

CALIFORNIA COASTAL COMMISSION

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W 14a

CD-0002-19 (USFWS)

July 8, 2019

CORRESPONDENCE

As of 5:00 pm on Friday July 5, 2019, the Commission received approximately 700 emails commenting on the proposed project. Of those emails, approximately 600 stated opposition to the project (including 460 form emails).

The June 27, 2019, Correspondence file accompanying the staff report published on that date included two of the 25 form emails received and all of the remaining emails received by that date.

This updated Correspondence file includes samples of the form emails received and all of the remaining emails (including attachments) received by 5:00 pm on July 5, 2019. In addition, the previous June 27, 2019, Correspondence file is attached to this updated file.

From: [Marie Miessler](#)
To: Energy@Coastal
Subject: agenda item, number W14a.
Date: Friday, June 28, 2019 10:21:36 AM

Regarding the plan to drop poison for mice to curb non native owl population at the Farallon islands: This plan is certain to cause harm to unintended targets, and the problem population it aims to target is relatively small. Why?? Certainly there is a better way to solve this problem.

Sincerely,

Marie Miessler

From: [leslie kneeland](#)
To: Energy@Coastal
Subject: W14a
Date: Friday, June 28, 2019 10:23:56 AM

I am horrified that ANYONE would consider dropping ANY kind of poison on a marine sanctuary island. This is the worst idea ever. DO NOT DO THIS!! The damage to wildlife and sea life will have a long lasting chain reaction that is MUCH MORE harmful than the mice!
Leslie Kneeland, Santa Rosa, Ca. 707 529-7014
Sent from my iPhone

From: [Anna Kazanjian](#)
To: Energy@Coastal
Subject: No toxic dumping on the Farallones!
Date: Friday, June 28, 2019 10:45:07 AM

To: California Coastal Commissioners
RE: Agenda W14a

I urge you to abandon the ecologically damaging proposal of a 1.5 ton poison pellet drop on the Greater Farallones National Marine Sanctuary to kill mice that attract a handful of Marin owls posing a threat to one of the island's seabird, the Ashy Storm-Petrel.

The drop is too risky to the Sanctuary and a threat to the adjacent fragile coastal ecosystems, while also posing unnecessary danger to non-target species. The State of California has outlawed the retail sale of the same toxic compounds due to the unintended damage they inflict on mountain lions, bobcats and an iconic mammal called the Pacific Fisher.

Additionally, in terrestrial urban interface locations, the toxic compounds pose dangers to pets and children. Legislation limiting their use is now moving through the California State Legislature. Any accidental wind- or wave-borne discharges of the poison into the ocean pose a contamination hazard to fish, crabs, and abalone.

The poisons being proposed are the subject of increased scientific scrutiny because of non-target wildlife disasters during similar air drops on island locations elsewhere.

The Wildlife Service should instead create a more precautionary approach than random airborne dispersal of dangerous poisons that needlessly kill and sicken harmless wildlife while becoming more concentrated throughout the predator food chain.

Endangering the ecosystem in a National Marine Sanctuary has far wider and dire consequences to the surrounding areas affecting all life including humans.

Please consider more ecologically sound approaches to this issue.

Respectfully,

Anna Kazanjian

From: [Carol Sweaney](#)
To: Energy@Coastal
Subject: Agenda item W14a
Date: Friday, June 28, 2019 11:28:50 AM

I've just read about the US Fish & Wildlife's proposal to drop poison pellets on the Fallon islands to kill mice in attempt to discourage burrowing owls from predating on the endangered Ashy Storm-Petrel. This is a very dangerous approach as it has potential of killing marine life & all sea birds that predate on them, as well as non target mammals such as mountain lions, bobcats & is dangerous to children who may come into contact with this poison. Cats & black rats also predate on these endangered birds, so why not remove the cats & set traps for the rats? Our oceans are the life blood of this planet. Oil spills, illegal dumping of waste, plastic & global warming are the biggest threat. Please reconsider your proposal of this nefarious act by not dropping poison pellets. Signed, Carol Sweaney

Sent from my iPad

From: [Lisa Owens Viani](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Friday, June 28, 2019 12:39:34 PM
Attachments: [RATS letter to Coastal Commission re Farallones.pdf](#)

Dear Commissioners,

Attached is our letter of opposition regarding the proposed Farallon Islands poison drop.

Sincerely,

Lisa Owens Viani
Director
Raptors Are The Solution
A Project of Earth Island Institute
2150 Allston Way, Suite 460
Berkeley, CA 94704
(510) 292-5095
raptorsarethesolution.org



Raptors Are The Solution

A PROJECT OF EARTH ISLAND INSTITUTE

2150 Allston Way, Suite 460 · Berkeley, CA 94704 · (510) 292-5095

June 28, 2019

Dear Commissioners:

Raptors Are The Solution (“RATS”) is a project of Earth Island Institute, a 501c3 organization. We were founded in 2011 after Cooper’s hawks began bleeding to death on the streets of Berkeley after having consumed poisoned rodents (tests showed their livers contained several **second generation anticoagulant rat poisons**). We quickly realized this was a widespread problem, affecting wildlife throughout the state: from hawks, owls, and eagles and other raptors to mountain lions and bobcats, foxes, bears, skunks, songbirds, and numerous other “non-target” species.

RATS educates the public about the ecological role of birds of prey and other natural predators in urban and wild areas and about the danger they face from the widespread use of rat poison. We envision a healthy, functioning ecosystem in which every organism has a part. Rat poisons undermine a critical piece of this system: the predator/prey relationship. Using poison is an ineffective and inefficient way to try to control rat and mouse populations that (a) does not work and (b) reduces the biodiversity of our planet by killing many non-target species, including threatened and endangered species.

We believe there are better solutions for controlling mice on the Farallones than conducting a large-scale aerial drop of a highly toxic second generation anticoagulant. While we certainly support efforts to conserve the ash storm petrel, we also believe the collateral damage that will occur from this proposed “drop” outweighs its benefits. New studies show that anticoagulant rat poisons are now being found in fish, river otters, snails, and other aquatic and terrestrial organisms. The fine print on packages of anticoagulant rat poisons contains a warning to not use anywhere near a body of water—there is a good reason for that because these compounds can and do disperse and enter bodies of water and terrestrial ecosystems, affecting non-target wildlife.

We ask that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. We ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the U.S. Fish & Wildlife Service to find a more targeted and environmentally benign approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you for your consideration.

A handwritten signature in dark ink, appearing to read 'L. Owens Viani', with a stylized, cursive script.

Lisa Owens Viani
Director

From: [Carin Johnson](#)
To: Energy@Coastal
Subject: Proposed Poison Drop
Date: Friday, June 28, 2019 2:02:37 PM

To Whom it Concerns,

Wildlife 'Service'? I wanted to voice that my stance on the proposed controversial poisoning plan by the US Fish and Wildlife Service ; I am completely AGAINST. These methods have been shown to damage innocent life forms beyond the target and do not create balance, instead often creating an unfortunate domino effect through the ecosystem.

Please look for other means of creating biological balance and sustainability, not a quick fix that is too often tragic and always cruel.

Thank you for your time,

Carin Johnson
Retired teacher

From: [Mary McAllister](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, June 28, 2019 2:10:01 PM

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

The plan to aerial drop rodenticides on the Farallon Islands to kill mice is deeply flawed. The stated purpose of this project was to protect the ash storm petrel, a legally protected species of concern. The mice are not a direct threat to the petrel. Rather, USFWS claims that another legally protected species of concern, the burrowing owl, eats the chicks of the petrel when the population of mice dwindles, as it does every year. Because the average population of burrowing owls on the Farallons is said to be only 8-10 burrowing owls, the scale of their predation of petrel chicks seems minimal given that their preferred prey is mice. USFWS theorizes that if the mice are killed, the burrowing owls will leave the Farallons. This fanciful scenario is less credible than the more likely outcome that the burrowing owls will either be killed by the poison or eat yet more petrel chicks if their mice diet is eliminated.

Aside from the convoluted and questionable rationale for this project, the main concern is the anticipated collateral damage caused by aerial bombing huge quantities of rodenticide (brodifacoum). We should learn from similar projects done elsewhere. In those few cases when after-the-fact monitoring was done, there is considerable evidence that many non-target animals were killed and the water was polluted.

In the case of Rat Island, off the coast of Alaska, no monitoring was planned after the aerial bombing of 46 metric tons of anti-coagulant rodenticide to kill rats. However, neighbors of Rat Island demanded an investigation when they saw dead birds and animals floating in the vicinity of the island after the project was done. That investigation was done by USFWS Law Enforcement. (https://drive.google.com/file/d/0BwdOUBgcb_baeXIYTzZ0X05hWFU/view) The investigation found that the manufacturer's recommendations regarding dosage were exceeded, that instructions to collect dead rats so they would not be eaten by birds were not followed, and that hundreds of birds died, including many legally protected bald eagles. The investigation was not done until 7 months after the project was completed. We should assume that the number of dead animals found would have been greater if the investigation had been done promptly after the project was completed.

In the case of Palmyra Island, off the coast of Hawaii, the scientific study conducted after the aerial bombing of rodenticides reported, "We documented brodifacoum [rodenticide] residues in soil, water, and biota, and documented mortality of non-target organisms. Some bait (14–19% of the target application rate) entered the marine environment to distances 7 m from the shore. After the application commenced, carcasses of 84 animals representing 15 species of birds, fish, reptiles and invertebrates were collected opportunistically as potential non-target mortalities. In addition, fish, reptiles, and invertebrates were systematically collected for residue analysis. Brodifacoum residues were detected in most (84.3%) of the animal

samples analyzed. Although detection of residues in samples was anticipated, the extent and concentrations in many parts of the food web were greater than expected." (William Pitt, et. al., "Non-target species mortality and the measurement of brodifacoum rodenticide residues after a rat (*Rattus rattus*) eradication on Palmyra Atoll, tropical Pacific," *Biological Conservation*, May 2015, 36-46)

The most damning evidence of all is that after killing untold numbers of animals, including those not meant to be killed, and poisoning the environment with a deadly toxin that bioaccumulates and persists in our bodies, the rat population often returns to pre-project levels within a few years.

Henderson atoll in the Pacific is an example of such a failure. Eighty tons of rodenticide pellets were aerial bombed on Henderson in 2011. Apparently, at least two rats survived, one presumably male and one presumably female. Within a few years the rat population had returned to pre-projects levels of 50,000 to 100,000 rats. (<https://news.nationalgeographic.com/2016/04/160419-rats-exploded-poison-henderson-island/>)

The rats were said to have been introduced to Henderson over 800 years ago. Surely they had reached some balance between population size and available food sources. Rats are an ancient species that would not be here if they completely wiped out their food sources. Rat population growth is modulated by available food sources. Hence, when almost completely eradicated, the rats rapidly reproduced back to equilibrium with food sources.

Claims that the Henderson project was urgently needed to prevent the extinction of a bird species with which rats had co-existed for over 800 years were bogus. If rats had not exterminated the birds within 800 years, they weren't likely to do so before this pointless project killed tens of thousands of animals, probably including many birds.

The failure of the extermination attempt on Henderson is not an isolated incident. Lehua is one of the Hawaiian Islands on which extermination was attempted and failed. An evaluation of that attempt was published in 2011 to determine the cause of the failure so that a subsequent attempt would be more successful. That evaluation included this report on the success of similar attempts all over the world: "An analysis of **206 previous eradication attempts against five species of rodents on islands** using brodifacoum or diphacinone is presented in an appendix to this report. For all methods, 19.6% of 184 attempts using brodifacoum failed, while 31.8% of 22 attempts using diphacinone failed."

Brodifacoum and diphacinone are both anti-coagulant rodenticides. Diphacinone is considered less toxic and less persistent than brodifacoum.

The California Coastal Commission has a responsibility to protect the coast of California and the people and animals that inhabit the coast. I respectfully request that CCC fulfil its mission by declaring the project inconsistent with that mission.

Thank you for your consideration.

Mary McAllister

Oakland, California

From: [Karina Zappa](#)
To: Energy@Coastal
Subject: Opposition to poison drop (W14a)
Date: Friday, June 28, 2019 2:41:40 PM

Please register my strong opposition to this proposed measure. We need a better approach. This idea threatens already fragile ecosystems and poses a danger to non-target species.

Thank you,
Karina Zappa

From: [Clay bennett](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, June 28, 2019 6:18:29 PM

Hi, I don't like using poison in general ... In this case however, I am all for it.

The relatively short period of time that the poison will be around is very short, and will only get relatively shorter, compared to the foreseeable rodent free future on the Farallones.

It's regrettable, but it should be done, and the sooner the better ...

Thank you ...

Clay Bennett
415-238-2217

From: [Marsha Dupre](#)
To: Energy@Coastal
Subject: CD-0002-19 Poison Free Sanctuary
Date: Friday, June 28, 2019 6:34:33 PM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Marsha Vas Dupre, Ph.D.
Former Santa Rosa City Council Vice Mayor, SRJC Trustee
3515 Ridgeview Drive
Santa Rosa, CA 95404
707-528-7146

From: [rhea damon](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Friday, June 28, 2019 7:39:49 PM

A sanctuary is a place of safety and protection for wildlife and nature. Dropping rat poison on the Farallon Islands will be disastrous for this pristine environment. Please do not proceed with this deadly proposal. Thank you. Rhea Damon/concerned and caring citizen

From: [Personal](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Friday, June 28, 2019 8:54:40 PM

Hello -

Please reject the consistency W14a and use a different strategy to control the mice, rather than a poison that can go up the food chain and poison other species. Thank you,

Vicki Mayster
11529 Occidental Rd
Sebastopol, CA. 95472

From: [JANET WEINER](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, June 28, 2019 9:58:41 PM

STRONGLY OBJECT TO RAT POISON DUE TO COLLATERAL SPECIES & ENVIRONMENTAL DAMAGE
THREAT TO MANY
BIRDS - SEALIFE - THE OCEAN.

FIND ANOTHER WAY - THIS IS NOT THE ANSWER TO THIS PROBLEM -

Janet Weiner
Sent from my Iphone

From: [Cynthia](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Saturday, June 29, 2019 8:31:37 AM

This is so wrong
Please don't do this
Let the people vote on this
Stop killing our planet

Sent from my iPhone

From: [Anne Seeley](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Saturday, June 29, 2019 8:59:59 AM

Dear People:

It is unthinkable to poison the ocean in this manner and I urge you to drop the plan to do it.

We are working to clean up our ocean and to expose Marine life to such virulent chemicals is just the wrong thing to do.

Thank you! Anne E. Seeley

Anne Seeley
aeseeley@sonic.net
526-3925
484-8722 (cell)

From: [Laura Duggan](#)
To: Energy@Coastal
Cc: Susan.Gorin@sonoma-county.org; Lynda.Hopkins@sonoma-county.org
Subject: CD-0002-19
Date: Saturday, June 29, 2019 9:05:34 AM

Dear Commissioners:

I am dismayed to hear that once again, man thinks it knows better than nature, and is attempting to use poison for wildlife control, this time on the Farralon Islands, part of our protected Marine Sanctuary. The plan to drop poison pellets on a protected island is very ill-advised.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. The National Marine Sanctuary has such poison expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

As a local coastal resident, who uses the coast and appreciates the Greater Farallones National Marine Sanctuary, I ask you to deny the requested consistency finding for item W14a.

The Wildlife Service needs to remove the dependence on persistent food-chain poisons, particularly within our National Marine Sanctuaries and elsewhere on the California coast. We need far more precaution before intervening.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Laura Duggan
PO Box 2345
(5855 Vine Hill Road)
Sebastopol, CA 95473

I am copying the Sonoma County Supervisors on this letter, so that they may be alerted to this egregious activity that is planned for the Farallones.

From: [Nancee Caye](#)
To: Energy@Coastal
Subject: Poisoning the Farallon Islands & an entire ecosystem
Date: Saturday, June 29, 2019 9:30:54 AM

Dear Commissioner:

Below is the form letter being circulated in hopes of having the Poison Dispersal Plan on Farallon Islands stopped. I hope you realize that we are using this form letter to facilitate a quick response to stop the harmful actions of poisoning an ecosystem. I'm hoping you will be inundated with these letters.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Nancee Foglesong Carlsbad CA

From: [Cathy Schwemm](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Saturday, June 29, 2019 11:26:52 AM
Attachments: [Farallons.docx](#)

Sent from [Mail](#) for Windows 10

To: California Coastal Commission

Date: June 29, 2019

Re: Agenda Item W14a, Poison Application in the Greater Farallons National Marine Sanctuary

To the Commissioners,

I would like to provide my brief comments regarding the proposed project. I hold a PhD in wildlife ecology with a research focus on small mammals on islands, and I was an employee of the National Park Service and participated in the rat eradication project that occurred on Anacapa Island in the early 2000s.

My opinion is that, as much as I detest the presence of rodenticides in our environment, (and strongly support efforts to ban them for nearly all uses in California), in this situation I feel there is no other reasonable option for long-term protection of South Farallon ecosystems.

I fully understand the concerns of many people regarding the application of poisons into the marine sanctuary. I had many concerns myself during the Anacapa project, though in that case the project also included the loss of high numbers of native mice as non-target species.

However, there simply are no other reasonable options. Non-native house mice are a serious threat to seabirds on the islands, consuming both eggs and small chicks. In the absence of nearly all predation this species is extremely prolific, exists in very high numbers, and lives in crevices and other inaccessible locations. The island-wide application of poison, as horrific and distasteful as it is for many of us, will occur only once (in two phases), and will allow the island ecosystem to recover and become more resilient to future threats such as climate change, sea level rise, and ocean acidification.

Also, I need to counter a statement made by a Mr. Charter (quoted in the Sonoma County Gazette, 6/24/19) as saying the, "...Coastal Commissioners [should] ensure that the [Fish and Wildlife Service-FWS] comes up with a more precautionary approach than random airborne dispersal of dangerous poisons...". I was the GIS specialist for the National Park Service during the Anacapa rat eradication project and can say for certain that the pellet application process is anything but random. The amount of poison applied, the path of the helicopter, the application rates and areas covered both by helicopter and by hand are precisely measured and recorded in real-time and immediate adjustments made when necessary.

I also strongly disagree with Mr. Charter's statement (quoted in the Point Reyes Light, 6/27/19) stating "[The plan] ignores the facts and the forces at work." The plan presented by FWS is the culmination of literally decades of research, data collection, observation and consideration. The facts are that non-native house mice eat native seabirds on the Farallons at high rates, that non-target impacts will occur and have been estimated, and that the plan has an extremely high likelihood of success.

For these reasons I support the plan as presented in the Preferred Alternative as the best way to protect native species and biological communities on the Farallon Islands far into the future.

Sincerely,

Dr. Cathy Schwemm; cathy.schwemm@gmail.com

From: [katharine_boyd](#)
To: [Energy@Coastal](#)
Subject: Poison bait dumping Farallones
Date: Saturday, June 29, 2019 12:11:03 PM

100% against! What could be the possible benefits of this action? The mice can be regulated by owls or other predators. This seems like a provocation from the Trump administration and it involves no environmental value nor does it provide any human value. This action would destroy this precious Marine sanctuary. As a California resident, I implore you to stop this idea.

Katharine Boyd
Resident
60 Corte Real
Greenbrae 94904

From: baxter2bailey@gmail.com
To: Energy@Coastal
Subject: W14a
Date: Saturday, June 29, 2019 1:24:33 PM

Please reconsider this plan. There is too much wildlife to drop poison & could endanger marine life as well. This makes no sense!!! Once our eco system is damaged to the point of no return, we all die.

Sent via the Samsung GALAXY S®4, an AT&T 4G LTE smartphone

From: [Teri Jasman](#)
To: Energy@Coastal
Subject: and identified with the relevant agenda item number W14a
Date: Saturday, June 29, 2019 2:34:21 PM

The use of poison is not a sustainable practice for the planet. DO NOT allow this poisoning to occur, as identified with the relevant agenda item number W14a. This is a BAD plan, from a BAD administration.

Teri Jasman, MA/BCBA
510-717-1719
Jasman Behavior Consult

*****PRIVACY NOTICE: The content of this communication is CONFIDENTIAL and may include student information that is protected by federal law under the Family Educational Rights and Privacy Act (FERPA). If you are not the intended recipient of this communication, please notify the sender immediately and delete the material without opening any attachments. Unauthorized use, disclosure, copying, or distribution is strictly prohibited and may be unlawful.*****

From: [cah](#)
To: Energy@Coastal
Subject: CD-0002-19 Please do not drop poison pellets in the middle of the Farallon Marine Sanctuary. There have been numerous studies attesting to the fact that these pellets not only kill the targeted species, but any species that comes in contact with them. R...
Date: Saturday, June 29, 2019 6:06:22 PM

Sent from my Samsung Galaxy smartphone.

From: [Faith Ares](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Saturday, June 29, 2019 6:15:03 PM

Hi,

Please do not think you can control rat populations by poisoning them with one drop. It will take years of poison and how many countless animals lives that eat rats such as owls would you like to be responsible for? Do you want to be responsible for the decline or extinction of birds of prey on or near the island? Not to mention what is the research that shows what happens when that poison turns into rain runoff and poisons ocean life in the area? Please consider the monumental effect this one act could have on an entire eco system.

Faith

Sent from my iPhone

From: [Joseph Morlan](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Sunday, June 30, 2019 7:41:02 AM

To whom it may concern,

I am an ornithology professor at City College of San Francisco and am writing to oppose the plan to aerial drop 1.4 metric tons of rodenticide on the Farallon Islands in an effort to eradicate mice. While removal of mice from the Farallons is a desirable goal, this is not the right approach.

I've studied rodent removal on other islands and believe the correct approach is that pioneered by researchers from New Zealand who successfully removed rodents and other predators from several of their islands where native species were at risk. Their new approach was also adopted on South Georgia Island in the South Atlantic which was recently declared rat free. Their more modern approach is also currently being used on Gough Island, where introduced mice are being eradicated.

Basically, the New Zealand approach uses a highly dilute solution of poison in rodent bait. When consumed, this diluted poison bait makes the rodents feel sick and they behave the way most people behave when they feel sick. They go to bed. In this case the rodents go into their burrows where they fall asleep. With the proper dose of rodenticide, the rodents die in their burrows. This technique avoids the problem of secondary poisoning where the rodents die above ground and are eaten by gulls, owls and other scavengers and predators.

Please reconsider the existing plan. It is not best practice and there are much better alternatives. If you wish, I can put you in contact with the scientists who have successfully implemented rodent eradication in New Zealand and South Georgia without the side-effects of the current plan. Please feel free to contact me.

Thank you.

Joseph Morlan
Department of Continuing Education
City College of San Francisco

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Joseph Morlan, Pacifica, CA

From: [Nancy Stein](#)
To: Energy@Coastal
Subject: Poison on farallones
Date: Sunday, June 30, 2019 8:42:55 AM

The us fish and wildlife plan to drop brodifacoum on the farallones to control mice is just another example of complete disregard and disrespect for nature. Please do not approve the plan which will have unintended consequences that will reach far beyond the seagulls that will be affected. The use of pesticides is so widespread and uncontrolled and misunderstood that it has already produced MORE mice, and rats.

I live in a remote area of west marin on the edge of the pt reyes national seashore. The owls are no gone and the rat population has exploded!

I trap my mice and rats constantly.

There are other ways to deal with mice besides dropping broad based pesticides. At the very least, boxes that the mice enter and don't come out of.

Yes

They are more time consuming and they require human interaction. Since it is man who introduced the mice we should have to do the unpleasant and consistent work of paying for our carelessness. The USFW plan is just another example of doing the simple, expensive action that has consequences. When it does, I can only hope some innocent human child is one of the consequences because that's the only way you men will see the error.unfortunately for nature, climate change won't wipe out humans soon enough.

Humans truly do not deserve the earth we have been given.

I would like public notice when this plan goes into effect.

Nancysteinart.com

From: [Lawrence Henzerling](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Sunday, June 30, 2019 8:53:18 AM

It always seems so simple. Poison the mouse and everything will be fine; but it will not! We introduce something into a system and, inevitably, it spreads beyond the intended result and starts affecting the entire system. This has happened so many times. And, it seems, we have not learned our lesson. Keep the rat poison off the Farralons. Please!

Sent from my iPad

From: [Baana](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Sunday, June 30, 2019 11:57:47 AM

Nononono what are you thinking? This is a horrible idea!

From: [Cynthia](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Sunday, June 30, 2019 2:15:25 PM

Please denied this request for poisoning our planet.

Sent from my iPhone

From: [Cynthia Killpack](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Sunday, June 30, 2019 2:39:05 PM

PLEASE SEE ATTACHMENTS
BUT IN SHORT

PLEASE REJECT PENDING REQUEST FOR A CONSISTENCY DETERMINATION ON ITEM W14a
THE US FISH AND WILDLIFE SERVICE POISON DISPERSAL PLAN.

CYNTHIA KILLPACK, KEN WOOD, LYDIA JACKSON
323 SAN PABLO
PACIFICIA CA 94044

AND 10 WOMEN IN MY BOOK CLUB ALL AGREE STOP!!!!!!

From: [Cynthia](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Sunday, June 30, 2019 2:41:08 PM

Please deny fish and wildlife their request to poison please

Sent from my iPhone

From: [Lauren Terk](#)
To: Energy@Coastal
Subject: Do not drop poison on the Farallones
Date: Sunday, June 30, 2019 10:09:31 PM

It is inconceivable that, with all we know about the impact of poisons on untargeted wildlife, this administration would be pushing to drop 1.5 tons of poison bait pellets in the Greater Farallones National Marine Sanctuary. There must be other ways to address the perceived problem of house mice on the islands attracting burrowing owls from Marin that threaten Ashy Storm Petrels. If there aren't, dropping 1.5 tons of poison certainly won't make things better. That poison will impact the wildlife throughout the sanctuary, the animals that feed on them and the animals who come into contact with the impacted waters ... reaching as far as Marin County, the City and County of San Francisco and beyond. If you are not concerned about the impact on wildlife consider this ... drop that poison and you might as well just tell the sport and commercial fishermen to pull their boats out of the water.

Lauren Terk
Marin County, CA

"My treasures do not clink or glitter, they gleam in the sun and neigh in the night." – Bedouin



Before printing this page please think about your responsibility to the environment.



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From: [Scotty Muira & Jim Ethridge](#)
To: [Energy@Coastal](#)
Cc: [waterway@monitor.net](#)
Subject: CD-0002-19 Farallones Poison Drop
Date: Monday, July 01, 2019 7:11:29 AM

I am horrified and outraged at learning that the US Fish and Wildlife has plans (W14a) to disperse a highly toxic poison at the Farallones National Marine Sanctuary, one which will kill a broad number of non-targeted species and which has a known history of being ineffective in achieving targeted goals. Your plans to disperse this poison are vastly irresponsible and may in fact be illegal. It is astonishing that your agency would choose to take such an action. I urge you to abandon this "quick fix" catastrophic approach!

Scotty Muira
10426 Scenic Dr., Forestville, CA 95436
[muira@comcast.net](mailto:muir@comcast.net)

From: [Delaplaine, Mark@Coastal](mailto:Delaplaine.Mark@Coastal)
To: [Simon, Larry@Coastal](mailto:Simon.Larry@Coastal)
Subject: FW: Rat poison on The Farrallons
Date: Monday, July 01, 2019 8:29:42 AM

This may have only come to me - Mark

-----Original Message-----

From: Cathy @ Gmail [<mailto:cathydamazio@gmail.com>]
Sent: Saturday, June 29, 2019 1:45 PM
To: Delaplaine, Mark@Coastal
Subject: Rat poison on The Farrallons

Government Employee,

I have been informed that your ridiculous shortsighted plan of dropping rat poison on The Farrallons supposedly to get rid of mice is actually to get rid of six burrowing owls. I guess the owls eat other birds in the off season. Is this really true? Which idiot came up with this idea? You must know that this will in turn poison the hawks, skunks and everyone else that feeds on the mice or an animal that fed on the mice. I mean, seriously, you do know this right? I am absolutely shocked that this is your plan. Please rethink this stupidity. California should not be acting like this.

Please come up with another way to deal with this. Or just leave them alone.

Sincerely,
Cathy Damazio

Sent from my iPad

From: ExecutiveStaff@Coastal
To: Simon.Larry@Coastal
Subject: FW: Public Comment on July 2019 Agenda Item Wednesday 6a - Executive Director's Report
Date: Monday, July 01, 2019 8:41:48 AM

-----Original Message-----

From: Thomasina Cordero [<mailto:tommiegirl58@att.net>]

Sent: Saturday, June 29, 2019 12:06 PM

To: ExecutiveStaff@Coastal

Subject: Public Comment on July 2019 Agenda Item Wednesday 6a - Executive Director's Report

I have an idea that doesn't include poison. Drop a bunch of feral cats on the island. Problem solved.
Tommie Cordero

Sent from my iPad

From: [Anastasia Glikshtern](#)
To: Energy@Coastal
Subject: Fwd: Don't allow the poisoning of Farallon Islands!
Date: Monday, July 01, 2019 11:30:46 AM

Hello,

Forwarding my comment to you - I only got your email address today - so the original email might not have reached the proper addressee.

Please don't let criminals at US Fish & Wildlife Service together with criminals at The Island Conservation & Point Blue Conservation Science to poison our environment and all of us via it.

Thank you,

Anastasia Glikshtern
150 Chaves Ave
San Francisco, CA 94127
415-759-5050

----- Forwarded message -----

From: **Anastasia Glikshtern** <apglikshtern@gmail.com>

Date: Sun, Jun 30, 2019 at 12:13 AM

Subject: Don't allow the poisoning of Farallon Islands!

To: <Effie.Turnbull-Sanders@coastal.ca.gov>, <Donne.Brownsey@coastal.ca.gov>, <Sara.Aminzadeh@coastal.ca.gov>, <Linda.Escalante@coastal.ca.gov>, <Katie.Rice@coastal.ca.gov>, <Carole.Groom@coastal.ca.gov>, <Erik.Howell@coastal.ca.gov>, <Roberto.Uranga@coastal.ca.gov>, <Stephen.Padilla@coastal.ca.gov>, <zahirah.mann@coastal.ca.gov>, <Belinda.Faustinos@coastal.ca.gov>, <Brian.Pendleton@coastal.ca.gov>, <Bryan.Urias@coastal.ca.gov>, <Christopher.Ward@coastal.ca.gov>
Cc: <John.Ainsworth@coastal.ca.gov>, <Marlene.Alvarado@coastal.ca.gov>, <Melisa.Arellano@coastal.ca.gov>, <Rita.Babaran@coastal.ca.gov>, <carey.batha@coastal.ca.gov>, <Sonia.Beckford@coastal.ca.gov>, <chantel.brame@coastal.ca.gov>, <Kelly.Cuffe@coastal.ca.gov>

Commissioners,

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and

elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much,
Anastasia Glikshtern
150 Chaves Ave.
San Francisco, CA 94127

P.S.

Those criminals at US Fish and Wildlife Service, along with criminals at the Island Conservation & Point Blue Conservation Science, should be tried and sentenced to eat the poison they want to use to kill fish, birds & marine mammals via poisoned mice.



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From: [Barb and/or Lynn](#)
To: NorthCentralCoast@Coastal
Subject: Hello from the Contact Page
Date: Monday, July 01, 2019 1:00:13 PM

Project Name and Application Number: Farallon Islands eradication of mice by poison pellets

Nature of Communication (In Person, Telephone, Other):

Date and Time Requested:

Full Name:

Email:

On Behalf Of:

Comments: I am extremely concerned about the proposed plan to drop poisoned pellets onto the Farallon Islands to eradicate the mice population. some of the pellets will be consumed by other creatures, mice that have eaten the pellets will be eaten by other species, some of the pellets and dead or dying mice will fall into the ocean. Other species marine and land and birds will die as a result of the poison pellets. Please find some other means to deal with the mice population. Humans cannot foresee the results of their actions that has been proven over and over and is why so much is out of kilter with the world environment and ecosystems.

