of SGARs in the environment and food chain lead to lethal and sub-lethal harm to endangered species. Recent comprehensive data from EPA, DPR and scientific journals document poisonings and deaths of the San Joaquin kit fox, golden eagle, Pacific Fisher, and numerous migratory bird species.[33]

i. San Joaquin kit fox (*Vulpes macrotis mutica*)

Besides significant habitat loss, a major threat to the kit fox are rodenticides used in agriculture, commercial, and residential areas in the Central Valley. Kit foxes' small-mammal prey base has been significantly reduced by rodenticides, which not only kill kit foxes' prey, but also kill kit foxes when they build up in the foxes' bodies. Exposure of kit foxes to rodenticides is widespread. In one study 87% of kit foxes in Bakersfield had been exposed to anticoagulant rodenticides from commensal rodents.[34]

EPA reported in a recent endangered species assessment that exposure of the endangered kit fox to the second generation anticoagulant brodifacoum is extensive.[35] EPA further determined that the use of rodenticides containing the second generation anticoagulants brodifacoum,[36] bromadiolone,[37] difethialone,[38] and difenacoum[39] are likely to adversely affect several ESA listed species species including the kit fox. The EPA has determined that there is such a high risk of kit foxes consuming poisoned rodents that use of rodenticides in the range of the kit fox will almost certainly lead to mortality.[40] Pesticide laboratory reports conducted by the California Department of Fish and Wildlife have validated this analysis. Necropsy reports demonstrate high levels of brodifacoum coupled with internal hemorrhaging indicating that kit foxes were killed due to lethal doses of second generation anticoagulants.[41]

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33 *Id*.; DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012); Gabriel et al. (2012) Anticoagulant Rodenticides on our Public and Community Lands: Spatial Distribution of Exposure and Poisoning of a Rare Forest Carnivore. PLoS ONE 7(7): e40163. doi:10.1371/journal.pone.0040163.

34 McMillan 2008, Anticoagulant Rodenticide Exposure in an Urban Population of the Joaquin Kit Fox. Proc. 23rd Vertebr. Pest Conf.

35 EPA 2012, Risks of brodifacoum use to the federally threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*) and the federally endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) and San Joaquin kit fox (*Vulpes macrotis mutica*). March 30 2012. Appendix D.

36 EPA. (March 30, 2012) Letter from S. Bradbury (EPA) to G. Frazier (FWS) regarding Endangered Species Act consultation for brodifacoum.

37 EPA. (September 30, 2011) Letter from A. Pease (EPA) to G. Frazier (FWS) regarding Endangered Species Act consultation for bromadiolone.

38 EPA. (September 30, 2011) Letter from A. Pease (EPA) to G. Frazier (FWS) regarding Endangered Species Act consultation for difethialone.

39 EPA. (March 30, 2012) Letter from S. Bradbury (EPA) to G. Frazier (FWS) regarding Endangered Species Act consultation for difenacoum.

40 EPA (2012) Risks of brodifacoum use to the federally threatened Alameda whipsnake (*Masticophis lateralis euryxanthus*) and the federally endangered salt marsh harvest mouse (*Reithrodontomys raviventris*) and San Joaquin kit fox (*Vulpes macrotis mutica*). March 30 2012.

41 Department of Fish and Game 2007. Pesticide Laboratory Report, Lab. No: P-2386, E.P. No: L-200-04.

ii. Golden Eagle (*Aquila chrysaetos*)

Golden eagles are susceptible to secondary rodenticide poisoning when they consume rodents that have ingested SGARs. EPA has reported numerous incidents of golden eagle deaths associated with brodifacoum exposure in California.[42] Exposure of golden eagles to brodifacoum in New York has also been confirmed in the scientific literature.[43] Necropsy reports from the California Department of Fish and Wildlife document golden eagle mortality from low level brodifacoum exposure.[44] A recent report by DPR indicates that as many as 8 golden eagles have been contaminated with detectable levels of brodifacoum in California.[45]

iii. Pacific fisher (*Martes pennanti pacifica*)

Wildlife far from urban setting have also been adversely affected by SGARs. The Pacific fisher, which lives in remote forested areas, has also been impacted by anticoagulant poisonings. Secondary exposure to anticoagulant rodenticides occurs by either consuming tissues of exposed or poisoned prey or by consuming undigested bait in a rodent's stomach. In a recent study, scientists autopsied 58 carcasses of the critically endangered Pacific fisher and detected brodifacoum in approximately 75%.[46] Mortality due to brodifacoum exposure was also recorded in several individuals.[47]