Thank you,

Barbara Tatum, barblynn@mcn.org, Pt. Reyes Station, CA

Public comments submitted to the Coastal Commission are public records that may be disclosed to members of the public or posted on the Coastal Commission's website. Do not include information, including personal contact information, in comments submitted to the Coastal Commission that you do not wish to be made public. Any written materials, including email, that are sent to commissioners regarding matters pending before the Commission must also be sent to Commission staff at the same time.

From: [Susan Bradford](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Monday, July 01, 2019 1:06:11 PM

Dear Commissioner:

The US Fish and Wildlife Service is suggesting an utterly inappropriate method of getting rid of the mice on the Farallones. Using 1.5 metric tons of a rat poison is an environmentally insane idea, for the other wildlife and for the ocean water. Please be environmentally and forward thinking in rejecting this proposal.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Susan Bradford

32 Marquard Ave San Rafael

Ca 94901

From: [Mike Sweeney, The Nature Conservancy](#)
To: Energy@Coastal
Cc: [Nick Holmes](#); [John Randall](#); [Mark Reynolds](#); [Scott Morrison](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Monday, July 01, 2019 1:58:41 PM
Attachments: [TNC Farallones Letter of Support 2019.pdf](#)

California Coastal Commission:

Please see attached for a Letter of Support regarding July 2019 Agenda Item Wednesday 14a CD – 0002 – 19.

Thank you.

Mike Sweeney
Executive Director
The Nature Conservancy, California

July 1, 2019

CALIFORNIA COASTAL COMMISSION

45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

RE: Letter of support for the proposed eradication of house mice from the Farallon National Wildlife Refuge

Thank you for the opportunity to comment on staff recommendations for the California Coastal Commission's Hearing on July 10th, 2019. The California chapter of The Nature Conservancy (Conservancy) supports the goals of the United States Fish & Wildlife Service's proposed House Mouse Eradication Project in the Farallon Islands National Wildlife Refuge which is an important component of their 2008 Comprehensive Conservation Plan for the Refuge. The Conservancy likewise supports the *California Coastal Commission staff recommendation of June 27th, 2019 that the Commission find the project consistent with the environmentally sensitive habitat policy of the Coastal Act (Section 30240)*.

The Conservancy has worked in California for 60 years to preserve and protect the state's extraordinary biological diversity. Our California Islands Program has delivered some of our biggest successes over the past four decades – successes born of an extraordinary coalition with other non-profit organizations, university researchers, and federal and state agencies which brought Santa Cruz Island and the seven other California Channel Islands back from the brink of ecological collapse and set them firmly on the path to recovery. The Conservancy owns 76% of Santa Cruz Island, and our successful effort to eradicate feral pigs there in the mid-2000's in partnership with the National Park Service (which owns the remainder of the island) and with other stakeholders was an important and necessary step in setting the native biodiversity of this island on the path to recovery¹. The subsequent recovery of the federally endangered and endemic Santa Cruz Island fox resulted in its delisting. This and the recovery of other endemic and rare plant and animal species and of the island's vegetative cover, gives the Conservancy first-hand experience with the conservation benefits that can result from the eradication of non-native invasive vertebrates from islands.

Further north on California's coast, the USFWS has led collaborative efforts to restore the Farallon Islands, home of the largest seabird colony in the contiguous United States, numbering

¹ Morrison, SA. 2007. Reducing risk and enhancing efficiency in non-native vertebrate removal efforts on islands: a 25 year multi-taxa retrospective from Santa Cruz Island, CA. Pp. 398–409. In G.W. Witmer, W.C. Pitt, and K.A. Fagerstone, eds. *Managing Vertebrate Invasive Species: Proceedings of an International Symposium*. USDA/APHIS/WS, National Wildlife Research Center, Fort Collins, Colorado, USA.

over 300,000 birds and 13 species including half of the world's population of the globally rare Ashy storm petrel. This group of small islands is also home to endemic terrestrial animals including the Farallon arboreal salamander, and the endemic Farallon camel cricket, and they host resting and breeding colonies of five species of marine mammal. Much has been accomplished there already, including the eradication of cats and rabbits which had devastated seabird colonies and island vegetation respectively. However, the presence of the house mouse there, often at population densities that are among the highest recorded on islands anywhere on Earth, threatens to reverse the breeding successes of the seabirds whose eggs they eat, as well as the survival of the endemic salamander and camel cricket. The Farallon National Wildlife Refuge is a vital ecological resource for the state of California and the nation. A recent analysis further identified the eradicating house mice on the Farallon Islands as globally important for the protection of native species².

The Conservancy supports the proposed plan to eradicate house mice from the Refuge as a vital step in maintaining and furthering their ecological recovery and their long-term ability to support nesting seabirds, endemic animals and native vegetation and marine life such as the marine mammals that rest and breed there.

Sincerely,

A handwritten signature in dark ink, appearing to read "Mike Sweeney", with a stylized, flowing script.

Mike Sweeney
Executive Director

² Holmes ND, Spatz DR, Oppel S, et al. 2019. Globally important islands where eradicating invasive mammals will benefit highly threatened vertebrates. PLOS ONE 14:e0212128.

From: [Don Croll](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Monday, July 01, 2019 4:07:45 PM
Attachments: [Croll Comment - Farallon Islands - CCC.pdf](#)

Dear CCC Staff,

Please see attached letter concerning this agenda item.

Sincerely,

Donald Croll
Professor, Ecology and Evolutionary Biology
UC San Diego John Muir Fellow
Robert Headley Presidential Chair for Integral Ecology and Environmental Justice
Ocean Health Building
115 McAllister Way
Santa Cruz, CA. 95060
(831)459-3610
<https://www.eeb.ucsc.edu/faculty/dept-faculty/croll.html>

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SANTA BARBARA • SANTACRUZ

DEPARTMENT OF ECOLOGY & EVOLUTIONARY BIOLOGY
DIVISION OF PHYSICAL AND BIOLOGICAL SCIENCES
OCEAN HEALTH BUILDING, LONG MARINE LABORATORY
115 MCALLISTER WAY.
SANTA CRUZ, CALIFORNIA 95060

California Coastal Commission
July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
July 1, 2019

Dear Commissioners,

I am writing concerning the application to conduct a rodent eradication on the Farallon Islands, California. By way of background, I am a Professor in the Ecology and Evolutionary Biology Department, UC Santa Cruz with over 30 years of experience and over 100 publications in the research and conservation of seabirds and island ecosystems. In a world with declining biodiversity and accelerating species extinctions, our tools to effectively avoid these losses are limited. The good news is that invasive species eradications on islands has proven to be a globally important tool to recover declining island populations, including seabirds, and restore functioning island ecosystems. Globally, there have been over 1,500 successful invasive species eradications on islands, with the majority (over 95%) of attempted eradications being successful. The rodents introduced to the Farallon Islands have been well established to be causing multiple direct and indirect impacts to native plants and animals, some of which are unique to the Farallon Island ecosystem. The potential non-target impacts of the eradication methods are well known and can be successfully mitigated, and this project is no exception. Indeed, I have been familiar with this proposed project for over a decade, and the degree of research and careful study is exceptional – giving me confidence that this project will be both successful in eradicating non-native rodents as well as providing important conservation benefits to the island. I encourage you to support this project. I am happy to answer any questions should you or your staff want some clarifications.

Sincerely,

A handwritten signature in black ink, reading "Donald A. Croll".

Donald A. Croll, Ph.D.
Professor, Ecology and Evolutionary Biology Department
John Muir Fellow
Robert Headley Presidential Chair for Integral Ecology and Environmental Justice

From: [Clyde Morris & Joelle Buffa](#)
To: Energy@Coastal
Cc: [Zachary Warnow](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Monday, July 01, 2019 9:46:42 PM
Attachments: [Comment Ltr CCC Consistency Determ.docx](#)

Please take into account my attached comments regarding the Project to Eradicate introduced, invasive house mice by aerial broadcast of rodent bait, hand baiting, bait stations, and traps in order to benefit native seabirds and restore natural ecosystem processes on the South Farallon Islands. I urge you to concur with the staff recommendation.

Joelle Buffa

Certified Wildlife Biologist

2981 Avenida de Suenos
Sierra Vista, AZ 85650
clyde_joelle@verizon.net
July 1, 2019

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, Ca 94105-2219

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

Dear Commissioners,

I read with great interest the excellent staff report on the South Farallon Islands House Mouse eradication project prepared for your upcoming July meeting. I fervently hope that you will concur with staff recommendation on this project. I served as manager of the Farallon National Wildlife Refuge (FNWR) for 12 years (1996 to 2008) and am a retired Wildlife Biologist with 37 years of service for four Federal Agencies. I'd like to share some personal perspectives to augment the well-written and detailed staff report dated 6/27/19.

During my tenure as Refuge Manager, populations of most seabird species on South Farallon Islands increased or experienced up and down cycles that could be explained by factors outside of our control such as the El Niño or ocean temperatures. A population viability analysis of ashy storm-petrels in the mid-1990s by Point Blue (then Point Reyes Bird Observatory) alerted me to the long-term decline of this species and prompted me to take action since the Refuge supported the largest single colony of this seabird. Studies indicated that predation of adult petrels was a major factor, so in the 1990s and early 2000s we conducted investigations (remote video cameras, track plates, petrel wing and owl pellet collections) to determine what was eating the petrels. We then implemented actions to thwart these predators, mainly burrowing owls and sometimes western gulls. We captured and relocated burrowing owls to suitable habitat on the mainland but had a difficult time capturing owls, and when we did succeed, timely boat transport to ensure the safe transfer of owls was often unavailable due to weather or other factors. We tested overhead wires to exclude western gulls from important ashy storm-petrel nesting habitat, but this was met with little success.

We funded studies to determine the movements and feeding habitats of burrowing owls, which occur seasonally but do not breed on South Farallon Islands, and discovered that the owls arrived in the fall when non-native house mouse populations peaked. When the house mouse population crashed during the winter rains, the burrowing owls switched to the only food source available – adult ashy storm-petrels returning to their breeding colonies. It was a situation that spelled doom for both species, since many owls starved to death on this atypical diet item.

We needed to restore natural balance to this island ecosystem so we called in experts with experience in rodent control from North America, New Zealand and other oceanic islands to advise Refuge personnel on options for eliminating exotic house mice, unintentionally introduced onto South Farallon Islands before it became a National Wildlife Refuge. The experts recommended 100% eradication with aerially applied rodenticide as the effective method. We followed their advice and conducted preliminary studies on mouse population cycles and diet. We also began studying other lesser-known aspects of native island wildlife, such as the distribution and population size of arboreal salamander, radio-telemetry studies of wintering burrowing owls, and patterns of winter gull use.

We also successfully sought outside funding sources and partners to conduct a number of major projects that protected and enhanced nesting habitat for ash storm-petrels and auklets (another small seabird prone to predation). In 2000, we constructed boardwalks using recycled plastic lumber to protect nesting borrows from human foot traffic. Throughout the 2000s we broke up old concrete foundations (relicts from past human habitation) and piled them up to create nesting burrows, and used the concrete rubble to screen nesting areas from human activity. We started a multi-year, multi-partner project in 2005 which reconstructed the Lighthouse Trail wall to incorporate nesting crevices for ash storm-petrels.

Since 2008, the Refuge has continued to refine methods, study the interaction between mice and burrowing owls, evaluate potential impacts, test ways to mitigate effects on non-target species (e.g. hazing gulls, capturing arboreal salamanders), develop monitoring plans, and modify project design to address concerns of critics.

My point in mentioning this history is to demonstrate that the project to eradicate introduced, invasive house mice by aerial broadcast of rodent bait, hand baiting, bait stations, and traps on South Farallon Islands is a culmination of over 25 years of careful study, analysis, debate, and trying less-costly and gentler (but ineffective) solutions. All of this time and effort is worthwhile because eradicating house mice on South Farallon Islands is now the most important project that the Refuge can undertake to restore ecosystem function of this environmentally sensitive habitat area (ESHA), and reverse the decline of a major segment of the ash storm-petrel breeding population. I am pleased that the Commission's staff report concluded that, "the proposed restoration efforts would result in significant long-term benefits to native seabirds, amphibians, terrestrial invertebrates, and plants and will help to restore natural ecosystem processes on the islands."

Sincerely,
/s/ Joelle Buffa

From: [Mari Tamburo](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 12:52:33 AM

Dear Commissioner:

As a primary candidate for President, a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a, the US Fish and Wildlife Service poison dispersal plan.

This proposal targets the middle of a treasured State Marine Reserve and National Marine Sanctuary, waters which are not to be poisoned, but are to be protected. If sanctuary regulations ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary, how and why is this poison drop under consideration? Furthermore, the currently proposed plan to drop anti-coagulant, persistent food-chain poisons is an outdated and irresponsible manner of dealing with a single species challenge.

To move forward with this currently proposed plan is the opposite of responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and along the California coast.

I urge you to find a more responsible, limited scope solution.

Thank you for the opportunity to speak on behalf of the wildlife in Farallones Marine Sanctuary.

Sincerely and Respectfully,

Mari Tamburo

San Rafael, CA

From: [Leilani Young](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 9:14:36 AM

Dear Commissioner:

Rodenticide enters the food chain and kills others that should not suffer this horrible death. Just because it's farther away and easy to overlook all the deaths that are unintended, I think it's like dumping oil in the water or massive garbage poisoning. It's unconscionable.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Name

Address

From: [Brian Valente](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 9:32:37 AM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

While I appreciate the desire to eradicate non-native rodents, This is a terrible approach because it endangers all the other animals who will feed on the sick and dying animals.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Brian Valente
Sherman Oaks, California

From: [Leslie Sands](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Tuesday, July 02, 2019 9:37:43 AM

To the Honorable California Coastal Commissioners:

We are second-generation California natives and have lived in California for more than 135 years combined. When we moved to Los Osos, San Luis Obispo County, California, in early 1996, we observed a thriving bat population. However, those ecologically beneficial bats have completely disappeared following the government's over-reaction to the "scare" of West Nile Virus by adding mosquito bait to many of our waterways. We have lived through the reprehensible consequences of widespread, government-sanctioned usage of pesticides, including DDT.

Now U.S. Fish and Wildlife Service is requesting permission to use **poison** to eradicate the house mice population on the South Farallon Islands. We are unequivocally opposed to interfering with the current balance through the use of dangerous poison. In the bigger picture, the ramifications of rodenticide usage will ultimately wreak havoc on the wildlife population on the South Farallon Islands, and beyond.

We are completely **opposed** to United States government and / or California State government intervention on the South Farallon Islands.

With grave concern and wisdom,

Jon M. Sands
1797 12th Street
Los Osos CA 93402-2205

Leslie E. Sands
1797 12th Street
Los Osos CA 93402-2205

From: [Doris Ober](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 9:49:16 AM

Dear Commissioner:

Please reconsider poisoning the Farallons in order to kill the mice. You will kill so many other creatures!

Doris Ober
POB 417
Point Reyes Station, CA

From: [BARBARA ROSS](#)
To: Energy@Coastal
Cc: waterway@monitor.net
Subject: reject plan to dump poison on The Farallons
Date: Tuesday, July 02, 2019 9:49:21 AM

I was alarmed to receive WildCare's email this morning informing me of the plan to dump toxic rodenticides on The Farallon Islands.

Please follow the scientific recommendations from fine organizations like WildCare about why this plan should be rejected.

Thank you,

Barbara Ross

P.O. Box 543

Woodacre, CA 94973

From: [Claudia Wornum](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 10:05:52 AM

Dear Commissioner:

Please reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. This is an inappropriate and toxic method that will impact and kill not targeted species. The Farallones host a huge array of Marine and Avian life. All must be protected from deliberate if indirect poisoning. To the right thing for our Sanctuary waters and reject this plan!

with respect,

Claudia Wornum
11780 Cranford Way, Oakland,
CA 94605

From: [Lavonne Jacobsen](#)
To: Energy@Coastal
Subject: W14a request to use rat poison in marine sanctuaries
Date: Tuesday, July 02, 2019 10:29:24 AM
Attachments: [image1.png](#)
[image2.png](#)

Dear Commissioner:

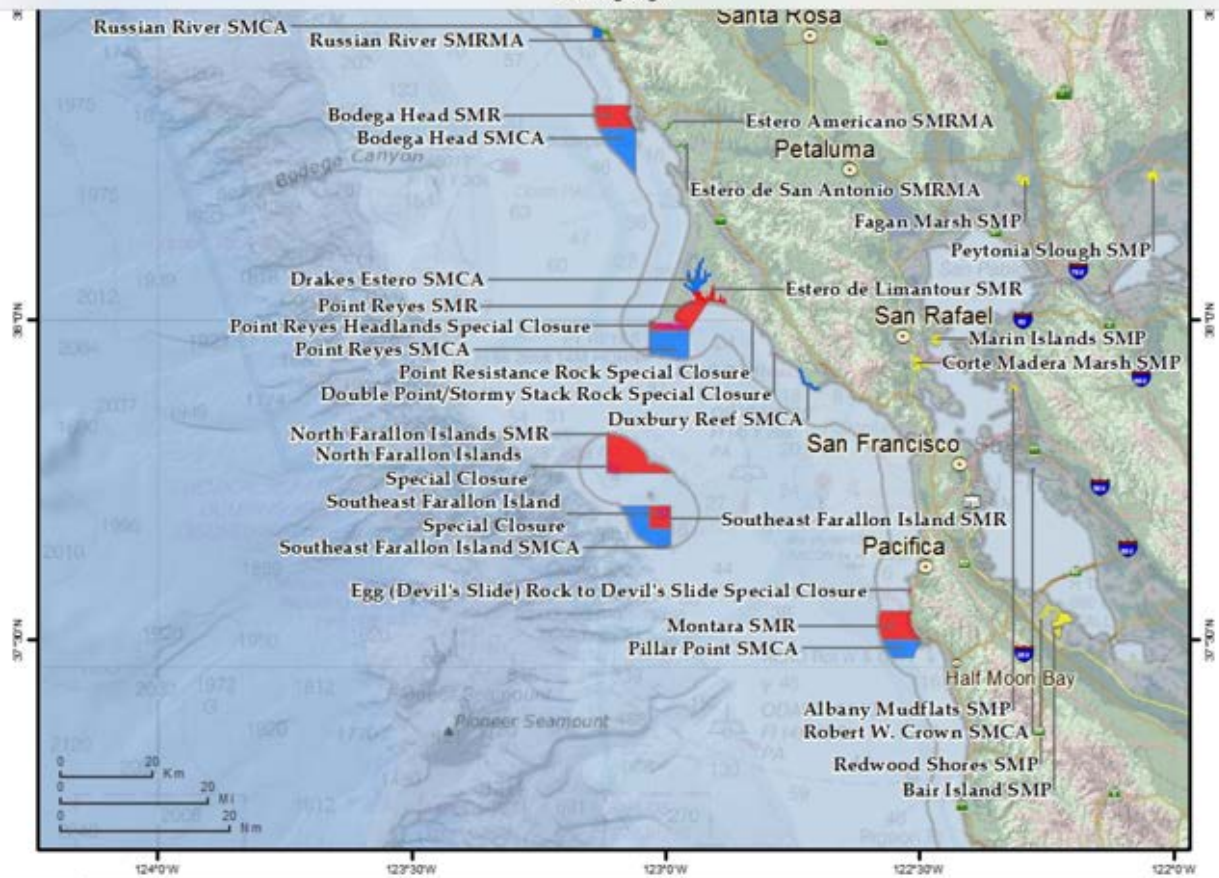
I am writing to ask that you and your fellow commissioners block the efforts by the US Fish and Wildlife Service to disperse poison on the Farallon Islands.

You are fully aware of all the national and state marine reserves and sanctuaries in the area in addition to the Farallons - but I have attached a couple of images from state and national web sites nonetheless. The multiplicity of these sanctuaries attests dramatically to the incredible diversity and value of this extraordinary coast for marine life. Marine life - including birds - is already endangered in so many other ways, you must ask them to consider alternatives. I understand that sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of a sanctuary. I do not see how the Commission, in all good conscience, can approve the requested consistency finding for item W14a.

To quote Wildcare: "It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem."

Thank you for your time and attention.

LaVonne Jacobsen
146 Lisbon Street
San Francisco CA 94112





From: tsagem28@gmail.com
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 10:37:24 AM

Dear Commissioner:

Dumping poison in a sanctuary to eradicate one species is an infective, inhumane, lazy, and unintelligent method of dealing with the situation. The chain reaction of suffering and death would be extreme.

Please have specialists brought in to research the most environmentally safe method with the submission of environmental studies and impact reports. This is a delicate and special ecosystem, please do not allow it to be abused in such a manner. Even letting the mouse overpopulation run its course naturally would be far preferable to the long reaching damage that will follow in the aftermath of an archaic poisoning plan.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Tracy Morris
PO 6195
San Rafael, Ca 94903

From: [Robert Boesch](#)
To: [Maggie Sergio](#); [Rachel Fobar](#); [Teresa Dawson](#); [info@beyondpesticides.org](#); [mpoffice@earthjustice.org](#); [nrdcinfor@nrdc.org](#); [Energy@Coastal](#)
Cc: [SFAgriculture@sfdph.org](#); [Ogawa_Joshua@CDPR](#); [Rose_Kachadoorian](#)
Subject: Poisons on Islands - Item W14a CD-0002-19 on California Coastal Commission Agenda, July 10
Date: Tuesday, July 02, 2019 11:41:55 AM
Attachments: [Vertebrate Poisons and Their Environmental Effects.docx](#)

The use of anticoagulant rat poisons is about to commence on Midway Island and the Farallon Islands.

My name is Robert Boesch. I served as pesticides program manager at the Hawaii Department of Agriculture from 1988 to 2009. I worked with EPA in the San Francisco office developing state regulatory programs (including pesticides) from 1975 to 1988.

I have been accused of being an alarmist during aerial applications of anticoagulant rodenticides to Lehua Island off Niihau in 2009 (Landcare, NZ, Parkes and Fisher review of why the eradication effort failed). I would not issue aerial permits for applications of rodenticides that would enter the intertidal areas or ocean because of non-target impact.

Now Fish and Wildlife Services and their Island Conservation contractor are preparing to apply brodifacoum (an extremely potent anticoagulant) to many more islands to protect birds. They also propose to relocate Laysan Ducks (an endangered species) from Midway and have supplies of antidote available in the event that there is exposure.

Attached is my assessment of the risks of anticoagulant use and links to supporting documents. Please share this information to anyone who may make a difference.

Robert Boesch
Visiting Colleague

Vertebrate Poisons and Their Primary and Secondary Effects

Toxicity

Paracelsus, a scholar born at the start of the Renaissance, is considered the father of pharmacology. He believed that one should make a distinction between the therapeutic and toxic properties of a chemical. Thus, the dose makes the poison. What is a toxic dose compared to a therapeutic dose?

Three factors influence toxicity (T):

1. Exposure – is the organism exposed to the substance (E);
2. What does an organism do to the substance (K)?
3. What does the substance do to the organism (D)?

Here is an equation that is used to characterize toxicity: $T=f(E,K,D)$

Toxicity is the accumulation of injury over short or long periods of time, which renders an organism incapable of functioning within the limits of adaptation or other forms of recovery. For vertebrate poisons, there are substances that produce quick results, single lethal doses, such as sodium cyanide, Compound 1080, strychnine, and aluminum phosphide. There are also substances that require longer time to produce results.

Some of the substances that take longer to produce results are anticoagulants. Here is a link which shows how the first anticoagulant (warfarin) was identified and show its therapeutic and toxic characteristics. The video contains images that may be offensive to some people.

Link 1

<https://www.youtube.com/watch?v=OnzF0oJkYe0>

What Does the Substance Do to the Organism?

Other anticoagulants were developed after warfarin, including diphacinone and brodifacoum, which are widely used in conservation programs. One characteristic of all anticoagulants is that they impair blood clotting ability. Brodifacoum is “a vertebrate toxicant that acts by interfering with the blood’s ability to form clots, causing sites of even minor tissue damage to bleed continuously. Before brodifacoum can have a measurable physical effect, levels of the toxin in the liver must reach a toxic threshold, which varies widely by species” (from page 73 of Link 11). Diphacinone is an indandione. Unlike the coumarin (warfarin) compounds, some indandiones cause symptoms and signs of neurologic and cardiopulmonary injury in laboratory rats. These lead to death before hemorrhage occurs, which may account for the greater toxicity of indandiones. Brodifacoum, a second generation anticoagulant is a hydrocoumarin. Neither of these anticoagulants are used for therapy because of their persistence and other effects.

Recovery in the form of an antidote is available for land animals. The antidote, as discussed in the link below, is Vitamin K₁, which is found in leafy green vegetables. Methods to treat Laysan Duck are discussed in the Environmental Assessment for the Midway Atoll National Wildlife Refuge mouse eradication project (Link 11). However, there are no methods or protocols to treat marine mammals. Actions taken in Hawaii by fishermen and their regulators and advisers likely exacerbated the risk to marine mammals. This topic will be further discussed in exposure.

For diagnosis and treatment of anticoagulant vertebrate poisons, please see link 2, page 178 to an online publication for health care professionals titled "Recognition and Management of Pesticide Poisonings"

Link 2

https://www.epa.gov/sites/production/files/2015-01/documents/rmpp_6thed_final_lowresopt.pdf

There is a high degree of variability in the susceptibility between species and within individuals of the same species to anticoagulants. An example of the variability between species is a study that was conducted in Mexico to control vampire bats that were feeding on cattle and effecting the cattle's ability to thrive.

Cattle were injected in the rumen with 1.0 milligram of diphacinone per kilogram of body weight. The drug was rapidly absorbed into the blood stream. Vampire bats that fed from a properly treated animal within 72 hours after treatment were "controlled."

This is a link to the study abstract: <https://science.sciencemag.org/content/177/4051/806>

Variability in the susceptibility among individuals of the same species is documented in data submitted to the Hawaii Department of Agriculture in support of the conservation use of diphacinone. This data included LD₅₀ tests and drug study summaries. The LD₅₀ test for cats demonstrated a range of 0.79 milligrams per kilogram to 273 milligrams per kilogram. The dose expected to kill half the cats tested was 14.7 milligrams per kilogram. The researcher observed that "The wide confidence limits in this instance is a result of the insidious toxicity of the compound." (Hazleton Laboratories, Incorporated, Falls Church, Virginia, April 19, 1957). The drug summaries showed that patients taking 30-40 milligrams followed by maintenance doses had three outcomes: no effect on clotting, clotting managed within desired range, or administration of the antidote was required. Thus, for individuals of the same species there is a wide range of responses to the same dose.

What Does the Organism Do to the Substance?

How an organism processes a substance is also called metabolism. This is a passage from International Programme on Chemical Safety, Environmental Health Criteria 175, Anticoagulant Rodenticides:

Anticoagulant rodenticides are vitamin K antagonists. The main site of their action is the liver, where several of the blood coagulation precursors undergo vitamin-K-dependent posttranslation processing before they are converted into the respective procoagulant zymogens. The point of action appears to be the inhibition of K₁ epoxide reductase.

Anticoagulant rodenticides are easily absorbed from the gastrointestinal tract, and may also be absorbed through the skin and respiratory system. After oral administration, the major route of elimination in various species is through the faeces.

The metabolic degradation of warfarin and indandiones in rats mainly involves hydroxylation. However, the second-generation anticoagulants are mainly eliminated as unchanged compounds. The low urinary excretion precludes isolation of metabolites from the urine. The liver is the main organ for accumulation and storage of rodenticide anticoagulants. Accumulation also occurs in the fat.

This is a link to Environmental Health Criteria 175.

<http://www.inchem.org/documents/ehc/ehc/ehc175.htm>

Anticoagulants accumulate in the liver and the fat. Other substances, such as persistent organic pollutants also accumulate in fat. Accumulation in fat is an indication of bioaccumulation potential. One chemical characteristic that can be used to predict bioaccumulation potential is the octanol-water partition coefficient (K_{oh}). (See links 5 and 6)

Link 5.

<https://science.sciencemag.org/content/317/5835/236>

Link 6.

<https://www.sciencedirect.com/science/article/pii/S0025326X83906045>

A link to a pesticides properties database that in can quickly identify chemical properties of concern is below. This database lists the K_{oh} for pesticides. The K_{oh} for brodifacoum is the same order of magnitude as DDT, suggesting that brodifacoum is extremely bioaccumulative.

Link 7.

<https://sitem.herts.ac.uk/aeru/ppdb/en/Reports/204.htm>

Whale milk contains a lot of fat. Whole milk from cows contains about 4% milk fat. Milk from whales contains about 40% milk fat. So newborn whale calves are exposed to about 10 times more fat soluble toxicants than people who drink whole milk, which leads us to the exposure, the remaining factor influencing toxicity.

Exposure

Exposure is the final factor in the equation for toxicity and the most important. Without exposure there can be no toxicity. Exposure to anticoagulants in baits is not through dissolving in water. Most anticoagulants are not water soluble. There would be very limited exposure expected in soil residues. Exposure is not through breathing the air. The only significant route of exposure is through ingestion. Ingestion of the anticoagulant is through consumption of the bait itself or primary exposure. Ingestion can also be through consumption of animals intoxicated or killed by the bait or secondary exposure. In some cases, such as brodifacoum, where the toxin accumulates in the liver, exposures to predators and

scavengers continues for a long time. Scavengers and higher level predators have the highest risk of secondary and tertiary exposure. Whales and dolphins are exposed to very high levels of fat soluble substances. Link 8 is to a study of persistent organic pollutants in whales and dolphins in Hawaii. Please note the very high levels of DDT. Other pesticides used in Hawaii listed in the study include mirex for ant control and chlordane, which was used as a prophylactic treatment for ground termites.

DDT, chlordane and mirex uses are now prohibited.

Link 8.

<https://www.sciencedirect.com/science/article/pii/S004896971400583X>

Brodifacoum bait use is increasing due to its use in conservation biology. The basic principles used in eradication programs are found on page 33 of the Midway Atoll National Wildlife Refuge Environmental Assessment:

1. Deliver a highly palatable bait containing a toxic rodenticide into every potential rodent territory.
2. Ensure bait is available in enough quantity and for long enough that every mouse has access to a lethal dose.
3. Time the baiting operation to when the rodent population is most likely to consume the bait.
4. The **short-term risks** and impacts to nontarget wildlife, people, and the environment from disturbance and the rodenticide is minimized wherever possible. The benefits of eradication must outweigh the costs.
5. Biosecurity procedures must be able to sustain the eradication, with effective prevention, detection, and an effective response to any incursion. Source: Howald et al. 2007 cited in Island Conservation (2017).

Every potential rodent territory for rats and mice includes intertidal zones and steep slopes. There are many opportunities for bait pellets get into the ocean, where the pellets have eaten by fish. There is evidence in the Environmental Assessment for Lehua 2017 eradication attempt. Nineteen (19) species of fish were observed to consume bait. See page 163 of link 9.

[Link 9.](#)

https://docs.wixstatic.com/ugd/5f73cf_7bbbf180ef8d4056981e3ef20bb8d98d.pdf

Generally the accumulation of fat soluble substance is by advancing up the food chain. Several trophic levels are skipped with bait applications because as noted above, many species of fish consume the bait, and these baits target higher level trophic levels.

In August of 2012, 50 lagoon species from the Wake Island lagoon were collected and sampled for analysis by a Japanese lab for residuals of brodifacoum after an aerial broadcast of brodifacoum occurred in an effort to eliminate rats from the atoll. 5 of the 50 samples collected tested positive for a "minimum limit of determination" not necessarily a "minimum detection limit". The Air Force closed the Wake Island lagoon to fishing for 3 years after the discovery (Link 10a). This is consistent with the New Zealand caution notes concerning the application of brodifacoum (3 years following the application should elapse before eating animals from treated areas-Link 10b).

[Link 10a.](#)

https://docs.wixstatic.com/ugd/5f73cf_d9629ed7c5a8445394833f1840549ad1.pdf

[Link 10b](#)

<https://www.doc.govt.nz/nature/pests-and-threats/pesticide-summaries/important-and-caution-notes/>

[Link 11.](#)

https://www.fws.gov/uploadedFiles/Region_1/NWRS/Zone_1/Midway_Atoll/Sections/What_We_Do/Resource_Management/Midway_Seabird_EA_Public_Draft.pdf

“Following the rat eradication on Palmyra Atoll, rodenticide residues were detected in all fish samples collected from the lagoon which included mullet fishes (*Moolgarda engeli* and *Liza vaigiensis*) and one puffer fish. Fish were found dead and collected opportunistically for this study (Pitt et al. 2015). Mullet fish contamination ranged from 0.058–1.160 ppm (mean=0.337 ppm) and the single puffer fish (family Tetraodontidae) sample had 0.438 ppm of brodifacoum in homogenized tissue. (Link 11, page 134)

If marine mammals live near Palmyra, they would be at considerable risk of secondary poisoning since all fish samples had rodenticide residues.

Secondary and other degrees of exposure occur when poisoned animals become sluggish or die and are consumed by predators and scavengers. After drops on Hawadax Island in Alaska and Lehua Island (the 2017 project) in Hawaii, collection and burial of animals that perished missed a lot of animals, resulting in secondary hazards and enforcement actions by the State Agencies regulating pesticides. Retrieving intoxicated animals from sea is difficult.

Secondary poisonings in Hawaii following the Lehua eradication attempts in August and September 2017 may have been exacerbated by the customary practice of removing fish entrails while at sea. Testing fish followed the application of anticoagulant to Lehua Island in 2009. Tissues tested were fish fillets and found no residues of anticoagulant (Link 12). (Perhaps whales and seals are expected to fillet their catch). This discussion is from page 134 of the MANWR environmental assessment (link 11) “... results from post-application sampling of the near shore marine environment from 2 eradication projects in Hawai’i... showed no detectable levels of diphacinone in fish, invertebrates, or seawater (Gale et al. 2008; Orazio et al. 2009). However, during the second 2017 Lehua rat eradication effort, fish were caught from shore and gut contents examined for signs of bait material and the pyranine biomarker fluorescence. Bait material and/or the biomarker were observed in some specimens of fish but not others.

https://pubs.usgs.gov/of/2009/1142/pdf/OF2009_1142.pdf

The entrails include the liver that concentrates anticoagulants. On October 13, 2017 there was a mass stranding of pilot whales at Kalapaki Beach, Kauai. This was the only mass stranding in Hawaii event that occurred over the past 10 years, resulted in 5 bloodied pilot whales dying and their pod trying desperately to save their mates. Were anticoagulants the culprit, or was this just the third and worst “unfortunate coincidence” in Hawaii following the application of poisons for conservation use.

Other Considerations

This discussion would not be complete without mentioning that a mouse eradication effort is planned for MANWR this summer. Application to every mouse habitat is planned. Aerial application to shorelines is planned. For eradication purposes, bait stations are systematically placed on a grid pattern in all habitats across the entire island. Once placed, bait crews would arm and check stations regularly and rearm each station over a period of months until bait take by rodents declines to zero. Bait stations were previously and successfully used at MANWR in the 1990s to eradicate *R. rattus*. In that effort, bait stations were spaced at ~164 ft. (50 m) intervals with live traps in between, ensuring that at least 2 stations were found in every potential rat home range. Due to smaller territory size when targeting mice, bait stations would need to be at smaller intervals. (See page 37 of Link 11).

Rats have been a pest of sugarcane in Hawaii. One of the reasons for the National Wildlife Research Center Laboratory in Hilo was to research control technologies for rats. One of the impediments in using bait stations is the labor required to monitor and replenish the bait stations. A researcher from the Hawaii Sugar Planters' Association demonstrated that applying baits in plastic bags (not to sugarcane, but to adjacent non-crop areas) was it was concluded that this test showed the bagged bait to be potentially superior to the bait stations and comparable to an aerial application over a limited area.

Link 12.

<https://digitalcommons.unl.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1045&context=vpc7>

All pesticides must be registered with the U.S. Environmental Protection Agency before they may be distributed for use in the United States. Pesticides are required to have labeling that provide directions for their use. Labeling is the law. Pesticide labeling has been developed to instruct applicators how a pesticide is to be used without causing "adverse effects". Data must support the proposed use.

Before EPA may register a pesticide under the pesticides law, the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA or 7 USC 136), the applicant must show, among other things, that using the pesticide according to specifications "will not generally cause unreasonable adverse effects on the environment."

FIFRA defines the term "unreasonable adverse effects on the environment" to mean: "(1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under section 408 of the Federal Food, Drug, and Cosmetic Act."

From: [Noreen Weeden](#)
To: [Energy@Coastal](#)
Cc: [cmargulis](#); [ggeorge@audubon.org](#); [Barbara Salzman](#); [director@scvas.org](#); [gerry_mcchesney@fws.gov](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Tuesday, July 02, 2019 12:06:01 PM
Attachments: [190702 CCC Farallones Item W14a.pdf](#)

Attached please find Golden Gate Audubon Society's letter in support of Item W 14a CD-0002-19 US Fish and Wildlife Service, San Francisco Southeast Farallon Island Nonnative Mouse Eradication Project.

Please let me know if you cannot open the attachment.

Thank you,

Noreen Weeden

Golden Gate Audubon

510-301-0570 cell phone

nweeden@goldengateaudubon.org

www.goldengateaudubon.org

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Bay Area birds since 1917*

Support
Agenda Item W14a
CD-00020-19
Cynthia Margulis, Executive Director
Golden Gate Audubon Society

July 2, 2019

Via Email

California Coastal Commission
San Luis Obispo, CA 94560
E-mail: EORFC@coastal.ca.gov

Re: Item W 14a CD-0002-19
U.S. Fish and Wildlife Service, San Francisco
Support for Southeast Farallon Island Nonnative Mouse Eradication Project

Dear Commissioners:

I am submitting these comments on behalf of the Golden Gate Audubon Society (GGAS) and our 10,000 members and supporters in the San Francisco Bay Area.

Since 1917 GGAS has been a strong advocate for protecting the Farallon Islands' birds and other wildlife that depend on these islands. We support the U.S. Fish and Wildlife Service (USFWS) mouse eradication project as also recommended by California Coastal Conservancy staff.

This island is critical seabird breeding habitat for 13 species. The USFWS, Point Blue Conservation Society and others have been studying this environmentally sensitive habitat area and are actively working to conserve the Ashy Storm-Petrel on the Southeast Farallon Island (SEFI). The Ashy Storm Petrel is a California Species of Special Concern. Due to the small population and risk from oil spills, climate change and human activities this species should be listed federally as endangered. According to Birds of North America, there are only approximately 8,200 Ashy Storm-Petrels remaining and SEFI is home to approximately 50% of the breeding population. Like many other seabirds, Ashy Storm-Petrels suffer from many impacts, mostly from human activities and byproducts including habitat degradation and ingestion of plastics. Given historical declines and the growing challenges for this species, it is important to protect important breeding and foraging sites for this species.

GGAS is aware that almost 50 alternatives were evaluated to eliminate the invasive house mouse problem and that ongoing trapping and other control methods on SEFI have failed to keep the nonnative rodent population under control. The problems of mice on the island have been documented in the Comprehensive Conservation Plan, scientific studies, and through biologist's reports with years of on island experience. For these reasons the use of rodenticide is the only method that is likely to eradicate the mouse population with fewer impacts.

GOLDEN GATE AUDUBON SOCIETY

2530 San Pablo Avenue, Suite G, Berkeley, California 94702

phone 510.843.2222 web www.goldengateaudubon.org email ggas@goldengateaudubon.org

printed on 100% post-consumer waste paper

On June 10, 2011 GGAS documented our concerns on the potential impacts of casting poison on SEFI. The proposition of distributing rat poison across the island understandably caused people to question this project. While this may seem like an extreme and risky solution, GGAS reviewed available information and conferred with biologists knowledgeable about the Farallones and the proposed project. Based on the information available, GGAS defers to the expertise of the biologists at the USFWS and Point Blue who have spent decades studying and protecting the wildlife and ecology of SEFI. We do not believe that either entity would endorse this remedy if it were not necessary. There have been recent successful island rodent eradication projects including one on Anacapa Island, part of the Channel Islands.

As a Species of Special Concern, the Burrowing Owl deserves special consideration as part of this project. We asked that the USFWS clearly identify expected impacts to the owls and discuss alternatives (i.e., trans-locating individuals). GGAS recommended that the USFWS study the feasibility of capturing or hazing raptors and other birds that are likely to be affected by the poison (or poisoned mice) to reduce the risk of unwanted exposures. Both of these recommendations have been addressed.

Last, we recommended that the USFWS improve its communications with the public to cover the need, alternatives and risks of the proposed SFEI project. The website (<http://www.restorethefarallones.org>) has been updated, to addressing the public's concerns. We appreciate that the USFWS and Point Blue have acted upon the previously submitted recommendations.

Golden Gate Audubon supports this recommended house mouse eradication project for the future of the Ashy Storm Petrel the seabirds and other wildlife that depend on the Farallon Islands. If you have any questions about these comments or any other matter, please do not hesitate to contact me at (510) 843-2222 or cmargulis@goldengateaudubon.org

Sincerely,



Cynthia Margulis
Executive Director

Cc: Zachary Warnow, Point Blue Conservation Science
Gerry McChesney USFWS Farallon National Wildlife Refuge sfbaynwrc@fws.gov
Garry George, Audubon California
Barbara Salzman, Marin Audubon Society
Matthew Dodder, Santa Clara Valley Audubon Society

From: [T.May](#)
To: Energy@Coastal
Subject: Against poison pills
Date: Tuesday, July 02, 2019 12:31:21 PM

I disagree with the idea of tossing poison pills on an island, because of the danger of unintended consequences.

Tina
May
Santa Cruz, CA

From: [Nancy Acito-Larson](#)
To: Energy@Coastal
Subject: Rodenticide Dumping
Date: Tuesday, July 02, 2019 12:32:06 PM

Please **STOP** the dumping of rodenticides in the Farallon Islands. It's ecologically unsafe!

From: [Debbie Lawson](#)
To: Energy@Coastal
Subject: Rejecting item W14a
Date: Tuesday, July 02, 2019 12:52:25 PM

Dear Commissioner -

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. This indiscriminate dump will work its way up the food chain to non-target species and marine mammals. I'm sure you are aware that the California EPA has banned the sale of rodenticides containing brodifacoum to consumers because of its toxicity and the dangers to non-target wildlife.

If a mouse control approach is necessary- non-toxic and responsible approaches must be used. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

The document "Rat Island Rat Eradication Project: A Critical Evaluation of Nontarget Mortality" ([click to read the PDF](#)) outlines the unintended consequences of this type of eradication project. Quoting from the document:

"Some nontarget mortality was expected, but the actual mortality exceeded the predicted mortality. Forty six Bald Eagles died (exceeding the known population of 22 Bald Eagles on the island); toxicological analysis revealed lethal levels of brodifacoum in 12 of the sixteen carcasses tested."

As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you for your review.

Debbie Lawson
10 Thomas Ct
San Rafael CA 94901
415.725.4350

From: [Jero Books & Templet Co.](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 1:03:11 PM

Dear Commissioner:

Please do NOT let the so-called "US Fish and Wildlife Service," murder more Wildlife. They are supposed to be protecting our Countries wildlife and truthfully they believe their job is to Kill everything. Look at their record. How many millions of animals do they kill every years at the behest of ranchers, big ag etc... who is on Who's payroll??

There is NO real reason to dump this poison on the Farallones which as we know is a Sancturary! **THIS poison DOES NOT JUST KILL MICE!!**

" (Ashy Storm Petrel, a species of special concern in California, centers around a small population of 6 - 8 Burrowing Owls that access the islands from the mainland to take advantage of the large number of mice available.)"

Those little owls will Die if this Poison is released!!

California senate is now considering Bill AB1788 banning Super-Toxic Rodenticides.

"Rodenticides are poisoning California's native wildlife. Rats who consume these poisons are in turn consumed by other wildlife, resulting in secondary poisoning and contamination of the food chain. The bill bans super-toxic second generation anticoagulant rodenticides (SGARs) except for agricultural use or by special permit. AB 1788 also prohibits less potent, but still dangerous, first generation anticoagulant rodenticides (FGARs) on State-Owned Lands."

Please, Please stop the "US Fish and Wildlife Service," from murdering more Wildlife.

I agree with the statements below:

"I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-

chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters."

Thank you very much.

Mary Rojeski

2603 3rd st.

Santa Monica, CA 90405

From: [crueljustice](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 1:03:25 PM

Dear Commissioner:

Animals will die from consuming the highly toxic and long-lasting poison pellets, from feeding on sick and dying poisoned victims, and from this toxic pesticide's integration into the entire island ecosystem. Isn't it your job to protect wildlife?

A. Tennant

From: [Diane Lynch](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 1:20:18 PM

Dear Commissioners:

I'm on your mailing list and received a letter about the proposed poison drop on the Farallones. However, nothing was said about how much rodenticide would be dispersed but another source puts it at 2917 pounds of Brodifacoum-25D Conservation rodenticide pellets. You certainly know that this is non-specific and that the murre population in particular continues to suffer. This application will have a negative outcome for them, along with other sensitive species out there, such as all birdlife.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters. I'm opposed to the use of rodenticides because this application will have a negative effect on the bird population out there.

Thank you very much for your consideration on this very sensitive matter.

Diane Lynch
171 Solano St.
Tiburon, CA.

From: [Christina Bradley](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 1:40:38 PM

Dear Commissioner:

As a resident of northern California I am APPALLED at the idiocy of the the U. S. Fish and Wildlife Service's plan to "drop the poison and see what happens" approach. It seems to me that there has to be far more sensible, ecologically responsible and well-thought-out solutions to the situation. Introducing poison at the volumes proposed with pass that poison up the food chain, leading to the death of animals Illlwho are not mice. And let's remember it was HUMAN BEINGS who brought this pestilence to the Greater Farallones in the first place.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Christina Bradley
25 Oak Knoll Avenue
San Anselmo, CA 94960

From: [dana.p](#)
To: Energy@Coastal
Subject: Please reject W14a CD-0002-19
Date: Tuesday, July 02, 2019 2:46:53 PM

Dear Commissioner:

Please reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

Dumping rodent poison is not environmentally sound. I'm sure there's a better way. Here, people use snap traps enclosed in a box designed to disperse poison, or they set owl boxes. Skunks, owls, coyotes and foxes in my yard eat small rodents, but poison would kill them too and cause the mouse and rat population to rebound. W14a will have a net opposite effect from the one intended. Please choose a more appropriate method.

An example of another method would be owl boxes, or Marin ferrets deploys neutered/spayed feral cats to control rodents - homeowners keep them in a cage for 2 weeks then feed them a small amount once daily with a camera to make sure who is coming to eat. Wildcare in San Rafael may have another method to suggest. Please make sure people who are entrusted with the care of wildlife sanctuaries are doing the job they're being paid for and not some other job. Thank you.

And from wildcare:

"As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters."

Thank you,
Sincerely yours,

Dana Phillips
PO Box 150897
San Rafael, CA 94915

From: [john law](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 3:28:40 PM

Dear Commissioner:

As someone who lived in California for the majority of my life and also taught Environmental Science for 35 years (a former CA state teacher of the year) I know the terrible, and many times unforeseeable, effects of pesticides added to an ecosystem and its food chain. It is always damaging and often disastrous to the animals that survive there. That damage lasts for decades and sometimes causes permanent extinctions of endemic species.

I implore you to consider viable alternatives of live trapping for safe removal those organisms that have overpopulated or have a deleterious effect.

Please choose the wise choice of rejecting the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

John Lawrence
88491 Trout pond Lane
Bandon, Oregon
97411
909-935-9899

From: [Ginger Mason](#)
To: Energy@Coastal
Subject: concern letter regarding Farallon Islands
Date: Tuesday, July 02, 2019 3:40:47 PM
Attachments: [Coast Commission 6-2-19.docx](#)

--Please see the attached letter of concern regarding the proposed dumping of poison in the sanctuary waters.

Thank you,
Ginger Souders-Mason
Board President

Pesticide Free Zone
Po Box 824
Kentfield, CA 94914-0824
www.pesticidefreezone.org
4pesticidefreezones@gmail.com
415-459-1391 or 888-590-3993

Pesticide Free Zone
P.O. Box 824
Kentfield, CA 94914

415-459-1391 888-590-3993

www.pesticidefreezone.org



July 2, 2019

California Coastal Commission
Energy, Ocean Resources and Federal Consistency Division
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
EORFC@coastal.ca.gov

RE: USFW proposal to poison mice on Farallon Islands

Dear Commissioners:

We are writing to protest the very idea of the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service's poison dispersal plan. You are very aware that this proposal targets the middle of a treasured State Marine Reserve. This area is also in the midst of our longstanding National Marine Sanctuary, within whose waters such activities are expressly precluded. **Sanctuary regulations ban pollutants** that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

*A similar poison drop proposal was abandoned by the Obama Administration in 2013 as being **too risky** to our National Marine Sanctuary and **an unacceptable threat** to adjacent fragile coastal ecosystems, while also posing unnecessary danger to non-target species. This proposal has not eliminated those risks. In fact, by using second generation anti-coagulants, sublethal impacts can affect generations of non-targeted species.*

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves the more precautionary approach.

As an organization devoted to a safer environment for all creatures, we must ask that you deny the requested consistency finding for item W14a. To do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much for taking our comments.

Ginger Souders-Mason,
Board President

From: [Joanie Crombie](#)
To: Energy@Coastal
Subject: agenda item, number W14a.
Date: Tuesday, July 02, 2019 4:22:28 PM

PLEASE DO NOT POSON DROP OVER THE FARALLONES SANCTUARY.

There are so many more non toxic solutioins to ridding the islands of mice, that have been there for the last 170 years.

To drop poison is the LAST solution. You could introduce traps, cats, other predators, anything but poson.

PLEASE!

Joanie Crombie, Volunteer
West Coast Songwriters
(650) 654-3966 office (650) 400-3542
1724 Laurel Street, Suite #120,
San Carlos CA 94070
<http://www.westcoastsongwriters.org>



West Coast Songwriters 39th Annual Music Conference - September 2019

From: [Barb and/or Lynn](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 4:54:49 PM

Dear Commissioner:

I am requesting that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

Dumping 2,917 pounds of toxic rodenticide pellets across a sensitive and fragile Farallon Island will catastrophically affect non-target endemic species and will wreak havoc on the very environment you are obligated to protect and enhance: "California's coast and ocean for present and future generations."

The Wildlife Service should find a more precautionary targeted and environmentally benign single-species approach at the Farallones.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Lynn Gigy
P. O. Box 982, Pt. Reyes Station, CA 94956

From: [David Morris](#)
To: Energy@Coastal
Cc: [father Morris](#); [Annie Ahern](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Tuesday, July 02, 2019 4:59:10 PM

Dear Commission Members

I am writing to you as a concerned California resident, mariner, and scientist. I am writing in strong support of the proposal to eliminate the non-native house mouse from the Farallon Islands. Having just returned from the Galapagos Islands, I can personally attest to the major beneficial impact that naturalists are seeing from the elimination of non-native rodent species which had decimated several of those islands. As a key part of the SF Bay/Monterey Bay and broader CA marine ecosystem, the preservation of the integrity of the Farallons is just as critical.

Key points to note are:

1. The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ash storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.
2. The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly.
3. At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.

4. The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.

5. Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

6. The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

As stewards of one of the most important and iconic coastlines in the world, please act to return the Farallons to their natural state. Thank you for your service to people and wildlife of California.

Sincerely yours,

David Morris, MD

From: [Larry Bragman](#)
To: Energy@Coastal
Subject: CD-0002-19 (Agenda item: W14a)
Date: Tuesday, July 02, 2019 6:07:53 PM
Attachments: [MMWD POISON DROP LB.pdf](#)

Please see attached comment letter from Larry Bragman, President of the Marin Municipal Water District Board of Directors.

Thank you.

Larry Bragman

--

Law Office of Lawrence Bragman
912 Lootens Place, Second Floor
San Rafael, CA 94901
(415) 459-6060
(415) 459-6067 (Fax)

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LAWRENCE BRAGMAN
ATTORNEY AT LAW
912 LOOTENS PLACE • SECOND FLOOR
SAN RAFAEL, CALIFORNIA 94901-3110
(415) 459-6060 FAX: (415) 459-6067

July 2, 2019

California Coastal Commission
Attn: Mr. Larry Simone c/o All Commissioners
Energy Ocean Resources and Federal Consistency Division
45 Fremont Street, Ste. 2000
San Francisco, 94105-2219

BY MAIL AND EMAIL TO: EORFC@coastal.ca.gov

RE: CD-0002-19 (Agenda item: W14a)

Dear Commissioners

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

The Marin Municipal Water District has long been implementing a comprehensive stewardship effort to enhance the habitat of Lagunitas Creek and Walker Creek for the restoration of endangered native species including steelhead and coho salmon.

Both Lagunitas Creek and Walker Creek empty into Tomales Bay which is protected by the Greater Farallones National Marine Sanctuary. Both the Greater Farallones and Cordell Bank Sanctuaries provide habitat and refuge essential for the survival of the protected coho salmon and steelhead trout that spawn in both Lagunitas Creek and Walker Creek.

The Marin Municipal Water District is in the process of completing a vegetation management plan for the 21,000 acre Mt. Tamalpais watershed which will exclude the use of toxic herbicides. It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem.

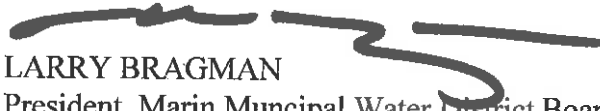
Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more

Letter to California Coastal Commission
Re: CD-0002-19 (Agenda item: W14a)
Page: 2

precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters which adjoin the local creeks in which the dwindling native steelhead and coho salmon species spawn and find refuge. Extinction is forever. Thank you for your time and consideration.

Respectfully yours,



LARRY BRAGMAN

President, Marin Municipal Water District Board of Directors

Disclaimer: The views and opinions expressed in this letter are those of the author and do not represent the Marin Municipal Water District or its Board of Directors

From: [A. Cone](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Tuesday, July 02, 2019 6:18:52 PM

Dear Commissioner:

Please reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. It's a lamebrain idea; the negative repercussions will ripple endlessly in untold ways. Because the unknown is greater than the known, it's simple folly to think the situation on the Farallones can be controlled by unleashing poison with dangerous and deadly effects that will spread far and wide.

The Farallones are too precious of an ecosystem to risk wreaking havoc and killing untargeted wildlife. I certainly applaud the intention of protecting the ashy storm petrel, but a better solution must be applied. F&W needs to find a solution that will not be the equivalent of using a nuclear weapon to wipe out crabgrass.

I urge you to take action that rejects this W14a foolishness and to maintain appropriate stewardship of critically-important coastal marine habitats such as the Farallones.

Thank you for your attention to this urgent matter.

Arlette Cohen
33 Heritage Drive
San Rafael, CA 94901

From: [Mark Rauzon](#)
To: Energy@Coastal
Subject: Farallon Mice Eradication YES
Date: Tuesday, July 02, 2019 7:05:55 PM

To Whom It May Concern:

This letter concerns the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California. I support the eradication of invasive house mice from the South Farallon Islands by aerial broadcast of rodent bait containing Brodifacoum-25D Conservation as the primary method of bait delivery.

The second-generation anticoagulant brodifacoum has successfully been used to eliminate alien rodents for more than 30 years. This best practices technique for scattering poisoned bait from a helicopter was developed by New Zealand conservationists and was first successfully employed in the United States in 2002 in a project that eradicated rats on Anacapa Island in the Channel Islands National Park.

Removing invasive rodents and restoring habitats so that seabirds and other native wildlife and plants can thrive is fundamental to the mission of the National Wildlife Refuge System. The Farallon National Wildlife Refuge comprises the largest seabird breeding colony in the contiguous United States, and eradicating house mice from the South Farallon Islands would eliminate the last remaining invasive vertebrate species on the refuge. The benefits that should result for the Ashy Storm-Petrel (*Oceanodroma homochroa*) is vital to its survival as well as the Leach's Storm-Petrel (*Oceanodroma leucorhoa*), and other rare native species, including an endemic salamander and cricket, and the ecosystem more broadly. One of the benefits of aerial bait dispersal is that it requires fewer applications and less helicopter flying time, which is so disruptive to seabirds.

There are risks in the application of brodifacoum or other poisons in terms of incidental short-term mortality and other unintended consequences, but I also firmly accept the premise that long-term benefits will accrue and that such actions are critical to enhancing resilience of the South Farallon Islands ecosystem in a changing marine environment, as has been proven around the world, time and again. The Ashy Storm-Petrel is among the rarest storm-petrels in the world, and, if successfully implemented, this project should result in a significant boost for this species that is a candidate for listing.

In conclusion, I supports this cutting edge conservation measure because the proposed techniques and rodenticide are proven and significant long-term benefits will accrue to the Ashy Storm-Petrels, as well as to the South Farallon Islands ecosystem. I am confident that the Service and its cooperators have the expertise, as well as commitment to safety and environmental protection, necessary for a successful project. Please allow this effort to go forward.

Thank you.

Sincerely,

Mark J. Rauzon
Seabird Biologist

Marine Endeavors
4701 Edgewood Ave.
Oakland, CA 94602

From: [Kristin Cronin](#)
To: Energy@Coastal
Subject: No toxic chemicals on Farallon Islands!
Date: Tuesday, July 02, 2019 7:21:05 PM

Please please don't dump thousands of pounds of chemicals on the Farallones to get ride of non native mice.

There has to be another way to deal with the problem.

The world needs less harmful chemicals and more creative solutions.

Please reconsider this tactic.

Thank you

Kristin Cronin
32 Gregory Dr
Fairfax, Ca 94930

Sent from my iPhone

From: [Eddie Bartley](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD - 0002 - 19
Date: Tuesday, July 02, 2019 8:10:20 PM
Attachments: [FIF support CCC Item 14a CD - 0002 - 19 USFWS.pdf](#)

Agenda Item: W14a
Consistency Determination No.: CD-0002-19
Eddie Bartley, President
Farallon Islands Foundation
IN FAVOR OF PROJECT

Dear California Coastal Commissioners,

Thank you for allowing public comment pertaining to the USFWS plan for eradicating non-native House Mice from South Farallon Islands. The Farallon Island Foundation is highly supportive of this project. We agree with your staff recommendation of concurrence that this project should move forward.

As you are well aware, humans, primarily those visiting from the ports of San Francisco, wreaked environmental havoc on the Farallon Islands from the 1850's through the early 1970's through hunting, fishing, collection, accidentally and purposefully introducing non-native species (including predators); and by dumping of waste petroleum, chemicals and even radioactive materials. Fortunately, our government slowly began to realize the ecological value of this most unique feature and started protecting it – at great effort and expense. Today while the island is doing much better, it is still suffering from introduced House Mice who predate on sensitive and endemic species - impacts have been well documented by researchers for decades. Based on the FEIS Statement posted in March 2019 we are satisfied that USFWS is working with best available scientific techniques for a successful outcome of this project.

Farallon Islands Foundation is proud to have supported highly successful invasive species removal on South Georgia and Henderson Island. Sensitive native species, especially birds, have subsequently flourished on those islands.

If nothing is done, House Mice will continue to predate on our vulnerable seabirds and other unique species like the island's endemic salamander and cricket. It's a horrible, slow death for birds and other wildlife as you have no doubt seen on many related documentary videos.

Thank you for your consideration and your efforts to minimize negative impacts by humans on our wildlife and ecosystems. We believe that the short term expenses of this project are

well worth the very likely positive outcomes and are hopeful that this USFWS project will move forward as quickly as feasible. The board of the Farallon Islands Foundation plans to support this project in the future and we hope that your commission will permit the project to proceed.

Eddie Bartley

President, Farallon Islands Foundation

<http://farallonislandsfoundation.org/>

Farallon Islands Foundation

1298 Grizzly Peak Blvd
Berkeley, CA 94708

farallonislandsfoundation.org

Agenda Item: W14a

Consistency Determination No.: CD-0002-19

Eddie Bartley, President

Farallon Islands Foundation

IN FAVOR OF PROJECT

Dear California Coastal Commissioners,

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Thank you for your consideration and your efforts to minimize negative impacts by humans on our wildlife and ecosystems. We believe that the short term expenses of this project are well worth the very likely positive outcomes and are hopeful that this USFWS project will move forward as quickly as feasible. The board of the Farallon Islands Foundation plans to support this project in the future and we hope that your commission will permit the project to proceed.

Eddie Bartley
President, Farallon Islands Foundation
<http://farallonislandsfoundation.org/>

From: [Adina Beaumont](#)
To: Energy@Coastal
Subject: Farallon Island spraying. CD-0002-19
Date: Tuesday, July 02, 2019 9:09:24 PM

Dear Commissioner:

I sincerely hope that you will not allow the pending request for the poisonous spraying plan that has been suggested for the Farallon Islands. For you to give permission for these toxic chemicals to be dumped on the Farallon Island would be a grave travesty. We need to protect all forms of natural life on the islands and the surrounding waters.

PLEASE VETO this bill and do the honorable action of making sure the Farallon Islands are protected against any pollutant spraying, now and in the future.

I trust that you will act responsibly and ethically and BAN any spraying.

With thanks,
Adina Beaumont
Address:
10 Elford Street,
San Rafael,
Ca. 94901

From: [DEBRA SHEARWATER](#)
To: Energy@Coastal
Subject: MICE ERADICATION FARALLON: YES, PLEASE
Date: Tuesday, July 02, 2019 9:58:47 PM

To Whom It May Concern:

This letter concerns the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California. I support the eradication of invasive house mice from the South Farallon Islands by aerial broadcast of rodent bait containing Brodifacoum-25D Conservation as the primary method of bait delivery.

The second-generation anticoagulant brodifacoum has successfully been used to eliminate alien rodents for more than 30 years. This best practices technique for scattering poisoned bait from a helicopter was developed by New Zealand conservationists and was first successfully employed in the United States in 2002 in a project that eradicated rats on Anacapa Island in the Channel Islands National Park.

Removing invasive rodents and restoring habitats so that seabirds and other native wildlife and plants can thrive is fundamental to the mission of the National Wildlife Refuge System. The Farallon National Wildlife Refuge comprises the largest seabird breeding colony in the contiguous United States, and eradicating house mice from the South Farallon Islands would eliminate the last remaining invasive vertebrate species on the refuge. The benefits that should result for the Ashy Storm-Petrel (*Oceanodroma homochroa*) is vital to its survival as well as the Leach's Storm-Petrel (*Oceanodroma leucorhoa*), and other rare native species, including an endemic salamander and cricket, and the ecosystem more broadly. One of the benefits of aerial bait dispersal is that it requires fewer applications and less helicopter flying time, which is so disruptive to seabirds.

There are risks in the application of brodifacoum or other poisons in terms of incidental short-term mortality and other unintended consequences, but I also firmly accept the premise that long-term benefits will accrue and that such actions are critical to enhancing resilience of the South Farallon Islands ecosystem in a changing marine environment, as has been proven around the world, time and again. The Ashy Storm-Petrel is among the rarest storm-petrels in the world, and, if successfully implemented, this project should result in a significant boost for this species that is a candidate for listing.

In conclusion, I supports this cutting edge conservation measure because the proposed techniques and rodenticide are proven and significant long-term benefits will accrue to the Ashy Storm-Petrels, as well as to the South Farallon Islands ecosystem. I am confident that the Service and its cooperators have the expertise, as well as commitment to safety and environmental protection, necessary for a successful project. Please allow this effort to go forward.

Thank you.

Sincerely,
DEBRA SHEARWATER

DEBRA SHEARWATER

Shearwater Journeys, Inc.
PO Box 190
Hollister, CA 95024
831.637.8527
debi@shearwaterjourneys.com
www.shearwaterjourneys.com
www.shearwaterjourneys.blogspot.com

Celebrating 44 Years of Seabirding with Shearwater Journeys
Siberia's Forgotten Coast & Spoon-billed Sandpiper- 23 June - 6 July 2020
Northeast Passage: Northern Sea Route 27 July - 22 August 2020

From: [Paula Morgan](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, July 03, 2019 3:50:29 AM

Dear Commissioner:

Our society has not taken responsibility for our own waste. There is not a good or even half way decent way to rid ourselves of toxins. Companies make money off these toxins and yet expect to dump the waste just about anywhere except their own back yards. No toxins should be dumped anywhere. Corporations making such chemicals need to think of a safe way to rid the earth of these toxins. Spreading them on a pristine place is not a reasonable way to dispose of these poisons.