II. LEGAL BACKGROUND

A. Registration of Pesticides by DPR

Before a new pesticide may be offered for sale in California, it must first be registered both by the EPA and by DPR. *See* 7 U.S.C. § 136a; Food & Agr. Code § 12811. Upon receipt of a registration application, DPR must conduct a "thorough and timely evaluation." Food & Agr. Code § 12824. DPR has broad discretion to refuse to register a pesticide when there are adverse effects, greater environmental detriments than benefits, reasonable alternatives, or data that a pesticide is detrimental to vegetation, domestic animals, or public health and safety. Food & Agr. Code § 12825.

During the registration process, DPR must also give "special attention" to a number of factors set forth in the agency's implementing regulations, including the "[p]otential for environmental damage," and "[t]he availability of feasible alternatives." 3 Cal. Code Regs. § 6158. "If any of these factors are anticipated to result in significant adverse impacts which

42 EPA 2012, Brodifacoum Effects determination, Appendix-D Wildlife incidents.
43 Stone 1999, Poisoning of wildlife with anticoagulant rodenticides in New York. *Journal of Wildlife Diseases,* 35(2):187–193
44 EPA 2004, Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach (July 2004).
45 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012)
46 Gabriel 2012, Anticoagulant Rodenticides on our Public and Community Lands: Spatial Distribution of Exposure and Poisoning of a Rare Forest Carnivore. PLoS ONE 7(7): e40163. doi:10.1371/journal.pone.0040163
47 *Id*.

cannot be avoided or adequately mitigated," the regulations provide that "registration will not be granted unless [DPR] makes a written finding that the anticipated benefits of registration clearly outweigh the risks." *Id*.

Once a pesticide is registered by DPR, it is only available for use in California subject to the restrictions and requirements placed upon that product by DPR. Any use of the pesticide in California is, therefore, done pursuant to the restrictions and directions DPR has placed upon it.

B. Reevaluation of Pesticides by DPR

California law directs DPR to "develop an orderly program for the continuous evaluation of all pesticides actually registered." Food & Agr. Code § 12824. To this end, DPR's regulations direct the agency to "investigate all reported episodes and information received by the [DPR] that indicate a pesticide may have caused, or is likely to cause, a significant adverse impact, or that indicate there is an alternative that may significantly reduce an adverse environmental impact." 3 Cal. Code Regs. § 6220.

"If [DPR] finds from the investigation that a significant adverse impact has occurred or is likely to occur or that such an alternative is available," the regulations provide that "the pesticide involved shall be reevaluated." *Id.* In addition, a pesticide must be reevaluated "when certain factors have been found," including a "fish or wildlife hazard," and "discovery that data upon which a registration was issued is false, misleading, or incomplete." 3 Cal. Code Regs. § 6221.

Once DPR places a pesticide into reevaluation, the registrant must submit to the agency all data required for registration of a new pesticide by the U.S. EPA and by DPR and has not previously been submitted to the department within two years. 3 Cal. Code Regs. § 6222(a). In conducting the reevaluation process "[DPR] shall act expeditiously to protect against risks to human health and the environment." *Id*. At the conclusion of reevaluation, DPR must "determine if the pesticide [under reevaluation] should be classified as a restricted material. . . and if additional restrictions on use are necessary, or if action [to suspend or cancel registration] should be taken." 3 Cal. Code Regs. § 6224.

C. Renewal of Pesticides by DPR

"Every [pesticide] registration expires on December 31st of each year, except when renewal is applied for within one month thereafter . . ." Food & Agr. Code § 12817. As when a pesticide is registered for the first time, the law provides that "[a]ll pesticides for which renewal of registration is sought also shall be evaluated . . ." Food & Agr. Code § 12824. By regulation, "renewal shall be issued within 60 days after [DPR] receives an accurate and complete renewal application," unless the agency initiates proceedings to cancel the registration. 3 Cal. Code Regs. § 6215(b). If DPR renews registration "without a reevaluation," the regulations direct DPR to "make a written finding that [it] has not received sufficient information necessitating reevaluation . . ." 3 Cal. Code Regs. 6215(c).