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Name
Address

From: [abay2315](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, July 03, 2019 7:10:41 AM

Dear Commissioner:

It is urgent that you refuse the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. Have we learned nothing since Rachael Carson wrote The Silent Spring?

This plan if carried out adds one more ill considered response to the ecological problems we have caused as a species. How many times have we launched a "this will do no harm" solution only to find the research was incomplete, the web of life more fragile and interdependent than we realized?

There are other ways to address this problem, more subtle, more scientifically sound, and safer for the Farralons and beyond.

Please consider your own legacy.

Sincerely

Bethanie Gilbert

San Rafael, California

Sent from my Verizon, Samsung Galaxy smartphone

From: dainley@penguinscience.com
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD - 0002 - 19
Date: Wednesday, July 03, 2019 10:53:13 AM

California Coastal Commission

EORFC@coastal.ca.gov

2 July 2019

RE: Continued restoration of the Farallon Island Ecosystem by removal of introduced House Mice, July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

To Whom It May Concern:

I write in support of procedures to remove house mice from the Farallon Islands, an action in accord with the restoration procedures that I (and T. James Lewis) instituted as Point Reyes Bird Observatory biologists in 1971. Neither of us remain as PRBO staff. The Farallones are unmatched in seabird species diversity and population size along the US and Mexican West Coast, an area in which islands are relatively sparse owing to subduction of the Pacific Plate beneath the North American Plate. These islands, then, are treasures, and seabirds need them to be predator free in order for the birds to persist.

When we arrived on the island in January 1971, the island was strewn with refuse from 100 years of use by the Lighthouse Service, US Coast Guard, commercial eggling companies and the like. Seabird and marine mammal populations (pinnipeds) were near their historic lows. We began, step by step, to restore the island and its natural residents. This action is detailed in the article that recently appeared in *Bay Nature*: <https://baynature.org/2019/06/14/how-people-saved-the-seabirds-of-the-california-current/>, and as detailed subsequently has involved many people and agencies, public and private. In our part, we quietly removed cats and introduced European hares, as well as curtailed the movements of island personnel (including biologists) to specific areas where humans would not affect seabirds or marine mammals. The results were extraordinary including the re-establishment of two seabirds and fur seal species absent since the 1800s. With removal of rabbits came an explosion in little known plant life. In turn, that profusion probably benefitted house mice, with more seeds on which to dine. House mice had been inadvertently introduced to the island in the 1800s. Restoration of the Farallones continues to the present day, with attempts to control weeds and remove extensive stretches of concrete to provide more nesting habitat, among other activities.

In our studies (see, for a start: D.G. Ainley & R. J. Boekelheide (Eds.). 1990. *Seabirds of the Farallon Islands: Ecology, Structure and Dynamics of an Upwelling System Community*. Stanford University Press, Palo Alto. 425 pp.), we documented the chewing off of the feet

of burrow-dwelling chicks by the mice. Perhaps not surprising, as once the plant life dies back seasonally, there is little else for mice, and once-upon-a-time rabbits, to eat. They become predators and even cannibals when the seasonal vegetation disappears. Subsequently, it has been shown that the seasonal high abundance of mice attracts dispersing owls, who arrive in the fall, to remain on the island far longer into the spring than they would otherwise (see, too: D.G. Ainley & D. F. DeSante. 1980. The Avifauna of the Farallon Islands, California. Studies in Avian Biology, No. 4. Cooper Ornith. Soc. 104 pp.). Before deciding to leave, the owls prey on storm-petrels, including the California Current endemic, the Ashy Storm-Petrel, as well as an important population of Leach's Storm-Petrel. The latter two species depend on the very few California offshore islands for breeding; they do not nest to any appreciable degree on coastal headlands in part owing to their defenselessness when confronted by alien, mammal predators.

Removing the mice will allow the Farallon Islands to fully recover from direct anthropogenic influence dating back to the 1800s, if not before. The technique proposed for mouse eradication, and to be managed by the U.S. Fish & Wildlife Service, has been successfully applied to hundreds of islands previously, including many that are much larger than the South Farallones, such as Anacapa in the Channel Islands National Park and three USFWS wildlife refuges in the Pacific. The response of resident, native fauna, including seabirds, has fully met expectations in all of these and other cases. I am looking forward to the Farallon mouse eradication project going forward. The islands and their endemic inhabitants are too much an ecological treasure for this issue to not be rectified.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'D. Ainley', with a stylized flourish at the end.

David G. Ainley
Marine Ecologist
105 Headlands Court
Sausalito CA 94965
dainley@penguinscience.com

From: [lawrence.gelb](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 11:37:43 AM

I strongly support the elimination of the house mouse on the Farallons. They are the only non-native animal on the islands. They are a scourge there.

Larry Gelb
15 Seafirth Place
Tiburon, CA 94920

From: [Teetle Clawson](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 11:57:40 AM

Please vote in favor of eradicating the non-native and invasive house mice from the Farralon Islands. The science is clear that the method proposed to eradicate the mouse has proven effective in more than 60 islands worldwide, including the Galapagos Islands. The fragile ecosystem of the island will have a chance to fully recover and become the world-wide important bird sanctuary it is meant to be.

Thanks for you your consideration of this matter,
Teetle Clawson

From: [Zachary Warnow](#)
To: Energy@Coastal
Cc: [Jaime Jahncke](#); [Pete Warzybok](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:02:58 PM
Attachments: [Point Blue CCC Public Comment Letter July3 2019.pdf](#)

Dear California Coastal Commission—

On behalf of Point Blue Conservation Science, please see the attached letter indicating our strong support for the US Fish and Wildlife Service’s proposed project to eradicate invasive house mice from the Farallon Islands.

Please don’t hesitate to contact us with any further questions you might have.

Sincerely,
--Zachary Warnow

Zachary Warnow (he/his), *Director of Communications*
Point Blue Conservation Science
3820 Cypress Drive, Suite 11, Petaluma, CA 94954
Desk: 707-781-2555 ext. 396
Mobile: 415-786-5285
pointblue.org | Follow Point Blue on [Instagram](#), [Twitter](#), and [Facebook](#)!

Point Blue—*Conservation science for a healthy planet.*



3820 Cypress Drive #11, Petaluma, CA 94954
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Support
Agenda Item W14a CD-00020-19
Point Blue Conservation Science
3820 Cypress Ave., #11
Petaluma, CA 94954

California Coastal Commission
San Luis Obispo, CA 94560
E-mail: EORFC@coastal.ca.gov

Re: Item W 14a CD-0002-19
U.S. Fish and Wildlife Service, San Francisco
Support for Southeast Farallon Island Nonnative Mouse Eradication Project

Dear Commissioners:

Fifty years ago, biologists from Point Blue Conservation Science (known then as Point Reyes Bird Observatory) landed on the Farallon Islands for the first time. Ever since then, scientists from Point Blue, a Bay Area non-profit organization focused on applied conservation science, have maintained a continuous presence on the islands: 24 hours a day, 365 days a year. Our mission is to advance the conservation of birds, other wildlife, and ecosystems through science, partnerships, and outreach. Our role on the islands is simple: we use our expertise in biology, ecology, and conservation to provide rigorous science to the US Fish and Wildlife Service (USFWS), helping them make decisions that will ensure a healthy ecosystem on the islands for generations to come.

Right now, the USFWS is considering an important decision and a significant opportunity for ecological restoration: the eradication of the invasive house mouse from the Farallon Islands. We at Point Blue would like to voice our strong support for this project.

Located just 27 miles from San Francisco, the rugged islands of the Farallon National Wildlife Refuge are a unique wildlife haven in need of ongoing restoration, protection, and management. Referred to by some as "California's Galapagos," the Farallones host the largest seabird breeding colony in the continental United States and 25% percent of



California's breeding seabirds (more than 300,000 individuals of 13 species). Before human-caused disturbances, more than one million seabirds bred in the Farallones. We commend the USFWS's 40-year efforts to restore the Farallones by removing invasive plants and animals. Introduced, invasive cats and rabbits were removed with positive ecological responses.

Today, the invasive house mouse is the last non-native, invasive vertebrate remaining on the Farallones. Introduced by sailing vessels, likely in the 19th century, these mice exist on the islands in plague-like levels--at times reaching as many 1,270 mice per hectare, one of the highest observed densities in the world. The presence of invasive house mice has been demonstrated to have severe and ecosystem-altering effects on island ecosystems throughout the world. These threats include direct and indirect predation on native species, competition with native species for food resources, facilitating the spread of non-native vegetation, and damage to habitat character. On the Farallones, Ashy Storm-petrels, other seabirds, burrowing owls, Farallon arboreal salamanders, Farallon camel crickets, and the islands' vegetation are all negatively impacted by the presence of mice. Threats to the rare and threatened Ashy Storm-petrel's declining population are of particular concern. The petrel is listed as: "Endangered" by the International Union for the Conservation of Nature's [Red List of Threatened Species](#); a "Species of Management Concern" by the USFWS; and "Species of Special Concern" by the CA Department of Fish and Wildlife.

About fifty percent of the world's Ashy Storm-petrel population breeds on the Farallon Islands. Unfortunately, the presence of the introduced, invasive House Mice threatens this globally significant storm-petrel colony by sustaining an unnatural wintering population of predatory Burrowing Owls. The Burrowing Owl is a natural, but temporary vagrant visitor to the islands that is induced to remain on the island throughout the winter due to the high density of mice during the fall season instead of continuing its normal migration. When the mouse population crashes each winter, the owls, which are already settled in for the winter, switch to preying on storm-petrels, resulting in the deaths of hundreds of petrels each winter (see Appendix M of the FEIS and also Nur et al. 2019, currently in press with a summary included below). Ashy Storm-petrels on the Farallones declined by 40% from 1972-1992, and their population has not yet recovered. Studies clearly demonstrate that owls predation, facilitated through the presence of the mice, negatively impact storm-petrel survival and are contributing to continuing population decline.

Thirteen years ago, the USFWS began a thorough review of available options to remove mice from the island. This spring, the Service published one of the most thorough and scientifically rigorous Environmental Impact Statements on record, extensively referencing original, peer-reviewed science by Point Blue. The final product represents over a decade of careful study, with a final report of 322 pages supported by an appendix 577 pages long.



Before publishing the final EIS document, USFWS reviewed each of the 553 public comments that were made on the draft EIS and addressed all substantive comments in its final report.

The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly. Although the service reviewed 49 potential mouse removal methods in its EIS, there is only one known method that has proven effective for island eradications, and that is the “preferred alternative” identified by the Service: an aerial broadcast of the rodenticide Brodifacoum.

Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California’s Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. House mice specifically have been successfully eradicated from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like those proposed for the South Farallon Islands house mouse eradication.

Wildlife managers face difficult decisions on a regular basis on how to manage sensitive areas for optimum ecosystem health. They must weigh the long-term benefits of ecosystem restoration with any potential short-term, temporary, adverse impacts of the management action. As the organization that has been primarily responsible for monitoring and providing stewardship to the Farallones for the last 50 years, Point Blue is acutely aware of the risks this project entails as well as the large ecosystem benefits it will provide. Based on our fifty years of experience studying birds and other wildlife on the islands, and the results of the extensive research done in preparation for this project, we strongly believe that this is the correct and necessary course of action to restore the islands and provide island wildlife with the resilience to adapt to future threats. We have extensively reviewed and support the conclusions of the Service’s EIS. They have identified a suite of precautionary actions they will pursue if the project is implemented to ensure that any exposure to the rodenticide by other species is kept to an absolute minimum.

The Farallon Islands are a world-famous local treasure. The Service has a unique opportunity in this moment to take a giant step forward in restoring the island’s fragile ecosystem and protecting the many species that rely on it. The time to act is now. Delaying the removal of mice presents a very real risk to island populations, and may deny petrels and other island wildlife the resilience necessary to adapt to future climate impacts or stochastic events (e.g. large oil spill). We applaud the Service for their careful, transparent process



and their commitment to science-based decision making and strongly encourage the California Coastal Commission to approve the consistency determination.

For reference, please see the following summaries of original Point Blue science that has been done to help inform this process:

- "Projecting impacts of mortality events on a Western Gull population"
- "Non-lethal hazing can protect gulls from exposure to rodenticide"
- "Removing invasive mice will benefit storm-petrels through reduced owl predation"

Signed,

Dr. Jaime Jahncke

California Current Group Director, Point Blue Conservation Science

Pete Warzybok

Farallon Islands Program Lead, Point Blue Conservation Science

Projecting impacts of mortality events on a Western Gull population

Nadav Nur
nnur@pointblue.org

We present a case-study of the potential impacts of a one-time mortality event on Western gulls (*Larus occidentalis*), potentially resulting from exposure to rodenticide directed at eradicating house mice at the Farallon Islands National Wildlife Refuge.

Using Point Blue's long-term datasets, we conducted a population viability analysis (PVA) to model future population trends while specifically accounting for stochastic variation in demographic parameters driven by environmental conditions.

We first modeled population trends under three environmental scenarios defined by the probability of future breeding failure: "optimistic" (no failure), "realistic" (long-term average failure rate), and "pessimistic" (increased frequency as in recent years).

Assuming no additional mortality, under "optimistic" scenario, our model predicted

that the population would grow by 12.4% after 20 years. The population is expected to decline by 6.6% under "realistic" scenario; and decline by 26% under the "pessimistic" scenario.

Secondly, we assessed the potential impacts of a one-time mortality event by re-running the PVA with varying levels of additional mortality to determine the maximum level that would yield population trends indistinguishable from trends in the absence of the eradication project ($\geq 95\%$ overlap in expected population outcomes after 20 years).

The models suggest that a mortality event of up to 3.3% of the population under the "realistic" scenario, 2.8% in the "optimistic" scenario, or 4.2% in the "pessimistic" scenario would be unlikely to alter projected population trends. These results demonstrate that the greater the stochastic variation, the greater the mortality event must be to be

able to discriminate a long-term effect against the backdrop of environmental variability. Note that these values do not represent any actual estimate of anticipated mortality but rather provide a threshold of detectability to evaluate potential mortality events.

Main Points

- Gull population trends are dependent on environmental conditions and likelihood of breeding failure.
- Additional mortality up to 3.3% of the population would not significantly alter existing trends.
- It is critical to incorporate stochasticity into population models to realistically project future trends.

Nur, N., Bradley, R.W., Lee, D.E., Warzybok, P., Jahncke, J. 2019. Projecting long-term impacts of mortality events on vertebrates: Incorporating stochasticity in population assessment. *Journal of Environmental Management*. (in review)

Non-lethal hazing can protect gulls from exposure to rodenticide

Pete Warzybok
pwarzybok@pointblue.org

Introduced house mice pose a threat to the ash storm-petrel and other native species on the Farallon National Wildlife Refuge. The US Fish and Wildlife Service, which manages the Refuge, is considering mouse eradication to help restore the island ecosystem and conserve native species. Eradication methods being considered include the application of bait pellets containing a rodenticide, which may pose a risk to non-target wildlife such as western gulls.

During a trial conducted on the islands in 2012, Point Blue, Island Conservation and the USFWS assessed the effectiveness of various non-lethal hazing techniques for temporarily keeping gulls off the island, thus reducing the risk to gulls from exposure to rodenticide. Hazing methods tested included biosonics

(devices which broadcast distress or alarm calls), pyrotechnics, lasers, reflective objects, effigies and helicopters.

Coordinated hazing efforts reduced gulls from a few thousand to a few hundred present on the islands, while having relatively minor impacts on other species.

Lasers, effigies and methods that combined auditory and visual stimulus, such as pyrotechnics, were the most effective at reducing gull numbers. Stationary objects such as reflective tape and kites were not effective. Biosonics were intermediate in their effectiveness but worked best in combination with other methods.

These results provide guidance for planning the mouse eradication on the Farallon Islands while

mitigating potential risks to other wildlife species.

Main Points

- Introduced mice threaten the Farallon Island ecosystem.
- Western gulls would be at risk of exposure to rodenticide during proposed mouse eradication efforts.
- Hazing can reduce gull numbers present on the island and lessen the chances of exposure to rodenticide.

Warzybok, Bradley, Grout, Griffiths, Pott, Vickers, Milsaps and McChesney. 2013. Evaluating the use of non-lethal hazing techniques to minimize potential exposure of western gulls to rodenticide from a proposed rodent eradication on the South Farallon Islands. Unpublished report to the Oiled Wildlife Care Network. Point Blue Contribution Number 1968.

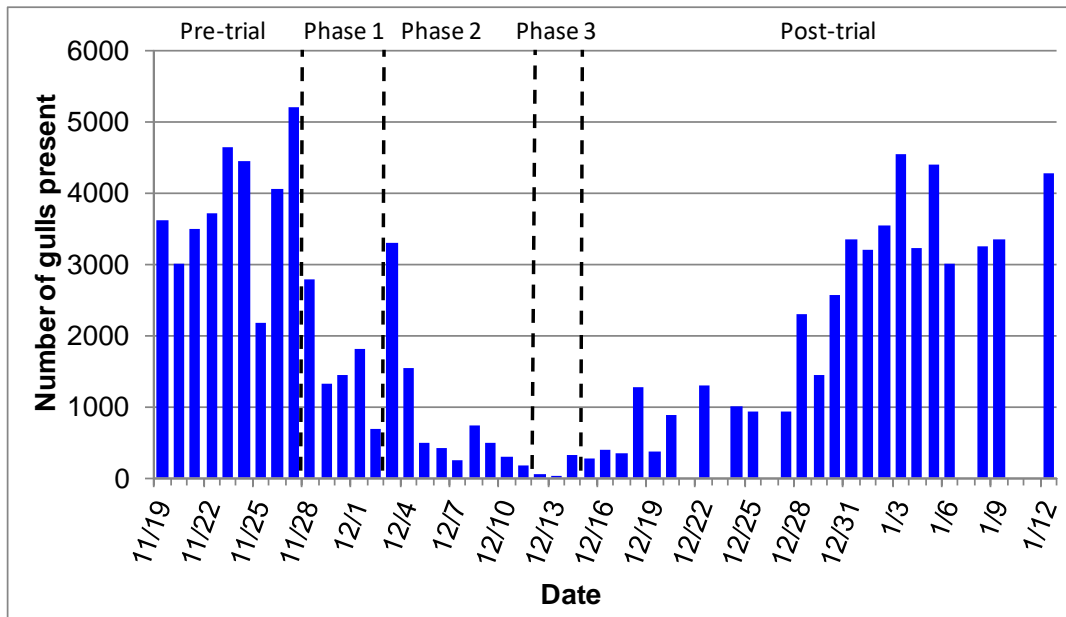


Figure 1. Maximum number of gulls present at dawn throughout the course of the hazing trial. The dashed vertical lines delineate the different phases of the trial. Individual hazing treatments were tested during phase 1. Full island active hazing efforts occurred during phase 2. Phase 3 consisted of reduced efforts to maintain low numbers.

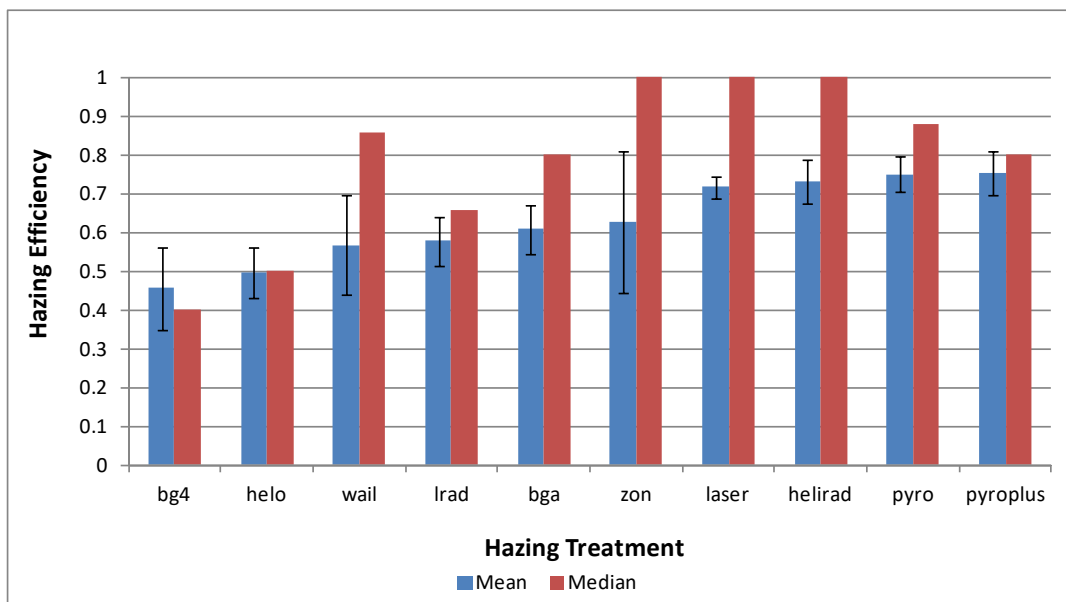


Figure 2. Mean (\pm standard error) and median hazing efficiency by hazing method. Hazing efficiency is defined as the proportion of gulls that departed the area in response to hazing. Different hazing methods include biosonics (bg4, wail, lrad, bga and zon), pyrotechnics (pyro), laser, helicopter (helo), helicopter in combination with biosonics (helirad) and pyrotechnics in combination with other methods (pyroplus).

Removing invasive mice will benefit storm-petrels through reduced owl predation

Nadav Nur
nnur@pointblue.org

We used Point Blue's long-term data to examine the complex relationship between house mice, burrowing owls, and ash storm-petrels on the Farallon Islands National Wildlife Refuge and to provide a quantitative estimate of the anticipated benefit to ash storm-petrels from a proposed house mouse eradication project.

Surveys by Point Blue biologists revealed a strongly seasonal pattern among the three species. Owls arrive at the refuge in the fall when mice are super-abundant as prey. But the mouse population crashes mid-winter each year due to seasonal rains and cold temperatures. This causes the owls to switch to preying upon storm-petrels which begin to return to the refuge at this time to breed. As a result, owl predation on storm-petrels is highest in late winter.

Analysis of storm-petrel capture/recapture data revealed a declining population trend in recent years and

showed that annual adult survival is inversely related to owl abundance, especially during winter.

We used a population-dynamic model to estimate the change in storm-petrel population trends resulting from reductions in owl predation. Under current conditions (i.e., owl predation the same as in recent years) the storm-petrel population is expected to decline by 63% over the next 20 years. However, a 50% reduction in burrowing owl abundance (and related predation) would reduce that decline to approximately 26%, whereas a reduction of 80% would result in a stable or increasing storm-petrel population.

Reducing burrowing owl abundance, through elimination of their house mouse prey, will have a substantial and significant effect in reducing overall storm-petrel mortality and will promote stable or

increasing future population trends.

Main Points

- Migrating burrowing owls remain on the Farallones for several months due to high density of mice during the fall season
- Owls switch from mice to storm-petrels as prey when mouse population crashes in winter
- Owl abundance has a significant negative impact on storm-petrel survival and population trajectory.
- Removing house mice is likely to reduce owl abundance and promote a stable or increasing storm-petrel population.

Nadav Nur, Russell W. Bradley, Leo Salas, Pete Warzybok, and Jaime Jahncke. 2019. Evaluating population impacts of predation by owls on storm petrels in relation to proposed island mouse eradication. *Ecosphere*. (In Press)

From: [Linda Swanson](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:05:13 PM

I support the US Fish and Wildlife proposal to eradicate house mice from the Farallon Islands. Who knew!

Sent from my iPad

Linda Alden Swanson
S.B. # 48359
150 Madrone Avenue
Larkspur, CA 94939
1-415-927-1990
FAX 1-415-927-1950
CELL 1-415-971-5141
Email addresses:
laslaw@pacbell.net
linda@swansonglaw.com

From: [Kristin Davis](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:12:08 PM

Dear California Coastal Commission,

I am writing to voice my strong support of the USFWS's proposed project to eradicate the invasive house mouse from the South Farallon Islands. The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem, and the only chance for ecosystem recovery is to ensure 100% eradication of the house mice (the survival of even a single pair of mice jeopardizes the whole project because the mouse population can recover so quickly). Invasive rodent removals have been successfully completed on nearly 700 islands worldwide (including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, and two islands off the coast of Mexico), and land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

In a time when we have lost already and continue to lose so much biodiversity, this is an incredible opportunity to protect the health, fragility, and sustainability of some of California's native ecosystems and wildlife. I respectfully request you to vote "yes" to support this opportunity.

Thank you very much for your time and attention,
Kristin Davis

From: [Adam Donkin](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:17:07 PM

I support the US Fish and Wildlife plan to eradicate the invasive house mice on the Farallon Islands.

- The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ash-y storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.
- The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly.
- At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.
- The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.
- Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.
- The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

Thanks,
Adam Donkin
Forest Knolls, CA

From: [Mary Power](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:19:59 PM

I support the US Fish and Wildlife Service's plan to eradicate house mice on the Farallon Islands. Thank you.

Mary E. Power
Professor
Integrative Biology
Univ. California, Berkeley
Berkeley, CA 94720-3140
mepower@berkeley.edu

Faculty Director,
Angelo Coast Range Reserve
<http://angelo.berkeley.edu>

From: [Nina Jane Karnovsky](mailto:Nina.Jane.Karnovsky@CoastalEnergy.com)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:21:43 PM

Dear California Coastal Commission,

I am writing in strong support of the USFWS proposal to eradicate the invasive house mouse on the Farallon Islands. I am a professor of biology at Pomona College. I study seabirds and have seen firsthand how damaging introduced rodents are to the seabirds on the Farallon Islands. I have spent over a year of my life on the island as an intern. Rodent eradication can be done with minimal impacts to other non-target species. The removal of rats from Anacapa Island from aerial broadcast of rodenticide bait here in Southern California has benefitted the seabirds enormously especially the Scripps' murrelets. The lizards and the native vegetation have also benefitted. In the same way, the seabirds on the Farallons, the salamanders, and the native plants need to be protected. The Ashy-storm petrel in particular will benefit from the mouse eradication. These endemic storm petrels have a restricted range and low population numbers. These burrow nesting birds are particularly impacted by the invasive house mouse.

Sincerely,

Nina J. Karnovsky, PhD.
Willard George Halstead Zoology Professor
Pomona College
Department of Biology
175 W. 6th St.
Claremont, CA
91711 USA
office phone: 909-607-9794
fax: 909-621-8878

<http://research.pomona.edu/karnolab/>

From: [Ted Eliot](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD-0002-19
Date: Wednesday, July 03, 2019 12:22:49 PM

I was for many years chairman of the board of the Point Reyes Bird Organization and have continued to be a member and "Honorary Chairman" of Point Blue. I have visited the Farallons many times and know of its hugely important value as a research center for the bird and ocean situation in that area of the Pacific. I am writing to lend my voice to having the US Fish and Wildlife Service funded to extinguish the mice on the islands. I understand this will be on your agenda per the subject of this email. Theodore L. Eliot Jr.

From: [jon richards](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 12:34:54 PM

I strongly support to proposal to eradicate house mice in the Farallons.
Jon Richards
Palo Alto, CA

From: [Anne Scanlan-Rohrer](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:12:46 PM

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

would like to express support for the project to eradicate the invasive house mouse on the Farallon Islands. The mice have jeopardized native birds breeding on the islands, as well as other native organisms.

The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.

Invasive rodent removals have been successfully completed on nearly 700 islands worldwide. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

Anne Scanlan-Rohrer
829 Acacia Drive
Burlingame CA 94010

annesr@mindspring.com

650-343-1465

From: [Peter Boffey](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:20:47 PM

To Whom It May Concern,

Given the idealistic intent of the above-referenced project, and the due diligence displayed by its advocates and other stakeholders, I believe it would make complete sense to proceed with the eradication of the rodents on the Farallones, and as soon as reasonably possible.

Sincerely,

Peter Boffey

Walnut Creek CA

From: [Rick Theis](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:23:25 PM

Dear California Coastal Commissioners,

Please support the plan to eradicate house mice from the Farralons. This plan is based on research and observation by Point Blue Conservation Science on the Farallon Islands who have worked there for more than 50 years.

I have been a longtime member and financial supporter of Point Blue Conservation Science (previously known as Point Reyes Bird Observatory). Finding practical and effective solutions to ecological restoration is very challenging. What I find so amazing about Point Blue is their rigorous research. Sometimes I am startled to learn that my long-held beliefs about environmental stewardship have been counterproductive. Fortunately I am open minded enough to appreciate their science-based findings and resulting recommendations for action.

It is rare to be able to restore a habitat once invasive species have been introduced. Eradicating house mice on the Farallons will be an amazing accomplishment to correct this and other human-caused damage as we work to restore this critically important sea breeding habitat.

Sincerely,
Rick Theis
11190 Peaks Pike Rd.
Sebastopol, CA

From: [Dwight Johnson](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:28:58 PM

Please support the eradication of house mice on the Farallon Islands.
Dwight L. Johnson

From: [Lonna Richmond](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:34:33 PM

hello,

i am definitely AGAINST this method and think it is pitiful that you would even think of doing something so extreme. using an indiscriminate killing poison which will have repercussions far and wide is beyond comprehension.

sincerely,

lonna richmond

From: [Carolyn Longstreth](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 1:47:45 PM

Hello Coastal Commissioners:

I write to support the mouse eradication project on the Farallones Islands. Past experience with islands around the world has shown both the ecological havoc wreaked by non-native mammals and the tremendous potential for restoration when such alien species are eradicated. The Santa Barbara Channel Islands provide an instructive example: the elimination of non-native goats and rodents triggered a resurgence of native flora and fauna.

As a bay area resident and birder, I hope to see such beneficial changes come to the Farallones. I am confident that the US Fish and Wildlife Service will observe appropriate precautions to avoid harm to native species on the islands.

I therefore urge you to approve the project as soon as possible.

Sincerely, Carolyn Longstreth

--

[Carolyn Longstreth](#)
PO Box 657
10 Balmoral Way
Inverness CA 94937
415-669-7514

From: rdettling@wowway.com
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 2:02:31 PM

Please allow for the eradication of rodents on the Farallon islands

Sent from my iPhone

From: [Mark Mushkat](#)
To: [Energy@Coastal](#)
Subject: Re: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 2:36:15 PM

Meant to write house mouse. Thx

> On Jul 3, 2019, at 2:35 PM, Mark Mushkat <mmushkat@gmail.com> wrote:
>
> I support, strongly, the USFWS proposal to eradicate field mice from the Farallons.
>
> Thanks for considering this
>
> Mark Mushkat
> 116 Laidley St.
> SF, CA

From: [Sandy Linder](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 2:45:40 PM

I strongly support the goal of eradicating the house mouse population on the Farallon Islands. The infestation is impacting an island ecosystem that harbors a highly significant community of seabirds. Information gleaned from Farallon studies over many years has increased understanding and protection of threatened seabird populations. House mouse interactions with the community create a negative impact and should be stopped.

Please support this eradication project.

Thank you,
Sandy Linder
3956 Washington Street
San Francisco, CA

From: [Edward Mainland](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 3:04:49 PM

- To California Coastal Commission:

Sirs:

I support eradication of the invasive house mouse on the Farallon Islands near San Francisco because the mice are having harmful effects on seabirds as well as other island species.

Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication. The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

All who care about nature preservation support USFWS's plan to do away with these invasive mice and allow the island ecosystem to recover.

Edward Mainland

1017 Bel Marin Keys Blvd.

Novato, CA 94949

From: [Valerie Herr](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 3:43:38 PM

Dear Members of the California Coastal Commission,

As a long term supporter of the aims and ideals of Point Blue, long known as the Point Reyes Bird Observatory, I write to encourage your careful consideration and support of the proposed plan to eradicate the common house mouse in the Farallones Island bird sanctuary and observation project.

The very long term studies that have been possible through work at this site have produced invaluable results that bear upon major questions of ecology security and species survival.

I observe that the studies prior to this proposal have been done with great care and presume that the scientific information provided seems intact and accurate.

Thank you for your careful consideration and support of this long overdue proposal.

Respectfully,
Dr Valerie Herr, Berkeley

Sent from my iPhone

From: [Bruce Bowser](#)
To: Energy@Coastal
Subject: Comment letter
Date: Wednesday, July 03, 2019 4:28:58 PM
Attachments: [CCC 2019 SEFI.doc](#)

Please find attached my comments on the South Farallon Island's Invasive House Mouse Eradication Program.

Thank you for your attention to this matter.

b2~~

--

Bruce Curtis Bowser
BCB & Associates
Bolinas ***Oceans~Advocate***
P.O. Box 598, Bolinas, CA 94924
T: 415 868 2459

~~~ Bolinas *Oceans~Advocate* ~~~

Bruce Curtis Bowser

Post Office Box 598 - Bolinas, California 94924
www.BCBNA@sonic.net

July 03, 2019

California Coastal Commission
RE: Comments on the U.S. Fish and Wildlife Service
South Farallon Island's Invasive House Mouse Eradication Program
Agenda Item 14a CD-0002-19

Dear Commission Staff and Coastal Commissioners:

Bolinas *Oceans~Advocate* (BO~A) greatly appreciates the opportunity to submit comments on the South Farallon Islands Invasive House Mouse Eradication Program. BO~A would like to offer heartfelt comments for you to consider while you determine a resolution of this troubling plan.

For more than 50 years I have been an advocate for the Oceans. I live in a coastal village and the health of the Ocean has always been of my highest concern. I trained at the California Academy of Sciences as a Rocky Shore Naturalist or a California tide-pool docent. I know of the vulnerability of intertidal creatures!

The Farallon Islands have always been a part of my independent study. It is my fear that aspects of the Fish and Wildlife's, House Mouse Eradication Project will go wrong and endanger the flora and fauna of the Island's surrounding marine habitats. The islands have precious little groundcover, therefore any nesting site is won at a high price because desirable sites are so few. The island surface is hard and smooth with sparse vegetation. The land is prime to shed unwanted detritus such as rodenticides and carcasses of dead mice into the surrounding waters.

Ever changing conditions and weather patterns that are not predictable will trouble applications. Foraging mollusks are bound to be impacted. Will mouse carcasses be removed before eaten by gulls? There is bound to be incidental death of non-intended species. In this plan too much is left to good fortune and fair weather.

The Coastal Commission needs to ensure that a thriving Greater Farallones National Marine Sanctuary remains a healthy and unique California Ocean Park! You simply must protect the Ocean ecosystem and the Sanctuary's many assets.

My considered opinion is to Oppose this plan and seek other solutions to the mouse problem.

Respectfully yours,

Bruce Curtis Bowser
Bolinas *Oceans~ Advocate*
Rocky Shore Naturalist, CalAcademy of Sciences

From: [Ryan Terrill](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19 - SEFI Mice
Date: Wednesday, July 03, 2019 4:29:44 PM

Dear Coastal commission:

I would like to write to you to voice my support for the eradication of mice on Southeast Farallon Island (SEFI). As a lifelong California resident and a professional Biologist, I know how vitally important native species are for a functioning ecosystem. The mice on SEFI are introduced, non-native species that are wreaking irrevocable harm to one of the most important sites for biodiversity on the west coast, and one of the last truly wild places in California. There is no reason to delay their eradication. To delay or halt the eradication of mice on SEFI would be short-sighted nonsense, and would likely be a death sentence for the Ashy Storm-Petrel as a species, among others.

Thank you for your consideration.

--

Ryan S. Terrill

NSF Postdoctoral Fellow
Moore Lab of Zoology
Occidental College
Biology Department
1600 Campus Road
Los Angeles, CA 90041

From: [Peter Pyle](#)
To: jmorlan@gmail.com
Cc: Energy@Coastal
Subject: Re: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Wednesday, July 03, 2019 4:52:58 PM

Hi Joe -

Thanks for sending me your opinion on the mouse eradication project.

I have been an active supporter of the project since the initial EIS was published in 2013, and wrote two editorial on it back then:

<<https://www.pressdemocrat.com/news/2228418-181/close-to-home-eradication-of?sba=AAS>> <https://www.pressdemocrat.com/news/2228418-181/close-to-home-eradication-of?sba=AAS>
<https://www.ptreyeslight.com/article/tradeoff-clear-farallon-islands>

I am working on my current response now and will copy you on it when completed. I believe that what you recommend IS what the plan calls for. I will be providing a point-by-point response to some of the criticisms, the idea that >1 metric ton of poison is being applied being the first thing I respond to. I have pasted in my response to this below.

I'm glad you are involved and am in agreement with your opinions on the spartina eradication projects re Ridway's Rails in the East Bay.

Peter

I would like to respond point-by-point to some of the arguments in opposition to the project from the perspective of one who has intensively studied and substantially knows the Farallon Islands:

1. Over "a metric ton of rodenticide" will be dropped on the Farallon Islands.

This has been an angle of misdirected messaging used by opponents of the project since its Draft EIS was issued in 2013. Instead the project calls for the use of only 1.16 oz of Brodifacoum rodenticide in over a metric ton of non-toxic pellet bait. Brodifacoum was formerly the key ingredient in the rodenticide "D-Con" which until recently was freely and cheaply available (for about \$5) at drug and hardware stores or on line. I certainly applaud recent efforts to ban Brodifacoum in D-Con but it is still being used widely by those who bought the product over 3 years ago, including by illegal Cannabis farmers in California, while Brodifacoum continues to be the most widely used slow-acting rodenticide worldwide, according to a recent scientific assessment

(<<https://pdfs.semanticscholar.org/04cc/21ffa3536ac58770b3204389382b63f3c529.pdf>> <https://pdfs.semanticscholar.org/04cc/21ffa3536ac58770b3204389382b63f3c529.pdf>).

Further, a recent California Pesticide Report indicates that approximately 209 million pounds of pesticides were used in California in 2016 alone, most by farmers in the Central Valley. Those of us in favor of the mouse-eradication project are not being complacent about the use of Brodifacoum. But we understand that, in the context of unsupervised, profit-motivated use of Brodifacoum and other pesticides in California and worldwide, the highly controlled, targeted conservation use of 1.16 ounces for this project represents an acceptable level of application and risk to other wildlife given the potential huge benefit of mouse removal to the Farallon Island ecology.

At 07:40 AM 6/30/2019, Joseph Morlan wrote:

>To whom it may concern,

>

>I am an ornithology professor at City College of San Francisco and am
>writing to oppose the plan to aerial drop 1.4 metric tons of rodenticide on
>the Farallon Islands in an effort to eradicate mice. While removal of mice
>from the Farallons is a desirable goal, this is not the right approach.

>

>I've studied rodent removal on other islands and believe the correct
>approach is that pioneered by researchers from New Zealand who successfully
>removed rodents and other predators from several of their islands where
>native species were at risk. Their new approach was also adopted on South
>Georgia Island in the South Atlantic which was recently declared rat free.
>Their more modern approach is also currently being used on Gough Island,
>where introduced mice are being eradicated.

>

>Basically, the New Zealand approach uses a highly dilute solution of poison
>in rodent bait. When consumed, this diluted poison bait makes the rodents
>feel sick and they behave the way most people behave when they feel sick.
>They go to bed. In this case the rodents go into their burrows where they
>fall asleep. With the proper dose of rodenticide, the rodents die in their
>burrows. This technique avoids the problem of secondary poisoning where the
>rodents die above ground and are eaten by gulls, owls and other scavengers
>and predators.

>

>Please reconsider the existing plan. It is not best practice and there are
>much better alternatives. If you wish, I can put you in contact with the
>scientists who have successfully implemented rodent eradication in New
>Zealand and South Georgia without the side-effects of the current plan.
>Please feel free to contact me.

>

>Thank you.

>

>Joseph Morlan
>Department of Continuing Education
>City College of San Francisco

>--

>Joseph Morlan, Pacifica, CA

From: [Laura Duggan](mailto:Laura.Duggan@pointblue.org)
To: sciencenews@pointblue.org; jjahncke@pointblue.org
Cc: Energy@Coastal
Subject: No Poison Drop on the Farallones
Date: Wednesday, July 03, 2019 4:58:20 PM

Dear Dr. Jahncke,

I am disturbed, dismayed, and shocked that Point Blue, an organization that I previously respected, has take a stance to poison mice on the Farallon Islands, and does so in the name of science and the environment. Your website, and your recent newsletter lead me to believe that good sense has been abandoned.

For starters, the aerial broadcasting of toxic rodenticide pellets over the Farallon Islands does not protect the many endemic species and species of special concern that live and breed on the Farallones, which is the goal of mouse eradication. Therefore, it should not even be considered in the eradication proposal.

Further, you wrote in your newsletter,

- At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.

Yet there is really no evidence that this is effective, within the bounds of a sensitive environment such as the Farallons. In face, you admit as much when you refer to actions to "minimize any potential negative impacts of the eradication." Minimize by how much? How many destroyed species is minimal?

The document "Rat Island Rat Eradication Project: A Critical Evaluation of Nontarget Mortality" outlines the unintended consequences of this type of eradication project: "Some nontarget mortality was expected, but the actual mortality exceeded the predicted mortality. Forty six Bald Eagles died (exceeding the known population of 22 Bald Eagles on the island); toxicological analysis revealed lethal levels of brodifacoum in 12 of the sixteen carcasses)."

In addition, you and your organization are dumping poison into the ocean, as drift will almost inevitably result, with all collateral damage to entire food web. Therefore you are poisoning a National Sanctuary. How can you minimize that? The Farallon Islands are an incredibly sensitive environment. Anything that happens on any of them will affect everything on the island and in/throughout nearby waters

Finally, adding insult to injury, the Point Blue website states,

"While it's a minor point, some opponents are indicating that the action will happen "in the Sanctuary" which is not technically

accurate."

It is not a minor point. It is an insult to say that islands in the Sanctuary are not protected as a sanctuary themselves. Perhaps we could say that you have a home with a fence around it, and while the property around it is safe, the house you live in is open to be raided, burned and vandalized. Give me a break!

Please, withdraw your organization from this plan. I for one will lobby to be sure not a penny of mine or my friends goes to support Point Blue, should this plan proceed.

Sincerely,
Laura Duggan
Sebastopol, CA

From: [Mountain Bluebird Professor](#)
To: Energy@Coastal
Subject: Fall of an Empire - Goodbye Mus Musculus!!!July+2019+Agenda+Item+Wednesday+14a+CD+--+0002+--+19
Date: Wednesday, July 03, 2019 5:13:34 PM

Howdy,

As a long time follower of Farallon Islands data, as well as an aspiring field biologist, I'd like to ask those who will be voting on the Farallon Islands House Mouse eradication plan to please support the removal of these invasive rodents from this precious rock so necessary for breeding seabirds. Given the extensive EIR that has been done by the USFWS, I truly hope that CEQA (or whatever law holds relevance here) is not considered restrictive of such an important project.

all the best,
Jonah B.

From: [Aja Woodrow](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 6:07:18 PM

I support Farallon Island mouse eradication.

2001 Point Reyes Bird Observatory intern
Aja Woodrow
1005 Denny Ave.
Cle Elum, WA

From: [Peter Pyle](#)
To: [Energy@Coastal](#)
Cc: [McChesney, Gerry](#); [Jaime Jahnske](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 6:12:35 PM
Attachments: [Comment-on-Farallon-Mouse-Eradication-3July19-PPyle.pdf](#)

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

Dear California Coastal Commission,

I would like to comment in support the U.S. Fish and Service's attempts to eradicate introduced House Mice from the Farallon Islands off San Francisco.

I am a biologist and marine ecologist who worked on the Farallones for 24 years (1980-2003). Until recently I had spent more nights on Southeast Farallon Island (2,187) than any other person in the modern era. Although I have worked there in all months of the year, my primary season was in the fall, when the House Mouse problem is most acute. My primary focus during this season was the study of migratory birds, including the Burrowing Owl. Based on both our data and my in-situ experience, I was the first to realize the connection between the mice, the owls, and predation upon the Ashy Storm-Petrel. Importantly, many owls also perish, as the storm-petrels cannot sustain them in late winter, and we would routinely find dead emaciated owls in spring. In 2013 I commented in support of the mouse eradication project in editorials to the Sonoma Press Democrat <<https://www.pressdemocrat.com/news/2228418-181/close-to-home-eradication-of?sba=AAS>> <https://www.pressdemocrat.com/news/2228418-181/close-to-home-eradication-of?sba=AAS> and the Point Reyes Light <<https://www.ptreyeslight.com/article/tradeoff-clear-farallon-islands>> <https://www.ptreyeslight.com/article/tradeoff-clear-farallon-islands>

The proposed mouse-eradication project is grounded in the absolute best and most-current science available, including that on previous mouse eradication attempts and success. Biologists for Point Blue Conservation Science and (as formerly known) the Point Reyes Bird Observatory have maintained a continuous presence on Southeast Farallon Island since April 3rd, 1968, an uninterrupted period of over 50 years, during which they have intensively researched all aspects of the island's ecology. This has lead to the Farallones being one of the most, if not the most, ecologically known locations in the world. The mouse-eradication project's design and planned mitigation efforts to protect other forms of wildlife is grounded in thoroughly researched scientific evidence. This is the reason why those who have studied the ecology of the Farallones are unanimously in favor of the eradication effort.

Most of those opposed the project have spent little or no time on the Farallones and are not using scientifically grounded assessment. I would like to respond point-by-point to some of the arguments in opposition to the project from the perspective of one who has intensively studied and substantially knows the Farallon Islands:

1. Over "a metric ton of rodenticide" will be dropped on the Farallon Islands.

This has been an angle of misdirected messaging used by opponents of the project since its Draft EIS was issued in 2013. Instead the project calls for the use of only 1.16 oz of Brodifacoum rodenticide in over a metric ton of non-toxic pellet bait. Brodifacoum was formerly the key ingredient in the rodenticide "D-Con" which until recently was freely and cheaply available (for about \$5) at drug and hardware stores or on line. I certainly applaud recent efforts to ban Brodifacoum in D-Con but it is still being used widely by those who bought the product over 3 years ago, including illegal Cannabis farmers in California, while Brodifacoum continues to be the most widely used slow-acting rodenticide worldwide, according to a recent scientific assessment (<<https://pdfs.semanticscholar.org/04cc/21ffa3536ac58770b3204389382b63f3c529.pdf>> <https://pdfs.semanticscholar.org/04cc/21ffa3536ac58770b3204389382b63f3c529.pdf>).

Further, a recent California Pesticide Report indicates that approximately 209 million pounds of pesticides were used in California in 2016 alone, most by farmers in the Central Valley. Those of us in favor of the mouse-eradication project are not being complacent about the use of Brodifacoum. But we understand that, in the context of unsupervised, profit-motivated use of Brodifacoum and other pesticides in California and worldwide, the highly controlled, targeted

conservation use of 1.16 ounces for this project represents an acceptable level of application and risk to other wildlife given the potential huge benefit of mouse removal to the long-term Farallon Island ecology.

2. Incidental ingestion of Brodifacoum will lead to widespread destruction of non-target wildlife and the surrounding marine ecosystem. Those who are concerned by this should carefully read the final EIS document prepared by the USFWS in March 2019, including the Memorandum (Exhibit 5 of the EIS) prepared by Ecologist Dr. Lauren Garske-Garcia in June 2019. The thorough, science-based mitigation efforts that will be implemented as part of the project, to limit non-target harm by Brodifacoum to terrestrial wildlife and the marine environment, are based on data collected by researchers on the the Farallones for over 50 years. As one who spent over 20 fall periods on the Farallones, I can add that the timing of best application for mouse eradication, November-December, advantageously coincides with the period of least wildlife use of the island. Application of Brodifacoum can be timed for periods when practically no seabirds are present. When winds during this late-fall period are from the south or east, very few if any gulls and no other seabird species are present on shore. Those gulls that do roost on the island during these weather conditions, furthermore, are not the locally breeding individuals and are thus very skittish and easily flushed from the island. Weather forecasting has become sophisticated enough that the application can be targeted for a period of such weather conditions but no rain, which will result in the best possible results in terms of non-target wildlife ingestion or effects due to potential run-off of Brodifacoum into the marine environment.

3. House mice on the Farallones can be controlled by trapping and other non-invasive techniques. Given the highly cyclical nature of the mouse population dynamics this simply does not represent a solution. Indeed, over the years, Farallon biologists have tried all manner of trapping mice when they reach peak population levels in fall. Trapping has also been attempted in spring, at times when mice are underground and not observed at all. At this time they do not come in to bait, apparently due to plenty of additional food being available. Given the geologically porous nature of the subterranean Farallon physiography, including an abundance of burrows, caves, and catacombs, it is absolutely impossible to effect a permanent control of the mouse population using non-invasive techniques.

4. The mice will suffer from the ingestion of Brodifacoum. I sympathize with this viewpoint from animal-rights activists. However, as I argue in my editorials (see links above), the current situation leads to the widespread annual drowning, death, and cannibalism of tens of thousands of mice per year, once the first heavy rains of winter occur. Those concerned with the suffering of mice should be in favor of an eradication effort to end this annual destruction.

5. Removal of mice will not cause Burrowing Owls to continue migration from the Farallones in the fall. This opinion is counter to all scientific research on bird migration, including results of the >50 years of daily counts of migrant birds on the Farallones. It is not only shown by our data but it is completely intuitive that if there is no food at a location, a stopover-migrant bird will keep going, rather than remaining at a location that lacks food and starving to death. Of the hundreds of thousands of migrant landbirds surveyed at the Farallones over the past 50 years, the only individuals that remain for longer than a few days are those (<0.01%) that eat seeds or are found in rocky non-vegetative habitats and can find food in the Farallon environment. Among raptors, those species that specialize on landbirds (e.g., Accipiters) rarely stay for longer than 1 day because there is simply not enough of a food resource for them to stay. Without the mice, the Burrowing Owls would not have anything to eat besides beetles, not nearly enough to sustain them. If they do not migrate from the Farallones, which they assuredly will according to all science-based research on bird migration, they will starve to death. This of course would not be good for the owls but is better than their surviving for half the winter on the Farallones, killing dozens of

storm-petrels, and then starving to death anyway.

In sum, I believe that we must follow a science-based rather than an emotionally based process in evaluating this project. I understand that there are those that do not evaluate science or agree with science-based approaches, but hope those in this camp represent the minority opinion. The bottom line is that the benefits to removing mice from the Farallones so outweigh the risks, that the attempt can be fully justified from a both scientific and an emotional perspective.

Respectfully submitted,

Peter Pyle
The Institute for Bird Populations
P.O. Box 1346
Point Reyes Station, CA 94956
415-663-2053
ppyle@birdpop.org

Attachment: pdf copy of email

CC:
Gerry McChesney, Manager, Farallon Islands National Wildlife Refuge
Jaime Jahncke, California Current Director, Point Blue Conservation Science

Dear California Coastal Commission,

I would like to comment in support of the U.S. Fish and Service's attempts to eradicate introduced House Mice from the Farallon Islands off San Francisco.

I am a biologist and marine ecologist who worked on the Farallones for 24 years (1980-2003). Until recently I had spent more nights on Southeast Farallon Island (2,187) than any other person in the modern era. Although I have worked there in all months of the year, my primary season was in the fall, when the House Mouse problem is most acute. My primary focus during this season was the study of migratory birds, including the Burrowing Owl. Based on both our data and my in-situ experience, I was the first to realize the connection between the mice, the owls, and predation upon the Ashy Storm-Petrel. Importantly, many owls also perish, as the storm-petrels cannot sustain them in late winter, and we would routinely find dead emaciated owls in spring. In 2013 I commented in support of the mouse eradication project in editorials to the Sonoma Press Democrat

<https://www.pressdemocrat.com/news/2228418-181/close-to-home-eradication-of?sba=AAS>

and the Point Reyes Light

<https://www.ptreyeslight.com/article/tradeoff-clear-farallon-islands>

The proposed mouse-eradication project is grounded in the absolute best and most-current science available, including that on previous mouse eradication attempts and success. Biologists for Point Blue Conservation Science and (as formerly known) the Point Reyes Bird Observatory have maintained a continuous presence on Southeast Farallon Island since April 3rd, 1968, an uninterrupted period of over 50 years, during which they have intensively researched all aspects of the island's ecology. This has led to the Farallones being one of the most, if not the most, ecologically known locations in the world. The mouse-eradication project's design and planned mitigation efforts to protect other forms of wildlife is grounded in thoroughly researched scientific evidence. This is the reason why those who have studied the ecology of the Farallones are unanimously in favor of the eradication effort.

Most of those opposed to the project have spent little or no time on the Farallones and are not using scientifically grounded assessment. I would like to respond point-by-point to some of the arguments in opposition to the project from the perspective of one who has intensively studied and substantially knows the Farallon Islands:

1. Over "a metric ton of rodenticide" will be dropped on the Farallon Islands.

This has been an angle of misdirected messaging used by opponents of the project since its Draft EIS was issued in 2013. Instead the project calls for the use of only 1.16 oz of Brodifacoum rodenticide in over a metric ton of non-toxic pellet bait. Brodifacoum was formerly the key ingredient in the rodenticide "D-Con" which until recently was freely and cheaply available (for about \$5) at drug and hardware stores or on line. I certainly applaud recent efforts to ban Brodifacoum in D-Con but it is still being used widely by those who

bought the product over 3 years ago, including illegal Cannabis farmers in California, while Brodifacoum continues to be the most widely used slow-acting rodenticide worldwide, according to a recent scientific assessment (<https://pdfs.semanticscholar.org/04cc/21ffa3536ac58770b3204389382b63f3c529.pdf>). Further, a recent California Pesticide Report indicates that approximately 209 million pounds of pesticides were used in California in 2016 alone, most by farmers in the Central Valley. Those of us in favor of the mouse-eradication project are not being complacent about the use of Brodifacoum. But we understand that, in the context of unsupervised, profit-motivated use of Brodifacoum and other pesticides in California and worldwide, the highly controlled, targeted conservation use of 1.16 ounces for this project represents an acceptable level of application and risk to other wildlife given the potential huge benefit of mouse removal to the long-term Farallon Island ecology.

2. Incidental ingestion of Brodifacoum will lead to widespread destruction of non-target wildlife and the surrounding marine ecosystem. Those who are concerned by this should carefully read the final EIS document prepared by the USFWS in March 2019, including the Memorandum (Exhibit 5 of the EIS) prepared by Ecologist Dr. Lauren Garske-Garcia in June 2019. The thorough, science-based mitigation efforts that will be implemented as part of the project, to limit non-target harm by Brodifacoum to terrestrial wildlife and the marine environment, are based on data collected by researchers on the the Farallones for over 50 years. As one who spent over 20 fall periods on the Farallones, I can add that the timing of best application for mouse eradication, November-December, advantageously coincides with the period of least wildlife use of the island. Application of Brodifacoum can be timed for periods when practically no seabirds are present. When winds during this late-fall period are from the south or east, very few if any gulls and no other seabird species are present on shore. Those gulls that do roost on the island during these weather conditions, furthermore, are not the locally breeding individuals and are thus very skittish and easily flushed from the island. Weather forecasting has become sophisticated enough that the application can be targeted for a period of such weather conditions but no rain, which will result in the best possible results in terms of non-target wildlife ingestion or effects due to potential run-off of Brodifacoum into the marine environment.

3. House mice on the Farallones can be controlled by trapping and other non-invasive techniques. Given the highly cyclical nature of the mouse population dynamics this simply does not represent a solution. Indeed, over the years, Farallon biologists have tried all manner of trapping mice when they reach peak population levels in fall. Trapping has also been attempted in spring, at times when mice are underground and not observed at all. At this time they do not come in to bait, apparently due to plenty of additional food being available. Given the geologically porous nature of the subterranean Farallon physiography, including an abundance of burrows, caves, and catacombs, it is absolutely impossible to effect a permanent control of the mouse population using non-invasive techniques.

4. The mice will suffer from the ingestion of Brodifacoum. I sympathize with this viewpoint from animal-rights activists. However, as I argue in my editorials (see links above), the current situation leads to the widespread annual drenching, death, and cannibalism of tens of thousands of mice per year, once the first heavy rains of winter occur. Those concerned with the suffering of mice should be in favor of an eradication effort to end this annual destruction.

5. Removal of mice will not cause Burrowing Owls to continue migration from the Farallones in the fall. This opinion is counter to all scientific research on bird migration, including results of the >50 years of daily counts of migrant birds on the Farallones. It is not only shown by our data but it is completely intuitive that if there is no food at a location, a stopover-migrant bird will keep going, rather than remaining at a location that lacks food and starving to death. Of the hundreds of thousands of migrant landbirds surveyed at the Farallones over the past 50 years, the only individuals that remain for longer than a few days are those (<0.01%) that eat seeds or are found in rocky non-vegetative habitats and can find food in the Farallon environment. Among raptors, those species that specialize on landbirds (e.g., Accipiters) rarely stay for longer than 1 day because there is simply not enough of a food resource for them to stay. Without the mice, the Burrowing Owls would not have anything to eat besides beetles, not nearly enough to sustain them. If they do not migrate from the Farallones, which they assuredly will according to all science-based research on bird migration, they will starve to death. This of course would not be good for the owls but is better than their surviving for half the winter on the Farallones, killing dozens of storm-petrels, and then starving to death anyway.

In sum, I believe that we must follow a science-based rather than an emotionally based process in evaluating this project. I understand that there are those that do not evaluate science or agree with science-based approaches, but hope those in this camp represent the minority opinion. The bottom line is that the benefits to removing mice from the Farallones so outweigh the risks, that the attempt can be fully justified from a both scientific and an emotional perspective.

Respectfully submitted,

Peter Pyle
The Institute for Bird Populations
P.O. Box 1346
Point Reyes Station, CA 94956
415-663-2053
ppyle@birdpop.org

CC:

Gerry McChesney, Manager, Farallon Islands National Wildlife Refuge
Jaime Jahncke, California Current Director, Point Blue Conservation Science

From: [Aaron Hebshi](#)
To: Energy@Coastal
Subject: Support for house mouse eradication and island restoration on the Farallon Islands
Date: Wednesday, July 03, 2019 6:43:47 PM

Dear Commissioners,

I would like to show my support for the project to eradicate invasive house mice and restore the ecology of the Farallon Islands. While native ecosystems around the world are facing so many threats, from development, overharvesting, pollution, invasive species, and now climate change, this is an amazing opportunity for us to actually enhance biodiversity and bring back an island ecosystem to a healthier state.

I've looked through much of the Environmental Impact Statement (EIS) that the US Fish and Wildlife developed to analyze effects of the proposed action, and it's encouraging to see how much background research and careful investigation has gone into the project's development in order to minimize non-target impacts of the eradication. It is clear that the environmental benefits of a successful eradication will be huge and long-lasting, while the negative impacts (most notably on Western Gulls) will be limited and short-lived. I'm most concerned about the plight of the Ashy Storm Petrel, a rare seabird whose most important breeding grounds is on the Farallones, but is in decline as a result of burrowing owls, who have moved in as full time residents due to the abundance of house mice.

As was witnessed with the rat eradication on Anacapa Island in the California Channel Islands, which the Coastal Commission supported, no long term negative impacts to the island, nearby waters, human health, or anything else occurred. Instead, we witnessed the restoration of the island and the first time breeding occurrence of Ashy Storm Petrels recorded there, along with population increases in other rare seabirds.

There is a lot of misinformation regarding the dangers of the toxicant brodifacoum proposed to be used as part of the EIS's Preferred Alternative. But I trust the commission to see through the fear mongering to do what's best for California and our one-of-a-kind majestic island group, the Farallones.

Thank you for considering my comment.

Dr. Aaron Hebshi
San Diego, 92104
aaron.hebshi@gmail.com

From: [Joseph Morlan](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Wednesday, July 03, 2019 7:23:39 PM

To whom it may concern,

I wish to revise my earlier comment below. I was misinformed about the method to be used by this project and I now understand that the modern alternative which I suggested is the plan currently being proposed. Therefore please consider this and my previous comment to be marked as comments in FAVOR of the proposal, not comments against.

-----Earlier comment below-----

To whom it may concern,

I am an ornithology professor at City College of San Francisco and am writing to oppose the plan to aerial drop 1.4 metric tons of rodenticide on the Farallon Islands in an effort to eradicate mice. While removal of mice from the Farallons is a desirable goal, this is not the right approach.

I've studied rodent removal on other islands and believe the correct approach is that pioneered by researchers from New Zealand who successfully removed rodents and other predators from several of their islands where native species were at risk. Their new approach was also adopted on South Georgia Island in the South Atlantic which was recently declared rat free. Their more modern approach is also currently being used on Gough Island, where introduced mice are being eradicated.

Basically, the New Zealand approach uses a highly dilute solution of poison in rodent bait. When consumed, this diluted poison bait makes the rodents feel sick and they behave the way most people behave when they feel sick. They go to bed. In this case the rodents go into their burrows where they fall asleep. With the proper dose of rodenticide, the rodents die in their burrows. This technique avoids the problem of secondary poisoning where the rodents die above ground and are eaten by gulls, owls and other scavengers and predators.

Please reconsider the existing plan. It is not best practice and there are much better alternatives. If you wish, I can put you in contact with the scientists who have successfully implemented rodent eradication in New Zealand and South Georgia without the side-effects of the current plan. Please feel free to contact me.

Thank you.

Joseph Morlan
Department of Continuing Education
City College of San Francisco
--
Joseph Morlan, Pacifica, CA

From: [Loretta Stec](#)
To: Energy@Coastal
Subject: Farralones
Date: Wednesday, July 03, 2019 7:25:43 PM

Dear Coastal Commission,

I write to object STRENUOUSLY to the US Fish and Wildlife Service proposal to drop **toxic rodenticide** on the Farallon Islands, a state and national treasure. This will result in the suffering of huge numbers of animals in addition to the targeted mice (who do not deserve to die in this gruesome way either). SURELY there is another way to protect storm petrels. Have the scientists and ecologists put their mind to the problem, or are they just taking the "easy" way?

Please do NOT use my tax dollars to spread poison over these islands.

Most sincerely,
Loretta Stec, Ph.D.

From: [Kraemer Winslow](#)
To: Energy@Coastal
Subject: Proposed Farallons Rodenticide Drop
Date: Wednesday, July 03, 2019 7:32:44 PM

Dear Commissioners:

I strongly object to item W14a, the US Fish and Wildlife Service poison dispersal plan to drop over a ton of rodenticides on any part of our Farallon Islands. To think that this will "save" our islands in any way is absurd. Poisons such as these kill indiscriminately. There MUST be a better way to help the ashly storm-petrels. Did you know that they breed in small rock crevices? How can you guarantee that these poisons won't harm them as well? Also can you guarantee NO COLLATERAL DAMAGE of other species – on the island as well as in the water???

There is another solution that has worked in other situations that is much safer. Rodent birth control is something you could consider...unless you are simply intent on killing outright instead. It is a JOKE that the name of the company in Santa Cruz that wants to "help" us "save" our beautiful island sounds so innocent and helpful. The hard data from their previous "saves" or "rescues" show a different story. Have you truly vetted them?

Thank you for your consideration also about the precedent this will set. I would not want my name listed as a supporter of such a heinous action. Please reject it in its entirety as it is currently proposed. There MUST BE A BETTER WAY!

Best regards,

Kraemer Winslow

Kraemer Winslow

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From: [Harmon Shragge](#)
To: Energy@Coastal
Cc: [Pete Warzybok](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 9:03:28 PM

To Whom This May Concern:

My name is Harmon Shragge and I am a skipper for Point Blue's Farallon Patrol. I have logged well over 30 trips to the island and back.

I would like to voice strong support for mouse eradication project on the island. Having worked with Point Blue for many years, I have the utmost confidence that they can carry out the task at hand in the most sensitive and professional way possible.