III. ADMINISTRATIVE PROCEEDINGS

Federal and state agencies have been reporting the harm of SGARs for at least fifteen years. Pursuant to the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"), EPA re-registered several rodenticides in 1998, including the second-generation anticoagulants brodifacoum and bromadiolone.[48] At that time, EPA acknowledged "data suggesting that there may be a potential problem involving accidental non-target and secondary exposures to wildlife," and the agency stated that it would "be reviewing, and would be interested in receiving, State wildlife incident data for all rodenticides to better understand the extent of this potential problem." *Id.*

Several second-generation anticoagulant rodenticides are registered for use in California by DPR. On December 30, 1999, at the request of the California Department of Fish and Game, DPR announced its decision to reevaluate all registered rodenticides that contain the active ingredient brodifacoum.[49]

In July 2004, EPA published a report that concluded second-generation anticoagulants – and brodifacoum in particular – "present the highest potential overall primary and secondary risks to birds and nontarget mammals.[50] Two years later EPA confirmed that "several monitoring programs have found that a major portion of some animal populations are being exposed to second-generation anticoagulant rodenticides."[51] The U.S. Fish & Wildlife Service reviewed EPA's Comparative Approach and concluded that "the prevalence of rodenticides in wild birds and mammals indicates that current restrictions are not sufficient to hinder their spread to nontarget organisms."[52] The U.S. Fish & Wildlife Service determined that "second-generation rodenticides have proven to be a greater threat to nontarget wildlife due to their high toxicity and ability to bioaccumulate in tissue." *Id.*

In late 2005, DPR proposed that brodifacoum-based rodenticides be restricted to indoor structural use only and recommended a number of additional mitigation measures.[53] However, DPR withdrew its proposal following opposition from the pest-control industry. *Id.*

In May 2008, EPA published its risk-mitigation decision for rodenticide bait products containing the second-generation anticoagulants brodifacoum, bromadiolone, difenacoum, and difethialone. Therein, EPA described in detail the evidence that second-generation anticoagulants are having a significant adverse impact on non-target wildlife, and the agency concluded that "widespread exposures to second-generation anticoagulants are occurring

48 63 Fed. Reg. 48,729 Initiation of Rodenticide Stakeholder Process and Availability of Zinc Phosphide and Rodenticide Cluster Reregistration Eligibility Decision Documents (Sept. 11, 1998).
49 DPR 1999, Notice of proposed reevaluation of pesticide products, California Notice 99-7 (December 30, 1999).
50 EPA 2004, Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach, (July 2004).
51 EPA 2006, Memorandum: Rodenticide Incidents Update (November 15, 2006).
52 US Fish and Wildlife Service 2005, Comments on EPA's Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: A Comparative Approach (February 28, 2005).
53 DPR 2012, Semiannual Report Summarizing the Reevaluation Status of Pesticide Products During the Period of January 1, 2012 Through June 30, 2012 (September 5, 2012).

wherever those rodenticides are being used."[54] With the "goal of minimizing the availability of the second generation anticoagulants on the consumer market," EPA imposed new minimum package size requirements and other use restrictions. *Id*.

Most rodenticide manufacturers voluntarily adopted the restrictions set forth in EPA's May 2008 risk mitigation decision. However, several companies did not. In particular, the manufacturer Reckitt Benckiser, Inc., among others, continued to market rodenticide bait products containing the second-generation anticoagulants brodifacoum and difethialone that do not meet the mitigation measures set forth in EPA's risk mitigation decision. Due to their noncompliance, EPA released on November 2, 2011 a draft notice of intent to cancel the federal registration of these products.

Also in 2011, the California Department of Fish and Wildlife requested that DPR restrict the availability and use of all second generation anticoagulants in order to mitigate the harm of exposure and poisonings in non-target organisms.[55] The California Department of Fish and Wildlife expressed concern that the EPA's mitigation decision still permits the sale of large volumes of second generation anticoagulents to the public at farm stores.

This year EPA announced that it intends to cancel federal registration of several second generation anticoagulants products, based on clear evidence that these compounds pose a risk to children, pets and wildlife, and the manufacturers refusal to comply with the mitigation measures set forth in EPA's 2008 Risk Management Decision.[56] EPA's cancellation order targets over the counter consumer products for in home use that do not contain tamper-resistant packaging such as loose baits, pastes or blocks or that contain SGARs. EPA's cancellation order does not cancel the SGARs for many other uses including sales at agricultural supply stores, uses by professionally licensed applicators, or outdoor uses in tamper-resistant packaging.

IV. LEGAL VIOLATIONS

A. Endangered Species Act

The ESA has a broad citizen suit provision. Under it, "any person may commence a civil suit on his own behalf to enjoin any person, including…any… governmental instrumentality or agency…who is alleged to be in violation of any provision of [the ESA]." 16 U.S.C. § 1540(g). Citizens can seek to enjoin both present activities that constitute an ongoing take and future activities that are reasonably likely to result in take. *See National Wildlife Federation v. Burlington Northern Railroad*, 23 F.3d 1508, 1511 (9th Cir. 1994); *Marbled Murrelet v. Babbitt*, 83 F.3d 1060, 1069 (9th Cir. 1996). The ESA's citizen suit provision also provides for the award of costs of litigation, including reasonable attorney and expert witness' fees. 16 U.S.C. § 1540(g)(4).

54 EPA 2008, Risk Mitigation Decision for Ten Rodenticides (May 28, 2008)
55 CDFG 2011, Recommendation that second generation anticoagulant rodenticides be redesignated as State Restricted Materials (July 11, 2011).
56 78 Fed. Reg. 8123, Notice of Intent to Cancel Registrations of, and Notice of Denial of Applications for, Certain Rodenticide Bait Products (February 5, 2013).

Under section 9 of the ESA, it is unlawful for any person to "take" an endangered species. 16 U.S.C. § 1538(a)(1)(B). To "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. 16 U.S.C. § 1532(19). The FWS has further defined "harass" to include "an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns, including breeding, feeding, or sheltering." 50 C.F.R. § 17.3. In addition, "harm" is defined to "include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." *Id*.

"Take" includes direct as well as indirect harm and need not be purposeful. *See Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687, 704 (1995). In fact, a take may even be the result of an accident. *See Burlington Northern Railroad*, 23 F.3d at 1512.

The ESA provides mechanisms for non-federal entities to avoid ESA liability. Under section 10 of the ESA, a non-federal entity can apply for and obtain an incidental take permit ("ITP"). 16 U.S.C. § 1539(a)(1)(B). In exchange for permission to "take" a listed species pursuant to an ITP, the permit applicant must commit to implement a plan that "conserv[es]" – *i.e*., facilitates the recovery of – the species. *Id*. §§ 1539(a)(1)(B), (a)(2)(A); *see also Sierra Club v. U.S. Fish and Wildlife Serv.*, 245 F.3d 434, 441-42 (5th Cir. 2001) ("'[c]onservation' is a much broader concept than mere survival" because the "ESA's definition of 'conservation' speaks to the recovery of a threatened or endangered species" (emphasis added)). This plan is called a Habitat Conservation Plan ("HCP") and it must delineate "the impact which will likely result from such taking" and the "steps the applicant will take to minimize and mitigate such impacts . . . ." 16 U.S.C. § 1539(a)(2)(A).

i. DPR's Endangered Species Act Violations

DPR is violating section 9 of the ESA by committing an illegal, ongoing take of kit fox through its registration of second generation anticoagulant rodenticides that "take" ESA listed species. The kit fox is currently listed as an endangered species under the ESA[57] and receives full protection under the statute.

Poisoning an endangered animal is a "take" regardless of whether the poisoning results in actual injury or mortality to the animal. While "harm" flows from "an act which actually kills or injures wildlife," an endangered animal is "harassed" by any "intentional or negligent act or omission which creates the likelihood of injury…by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering." 50 C.F.R. § 17.3 (emphasis added). "Take is defined in the broadest possible manner to include every conceivable way in which a person can 'take' or attempt to

57 32 Fed. Reg. 4001, Dept. of Interior, Native Fish and Wildlife, Endangered Species (March 11, 1967); Populations of fishers inhabiting California have been declared a candidate species for listing under the federal Endangered Species Act. 69 Fed. Reg. 18770 12 month findings for a petition to list the west coast distinct population segment of the fisher (*Martes pennanti*) (April 8, 2004)

'take' any fish or wildlife." *Defenders of Wildlife v. Administrator, EPA*, 882 F.2d 1294, 1300 (8th Cir. 1989).