Please feel free to contact me for more information if you wish.

Thank you so much,

Harmon Shragge
415-244-8050

From: [Janis Dolphin](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, July 03, 2019 9:06:58 PM

Dear Commissioner:

It doesn't take an advanced degree in biological science to understand the perils of the plan proposed by the US Fish and Wildlife Service to drop anti-coagulant pellets to control mice in the Greater Farallones National Marine Sanctuary. I personally view this plan as a political stick in the eye to the residents of California by our current administration and an environmental abomination in the making. The inevitable bio-accumulation of toxins in the food chain threatens all organisms, large and small, who will feed on the dying mice. Anti-coagulants do not kill quickly and they cause the affected animals to be more vulnerable as prey as they are dying so many if not most of the poisoned mice will be consumed by both invertebrates and avian and mammalian scavengers who will themselves be poisoned in the process. Our area has been thrilled to watch the recent appearance and growth in the bald eagle population. Bald eagles are opportunistic scavengers and it's a cruel irony that the iconic symbol of our country could end up being a victim of this ill-considered plan. I am writing to request that you reject the pending request for a consistency determination on item W14a. This plan would be scientifically reprehensible anywhere, but the fact that the proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary makes the whole idea that much more egregious. As a constituent of the California Coastal Commission, as someone who resides in the official Coastal Zone, and as someone who cares deeply about the fragile environment of the Greater Farallones National Marine Sanctuary, I beg you to deny the requested consistency finding for item W14a.

Thank you very much.

Janis Dolphin
45851 Iversen Road
Gualala, CA 95445

From: Carl_Dan@Coastal
To: Delaplaine_Mark@Coastal; Simon_Larry@Coastal
Subject: Fwd: W14a
Date: Thursday, July 04, 2019 7:33:16 AM

From: Mike McKinney <mikewrite1@verizon.net>

Sent: Thursday, July 4, 2019 3:41:10 AM

To: Carl, Dan@Coastal

Subject: W14a

Dear Mr. Carl,

As a constituent, I am writing to request that you help reject the pending request for a determination on item 14a, the US Fish and Wildlife Service poison dispersal plan for the Farallones Islands. This plan depends on the kind of persistent food-chain poisons that are already banned from National Marine Sanctuary around the Farallones. What's more, sanctuary regulations even ban pollutants that can enter and injure sanctuary inhabitants from *outside* the sanctuary boundary.

Responsible stewardship of California's Coast deserves a different approach. Please help defeat a plan that fails on its merits and would set a legal precedent .

Sincerely
Michael McKinney
65 Santa Maria Drive
Novato, CA 94947

From: [Richard Grimmett](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19, eradication of House Mouse from the Southern Farallon Islands
Date: Thursday, July 04, 2019 8:32:39 AM
Attachments: [image015.png](#)
[BirdLife support for house mouse eradication from Southern Farallon Islands.pdf](#)

Please find attached our letter of support for the eradication of House Mouse from the Southern Farallon Islands

Richard Grimmett
Director of Conservation



BirdLife International | The David Attenborough Building | Pembroke Street | Cambridge | CB2 3QZ | UK
Direct Dial +44 (0) 1223 747548 **Fax** +44 (0)1223 281441
Email richard.grimmett@birdlife.org **Skype** Richard.grimmett **Web** www.birdlife.org



Please consider biodiversity and the environment before deciding whether to print this message and any attachments.

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The BirdLife International Partnership is a Partnership of over 110 conservation organizations around the world. BirdLife International the Secretariat to the Partnership is a UK registered company no. 2985746, registered Charity no. 1042125, registered address: David Attenborough Building, Pembroke Street, Cambridge, CB2 3QZ, UK. BirdLife International Secretariat Regional Offices: Amman, Brussels, Nairobi, Quito, Suva, Singapore, Tokyo.

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
4th July 2019

Dear Commissioners,

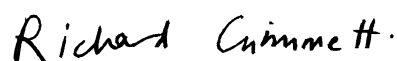
RE: Southern Farallon Islands Mouse Eradication

BirdLife International strongly supports the proposal to eradicate the house mouse from the Southern Farallon Islands. As you will be aware, the islands are internationally important for 50% of the world population of Ashy Storm Petrel and at least four other globally important marine bird populations. Studies have established that the invasive house mouse has a direct and indirect impact on native island fauna and flora particularly small ground nesting seabirds including storm petrels and well as on salamanders, reptiles, invertebrates and plants that occur within the Wildlife Refuge.

The use of rodenticides and specifically second-generation anticoagulants like Brodifacoum are effective and indeed necessary for the successful (100%) removal of a house mouse population. BirdLife has successfully removed rodents from 40 Pacific Islands (and many more worldwide) using aerial, hand broadcast and bait station techniques. Best practice is now well established, and is routinely delivering a high rate of success including the safe management of non-target species and human health. The approach and precautionary needs set out for the Farallon Islands in the *Final Environmental Impact Statement* (FEIS) is consistent with best practise.

Monitoring following rodent eradication operations in the Pacific has shown increases in seabird and land bird populations and wider ecosystem benefits. It is our experience that the operation proposed for the Farallon Islands will have significant benefits for biodiversity and the resilience of island ecosystems and we wish the proponents success with this venture.

Yours sincerely



Richard Grimmett, Director for Conservation

From: [Gerald Meral](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 8:44:56 AM

Dear Coastal Commission

Our organization supports the Fish and Wildlife Service proposal to use a rodenticide to eliminate mice from the Farallon Islands. This is the only way to get rid of the mice, and it is vital for seabird conservation. This is proven conservation science and technology, and must be used to protect our seabirds. Please approve this USFWS proposal.

Thanks for considering this message.

--

Jerry Meral, Ph.D.
Director
California Water Program
Natural Heritage Institute

jerrymeral@gmail.com
415-717-8412

From: [Sandy Greene](#)
To: Energy@Coastal
Subject: Poison Free Sanctuary Letter
Date: Thursday, July 04, 2019 9:30:05 AM
Attachments: [Poison Free Sanctuary 1.pdf](#)



Poison Free Sanctuary

Dear Commissioner:

We, Tri County Wildlife Care, are writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As permitted wildlife rescuers and caregivers, we see first-hand the devastation this type of activity brings to generations of wild animals. We must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Sandra Greene, President

Tri County Wildlife Care
P.O. Box 367
Jackson, CA 95642

From: [barbara.coler](mailto:barbara.coler@coastalenergy.com)
To: Energy@Coastal
Subject: RE: W14a – US Fish and Wildlife Service Proposed Plan for Rodenticide Dispersal at the Farallones Islands
Date: Thursday, July 04, 2019 9:40:54 AM

Dear Members of the California Coastal Commission:

RE: W14a – US Fish and Wildlife Service Proposed Plan for Rodenticide Dispersal at the Farallones Islands

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service rodenticide dispersal plan. I am concerned that this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

Along with serving as the current Mayor of the Town of Fairfax, CA, I am an environmental scientist with decades of working to preserve our ecosystems. I served as lead negotiator for the State of California for the Montrose site with the DDT dischargers, among other things I led the natural resources damages settlement with these same DDT dischargers for \$73 million, to attempt to “right the wrongs” on the environment – mainly for bald eagles and the endangered gray foxes on islands adjacent to the Continental Shelf. This project impressed on me the significant danger and deleterious effects of pesticide applications on the coast, not just with the marine environment but terrestrial fauna in particular. The Greater Farrallones is a delicate ecosystem --- we cannot afford to risk another environmental disaster.

Please vote “no” on this proposal by rejecting consistency for item W14a.

Thank you for your consideration. If you have questions, please contact me at (415) 450-7860 or at barbaracoler@gmail.com.

Sincerely,

Barbara Coler
14 Ace Court
Fairfax, CA, 94930

Barbara Coler, Mayor
Town of Fairfax

The opinions expressed in this email are those of this individual Council Member and are not representative of the entire Council or Town of Fairfax unless otherwise stated.

From: [Mary Fraser](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, July 04, 2019 9:53:31 AM

July 4, 2019

Dear Commissioners,

I find it astounding that the US Fish and Wildlife Service is advocating for the use of second-generation rodent bait in the National Marine Sanctuary. Do they not understand basic ecosystem science? This bait drop of 1.5 tons has the potential to disrupt animal life throughout the ecosystem and poses a hazard to fishing, eagles and other birds within the Bay Area. Must we poison multiple species in order to control one species, the burrowing owl?

So, I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. Uphold the Sanctuary regulations!

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Mary Fraser
110 Seminary Drive, Apt 2A
Mill Valley, CA 94941

Sent from [Mail](#) for Windows 10



Virus-free. www.avg.com

From: [charlie](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 10:34:16 AM

get rid of non-native mice on the Farrallones. don't let pseudo science or people who don't understand nature interfere. It worked for the island fox recovery. Charles Fisher. prof. emeritus, Brandeis Univ. author of Bhudda's Way Through Darwin's World.

From: [Peter Adams](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 11:41:55 AM

To Whom It May Concern:

I am writing a letter in support of the Fish and Wildlife eradication of the house mouse on the Farallon Islands. The Farallon Islands are an unique ecosystem that has a widespread impact on the California Current as seabird breeding grounds and as well as the trickle-down impacts on the overall ecosystem. The Fish and Wildlife plan is well thought out and is the best possible approach. The damage of invasive species are well documents; silversides in Clear Lake, mongooses into Hawaii, and on and on. It is important that this plan be executed as soon as possible. Everything needs to be done to avoid the potential damage of house mice to the Fallon Island needs.

Peter Adams PhD
Adams Fisheries Consulting
544 Mariano Dr.
Sonoma, CA 95476

Sent from [Mail](#) for Windows 10

From: [John Gaffin](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 12:43:05 PM

Dear Commissioners,

As you have been informed, there are many reasons to allow the USFWS to go forward with 100% eradication of house mice in the Farallones. The EIS is comprehensive and clearly identifies the Preferred Alternative, which I urge you to approve.

Sincerely,
John Gaffin
Fortuna, CA 95540

From: [Michael Mecham](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 1:33:21 PM

July 4, 2019

Dear California Coastal Commission,

As a member of Point Blue Conservation Science, I am writing to ask that the Coastal Commission support the U.S. Fish and Wildlife Service's plan to eradicate the house mouse from the Farallon Islands.

There's a bit of irony in my support for wiping out a mouse. I'm a volunteer at the Hamilton Wetlands/Bel Marin Keys restoration project that is trying to restore seasonal and tidal wetlands specifically to benefit wildlife like the endangered salt marsh harvest mouse. The obvious difference is that the salt marsh mouse is a native species of the San Francisco Bay while the house mouse is a voracious invasive species that does not belong on the Farallones.

As a student of California history, I'm well aware how egg robbers eager to feed Gold Rush miners upset the natural cycle of the Farallones by collecting tens of thousands of eggs from nesting shorebirds. It is likely that the first house mice reached the islands by jumping ship during these egg raids. The result is that instead of being home to a million or more breeding shorebirds the islands now support a third that number. One of the 13 breeding bird species hardest hit by house mice predation is the endangered Ashy Storm-petrel, but other island residents — the uncommon Burrowing Owl and Farallon camel cricket among them — also are at risk.

I know how difficult it is to eradicate invasive species. At Hamilton Wetlands we target invasive plants that crowd out the beneficial natives that are essential for a healthy shoreline. Slowly but surely the natives we plant, such as the pickle weed that is home to the salt marsh harvest mouse, are taking root and the wetlands are welcoming greater numbers of native birds, fish and mammals. All it takes is planning and persistence. And money.

Invaders like the house mouse can be eradicated; they already have been from some 60 islands worldwide. It is time to add the Farallon Islands to that list. I join Point Blue, the stewards of this important wildlife sanctuary, in asking for the Coastal Commission's support of the Fish and Wildlife Service's plan to rid the Farallones of the house mouse.

It's a mouse in the wrong place.

Respectfully,

Mike Mecham,
18001 Harvard Ct.,
Sonoma, CA 95476

From: [David Wimpfheimer](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 3:17:14 PM

Dear Sirs,

This letter represents my support for the “preferred alternative” - an aerial broadcast of the rodenticide Brodifacoum, identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.

The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ashy storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.

- The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly.

I am a bird biologist and naturalist and am very familiar with this issue. For the last thirty years I have been leading natural history trips in the Gulf of the Farallons Marine Sanctuary. I am well aware how the natural predator prey relationship has been out of balance for sometime.

I have traveled to New Zealand and the Channel Islands where rodenticides have been used successfully to eliminate non native rodents that were severely impacting the nesting success of many seabirds. After using the poison native species are breeding much more successful and it seems like there has been minimal impacts to other wildlife on the islands.

Although there are some risks in using the poison here I feel that the need to correct a significant imbalance outweighs those risks. That is why I am in favor of using Brodifacoum at Southeast Farallon Island.

I am in favor of the preferred alternative because:

-
- - The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.
-
- - Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.
-
- - The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

Thank you for registering my position on the proposed action.

Sincerely

David Wimpfheimer

From: [Ivan Samuels](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 4:07:33 PM

To whom it may concern:

I am writing in support of the preferred alternative to use aerial broadcast of Brodifacoum to eradicate the invasive exotic house mouse from Southeast Farallon Island.

I have personally worked on the Farallon Islands and witnessed first hand the impact of mice there. I also serve on the board of directors of Island Conservation, and have seen many examples of successful eradication of introduced exotic predators and herbivores from insular environments, and the profound recovery that is possible when these species are removed. Removal of mice from the island would also be a benefit to the health and hygiene of the biologists that work on the island, as the mice infest the houses where people live.

Ongoing control through trapping will not yield meaningful results. Furthermore, inaction could lead to new problems associated with the mice that are hard to predict. For example, introduced mice on the island of Midway, NW Hawaiian chain, are now attacking both adult and juvenile Albatrosses on the nest.

Overall I am opposed to the use of anticoagulant baits on the mainland, as these poisons end up in the food chain, threatening raptors and other predators. But they are used in an on-going manner in those systems. Project implementation on SE Farallon Island would indeed require a substantial bait application, but if successful it would not need to be repeated. The lack of public access and lack of a dock for boats there helps ensure biosecurity, i.e. reduces the chance of re-invasion.

The risk of non-target mortality should be taken seriously in the project design and implementation. Nobody wants to see dead Western Gulls - the most likely non-target species that could attempt to eat the bait. However, a small amount of non-target mortality should be expected, and it's important to keep in mind the long-term benefit to the island's wildlife exceeds the short term effects of the bait.

Sincerely,

Ivan Samuels

Ivan Samuels, Executive Director
March Conservation Fund
1016 Lincoln Blvd., Mailbox #1
San Francisco, CA 94129 USA
415-290-5779
ivan@marchconservationfund.org
www.marchconservationfund.org

From: [Kate Harrison Solana](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, July 04, 2019 6:00:29 PM

Dear Commissioner,

I have never written a letter to my government before. I'm a truly lazy person (who will amazon prime almost anything to avoid leaving the house) and fact that I feel compelled to comment on something that goes against all common sense is so disheartening to me. I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. I don't want to have to explain to my kids why our generation destroyed and poisoned the wildlife off the coast of our beautiful city. Please deny the requested consistency finding for item W14a.

Thank you very much.

Kate Harrison Solana

36 Sidney Street, Mill Valley

Sent from my iPhone

From: [Anne Libbin](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 6:21:30 PM

I support the proposed eradication of the introduced, invasive mice, based on the thorough scientific analysis in the EIA report. Protecting the island ecosystem requires the complete eradication, and will improve the degraded habitat for important native species.

Anne Libbin
Tiburon, CA

--

Sent from Gmail Mobile

From: [Gerry Robertson](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, July 04, 2019 6:31:55 PM

Dear Commissioner:

You can not be serious! Absolutely abandon this foolish and ill conceived plan to drop poison on our protected and vital farallon islands.

You can not be serious!!!

Gerry Robertson

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Name

Address

Sent from my iPhone



Gerry Robertson
Captain - Owner

Mobile: [415-720-7935](tel:415-720-7935)
Reservations: [415-332-3291](tel:415-332-3291)
EmpressEvents.com

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From: [Elizabeth](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, July 04, 2019 7:05:40 PM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. This course of action would be inconsistent with your charge as it will only cause more harm than good. Do what's right. Don't do it. Thank you very much.

Elizabeth Tosaris
Marin County resident

Sent from my iPhone

From: [Brad Pace](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, July 04, 2019 7:05:56 PM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

This idea is idiotic and has no logical basis in reality on how to address this problem. People like yourself hold the incredible power to potentially release this poison into our ecosystem OR prevent such a travesty from occurring, preserving our oceans and, ultimately, our environment that we cherish in California. It is incumbent on you to closely scrutinize and action such as the one proposed. I, and my 2 children, fish in those waters and regularly swim at the beaches nearby (Stinson, Dillion, and Pt. Reyes) Please do not allow this plan to take place, we beg you.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Bradley Pace
70 Kite Hill Lane
Mill Valley, CA 94941

From: [Doug Nelson](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 8:20:06 PM

I am writing to express my support for the proposed project to eradicate the non-native mouse on the Farallone Islands. I hope you will support this important wildlife conservation effort.

There has been much misinformation spread about this but I would primarily note the strong support for this project by the independent conservation organization Point Blue.

Thank you,
Douglas Nelson
Mill Valley, CA

Sent from my iPad

From: [Dominique Richard](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Thursday, July 04, 2019 8:37:27 PM
Attachments: [Comments to CCC on Farallones Mice eradication.docx](#)

Thank you for the opportunity to comment.

--

De Minimis cura!

Dominique M. Richard, Ph.D.
PO Box 863
215 Via de la Vista
Inverness, CA 94937
P: 415-669-7500, C:415-250-5618

To whom it may concern:

Clearly, the intent of the mouse eradication project proposed by the US Fish and Wildlife Services (USFWS) seeks to restore the ecological balance of the South Farallones Island; the Final Environmental Impact Statement (FEIS) published in this regard is well documented, as underscored by the California Coastal Commission (CCC) staff report. However, the method suggested to achieve this goal remains contestable in its design, justification and implementation.

Design:

Brodifacoum is a highly lethal anticoagulant that adversely affects a large fraction of the domestic and wild animal life. Currently, the California State legislature is considering banning its use. Furthermore, the claim that this project “only” uses 1.16 oz. of rodenticide dispensed in 1.45 tons of a benign cereal-like grain bait (a trivializing argument reminiscent of DDT “benefits”) only underscores its extreme toxicity. Indeed, this seemingly small amount should kill ALL the mice on the Island, a *sine qua non* requirement for the project.

Justification:

Moreover, although the proposed eradication method seeks to minimize collateral damage by hazing the Western Gulls, it still expects more than 1,700 of them to succumb to secondary poisoning, a number casually dismissed as negligible collateral damage because the species is abundant. This tolerance also does not take into account the potential public relations nightmare which may derive from this hecatomb when the gull’s carcasses will scatter on the highly touristic waterfront of San Francisco, an event that may taint the reputation of the conservation effort the Greater Farallones National Marine Sanctuary promotes.

Unfortunately, the FEIS also fails to address the full range of the eradication aftermath since no mention is made regarding the future fate of the Burrowing owls, the initial source of the threat to the Ashy Storm petrel. Indeed, the full eradication of the mice does not preclude a behavioral change in the Burrowing owl, which may, instead of disappearing, turn to predation of the Ashy storm petrel earlier and thereby create more damage to this threatened population.

Implementation:

The ruggedness of the targeted environment requires heavy logistics using aerial dispersal from helicopters deployed from shore to the island. This will require low overflight in the waters of the Greater Farallones National Marine Sanctuary and therefore dictate requirements from permits from the Sanctuary and possibly other local, state and federal agencies to proceed.

In conclusion, in line with the precautionary principle, I recommend that the CCC support the no-action alternative at this time and demand that USDFW develop alternate methods to be proposed as substitute for the two chemical solutions described in the FEIS. Such a CCC recommendation would also set a precedent, which in the long term, could help develop less lethal mice eradication protocols and, in the short term, limit the deployment of the 292 future rodent eradications planned worldwide by Island Conservation, the contractor hired to execute the Farallones mouse eradication project.

Dominique M. Richard, Ph.D. Member of the Environmental Action Committee of west Marin (EAC)

From: [Elias Elias](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 9:08:23 PM

To whom it may concern,

I support the eradication of the invasive house mouse on the Farallon Islands. It would help restore a natural balance to the ecosystems. The proposed techniques have been successful on other islands throughout the world. Since more than a few seabirds evolved on islands without mammalian predators and those seabirds often lack the defenses needed to protect themselves from mammalian assaults, it is incumbent upon us to fix the wrong inflicted on the ecosystem. Seabirds perform ecosystem services that we have only begun to realize.

Please vote to allow the United States Fish and Wildlife Service to exterminate the invasive house mice of South Farallon Island.

Elias Elias
141 G Street
Arcata CA 95521
559-433-7254

From: [Phil Capitolo](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Thursday, July 04, 2019 11:53:59 PM

To Whom it May Concern,

I write this holiday evening to express my support for the proposed eradication of invasive, non-native house mice from the South Farallon Islands. I am a seabird biologist who specializes in aerial photographic surveys of surface-nesting seabirds – gulls and cormorants and murrelets and the like. The surveys track breeding population sizes over time. I also have had the good fortune to have lived nearly a year of my life on Southeast Farallon Island as a volunteer during 14 consecutive falls.

Great strides have been made in the conservation of our local marine environment over the last 50 years, too numerous to try to describe here, but see this recent essay as an example:
<https://baynature.org/2019/06/14/how-people-saved-the-seabirds-of-the-california-current/>

At the South Farallones, introduced cats and rabbits were removed, researcher numbers and movements are strictly limited, and even our aerial surveys are conducted only under special permit. Eradicating the introduced house mice would seem a natural continuation of the myriad conservation efforts in our Gulf of the Farallones environment since the 1970s.

I won't go into detail on why mice should be eradicated (restoration of seabird populations and native plant communities, etc., as well as simply restoring the island ecosystem more closely to its natural functioning before human impacts). I'll let the EIS and other testimonials speak to that. And not that outcomes are certain, of course – such is science. But see the above link that much good can happen when we put our heads together.

I'd rather just offer a brief perspective on the mortality of mice and non-target animals, as I suspect that's the primary basis of resistance to such eradications. Perhaps there are some unknown impacts? Brodifacoum in the soil? On the skin of salamanders? A small amount might enter the ocean. But are these reasons to not eradicate the mice? Is not the dying of animals the main objection of some to the proposed eradication? A valid concern, to be sure. Why should we decide that these mice must die? Why should we decide that they must die from internal bleeding?

I won't do justice to these topics in an e-mail w. a deadline, but for me I suppose it comes down to restoration. Reducing the past and present impacts of humans on other taxa and ecosystems. Mice would die from brodifacoum in this case, rather than from predation or some other factor, as they currently do. Some gulls will die too, maybe 100s to low 1000s. Some landbirds or other animals might die too. But not at levels to have impacts on population sustainability. Furthermore, the mortality would be in the short-term, while mice impacts are centuries old and counting.

As for brodifacoum, I don't think it should be on store shelves for public use, and I urge neighbors not to use poison traps, but that should not preclude its use for island restorations.

And some gulls might end up dying on the mainland too, to be seen by the public, I think was a con argument I read somewhere. But I think such public exposure wouldn't necessarily be bad. It would

be an opportunity to explain why it is happening. To explain human impacts on flora and fauna. Restoration. Population dynamics. Really, topics to which everyone should be exposed beginning at a young age, I think.

So that's my holiday take, up against a deadline. It isn't perfect. Nothing is. But I think eradicating mice from the South Farallones is the right thing to do.

Sincerely,

Phil Capitolo

Institute of Marine Sciences

UC Santa Cruz

From: [Mike Parker](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 9:37:44 PM
Attachments: [CA Coastal Commision July 2019 Agenda Item Wednesday 14a CD – 0002 – 19.pdf](#)

Public comment letter below and attached as pdf. Thank you.

July 3, 2109

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

California Coastal Commission Members:

I am writing on behalf of the California Institute of Environmental Studies (CIES) in support of the U.S. Fish and Wildlife Service's project to eradicate introduce, invasive house mice at the Farallon National Wildlife Refuge. CIES is a nonprofit organization with over 40-years' experience studying and implementing conservation actions for seabirds in California. We ask the Commission to agree with their staff's recommendation and concur with the Service's consistency determination (CD-0002-19).

This eradication project was carefully studied for over 10-years and as a result, it is well designed selecting a "preferred alternative" that uses the only known method proven effective for eradication of rodents on islands. The implementation of this project will help restore and improve ecosystem functions within the environmentally sensitive habitat at the Farallones, once 100% of the house mice have been eliminated. The eradication of the house mouse population will have benefits to many native species utilizing these islands. We would like to highlight the importance of this project to one rare seabird species, the ashy storm-petrel. Our organization has been actively involved in studying and researching this species in California and Baja California for well over a decade. In September 2016, we spearheaded an effort, with input from the World's leading ashy storm-petrel experts, to develop a Conservation Action Plan for this species that included conservation objectives and actions most important to help ensure the long-term viability of the ashy storm-petrel. The U.S. Fish and Wildlife Service's mouse eradication project was ranked as the most important project to be implemented for this species. The U.S. Fish and Wildlife Service and Point Blue Conservation Science have done an exceptional job of detailing the negative impacts that the house mouse population has had on the ashy storm-petrel populations at the South Farallon Islands. Eliminating the house mouse population will have significant benefits for the declining breeding population of ashy storm-petrels. This is particularly important because roughly 55-60% of all breeding ashy storm-petrels nest at the Farallon Islands.

Finally, CIES has documented the benefits that introduced rodent eradication projects can have on seabird populations. We carefully monitored and documented the recovery of the rare Scripps's murrelet population at Anacapa Island after black rats were eradication from this island. In approximately 10 years post rat eradication, murrelet nests numbers increased 4.45 times and counts of murrelets increased approximately 3.8 times at Anacapa Island. This type of success has

been documented by others around the world with land managers eradicating house mouse populations from over 60 islands using the techniques being proposed for the South Farallon Islands. We suspect that the ashy storm-petrel population at the South Farallon Islands will respond in a similar manner after the house eradication is completed.

Thank you for the opportunity to provide comments on this important ecological restoration action. We trust that the California Coastal Commission will understand the long-term benefits of this project and concur with the U.S. Fish and Wildlife Service's consistency determination (CD-0002-19).

Sincerely,

Michael Parker
Executive Director

--

Michael Parker
Executive Director

From: [ACAP Secretariat \(ACAP\)](#)
To: Energy@Coastal
Cc: [Misiak, Wiesława \(ACAP\)](#); [Bogle, Christine \(ACAP\)](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 1:10:52 AM
Attachments: [Letter of Support Farallon Islands 2019.pdf](#)

Good morning

I would be grateful if the attached letter could be considered by the Commission.

Kind Regards

Christine Bogle

Executive Secretary I Agreement on the Conservation of Albatrosses and Petrels (ACAP)

Level 2, 119 Macquarie Street, Hobart 7000, Tasmania, Australia

Office: +61 3 6165 6674 | Mobile: +61 (0) 419 135 806

christine.bogle@acap.aq | www.acap.aq

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Agreement on the Conservation
of Albatrosses and Petrels

4 July 2019

TO: California Coastal Commission

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19 (South Farallon Islands Mouse Eradication Project)

Dear Sir/Madam

I am writing to you regarding a proposal currently before the Commission to eradicate invasive house mice from the South Farallon Islands.

The Agreement on the Conservation of Albatrosses and Petrels (ACAP) welcomes pest eradication programmes that protect seabirds and restore natural ecosystem processes at their breeding sites. ACAP is a multilateral agreement which seeks to conserve albatrosses and petrels by coordinating international activity to mitigate known threats to their populations. ACAP currently covers 31 species of albatrosses, petrels and shearwaters. Predation and habitat degradation by introduced vertebrates are the main threats facing these and other seabird species at their breeding sites. Each eradication project adds to our knowledge of best practice in mitigating these threats and to effective seabird conservation.

The last several years in particular have seen successful, often multi-species, eradication programmes from large and topographically challenging islands. We hear about many of these projects first hand at the annual meetings of the Agreement. Most recently (in May this year), at the Advisory Committee and associated Working Group meetings, Australia delivered news of the Lord Howe Island Rodent Eradication Project, now underway at an inhabited World Heritage Area in the Pacific. Plans for house mouse eradications on subantarctic Marion Island, Auckland Island and Gough Island are also progressing.

It is very encouraging to see resources being dedicated to programmes such as the South Farallon Islands Mouse Eradication Project, including a comprehensive and scientifically rigorous Final Environmental Impact Statement so that best practices learned from successful invasive rodent eradications on nearly 700 islands worldwide can be followed. The international seabird conservation community will also look forward to the outcomes of this project.

Yours sincerely,

A handwritten signature in cursive script that reads "Christine Bogle". The signature is written in a dark ink and is positioned above the printed name and title.

Christine Bogle
Executive Secretary
Agreement on the Conservation of Albatrosses and Petrels

From: [Mason Willrich](#)
To: Energy@Coastal
Subject: See attached
Date: Thursday, July 04, 2019 4:59:19 PM
Attachments: [CCC-Comments-July meeting.docx](#)

Mason Willrich
38 Dudley Court
Piedmont, CA 94611
t: 510.547.3752; e: willrichmason@gmail.com

To: California Coastal Commission

From: Mason Willrich
38 Dudley Court
Piedmont, CA 94611

Subject: Comment re: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

- The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ashy storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.
- The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly.
- At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.
- The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.
- Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

From: [Matthew L Brady](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19 comments
Date: Friday, July 05, 2019 8:55:31 AM

I would like to take this opportunity to voice my full and complete support for the mouse eradication plan on Southeast Farallon Island put forward by USFWS. I have spent a total of eight months on Southeast Farallon Island as a volunteer for Point Blue Conservation Science and I have seen first-hand the impact that the invasive, non-native house mouse population has on the island and its native wildlife. The direct and indirect effects that these destructive aliens have on this sensitive and unique native ecosystem is profound. Southeast Farallon Island is home to the world's most important breeding colony of Ashy Storm-Petrel, the species that will benefit the most from mouse eradication efforts. The plan that the USFWS has laid out has worked on over 50 other islands with invasive house mouse populations, many of which are much larger and topographically more complex than Southeast Farallon Island. After reading the report, I have no reason to believe that the USFWS plan will not work here as well. The negative effects, while serious, are temporary, but the potential positive impacts of removing house mouse populations from Southeast Farallon Island will be profound and permanent. This is a critical opportunity to really make a positive change in one of the most important seabird breeding colonies in the Lower 48 states, and one of the most special islands in the world. Eradicating the mice from Southeast Farallon Island is an absolutely critical mission, and one I implore the California Coastal Commission to endorse.