It is unlawful for any person to "cause [an ESA violation] to be committed." 16 U.S.C. § 1538(g) (emphasis added). The term "person" includes "any officer, employee, agent, department, or instrumentality…of any State, municipality, or political subdivision of a State…[or] any State, municipality, or political subdivision of a State…" *Id.* § 1532(13). The ESA "not only prohibits the acts of those parties that directly exact the taking, but also bans those acts of a third party that bring about the acts exacting a taking. [A] governmental third party pursuant to whose authority an actor directly exacts a taking…may be deemed to have violated the provisions of the ESA." *Strahan v. Coxe*, 127 F.3d 155, 163 (1st Cir.1997) (holding that by issuing licenses and permits authorizing gillnet and lobster pot fishing, activities known to incidentally injury Northern right whales, Massachusetts officials had exacted a taking).[58]

A government agency's approval of pesticides that result in take by a third party also results in liability for the government agency approving the use of that product. *Defenders of Wildlife v. Administrator, EPA*, 688 F.Supp. 1334 (D. Minn. 1988), *aff'd by Defenders of Wildlife v. Administrator, EPA*, 882 F.3d 1294 (8th Cir. 1989) (holding the EPA liable for take associated with the registration of strychnine even though the administration of the pesticide, which was known to poison endangered species, was actually carried out by third parties). An agency's approval of activity that poisons prey for endangered species leading to take of the upper level predator also can constitute take by the approving agency. *National Wildlife Federation v. Hodel*, 1985 U.S. Dist. LEXIS 16490, *12-13, 1985 WL 186671 (E.D. Cal. 1985) (enjoining the use of lead shot in areas where the formerly endangered bald eagle preyed on carcasses with lead shot because of lead poisoning in bald eagles).

The State's own data as well as data from EPA and scientific literature all demonstrate that the use of SGARs leads to death of kit foxes due to consumption of bait laden rodents or consumption of the bait itself. Consumption of these rodenticides further leads to injury, harm, and harassment from non-lethal doses of SGARs due to the documented physiological harm to wildlife from exposure to SGARs. So long as DPR continues to authorize the use of rodenticides with the capacity to harm, harass, injure, or kill endangered species, DPR is causing ongoing take to occur**.**

58 *Sierra Club v. Lyng*, 694 F.Supp. 1260 (E.D.Tex. 1988), aff'd by *Sierra Club v. Yeutter*, 926 F.2d 429 (5th Cir.1991) (holding the U.S. Forest Service liable for take because its even-aged management plan allowed private companies to harvest timber in a way that degraded the habitat of the endangered red-cockaded woodpecker); *U.S. v. Town of Plymouth*, Mass., 6 F.Supp.2d 81 (D.Mass. 1998) (holding the Town of Plymouth liable for the take of endangered piping plovers that had either been run over or isolated from their food source by off-road vehicles, which were allowed on the beach under the Town's policies); *Pac. Rivers Council v. Brown*, No. 02-243-BR, 2002 U.S. Dist. LEXIS 28121, 2002 WL 32356431 (D. Or. Dec. 23, 2002) (Oregon State Forester may be held liable under the ESA for approving logging operations on private lands by private timber companies); *Loggerhead Turtle v. County Council of Volusia County*, 896 F. Supp. 1170, 1180–81 (M.D. Fla. 1995) (county's authorization of vehicular beach access during turtle mating season led to take of the turtles); *Seattle Audubon Soc'y. v. Sutherland*, No. 06-1608MJP, 2007 U.S. Dist. LEXIS 31880, 2007 WL 1300964 (W.D. Wash. May 1, 2007) ("the [ESA] not only prohibits a party from directly causing take, but also prohibits a party, including state officials, from bringing about the acts of another party that exact a taking").

Between 2006 and 2010 a total of over 200,000 pounds of formulated product containing the active ingredient brodifacoum was sold in California.[59] Data through 2011 from the California Department of Fish and Wildlife reports approximately 50 kit fox individuals in Kern County alone with detectible levels of brodifacoum, ranging from 0.007 to 11 ppm.[60] This level of exposure to SGARs will lead to sublethal and lethal impacts on endangered kit foxes. Pesticide laboratory reports have found brodifacoum at levels indicating rodenticide toxicosis and death due to exposure to SGARs.[61] By registering SGARs DPR is authorizing "take" –*i.e.*, harassment, harm, injury, and death–of kit foxes due to the use of brodifacoum, bromadiolone, difethialone, and difenacoum by individuals and corporations who are acting in accordance with California law.

The fact that DPR or individuals applicators did not intend for kit fox to be injured by their otherwise legal rodenticide applications is inconsequential. Actual knowledge that the species being taken is a listed species is not required. Take is a general, rather than specific intent crime. The critical issue is whether the rodenticide was set knowingly, not whether the person knew he would capture a non-target species. *See Animal Prot. Inst. v. Holsten*, 541 F. Supp. 2d 1073, 1079 (D. Minn. 2008) (holding state officials liable for take under the ESA by allowing trapping of other species within the range of threatened lynx. The court found that in order to trap "one must obtain a license and follow all governmental regulations governing trapping activities" and the state's "licensure and regulation of trapping is the 'stimulus' for the trappers conduct that results in incidental takings" of threatened lynx.); *Defenders of Wildlife v. Administrator, EPA*, 882 F.2d 1294, 1301 (8th Cir. 1989) (Finding EPA officials liable for take where "endangered species have eaten the strychnine bait, either directly or indirectly" that the agency registered "and as a result,[the species] have died").

If DPR fails to alter the California rodenticide regulations further violations of ESA section 9 will occur through harm, harassment, injury, or death of kit foxes. To avoid future take, you have two options. First, DPR can develop new regulations that are much more restrictive of SGAR use in California. These regulations must at minimum foreclose the use of SGARs within the known habitat of kit fox and prohibit the sale of SGARs in California where the rodenticides could potentially affect kit fox. *See e.g.*, *Defenders Of Wildlife*, 668 F.Supp. at 1356-1357, *aff'd by DOW*, 882 F.2d 1294 (enjoining the EPA from continuing its registration of strychnine until it could do so without illegally taking protected species of wildlife).[62] We propose the DPR issue regulations that foreclose the use of SGARs in California except for

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59 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012); 26.58 lbs of brodifacoum active ingredient were sold during the same period. *Id*.

60 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012); McMillan et al. (2008) Anticoagulant Rodenticide Exposure in an Urban Population of the Joaquin Kit Fox. Proc. 23rd Vertebr. Pest Conf.

61 Department of Fish and Game 2007. Pesticide Laboratory Report, Lab. No: P-2386, E.P. No: L-200-04.

62 *See also Sierra Club*, 926 F.2d at 433 (enjoined even-aged lumbering in the Texas national forests within 1,200 meters of active woodpecker colonies); *Palila v. Hawaii Dep't of Land and Natural Resources*, 639 F.2d 495 (9th Cir.1981) (holding that the state's feral sheep and goats must be removed from the endangered palila's habitat because they degraded the bird's habitat, thereby imposing an injury); *Town of Plymouth*, 6 F.Supp.2d at 91 (enjoining any further off-road vehicle driving on the beach that was inconsistent with the protection of piping plovers).

island conservation and human health emergencies. Alternatively, DPR can follow the ESA process for obtaining an Incidental Take Permit and Habitat Conservation Plan to avoid liability for the on-going violations of section 9 of the Act resulting from the registration and use of SGARs.

B. California Endangered Species Act

DPR's registration of SGARs results in ongoing take of kit fox and Pacific fishers contrary to the California Endangered Species Act ("CESA"). DPR's continued registration of SGARs also jeopardizes the continued existence of kit fox and Pacific fisher in violation of CESA. The kit fox is a state threatened species, 14 Cal. Code Regs. § 670.5, and the Pacific fisher is a candidate species under CESA. *Center for Biological Diversity v. Fish and Game Commission et al.*, San Francisco Superior Court Case No. CGC-10-505205 (case filed November 9, 2010) (Order Granting Petition for Writ of Mandate filed July 23, 2012).

Take of species listed under CESA is prohibited, except as allowed under permit from state or federal authorities. Fish & Game Code §§ 2080, 2080.1, 2081. Under CESA, take "means [to] hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Fish & Game Code § 86; *Watershed Enforcers v. Department of Water Resources*, 185 Cal. App. 4th 969, 974 (2010). CESA also prohibits the take prohibitions of species petitioned for listing (state candidates). Fish and Game Code § 2085. CESA's "prohibition against 'taking' or 'possessing' endangered species applies to the killing of endangered species in the course of lawful activity" and that there is no indication in CESA that Fish & Game Code § 2080 requires a specific intent to hunt or fish. *See Department of Fish & Game v. Anderson-Cottonwood Irrigation Dist*., 8 Cal.App.4th 1554, 1563-1564 (1992) (prohibiting irrigation district from operating pump division facility that would kill the endangered winter-run chinook salmon).