Thank you,

Matt Brady

--

Matthew L. Brady
PhD Student, Sheldon Lab
LSU Museum of Natural Science | Dept. of Biological Sciences
Louisiana State University
Baton Rouge, LA 70803
<http://www.museum.lsu.edu/>

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From: [Dawn](#)
To: Energy@Coastal
Subject: Re: CD-0002-19
Date: Friday, July 05, 2019 9:09:19 AM

I withdraw my earlier comments having reviewed the project done on Anacapa Island.

Thanks,
Dawn Williamson

> On Jul 4, 2019, at 6:46 PM, Dawn <soxdawn@yahoo.com> wrote:

>

> Dear Commissioner:

>

> I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

>

> It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

>

> Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

>

> Thank you very much.

>

> Dawn Williamson

>

> 121 Mariner Green Ct

> Corte Madera CA

>

>

From: [Dorothy Kraus](#)
To: Energy@Coastal
Subject: W 14a - Deny Poison Bait Drop on Farallon Islands
Date: Friday, July 05, 2019 9:26:21 AM

Dear Chair Bochco and Commissioners,

We respectfully request that you please do your job by protecting the natural resources that you as an agency are deemed to protect and deny a finding of consistency to the proposed helicopter dispersal of a highly-toxic and systemic poison on the Farallon Islands.

Thank you so much.

Sincerely,

*Dorothy & Michael Kraus
10 Wild Goose Court
Newport Beach, CA 92663*

From: [Genevieve Mount](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 9:38:36 AM

To whom it may concern,

It has come to my attention that attempts at a mouse eradication on the Farallon Islands may not succeed due to negative opinions on such conservation efforts.

I STRONGLY support any and all eradication of invasive species, especially on islands that harbor endemic species.

Complete removal of ALL invasive mice is crucial. I have participated in removal of invasive species, and lethal removal of any animal is not pleasant. However, I do not regret any of my work, and I support all and any efforts to remove invasive animals in order to avoid extinction, especially when multiple species are endangered. Although an aerial broadcast of the rodenticide Brodifacoum may sound extreme, it is the only known way to save the current endemic species on the Farallons that are threatened by the invasive mice.

I was an intern for Island Conservation in Santa Cruz, CA, and learned about their very successful eradication efforts on multiple islands. I learned about plants that had been presumed extinct. When invasive mammals were eradicated from the island, the plants re-emerged from the seed bank, and were no longer extinct. Eradication of invasive mammals on islands has been repeatedly proven as a way to avoid local and endemic extinctions.

I hope that the eradication on the Farallons continues as planned. It is encouraging to hear that there is support for the local wildlife and that they may have a chance to recover their natural environment going forward.

Thank you for your time,

Genevieve G. Mount
PhD Student, Jeremy Brown Lab and Chris Austin Lab
Department of Biological Science and Museum of Natural Sciences
Louisiana State University

Website: [Phyleaux website](#)
Twitter: [@Lizardeve](#)

Pronouns: She/her/they/them/he/him (no preference)

From: [Irene Hays](#)
To: Energy@Coastal
Subject: Letter for Coastal Commission July 10th Hearing- Agenda Item W14a
Date: Friday, July 05, 2019 9:47:20 AM
Attachments: [190705 CCC Ltr. Hopkins, Lynda.pdf](#)
[190415 EPA Ltr. in comment on USEWS FEIS.PDF](#)

Dear Chairman,

Please accept and include this letter and enclosure for the Coastal Commission meeting of July 10 (Item 14a on the agenda) from the office of Sonoma County Fifth District Supervisor, Lynda Hopkins.

Sincerely,
Irene Hays
District Five Administrative Aide
707-565-1595

COUNTY OF SONOMA
BOARD OF SUPERVISORS
575 ADMINISTRATION DRIVE, RM. 100A
SANTA ROSA, CALIFORNIA 95403



LYNDA HOPKINS
FIFTH DISTRICT SUPERVISOR
Lynda.Hopkins@Sonoma-County.org
(707) 565-2241

July 5, 2019

California Coastal Commission
Dayna Bochco
45 Fremont Street, Suite 2000
San Francisco, CA 94105
Sent via email: EORFC@coastal.ca.gov

RE: South Farallon Islands Invasive House Mouse Eradication Project

Dear Chair Bochco and Commissioners:

I am writing in regard to the U.S. Fish and Wildlife Service plan for the South Farallon Islands Invasive House Mouse Eradication Project, set to be considered by your commission on July 10th (Item 14a on the agenda).

The U.S. Fish and Wildlife Service (FWS) is proposing to eradicate introduced, invasive house mice from the South Farallon Islands within the Greater Farallones National Marine Sanctuary (Sanctuary) this fall. I understand that an aerial broadcast of the rodenticide Brodifacoum has been identified by the US Fish and Wildlife Service as the preferred alternative in the Final Environmental Impact Statement published in March 2019. I am concerned that the proposed strategy will pose significant risks to the Sanctuary and adjacent fragile coastal ecosystems and non-target species.

The proposed poisons are the subject of increased scientific scrutiny because of non-target wildlife disasters during similar airdrops on other island locations. I am also in receipt of an EPA Region IX letter which supports a well-planned restoration and cautions the considerable complexity of this project and the risks posed to non-target species including secondary human exposure. I am in support of the recommendations in the EPA's letter and I respectfully request that the recommendations be fully considered prior to approval of this complex and potentially perilous plan.

Thank you for your consideration of the health of California's ocean ecology.

Best regards,

Lynda Hopkins
Supervisor, Fifth District

Enclosure: EPA letter of April 15, 2019 in comment on the USFWS FEIS



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

April 15, 2019

Gerry McChesney, Refuge Manager
Farallon National Wildlife Refuge
9500 Thornton Ave.
Newark, CA 94560

Subject: Final Environmental Impact Statement (FEIS) for the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California (EIS No. 20190027)

Dear Mr. McChesney:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The U.S. Fish and Wildlife Service (FWS) proposes to eradicate non-native house mice from the South Farallon Islands off the coast of San Francisco using aerially broadcast rodenticide in an effort to restore the ecosystem. As a cooperating agency for the project, EPA provided scoping comments to the FWS on June 10, 2011, and well as early input on the alternatives selection report and the Administrative Draft Environmental Impact Statement (February 16, 2012 and February 5, 2013 respectively). EPA reviewed the Revised Draft Environmental Impact Statement (RDEIS) and provided extensive comments to the FWS on December 9, 2013. In that letter, we commented on the necessity for thorough planning and analysis of impact assessment, mitigation, and monitoring due to the complexity of the project. We also provided comments regarding the potential population level impacts to gulls and the effectiveness of the proposed gull hazing operation. In addition, we recommended an independent third-party post-project review to maximize lessons learned from this eradication effort.

EPA supports the concept of a well-planned restoration. We acknowledge that the FWS, the government agency with trust responsibility for managing wildlife within a national wildlife refuge, is responsible for determining the acceptability of nontarget mortalities versus benefits to vulnerable species. We note that the project can proceed utilizing existing registered rodenticides; however, should the project require application rates or other application parameters that are not allowed by existing product labels, FWS will have to work with the registrant of the product selected for use to submit an application to EPA's Office of Pesticide Programs for revised labeling. .

EPA continues to highlight the considerable complexity of this project over other recent island rodent eradications, due to mice being harder to eradicate than rats, and the indirect effect the mice have on the bird species targeted for the restoration - the ash and Leach's storm-petrels - by attracting burrowing owls that prey on them after mouse levels seasonally decline. Even in cases of direct impact by rodents,

predicting treatment effects has proven difficult and has sometimes resulted in more non-target mortality than expected. Changes to the FEIS indicate that the petrels are no longer the primary target for the restoration, but instead the goal is to eradicate mice to eliminate their impacts on the native ecosystem. The FEIS acknowledges the “imprecise knowledge of impacts of mice to resources” (p. 141) but states that there has been sufficient planning and consideration and that the project’s predicted effects are not overly optimistic as EPA had suggested (Appendix P, p. 68).

Following our review of the RDEIS, our main recommendations regarded the need for adequate planning to avoid the problems experienced in past failed rodent eradications, including contingency planning as a part of the adaptive management plan. We recommended disclosing specific mitigation and Best Management Practices (BMPs) that would be applied in the FEIS. The FEIS indicates that contingency plans are being developed, adaptive management and mitigation plans would be prepared should the project proceed, and the specific BMPs that would be applied will be identified in the Record of Decision. Other information, such as application of bait and carcass removal, would be contained in the Operational Plan that would be developed, and a detailed plan for monitoring of operational, mitigation, and ecosystem restoration objectives will be part of the Operational Plan, according to the FEIS. Much information is deferred to these plans. While the FEIS states that “The Service has committed to allow the operational team the opportunity to fully review the operational plan, ask questions, and suggest revisions prior to initiation”, we note that Recommendation #4 by the Ornithological Council, cited in the FEIS, recommends that project-related documents, including operational plans, be made available to the public (p. 22).

Recommendation: Since the Operational Plan will not be made public, we recommend that it be offered to other knowledgeable third-party experts, in addition to the operational team, for review prior to implementation.

The predicted success of the gull hazing plan remains at 90% (p. 161), the level necessary to avoid population-level effects to the Western Gull, the largest known colony of which exists in the South Farallon Islands (p. 157). In our comments on the DEIS, we questioned whether the predicted staff level of 10-12 people would be sufficient for gull hazing, given the hazing trial’s much smaller area and time period and the habituation that was observed. According Appendix P, p. 38 (response to comments), FWS confirmed that 10 personnel would be sufficient to handle all of the hazing duties for the duration of the project, and if additional hazing personnel are needed, the Service would be prepared to add hazing staff and haze for as much time as is necessary to minimize the numbers of gulls consuming rodenticide bait.

Recommendation: EPA recommends the FWS ensure sufficient funding is secured for additional hazing staff, as needed, prior to project implementation, and that this commitment be identified in the Record of Decision.

EPA’s comments on the RDEIS addressed carcass removal, which is a pesticide label requirement, and we requested that the FEIS include a commitment for monitoring of mainland beaches for gull carcasses and that public notification be extended to all segments of the public (in addition to boaters). We appreciate that FWS acknowledges that sickened or dead birds could show up on mainland beaches or other areas (Appendix P, p. 29), and that monitoring would occur via volunteers of the Sanctuary’s Beach Watch program. The FEIS states that public notices would be posted about the eradication project but doesn’t indicate where this will occur. Posting on websites is not sufficient to reach all potentially affected people.

Recommendations: EPA recommends the public notification include communications to media outlets as well as other organizations that utilize the beaches, such as the Surfrider Foundation, the Golden Gate National Parks Conservancy beach stewards, and dog recreational organizations such as SFDOG.

EPA's RDEIS comments recommended that the impact assessment include an analysis of risks in case the eradication is not successful, since house mouse eradications historically have had relatively high failure rates compared to rats¹ and the possibility exists that, should the effort fail, resources may have to withstand impacts from rodenticide along with the continued impacts from mice. The FEIS states that assessments of potential impacts assuming eradication failure is beyond the scope of the EIS, and that if the project proceeds, the FWS assumes that the eradication will be successful (Appendix P, p. 66).

Recommendations: We strongly suggest that FWS arrange for an independent third-party review of the project to maximize lessons learned. This occurred for projects that failed, such as Rat Island and Wake Island, but also for successful projects including Palmyra atoll. We request that FWS commit to and ensure funding for this independent post-project review in the Record of Decision.

EPA appreciates the opportunity to review the FEIS. We appreciate that FWS may consider collaborating with interested wildlife rehabilitation organizations, as we suggested, to care for wildlife impacted as a result of the Farallon mouse eradication project, if funds are available (Appendix P, p. 67). If you have any questions, please contact me at 415-947-4161, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,



Connell Dunning, Acting Manager
Environmental Review Section

¹ According to the FEIS, Table 2.2, just under 69% of mouse eradication attempts using Brodifacoum were successful

From: [Lauren Harter](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 9:48:24 AM

To whom it may concern:

I am writing today in support of the planned house mouse eradication program on Southeast Farallon Island.

Having worked with seabirds on a small coastal island, I have seen first-hand the extreme deleterious effects that a single individual mammalian predator can have on populations of storm-petrels and other breeding seabirds. I'm sure the Commission has very carefully considered the data from Point Blue Conservation Science showing the effects in this case of house mice on Ashy Storm-Petrels and other native flora and fauna of Southeast Farallon Island.

It is personally very important to me that we maintain a healthy and thriving ecosystem on the Pacific Coast, including robust seabird colonies. In my opinion, the maintenance of native species and habitats should be a high priority for the Commission, rather than allowing a non-native predator to persist to the detriment of our native wildlife and their habitats. I hope you will agree and choose to move forward with the house mouse eradication program.

Regards,
Lauren B. Harter

From: [Justyn Stahl](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 9:49:22 AM

Members of the Commission,

I write to you this morning to voice support for the proposed mouse eradication efforts on Southeast Farallon Island. As a conservation biologist working on an island (San Clemente Island), for 11+ years, I have seen the negative impacts of non-native species on bird populations. Islands are extremely susceptible to negative impacts from invasive species, yet, are often rather easy to recover. In this case, the fact that nearly 50% of the global population of Ashy Storm-petrels nests on Southeast Farallon Island makes this island an extremely valuable resource for biodiversity along the California coast.

Of course, I wish there was a viable alternative to broadcasting rodenticide on the island, and yes, there will likely be negative side effects, but these will be short-term. Without intervention, this important storm-petrel colony will be lost, and replacing it would be nearly impossible. The proposed techniques, supported by the USFWS, have worked time and time again throughout the world as a way to recover precious island ecosystems from rodent invasions. Please see through the misinformation being spread by animal rights advocates - their hearts may be in the right place, but they simply aren't seeing the bigger picture of maintaining biodiversity, not only in California but across the globe.

Sincerely,

Justyn T. Stahl, M.S.
Program Manager
San Clemente Loggerhead Shrike Recovery Program
Institute for Wildlife Studies

From: [Michelle Raine](#)
To: Energy@Coastal
Subject: Agenda Item W14a - Meeting July 10, 2019 San Luis Obispo
Date: Friday, July 05, 2019 9:56:12 AM

RE: Trump Administration's proposed helicopter dispersal of 1.5 tons of poison bait pellets in the Greater Farallones National Marine Sanctuary off of Marin and San Francisco this Fall

To the Coastal Commission:

This controversial poisoning plan by the US Fish and Wildlife Service was abandoned by the Obama Administration in 2013 as being too risky to the Sanctuary and a threat to adjacent fragile coastal ecosystems, while also posing unnecessary danger to non-target species, the poison drop proposal here has recently been revived by federal officials, who are now pushing the Coastal Commission to find their scheme to be "consistent" with California's Coastal Plan. The US Fish and Wildlife Service asserts that burrowing owls from Marin pose a threat to Ashy Storm Petrels, a seabird that frequents the islands, but the same agency has also declined petitions to list the Ashy Storm Petrel as at risk under the Endangered Species Act, noting that their population is on the increase. The Wildlife Service is now claiming that not one single poison pellet will reach the water and that killing every single one of the islands' house mice using a slow-acting poison, represents the only way to discourage the small number of burrowing owls (6-8) from being attracted from Marin's coastal headlands to feed on the mice. The poisons being proposed are the subject of increased scientific scrutiny because of non-target wildlife disasters during similar air drops on island locations elsewhere. The State of California has outlawed retail sale of the same toxic compounds due to the unintended damage they inflict on mountain lions, bobcats, an iconic mammal called the Pacific Fisher, and in terrestrial urban interface locations, the dangers they pose to pets and children. Legislation limiting their use is now moving through the California State Legislature. Some within the Wildlife Service admit that large numbers of gulls ingesting the poison pellets offshore during a helicopter drop this fall could return to die in mainland locations they frequent, such as at Fishermen's Wharf. Any accidental wind- or wave-borne discharges of the poison into the ocean pose a contamination hazard to fish, crabs, and abalone.

I have experienced first-hand the problem with these toxins when our County (Tuolumne) where I used to live used these same products to kill mice in the attic of the old courthouse. They later found five full grown owls dead in the attic from ingesting the dead mice. This is a horrible death and these toxic poisons should be outlawed.

Some regulations should not be ignored and are there for a good reason.

I will try to come to the hearing, but may not be able to make it, so please accept these comments for the hearing.

Thank you.

Michelle Raine
1310 Buena Vista Avenue
Pacific Grove, CA 93950

From: [Barbara](#)
To: [Energy@Coastal](#)
Subject: Comments on Farallon Islands Mice Eradication CD-0002-19
Date: Friday, July 05, 2019 10:01:38 AM
Attachments: [Farallon Is Mice Erad CCC comment.pdf](#)

Attached please find Marin Audubon Society's comment letter on the USFWS application for a consistency determination for the Mice Eradication project on the Farallon Islands

Thank you for passing it along to the Commission

Barbara Salzman,
President
Marin Audubon Society



Marin Audubon Society

P.O. Box 599 | MILL VALLEY, CA 94942-0599 | MARINAUDUBON.ORG

July 5, 2019

VIA EORFC@coastal.ca.gov
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105

RE: U.S. Fish and Wildlife Service South Farallon Islands invasive House Mice Eradication Project
Consistency Determination July 2019 Agenda Item Wednesday 14a CD-0002-19

Dear Commissioners:

This conveys the support of the Marin Audubon Society for the staff recommendation that the Commission concur with CD-0002-19 that the US Fish and Wildlife Service's project to eliminate non-native house mice from the Farallon Islands is fully consistent with the California Coastal Management Plan.

As the staff report makes clear, the Farallon Islands are critical and unique habitat. The islands support the largest seabird nesting colony in the contiguous U.S. with up to 350,000 individuals of 13 species, five species of marine mammals that rest and breed, many birds that stop to rest and feed during migration, and two endemic species. The diversity of species is unparalleled. But this diversity is at risk.

The current risk of losing several species of petrel is of grave concern. Helpless petrel chicks are being eaten in their nest burrows by hungry introduced house mice when other food runs low. The breeding population of petrels doesn't have much of a chance of surviving if the introduced house mice are not eliminated from the island. With 50% of the world's population of ash-storm petrels nesting on the islands, the entire population is at risk of a significant decline.

While no one likes to use chemical controls, there are some that oppose the use of chemicals for any reason. Marin Audubon has learned from our 70+ years of advocacy work and 20 years' experience owning and maintaining habitat (500 acres), that sometimes using chemicals under carefully controlled circumstances is the only method that will work to restore native habitats for native wildlife. Some situations are so dire, and pose such severe threats to species and the environment, that the judicious use of chemicals is the only recourse. Such is the case here.

Opponents of pesticide use point to problems that have occurred in several places where pesticides were used to eliminate pests. While it is unfortunate that there have been problems in other places, the Service has learned from the past failures. The Service has used the failures to inform this project by designing it to avoid the conditions that resulted in earlier problems. All of the 27 projects that used the

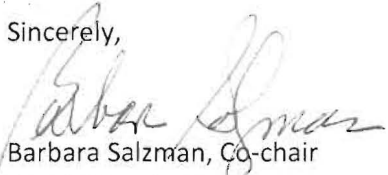
chemical proposed for use in this project (*Brodifacoum 25D Conservation*) or similar chemical in recent years, have successfully eradicated target rodents from habitats similar to the Farallone's.

We have reviewed the EIS and the staff report and are satisfied that comments have been responded to and that, in response to our concern, adequate measures to protect non-target species and the environment by minimizing and avoiding significant impacts are part of the project. Measures being proposed to protect non-target species include hazing to prevent birds from landing, timing to avoid nesting and other sensitive periods, and collecting carcasses and pellets that have not been broken down by the elements, in order to prevent other wildlife from feeding on them.

The project's potential for causing contamination and other environmental impacts have been minimized to the maximum extent possible and that the benefits of this limited and controlled use of *Brodifacoum 25D Conservation* far outweigh the risks. Please approve the consistency determination so that this untenable circumstance can be remedied as soon as possible.

Thank you for considering our input.

Sincerely,



Barbara Salzman, Co-chair
Conservation Committee



Phil Peterson, Co-chair
Conservation Committee

From: [jonnations](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 10:05:11 AM

Dear California Coastal Commission,

I wish to write you a letter in support of the SEFI Mouse Eradication Project. The Farallon Islands are not only a critical site for conservation issues, but are a beautiful part of our natural heritage as Americans. Unfortunately, as in much of the world, this site is in extreme trouble due to the ongoing slaughter of endemic species by invasive species. The only way for the Farallon ecosystem to completely recover is through the eradication of invasive house mice (***Mus musculus***) from the islands. These species pose a distinct threat to breeding colonies of shorebirds, as well as many native animals and plants. The destruction caused by invasive rodents around the world is real.

I am a PhD student studying the evolution and ecology of rodents in Southeast Asia. I have seen first hand the damage that invasive rodents can do to the native rodent fauna on these regions. However, there is a path to success, which has been outlined in the USFWS EIS statement released in March of 2019. This document clearly outlines a way to safely eliminate invasive rodents from these islands.

Invasive rodent eradication has been successful around the globe in locations such as the Galapagos islands and other islands in the Pacific. Best practices have been established, and the USFWS is aware and capable of working in this manner.

I hope that the commission can understand how eradication of invasive mice is critical to the life and health of the special Farallon ecosystem. I hope that the commission can understand and support these critical conservation efforts.

Sincerely,
Jonathan Nations

--

Jonathan A. Nations
PhD Candidate
[Esselstyn Lab](#)
[Museum of Natural Sciences](#)
Louisiana State University

From: [Peter White](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a C D 0002 19"
Date: Friday, July 05, 2019 10:09:10 AM

Dear California Coastal commission,

I'm writing to urge that the mouse eradication program on the Farallon Islands go forward. These islands provide important breeding and resting areas for a number of species of pinnipeds as well as seabirds. Over the years the wild things of the islands have been hard pressed by human activity. They have endured many forms of disturbance including hunting, egg gathering, pollution and other sorts of destructive human activity. Through the efforts of the US Fish and Wildlife Service and those that work with them, much of the damage caused by the hand of man has been reversed and the birds and the other original inhabitants have survived and to an extent populations have recovered. But there is still work to be done. The House Mouse is not native to the islands and it's presence degrades the island habitat and retards further recovery efforts. In my view the mouse's presence is an example of the worse kind of human pollution.

Who among us would tolerate an invasion of mice in our home?

Peter White

Former Farallon Volunteer

761 Condor Drive

Martinez, CA 94553

From: [Alec Shuldiner](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 2:57:06 AM

Concerning this agenda item, I write in favor of the proposal. That such extreme measures are required is testified to by Point Blue, and no one knows the area or the issues like they do.

Alec Shuldiner
Fairfax, CA

From: alison.neil@sght.org
To: Energy@Coastal
Subject: Letter of support for the proposed mouse eradication project on the Farallon Islands
Date: Thursday, July 04, 2019 1:26:27 AM
Attachments: [July 2019 Agenda Item Wednesday 14a CD - 0002 - 19 - SGHT.doc](#)

Dear Sir/Madam,

Please find attached a letter of support from the South Georgia Heritage Trust for the mouse eradication project on the Farallon Islands, to help save Ashy Storm-petrels.

Sincerely,
Alison

Alison Neil MBE

Chief Executive
South Georgia Heritage Trust
Verdant Works, West Henderson's Wynd, Dundee DD1 5BT
+44 (0) 1382 229792

From: [Bryant Bainbridge](#)
To: Energy@Coastal
Subject: Regarding your July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Wednesday, July 03, 2019 11:59:50 AM

Folks,

I am writing to express my strong support for the eradication of the house mouse on the Farallon Islands. As a visiting biologist in the 1970's I was shocked to find that the population was so dense that the native plants were completely denuded in the fall and that when I turned the light off at night to sleep, mice emerged from every corner of the house, running freely over every surface, including the bed I was sleeping in. It would be hard to imagine a population anywhere on earth that is more dense than this one. As one of the most important sites for breeding seabirds in the USA, this island and it's ecology must be protected. Eradicating these mice, which were introduced in the 19th century, is one of the most important steps we can take to accomplish that. I urge you to support eradicating this invasive species, as has been done on so many other important coastal islands around the world.

Thanks you for the time you have taken to consider this.

Regards,

Bryant Bainbridge

From: [Anna Schmitz](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Friday, July 05, 2019 10:30:45 AM

Dear Commissioner:

I am writing to object the current plan to use rat poison on the Farallones and beseech you to find an alternate, safer solution. The many objections site below could not be better stated.

Thank you for counting my voice in considering this problem, and a safer solution.

Anna Schmitz
415-609-5075
annaschmitz1@mac.com
165 Lark Lane
Mill Valley, CA 94941

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

From: [Donna L Dittmann](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 10:32:26 AM

5 July 2019

CALIFORNIA COASTAL COMMISSION, GAVIN NEWSOM, GOVERNOR
45 FREMONT STREET, SUITE 2000 SAN FRANCISCO, CA 94105-2219 VOICE (415) 904- 5200
FAX (415) 904-5400 TDD (415) 597-5885

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

Dear California Coastal Commission:

The introduced feral house mouse (*Mus mus*) population on the Farallones Islands National Wildlife Refuge should be removed=eradicated to protect the native wildlife, including the Ash-Storm-Petrel. Introduced pest *Mus* have direct and indirect harmful impacts on the islands' breeding seabirds, native salamanders, crickets and other invertebrates, as well as native plants. A recent report indicated that *Mus* densities can exceed 490 per acre at their annual peak and are among the highest recorded for any island in the world. This is outrageous. The USFWS 2008 Comprehensive Conservation Plan for the FINWR calls for the eradication of invasive house mice from the Islands and restoration of degraded habitat, the latter can not happen while *Mus* remain on the island.

The eradication project goals and objectives include 100% removal of *Mus*, *which will lead to restoration of native ecosystem functions, increased abundance of native vegetation, increased populations of certain seabirds and native invertebrates.* No mice should remain to be able to repopulate the islands; the best rodenticide and project protocol for this purpose is based on scientifically rigorous EIS documents examining this issue for over ten years of careful study. It builds on worldwide feral mammal eradication projects on islands as models where such projects have been successful (including California islands). Project goals are to minimize negative impacts to non-target species and natural resources. Non-target fish and wildlife have been carefully taken into consideration by this focused and strategic plan to rid the Farallones of this pest species.

As a native San Franciscan, avian biologist, and life time birdwatcher I fully support this plan to return the Farallones to a *Mus*-free environment. Please support this carefully designed plan to affect this outcome.

Sincerely,

DONNA L DITTMANN

435 PECAN DRIVE, ST. GABRIEL, LA 70776 | 225-642-5763 | DDITMA@LSU.EDU

From: marshapainter@yahoo.com
To: Energy@Coastal
Subject: CD-0002-19 deny
Date: Friday, July 05, 2019 10:46:01 AM

Dear commissioner—Please reject the request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

On a personal level, I am concerned because I swim in the Bay! But mainly because this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are definitely contraindicated. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It is vital that the Wildlife Service find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem.

Please be a responsible steward-of America's public trust also for my granddaughter's sake. She is only 7 but is avidly studying sea creatures in the Bay!

Thank you very much.

Marsha Torkelson
22 Egret Way
Mill Valley

Sent from my iPhone

From: [Elaine Weihman](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 11:04:28 AM

Gentlemen,

I would like to voice my strong support for your proposal to eradicate the house mouse from the Farrallon Islands.

The research being done there by Point Blue is too important to birds and the environment to be compromised.

Thank you for your kind consideration.

Yours truly,

Elaine J. Weihman

520 Morris Way
Sacramento, CA 95864

ejweihman@yahoo.com

From: [Jack Dumbacher](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 11:15:56 AM

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
The elimination of the invasive house mouse from the Farallon Islands

Dear California Coastal Commissioners:

I urge you to approve the USFWS's preferred alternative for ecological restoration of the Farallones by eradicating the invasive house mouse using aerial application of the rodenticide brodifacoum.

This is critical work, as the Farallones is one of the most important offshore breeding colonies of seabirds of continental US states, harboring large numbers of Western Gulls, Common Murres, Cassin's Auklets, Rhinoceros Auklet, Brandt's and Pelagic Cormorants, as well as **critical populations of ashy storm-petrels, Leach's storm-petrels**. In addition, the island hosts native salamanders, native crickets and other invertebrates, and native plants. All of these are affected by the invasive, human-spread mouse populations.

Although there are many concerns about the use of brodifacoum, it is currently the ONLY EFFECTIVE AVAILABLE treatment that is capable of completely eliminating mice on the island. This technique has been used effectively on multiple other oceanic islands, and the restoration achieved has been monumental in scope and critical to the survival of seabirds and other important species found only on those islands. Lesser measures have only reduced mouse populations temporarily at huge cost, and the mice populations quickly rebound.

Additionally, USFWS and its various partners have studied the impacts extensively, and are proposing innovative and thoughtful solutions to minimize unwanted impacts. Their work has been thorough and the impacts are clearly outlined in their EIS and REIS documents.

This work is critical to the health of the Farallon Islands and to many bird species that nest there. The best available science clearly supports this work, and the impacts are far outweighed by the benefits. We need to restore this critical island environment and remove the invasive house mouse that has been devastating seabird nests and young for many years.

I fully support this work by USFWS, and I hope that you will too.

Very sincerely yours,

John P. Dumbacher

Curator of Birds and Mammals
California Academy of Science

- The views expressed in this letter are my own, based upon my experience and training as a professional ornithologist and mammalogist. These are not necessarily the views of the California Academy of Sciences, its leaders or Fellows, and I am not authorized to speak for the Academy as a whole.

John P. Dumbacher (Jack)

Curator of Ornithology and Mammalogy
Institute of Biodiversity Science and Sustainability
California Academy of Sciences

p. 415.379.5377
jdumbacher@calacademy.org

55 Music Concourse Drive
Golden Gate Park
San Francisco, CA 94118 USA
www.calacademy.org
www.jackdumbacher.com
[My Academy Website](#)

From: [Katherine O'Dea](#)
To: Energy@Coastal
Subject: Letter Opposing Rat Poison Application in Greater Farallones
Date: Friday, July 05, 2019 11:17:55 AM
Attachments: [Letter to CCC Opposing Rat Poison Application in Greater Farallones 7.5.2019.docx](#)
[2019_04_15_EPA Comments on Farallon Mouse Eradication FEIS 1.pdf](#)

Dear Mr. Simone,

Please find a letter from Save Our Shores opposing the US Fish and Wildlife Service's proposal to eradicate a mouse infestation in the GFMNS using a highly toxic rodenticide that could have broad negative impacts throughout the region.

Thank you for considering our position.

Sincerely,

Katherine

Katherine O'Dea

Executive Director, Save Our Shores



Office: 1.831.462.5660 x8

Mobile: 1.401.640.8213

Website: www.saveourshores.org

Address: 345 Lake Ave, Suite A. Santa Cruz, CA 95062



Save Our Shores
345 Lake Avenue, Suite A
Santa Cruz, CA 95062-4600
(831) 462-5660

July 5, 2019

California Coastal Commission
Attn: Mr. Larry Simone c/o All Commissioners
Energy Ocean Resources and Federal Consistency Division
45 Fremont Street, Ste. 2000
San Francisco, 94105-2219
(by email to EORFC@coastal.ca.gov)

Re: CD-0002-19 (Agenda item: W14a) please deny consistency

Dear Commissioners:


Save Our Shores, a 501 c 3 non-profit based in Santa Cruz and serving the counties of Santa Cruz, Monterey, San Mateo, Santa Clara, and San Benito with a mission to steward clean shores, healthy habitats and living waters to foster thriving marine ecosystems along the California coast, was a key partner and lead organizer in efforts to establish the Monterey Bay National Marine Sanctuary (MBNSM). We are also a strong supporter of the National Marine Sanctuary program overall.

Hence, we are alarmed to learn of the US Fish and Wildlife Service's proposed aerial application of a controversial second-generation brodifacoum rodenticide in the Greater Farallones National Marine Sanctuary (GFNMS). While the proposed solution to a mouse infestation and related issues will be most devastating to the GFNMS, the consequential poisoning of multiple species will have widespread negative impact including the migration of some of those mammals and birds into the MBNMS. As some and possibly many will die on the shores of the MBNMS, they will expose local wildlife to toxic ingestion and illness as they prey on the dead carcasses.