In order to ensure the survival of endangered and threatened species, CESA prohibits the taking of an endangered or threatened species except in two limited circumstances. First, take is authorized under CESA when incidental take is authorized by the Secretary of the Interior under the federal ESA. Fish & Game Code § 2080.1. Second, CDFG may grant permits allowing the taking of an "endangered species, threatened species, and candidate species" if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, and the applicant ensures adequate funding to implement and to monitor compliance with and effectiveness of the mitigation measures. Fish & G. Code § 2081 (a)-(b). No take authorization has been obtained by DPR under either the federal or state ESA.

CESA further declares "it is the policy of this state that all state agencies, boards, and commissions shall seek to conserve endangered species and threatened species." Fish & Game Code § 2055. The statute provides that "state agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species . . . if there are reasonable and prudent alternative available . . . which would prevent jeopardy." Fish & Game Code § 2053. A project under CESA is defined broadly and includes, *inter alia*, the issuance of a license or certificate from a public agency that causes a direct or reasonably foreseeable indirect physical change in the environment. Fish & Game Code § 2064, *citing* Pub. Res. Code § 21065.

Exposure of kit foxes and Pacific fishes to rodenticides has been extensively documented. Exposure levels of kit foxes in Kern county have ranged from 0.25 to 11 ppm, including one kit fox necropsy report from Kern County that attributes death to bordifacoum exposure.[63] In addition, multiple necropsies from Kern County show levels of brodifacoum exposure that contribute to sub-lethal symptoms.[64] Pacific fishers are also poisoned by SGARs at an astounding level based on the limited population. Approximately 75% of fishers studies showed exposure to brodifacoum, including deaths associated with brodifacoum exposure.[65]

DPR's issuance of registrations for use of SGARs that kills kit foxes and Pacific fishers without obtaining take authorization leads to CESA violations. DPR is also violating CESA by jeopardizing the continued existence of the species through the registration and approval of SGARs that have negative impacts on the overall population, which is jeopardizing population of kit foxes and Pacific fishers. DPR has failed to investigate reasonable and prudent alternatives or restrict the statewide use of these products. Take and jeopardy will continue unless DPR changes is authorization to use SGARs.

C. California Fully Protected Species

DPR's registration of SGARs results in deaths of golden eagles contrary to California's "fully protected" species laws. The golden eagle is listed as a fully protected bird in California. Fish and Game Code § 3511(b)(7). Take for purposes of California's fully protected species laws is defined the same as CESA, take "means hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Fish & Game Code § 86. Fully protected species may not be taken, except under narrow circumstances as authorized under the statute. Fish and Game Code § 3511(a).[66] DPR's registration of SGARs does not fall under the narrow exceptions to permit take of protected golden eagles under California's fully protected species laws.

The deaths and poisonings of golden eagles has been documented by federal and state agencies. EPA has reported numerous incidents of golden eagle deaths associated with brodifacoum exposure in California.[67] A recent report by DPR indicates that as many as 8 golden eagles have been contaminated with detectable levels of brodifacoum in California.[68] Even low levels of brodifacoum have led to golden eagle mortalities in California.[69] DPR's

63 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012); McMillan et al. (2008) Anticoagulant Rodenticide Exposure in an Urban Population of the Joaquin Kit Fox. Proc. 23rd Vertebr. Pest Conf.
64 *Id*.
65 Gabriel 2012, Anticoagulant Rodenticides on our Public and Community Lands: Spatial Distribution of Exposure and Poisoning of a Rare Forest Carnivore. PLoS ONE 7(7): e40163. doi:10.1371/journal.pone.0040163
66 Take is authorized for certain water operations in California, Fish and Game Code § 2081.7, under approval through a Natural Communities Conservation Plan, Fish and Game Code § 2835, or for scientific research. Fish and Game Code § 3511(a).
67 EPA 2012, Brodifacoum Effects determination. Appendix-D Wildlife incidents.
68 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012).
69 EPA 2004, Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach (July 2004).

registration and authorization of SGARs in California will continue to result in deaths and take of fully protected species in California unless the products are removed from use within the state.

D. Bald and Golden Eagle Protection Act

DPR's registration of SGAR's also contributes to the violation of federal law protecting golden eagles. The Bald and Golden Eagle Protection Act creates criminal and civil penalties for any unpermitted, knowing take of bald or golden eagles. 16 U.S.C. § 668(a)-(b). Take in the context of the Bald and Golden Eagle Protection Act includes poisoning, wounding, killing, molesting or disturbing. 16 U.S.C. § 668(c). Disturbing is defined as behavior "to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior." 50 C.F.R. § 22.3.

As noted above, the deaths and poisonings of golden eagles is well documented by federal and state agencies.[70] These activities result in killing, molesting, and disturbing eagles through death, injury, interfering with normal behavior, and impacting productivity, which constitutes take under the the Bald and Golden Eagle Protection Act. DPR's registration and authorization of SGARs in California will continue to lead to eagles deaths, poisonings and take unless DPR's regulations are changed to reduce the harm to eagles.

E. Migratory Bird Treaty Act

Continued registration of SGARs by DPR leads to violations of the Migratory Bird Treaty Act ("MBTA"). The MBTA prohibits the unlawful taking or killing, or an attempt to take or kill, by any means any migratory bird native to the U.S. 16 § U.S.C. 703(a). The MBTA covers a vast array of migratory birds including numerous raptors such as several species of owls and hawks. 50 C.F.R. § 10.13.

Specific knowledge or intent to kill MBTA covered species is not necessary to violate the law; passive, unintentional actions are considered take under the MBTA. *United States v Moon Lake Elec. Ass'n, Inc.* 45 F. Supp. 2d 1070 (D. Colo. 1999). The MBTA further prohibits poisoning migratory birds through the application of a pesticides that kill covered species even when there is no intent to kill those species. *United States v Corbin Farm Service*, 444 F. Supp. 510 (E.D. Cal. 1978) *affd* 578 F2d 259 (1978); *United States v. FMC Corp*., 572 F.2d 902, 908 (2d Cir. 1978)

70 EPA 2012, Brodifacoum Effects determination. Appendix-D Wildlife incidents; Deborah Daniels, DVM Senior Environmental Scientist draft report to Ann Prichard of Pesticide Registration Branch of the CA Dept. of Pest. Regulation (September 19, 2012); EPA (2004) Potential Risks of Nine Rodenticides to Birds and Nontarget Mammals: a Comparative Approach (July 2004).

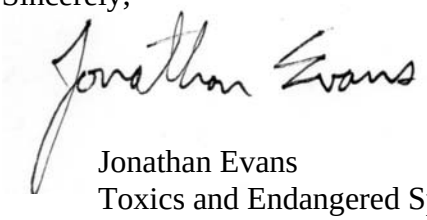
Poisonings and deaths of migratory birds due to SGARs has been well documented in reports from federal and state agencies, as well as the scientific literature.[71] DPR has also noted deaths of migratory birds in recent data.[72] DPR's registration of SGAR's is contributing to deaths of MBTA listed species in California. Without changes to DPR's registration process regarding the use of SGARs deaths and poisonings of migratory birds will continue to occur.

V. CONCLUSION

Due to the overwhelming harm to non-target wildlife species, we urge DPR to cancel brodifacoum, bromadiolone, difethialone, and difenacoum registrations in California, or make these products restricted use materials that are *only* available under rare circumstances for conservation purposes on island habitats or in the event of a true public health emergency. Simply regulating SGARs as restricted use materials, which would permit continued use by licensed applicators, would still allow a large percentage of use of those products to be applied, allow SGARs to be consumed by non-target organisms and allow bio-accumulation in the food chain—all resulting in take of ESA protected species. Therefore, should DPR continue to allow the use of these rodenticides under existing regulations or more restrictive regulations that still allow wide-spread use of SGARs, we intend to file suit in federal district court. We will further seek an award for any costs and fees associated with the litigation, including reasonable attorney and expert fees.

Please do not hesitate to contact us should you wish to discuss this matter and opportunities to address DPR's legal violations outside of litigation.

Sincerely,



Jonathan Evans
Toxics and Endangered Species Campaign Director
Staff Attorney

cc:

Polly Frenkel, Chief Counsel, Department of Pesticide Regulation, pfrenkel@cdpr.ca.gov

71 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012); Thomas 2011, Second generation anticoagulant rodenticides in predatory birds: probabilistic characterization of toxic liver concentrations and implications for predatory bird populations in Canada. Environment International 37:914–920; EPA 2013, Compilation of Rodenticide Wildlife Mortality Incident Reports Between 1971-2012 (January 29, 2013).
72 DPR 2012, Memorandum: Second Generation Anticoagulant Rodenticides (draft) from Deborah Daniels, DVM,Senior Environmental Scientist (September 19, 2012).