Further, we are in receipt of an EPA Region IX letter cautioning the US Fish and Wildlife Service that secondary human exposure from the proposed Farallones brodifacoum rat poison helicopter dispersal could occur. Given the prevailing seasonal current patterns, this anticipated human exposure impact zone includes the MBNMS coastline (see attached EPA letter of April 15, 2019).

Communities along the boundary of the MBNMS rely on their clean coast economy and have every right to be concerned about the potential erosion of our Sanctuary protections due to the introduction of pollutants of any kind. Therefore, Save Our Shores and tens of thousands of constituents across our service region respectfully request that the Coastal Commission deny a federal consistency finding to the US Fish and Wildlife Service's proposal.

Sincerely,


Katherine O'Dea,
Executive Director

Attachment: EPA letter of April 15, 2019 in comment on the USFWS FEIS



From: [Maggie Sergio](#)
To: [Bochco, Dayna@Coastal](#); [Turnbull-Sanders, Effie@Coastal](#); [Groom, Carole@Coastal](#); [Robert.Uranga@coastal.ca.gov](#); [Brownsey.Donne@coastal.ca.gov](#); [Howell, Erik@Coastal](#); [Aminzadeh, Sara@Coastal](#); [Padilla, Stephen@Coastal](#); [Escalante, Linda@Coastal](#); [Rice, Catherine@Coastal](#)
Cc: [larry.simone@coastal.ca.gov](#); [Ainsworth, John@Coastal](#); [Delaplaine, Mark@Coastal](#); [alison.detmer@coastal.ca.gov](#); [Energy@Coastal](#)
Subject: Re: CD-0002-19 (Agenda item: W14a) - Deny
Date: Friday, July 05, 2019 11:18:07 AM
Attachments: [MSergio_commentletter&historydoc July 5 2019.pdf](#)

Dear Commissioners:

I am reaching out to respectfully request that you deny the request of U.S. Fish & Wildlife Service (USFWS) for consistency determination. My comment letter, along with a history of the problems caused by these type of projects is attached.

Best Regards,
Maggie Sergio

July 5, 2019

California Coastal Commission
Attn: Mr. Larry Simone c/o All Commissioners
Energy Ocean Resources and Federal Consistency Division
45 Fremont Street, Ste. 2000
San Francisco, 94105-2219
(via email to EORFC@coastal.ca.gov)

Re: CD-0002-19 (Agenda item: W14a) - Deny

Dear Commissioners:

I am reaching out to respectfully request that you deny the request of U.S. Fish & Wildlife Service (USFWS) for consistency determination.

My background includes years of working in wildlife rehabilitation, treating a wide variety of species. In my work, I witnessed the inhumane poisoning of wildlife due to rodenticide exposure—both directly through straight ingestion—and indirectly—by ingesting rodents that had been poisoned. The poison most commonly found in lab results was the second generation anticoagulant rodenticide, brodifacoum—the same poison USFWS is proposing be dropped out of helicopters over the Farallon Islands.

In 2013, I began researching the global island eradication industry, which traces its origins back to the New Zealand government in the 1970s. While USFWS and Island Conservation (the sole source contractor that will drop the poison) point to New Zealand as “experts” in saving species from extinction—the truth is dramatically different than what is portrayed on glossy websites and slick marketing campaigns making bold claims of success, that cannot be verified by an independent, third party.

In 2014, with the support of the Animal Legal Defense Fund, a retired Fish and Wildlife biologist and I filed a comprehensive Freedom of Information Act request to investigate the inner workings of the island eradication industry.

The information we received back was disturbing. The documents included a [law enforcement report](#) done after the Rat Island poison drop in 2008, which listed [10 criminal offenses](#), including violations of the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act and the Federal Insecticide, Fungicide, and Rodenticide Act. The Rat Island project resulted, at a minimum, of over 460 dead birds, including 46 dead bald eagles. And not all poisoned wildlife was accounted for.

Internal emails released under our FOIA request show that after the failed eradication attempt on Wake Island in 2012, toxicological testing of fish was carried out by the

United States Air Force, which maintains a base on Wake Island. After the fish tested positive for brodifacoum—the same poison headed for the Farallones—an Air Force official recommended a [942 fishing ban](#).

In August and September of 2017, USFWS, DLNR and sole-source contractor, Island Conservation dropped 11.5 tons of anticoagulant rodenticide on the 284 acre island of Lehua, Hawaii. This drop failed to kill the rats on Lehua, and [the following video](#) was taken approximately four days after the second poison drop. You can clearly see dead fish and birds, floating in the water, surrounded by huge amounts of rat bait. After this video went viral on social media, a local lawmaker intervened and tried to halt the third and final drop, but was not successful. This recent drop was the second time an eradication project was carried out at Lehua, Hawaii. The first drop in 2009 had failed to kill the rats, and this recent drop in 2017 also failed.

The state of Hawaii did an investigation of the 2017 Lehua poison drop. The violation report, over 200 pages in length, included such comments as - *failure to notify HDOA pesticides branch of a large fish kill, wind speed not being recorded, the pesticide label not being in possession of the helicopter pilot, and the helicopter pilot not being properly licensed*.

The entire violation report, complete with a long list of infractions was completed earlier this year. The document can be found at the Dropbox link below and was released under FOIA.

https://www.dropbox.com/home/Lehua%20drop%20enforcement?preview=Lehua+Island+Complaint-+entire+KA-17-08_Redacted.pdf

I have reviewed both the Final EIS and previous versions of the risk assessment since 2013. Much of the information in the Final EIS is inaccurate, misleading and outright false. The probability of success is grossly exaggerated and the environmental risks, including the projected number of deaths of nontarget species are ruthlessly downplayed. The truth has been sacrificed to push through the outdated use of helicopters and brodifacoum. If this project is allowed to proceed, the victims of the poison drop at the Farallon Islands will be all the living resources within the public trust, which USFWS has a legal obligation to protect, and all the constituents of our National Marine Sanctuaries System.

Several years ago, I received an email from USFWS. It was from a scientist who disagreed with dropping brodifacoum on the Farallon Islands because of the high number of nontarget animals that would be poisoned. The email mentioned the flying range of the western gulls, and the fact that the gulls on the Farallones fly back and forth daily to many of the tourist areas in San Francisco, including Fisherman's Wharf and Alcatraz Island. Also mentioned was the fact that it takes four – seven days before the poisoned gulls would succumb to the poison they had ingested. The end result would be thousands of gulls, dying very gruesome, public deaths in many of the tourist areas of San Francisco. This individual challenged the hazing plan outlined and estimated that,

at a minimum, there would be 3000 dead gulls. More, if the hazing plan was not successful.

It is critical that the California Coastal Commission be made aware of not only the immediate risks to the Farallon Islands due to the proposed poison drop, but the larger threat of setting precedent by granting consistency determination for this type of antiquated and reckless methodology that does not discriminate which animals are poisoned, and has the potential to contaminate the Farallon Islands food web for up to one year.

In March 2019, Island Conservation published on the [PloS One](#) website that there are 292 island eradication projects planned at various locations around the globe. According to the map provided with island targets identified, a good portion will be located off the California coast.

Along with this comment letter, you will find a document entitled, *Island Eradications: History of Malfeasance & Violations*. I urge you to please take the time and go through the history of unintended consequences for these hazardous projects which includes [causing the extinction](#) of one species of snail during a drop in the Seychelles in 2001, and the [extinction of the western weka](#) from Tawhitinui Island, NZ in 1984.

Additionally, the [following link](#) takes you to a petition originally started on Change.org in 2013. At the time, I was petitioning USFWS to not move forward with poisoning the Farallon Islands. Over **32,000 people** signed this petition several years ago. I reopened the petition soon after hearing that the California Coastal Commission was considering granting consistency determination for this project. The total number of signers submitted with this comment letter is **34,134**.

Please deny this request by USFWS for consistency determination. There are alternatives, such as rodent contraception available from a biotechnology company called [Senestech](#). It was confirmed to me that Senestech has the necessary agreements in place to begin working on an island eradication project next year in the Caribbean.

Sincerely,

Maggie Sergio
Aberdeen, North Carolina

Attachment: *Island Eradications: History of Malfeasance & Violations*

Island Eradications: History of Malfeasance & Violations

Due to the nature of island eradication projects taking place on remote islands around the globe, it is difficult to know the full extent of nontarget species that have poisoned, or food web contamination that has occurred. This challenge is compounded by the fact that there is a lack of any independent, third party oversight for these projects. Only once, in 2011 for the Palmyra Atoll drop, was a third party agency (USDA) involved on the ground. When the same, sole-source contractor is hired to write the risk assessment, perform the poison drop, in addition to providing an accurate count of unintended animals poisoned, it is difficult to validate any positive claims being made.

This is not a complete listing of catastrophic outcomes for poison drops, but this information does provide a snapshot of the reality of what occurs when dropping a highly persistent poison over fragile island ecosystems. This information has been derived from a variety of sources including FOIA, eyewitness accounts and published papers.

Rat Island 2008

While the official Rat Island death toll listed is at 467 dead birds, including 46 bald eagles, we will never know how many animals were poisoned as USFWS and Island Conservation dropped 46 metric tons (more poison than they were allowed to drop by federal law) in October 2008, and did not return until May 2009. When carcasses were retrieved, only a partial search of the island was done. It is impossible to know how many poisoned animals were washed out to sea during the winter months in Alaska.

Rat Island Law Enforcement Report.

https://drive.google.com/file/d/oBwdOUBgcb_baeXLYTzZoXo5hWFU/view?usp=sharing

Rat Island violations cited - including violations of Migratory Bird Treaty Act, Bald & Golden Eagle Protection Act and FIFRA

https://drive.google.com/file/d/oBwdOUBgcb_baMoJMVGZjTml6YWc/view?usp=sharing

The Ornithological Council, after their own investigation of what went wrong on Rat Island, delivered the following scathing report - ***The Rat Island Eradication Project: A Critical Evaluation of Non Target Mortality***. That report can be found at the link below.

https://drive.google.com/file/d/oBwdOUBgcb_baak5VRU5XWVpXYVU/view?usp=sharing

Lehua Island, Hawaii 2017

In 2017, USFWS, DLNR and Island Conservation dropped 11.5 tons of rodenticide on the 284 acre island of Lehua, located off Kauai. The rats survived the poison drop. After the following video of dead fish, birds and bait in the water went viral on social media, the state of Hawaii did an investigation.

<https://www.youtube.com/watch?v=1Q7YGcq5Lh8&t=119s>

Hawaii's Dept. of Agriculture, Pesticides Branch released this 200+ page violation report on the Lehua drop earlier this year. This was released under a public records request from a concerned citizen in Hawaii, who has been researching this industry for some time. This individual had been previously involved in previous island poison drops within the state of Hawaii.

Report comments included - failure to notify HDOA pesticides branch of a large fish kill, wind speed not being recorded, the pesticide label not being in possession of the helicopter pilot, and the helicopter pilot not being properly licensed. There are too many violation notices to include in this document. The linked report provides the detail.

[https://www.dropbox.com/home/Lehua%20drop%20enforcement?preview=Lehua+Island+Complaint-+entire+KA-17-08+Redacted+\(1\).pdf](https://www.dropbox.com/home/Lehua%20drop%20enforcement?preview=Lehua+Island+Complaint-+entire+KA-17-08+Redacted+(1).pdf)

Wake Island 2012

After a 20 ton poison drop of brodifacoum on Wake Island in the South Pacific, the only inhabitants of the island, the USAF, carried out toxicological testing of the fish for brodifacoum exposure. The same poison that USFWS propose be dropped over the Farallon Islands. After receiving the lab results back, there was a recommendation from the USAF that a 942 day fishing ban be implemented. The email discussion of the findings and recommended fishing ban, released under FOIA, can be found at the following email thread -

https://drive.google.com/file/d/oBwdOUBgcb_baWVd3YoJhMU14eTA/view?usp=sharing

Palmyra Atoll June 2011

During the Palmyra Atoll poison drop, the pounds of poison applied per square acre was five times than what is normally allowed under the EPA label of 22 lbs. per acre. A supplemental label had been granted from the EPA.

Directly from the Final Report (page 2) “Some bait entered the marine environment with areas up to 7m from the shore receiving 14- 19% of the target application rate. Fifty-one animal samples representing 15 species of birds, fish, reptiles and invertebrates were collected for residue analysis during systematic searches or collected as potential non-target mortalities. Brodifacoum residues were detected in most (84.3%) of the animal samples analyzed.” The full report can be found here -

https://drive.google.com/file/d/oBwdOUBgcb_baQnF2cXdWSUptbW8/view?usp=sharing

Hawaii’s History of Poison Drops – A Presentation in 2009

The following presentation was delivered by Robert Boesch, former Pesticides Program Manager at the Hawaii Department of Agriculture from 1988-2009. This presentation talks about three disastrous poison drops in Hawaii; Keauhou Ranch, Mokapu Island and the first failed drop on Lehua in 2009. Both Mokapu and Lehua resulted in whale beachings that were called an “unfortunate coincidence,” and in his presentation, Robert questions the testing methodology used to detect rodenticides in the whales. After the first Lehua drop in 2009, the owner of the nearby island of Niihau complained of hundreds of dead fish washing up on the beach.

https://drive.google.com/file/d/oBwdOUBgcb_baUEpXMo1zOXNTZzQ/view?usp=sharing

Rangitoto & Motutapu Islands, New Zealand 2009

New Zealand’s Dept. of Conservation (DoC) dropped brodifacoum over the islands of Rangitoto and Motutapu. The nontarget species killed included native birds, dolphins, fish, penguins and numerous dogs. This [New Zealand news station covers the story](#) and in an interview, one can see the evasive response from DoC employee, Richard Griffiths when questioned if the dolphins were tested for brodifacoum. The response was yes, and the news reporter later confirmed that the dolphins were not tested for brodifacoum.

NOTE: Richard Griffiths is currently employed by Island Conservation and was listed as one of the contributing authors to the Final EIS.

Tawhitinui Island, New Zealand – 1984 (and other New Zealand drops)

From the [envirowatchrangitikei](http://envirowatchrangitikei.org/) website – “The entire western weka (rare NZ native bird) population was exterminated in a brodifacoum drop on Tawhitinui Island (1984).

Nearly 60% of the Tawharanui Regional Park dotterel (endangered NZ native bird) population died through eating brodifacoum baits and poisoned sand-hoppers (2004); brodifacoum residues continued to be found in wildlife more than 24 months after the brodifacoum poison drop in and around the Rotoiti Nature Recovery Project in Nelson (2005); The Rangitoto and Motutapu Island eradication by-kill included dolphins, penguins, fish, numerous dogs and birds. Vast numbers of dead mussels washed up on Waiheke Island up to five months after the poison drop. Hundreds of dead birds also washed up on Coromandel Peninsula beaches in the months following (2009); More than 10,000 seagulls were killed in Shakespeare Regional Park (2011)”

Fregate Island, Seychelles 2001

The following paper - *The impact of rodent eradication on the larger invertebrates of Fregate Island, Seychelles* discusses how a drop of brodifacoum impacted a variety of invertebrates and is believed to have caused the extinction of one species of snail, *C. crenata*.

https://drive.google.com/file/d/oBwdOUBgcb_baeU1aX2FOZGNIRWM/view?usp=sharing

From: [Carol C. Saysette](#)
To: Energy@Coastal
Subject: CD-0002-19 deny
Date: Friday, July 05, 2019 11:26:20 AM

Dear Commissioner:

I care deeply about the wildlife in and around the San Francisco Bay! Please do not drop poison at the
Farralones.

Thank you for reading this short note.

Name Rev. Dr. Carol Saysette

Address 40 Camino Alto, #13111, Mill Valley, CA, 94941

From: [C. John Ralph](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 11:27:22 AM

Dear Folks,

I am writing to support the U.S. Fish and Wildlife Service's project to get rid of the house mice on the Farallon Islands.

I am very familiar with the islands, having helped start the research station there with the Point Reyes Bird Observatory, more than 50 years ago. I also have had extensive experience for more than 35 years on an island in New Zealand where I have seen first hand the destruction of the natural ecosystem that non-native rodents cause. On this island we used brodifacoum to good effect and have witnessed the recovery of the many aspects of the native flora and fauna.

This eradication is a welcome and necessary step and the Service is to be commended on its perseverance in moving forward. I trust that the commission will approve it.

Kind regards,

C.J. Ralph

--

C. John Ralph

--- 7000 Lanphere Road, Arcata, California 95521.
(707) 822-2015 -- cell: (707) 499-9707

From: [Hannah Nevins](#)
To: Energy@Coastal
Cc: [Brad Keitt](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 11:53:07 AM
Attachments: [2019-07 ABC Comment Farallones Coastal Comm FINAL.pdf](#)

Dear Commissioners,

Please include the attached letter of comment on behalf of American Bird Conservancy with regard to agenda item: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19.

Thank you for your consideration.

~Hannah

Hannah Nevins

Seabird Program Director
American Bird Conservancy
Santa Cruz, CA
808-333-4469 | skype: Hannah.nevins

CONNECT WITH AMERICAN BIRD CONSERVANCY:

abcbirds.org | [Twitter](#) | [Instagram](#) | [Facebook](#)



Bringing back the birds

3 July 2019

45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219

EORFC@coastal.ca.gov

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19

Dear California Coastal Commissioners,

We would like to express our support for the project under review by your commission (Agenda Item 14a), Eradication of Mice on South Farallon Islands, Farallon Islands National Wildlife Refuge, San Francisco County. We believe the preferred scenario of aerial broadcast of rodent bait, hand baiting, bait stations, and traps in order to benefit native seabirds is the most feasible and the best possible conservation action to ensure thriving nesting colonies of many species of seabirds, and native invertebrates. In particular, this project will benefit Ashy Storm-petrel, a California designated Species of Special Concern¹.

American Bird Conservancy is a 501(c)(3), non-profit membership organization whose mission is to conserve native birds and their habitats, working throughout the Americas to safeguard the rarest bird species, restore habitats, and reduce threats.

Predation pressure in limited breeding habitat has become a major factor influencing reproduction and population dynamics for many seabird species. It is recognized that removal of non-native mammals, and rats and mice in particular, from island ecosystems removes the pressure of predation on adults, chicks and eggs². Furthermore, this approach has been tested successfully on over 700 islands around the world.

While American Bird Conservancy's primary interest and mission is related to bird conservation, we acknowledge the benefits of rodent eradication extend to the entire ecosystem more broadly. A recent paper has demonstrated that thriving seabird colonies have flow-on effects to nearshore marine

¹ Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

² Jones, H. et al. 2008. Severity of the Effects of Invasive Rats on Seabirds: A Global Review. Biological Conservation. 22 (1): 16-26. <https://doi.org/10.1111/j.1523-1739.2007.00859.x>

ecosystems, and restoration of island ecosystems can substantially increase productivity and abundances of fishes in adjacent nearshore waters³.

American Bird Conservancy recognizes that the proposed action would come with certain risks to non-target species. American Bird Conservancy outlined our concerns in a letter provided during the EIS public comment period. We believe the Service has done a good job of addressing our comments, and the concerns raised by others.

We support the conclusion that this project will have minimal short-term effects to the marine ecosystem and have multiple-long term benefits to both marine and terrestrial environments. Please contact us if you require further information.

Sincerely,

A handwritten signature in cursive script, reading "Hannah Nevins".

Hannah Nevins
Seabird Program Director
180 Benito Ave., Santa Cruz, CA
hnevins@abcbirds.org

³ Xosé Luis Otero, Saul De La Peña-Lastra, Augusto Pérez-Alberti, Tiago Osorio Ferreira & Miguel Angel Huerta-Diaz. 2018. Seabird colonies as important global drivers in the nitrogen and phosphorus cycles. Nature Communications. Vol 9, No. 246.

From: [Terri](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 11:55:02 AM

It should be obvious to anyone reading the staff report that doing nothing to eradicate the mouse problem on the Farrallon Islands is untenable. The short-term impacts are far outweighed by the long-term goals of ecological habitat restoration. I encourage the Commissioners to vote to accept the staff recommendation.

Sincerely,
Teruko Nakashima

Sent from my iPad

From: [Dorit Winter](#)
To: Energy@Coastal
Subject: W14a
Date: Friday, July 05, 2019 11:55:07 AM

To Commissioner of US Fish and Wildlife Service,
I am writing to beg you to reject the request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan for the Farallone Islands off the Coast of California. It is a very short-sighted plan. The Farallones are part of a Marine Sanctuary and State Marine Reserve which makes the unrealistic idea of poisoning just one species even a worse idea than it would be were the Farallones not supposed to be protected. A lot of other species, apart from the targeted rodents will be poisoned. You cannot possibly control the owls who eat the rodents. It is a simplistic solution. US Fish and Wildlife Service needs to come up with a better, more responsible plan that will not cause a extensive and unnecessary collateral damage. Your plan will kill innocent and desired species.

I ask you to deny the requested consistency finding for item W14a.

Thanks,

D. Winter

From: [Anthony Eliseuson](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 11:57:53 AM
Attachments: [2019-7-5 -- Animal Legal Defense Fund Opposition to Farallon Islands Rodenticide Plan.pdf](#)

Hello, please see the attached comment from the Animal Legal Defense Fund regarding Item 14a-- the United States Fish and Wildlife Service poison dispersal plan South Farallon Islands Invasive House Mouse Eradication Project.

We greatly appreciate you providing copies of this to the commissioners for the meeting. We included relevant excerpts of the materials we cited to keep the page count lower (the full documents are very voluminous), but we are happy to provide full copies upon request. The documents we cited are also available online at the links cited in the letter.

Please let me know if you need any additional information from me.

Thank you,
Tony

Tony Eliseuson | Senior Staff Attorney
Animal Legal Defense Fund | aldf.org
aeliseuson@aldf.org | 707.795.2533, ext. 1043



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525 East Cotati Avenue
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T 707.795.2533
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info@aldf.org
aldf.org

July 5, 2019

Submitted by Email to EORFC@coastal.ca.gov

Agenda Item W14a—California Coastal Commission July 2019 Meeting

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105

Re: Opposition to the pending request for a consistency determination on agenda item W14a, the United States Fish and Wildlife Service poison dispersal plan South Farallon Islands Invasive House Mouse Eradication Project

Dear Chair Bochco and Commissioners Turnbull-Sanders, Luévano, Brownsey, Aminzadeh, Escalante, Rice, Groom, Howell, Uranga, and Padilla:

On behalf of the Animal Legal Defense Fund—a national non-profit organization and its more than 200,000 members and supporters—we submit the following comments in ***opposition*** to the proposed federal consistency determination for the United States Fish and Wildlife Service South Farallon Islands Invasive House Mouse Eradication Project, Farallon Islands National Wildlife Refuge (the “Farallon Islands Poison Plan,” Item W14a).

You are being asked to approve the mass use of a second generation rodenticide, Brodifacoum-25D Conservation (“Brodifacoum”), which the United States Environmental Protection Agency (“EPA”) has declared too dangerous for public use.¹ The California Department of Fish and Wildlife and California Department of Pesticide Regulation (“DPR”) have also concluded that all second generation rodenticides “have a significant adverse impact [on] non-target wildlife,” potentially requiring DPR to “eliminate from use in the state” because they “endanger[] the agricultural or nonagricultural environment . . .”²

¹ *Restrictions on Rodenticide Products*, U.S. ENVTL. PROTECTION AGENCY, <https://www.epa.gov/rodenticides/restrictions-rodenticide-products> [hereinafter EPA Rodenticide Page], attached as Tab 1.

² See “An Investigation of Anticoagulant Rodenticide Data Submitted to the Department of Pesticide Regulation” at 31–32 (available at https://www.cdpr.ca.gov/docs/registration/reevaluation/2018_investigation_anticoagulant.pdf) [hereinafter “2018 DPR Study”]. Relevant portions of the 2018 DPR Study cited in this letter are attached as Tab 2.

Second generation rodenticides like Brodifacoum are especially lethal because they remain in animal tissues substantially longer than first generation rodenticides. As the EPA recognizes, “second-generation products pose greater risks to non-target species that might feed on bait only once or that might feed upon animals that have eaten the bait.”³ Likewise, according to the California DPR, animals exposed to second generation rodenticides, including Brodifacoum, “can potentially carry that compound for years, as compared to days or months for [a first generation rodenticide],” significantly increasing the likelihood of harm to non-target species and bioaccumulative food-chains.⁴

Significantly, California DPR determined that of all the second-generation rodenticides, Brodifacoum “may have the highest level of risk. . . . Brodifacoum consistently had higher exposure rates in non-target organisms than any other rodenticide that was disproportionate to its use.”⁵

Put simply, the proposed mass aerial release of Brodifacoum in the FWS’s Farallon Islands Poison Plan is not consistent with the California Coastal Management Plan and the consistency determination should be *rejected*.

There is no safe delivery system for second-generation rodenticides that will prevent non-target species deaths.

Because second generation rodenticides like Brodifacoum remain in the tissue of exposed animals (and humans) for months or years, there is no realistic method to eliminate non-target species deaths. This is because a dosed rodent itself can contaminate non-target species as it slowly succumbs to death over several days or as its remains decay over the course of weeks. Indeed, a dosed rodent in this condition becomes an even more tempting prey target not just for raptors and birds of prey, but also for mammalian predators, because it is an easier target.

Given this data, the United States Fish and Wildlife Service’s (“FWS”) own Final Environmental Impact Statement acknowledges that several similar prior projects led to “nontarget [species] impacts [that] were greater than expected.”⁶ The Final EIS discussed one such project as an exemplar of these prior failures, stating:

³ EPA Rodenticide Page.

⁴ 2018 DPR Study at 2.

⁵ *Id.* at 32.

⁶ *South Farallon Islands Invasive House Mouse Eradication Project: Final Environmental Impact Statement* [hereinafter “Final EIS”] at 19–20, §§ 1.5–1.5.1. The full Final EIS is available at <https://www.regulations.gov/document?D=FWS-R8-NWRS-2013-0036-0560>. Relevant portions cited in this letter are attached as Tab 3.

A well-known example of this was the 2009 rat eradication on Rat Island in the Aleutian Islands, Alaska. The operation was successful at eradicating the target rat species, but it failed to foresee and plan for non-target impacts that resulted in the deaths of at least 320 glaucous-winged gulls and 46 bald eagles (Ornithological Council 2010).⁷

The problems of non-target deaths have *increased* in projects involving “islands with increasingly difficult planning environments,” like here, leading to “several projects that failed to eradicate the target species or resulted in unanticipated nontarget mortality.”⁸ These failures led to a study from the Ornithological Council that included four recommendations for future projects, including its primary recommendation that “[a] concerted effort must be made to use first-generation anticoagulants or less toxic alternatives whenever possible.” FWS’s Final EIS violates this recommendation by proposing the use of not only a second generation rodenticide, but *the most lethal and dangerous of the second generation rodenticides*.

Brodifacoum is substantially more lethal to non-target species than other hazardous second generation rodenticides.

FWS’s own Final EIS acknowledges that “[t]he EPA has determined the acute toxicity of brodifacoum to birds and most mammals to be high to very high (EPA 1998), with a single 24-hour feeding event often sufficient to be lethal.”⁹ This very high lethality is significant even in comparison to other hazardous second generation rodenticides. Diphacinone, for example, “is generally considered to have low to moderate toxicity to birds and mammals, typically requiring consumption of the toxicant multiple times over many days to be lethal (Erickson and Urban 2004).”¹⁰

Like FWS, the DPR concluded in its 2018 Study that Brodifacoum was substantially more dangerous and lethal to non-target species than even other second generation rodenticides that “have a significant adverse impact to non-target wildlife.” As the Study concluded:

[T]here is evidence to suggest that brodifacoum may have the highest level of risk within the [second generation rodenticides]. Brodifacoum consistently had higher exposure rates in non-target organisms than any other rodenticide that was disproportionate to its use: in the DFW mountain lion database; in the non-target organism loss

⁷ *Id.* at 20, § 1.5.1.

⁸ *Id.*

⁹ Final EIS at 148, § 4.5.4.3.1.

¹⁰ *Id.*

reports submitted by DFW (compiled into a database and independently analyzed by DPR scientists); in the WildCare data that DPR already had on file (Part 4); and in the following peer-reviewed publications submitted by Graf: Vyas et al. (2017); Poessel et al. (2015); Gabriel et al. (2017); and Franklin et al. (2018). These lines of evidence indicate that more non-target organisms are exposed to brodifacoum than to any of the other [rodenticides] tested.”¹¹

The 2018 DPR Study reached its conclusions, in part, by analyzing several studies regarding non-target mortality rates of various second generation rodenticide products. Those studies demonstrated that the Brodifacoum at issue here was lethal to 42% of individual birds (62 of 149) who consumed ground carcasses of exposed rats or mice and 67% of barn owls (4 of 6) who consumed Brodifacoum-exposed mice. In contrast, the mortality rates of birds and barn owls exposed to bromadiolone (another second generation rodenticide) was significantly lower, with only 8% mortality in birds (9 of 118) and *no mortality* (0 of 6) in barn owls fed bromadiolone-poisoned mice.

The 2018 DPR Study also acknowledged that Brodifacoum was present in a larger percentage of studied wildlife than researches would have predicted based on its usage. Specifically, in the 2018 study, 82% of non-target animal fatalities necropsied by the California Department of Fish and Wildlife contained Brodifacoum.¹² And a study of the entire DFW Mountain Lion Database showed 91% had Brodifacoum present.¹³ The findings demonstrate that the dangerous bio-accumulative effects of Brodifacoum likely would impact wildlife for years even after its use is prohibited.

Based on these studies and the generally accepted science more fully discussed in the 2018 DPR Study, the DPR concluded that the use of second generation rodenticides—and particularly Brodifacoum—should be reevaluated to determine if its use should be broadly prohibited in California.

¹¹ 2018 DPR Study at 32.

¹² 2018 DPR Study at 5, Table 4.

¹³ 2018 DPR Study at 9, Table 5.

The Final EIS acknowledges that the use of Brodifacoum will result in hundreds and potentially thousands of non-target species deaths.

Based on the very high risk of Brodifacoum's use, the Final EIS recognizes that there is a "high" risk of non-target species mortality facing two dozen different species that call the Farallon Islands National Wildlife Refuge their home.¹⁴ This will result in hundreds if not thousands of non-target species deaths, including up to 1,700 Western gulls.¹⁵

While FWS deemed a mortality rate of up to 1,700 Western gulls "not significant,"¹⁶ its own study indicated that such a one-time mortality event "could have a detectable effect on the population dynamics compared to no such additional mortality," and thus "the ability of the population to recover from the loss of 1,700 individuals will very much depend on the incidence of reproductive failures in the future, unrelated to the mouse eradication project."¹⁷ In other words, the proposed Farallon Islands Poison Plan, when coupled with other factors, could risk the future population of Western gulls on the Farallon Islands.

The impact on the Western gull population, standing alone, should be sufficient to demonstrate that the proposed consistency determination should be rejected. There is simply no justification for a mass aerial release of the most potent, lethal, and hazardous of the second generation rodenticides. It risks generations-long detriments to the sensitive environment in the Farallon Islands National Wildlife Refuge and surrounding Greater Farallones National Marine Sanctuary.

* * * *

¹⁴ Final EIS at 197–99, Table 4.4.

¹⁵ *Id.* at 213, § 4.5.6.2.1.7. Although FWS has stated that the 1,700 figure is the modeling threshold over which significant impacts would occur, not a predicted figure, its analysis was only able to predict that this figure would likely not be exceeded. This prediction suggests that mortality rates likely would approach 1,700 Western gulls, even assuming the project proceeds as intended without any errors that increase mortality rates.

¹⁶ *Id.*

¹⁷ Final EIS at Appendix N, relevant excerpt attached as Tab 4.

CONCLUSION

While we acknowledge there are difficult conservation issues present in the South Farallon Islands, the proposed mass aerial dump of one of the most potent and lethal broad-ecosystem poisons poses an unacceptable threat to non-target species and wildlife that call the Farallon Islands National Wildlife Refuge their home. Accordingly, for all the reasons above, and those in other comments and oral testimony opposing this plan, we respectfully urge you to ***object*** to the Farallon Islands Poison Plan as inconsistent with the California Coastal Management Plan.

We greatly appreciate your time and consideration of our comment.

Very truly yours,

ANIMAL LEGAL DEFENSE FUND

By:



Anthony T. Eliseuson
Senior Staff Attorney



Tab 1



Restrictions on Rodenticide Products

Types of Rodenticides

Most of the rodenticides used today are anticoagulant compounds that interfere with blood clotting and cause death from excessive bleeding. Deaths typically occur between four days and two weeks after rodents begin to feed on the bait.

First-generation anticoagulants include the anticoagulants that were developed as rodenticides before 1970. These compounds are much more toxic when feeding occurs on several successive days rather than on one day only. Chlorpophacinone, diphacinone and warfarin are first-generation anticoagulants that are registered to control rats and mice in the United States.

Second-generation anticoagulants were developed beginning in the 1970s to control rodents that are resistant to first-generation anticoagulants. Second-generation anticoagulants also are more likely than first-generation anticoagulants to be able to kill after a single night's feeding. These compounds kill over a similar course of time but tend to remain in animal tissues longer than do first-generation ones. These properties mean that second-generation products pose greater risks to nontarget species that might feed on bait only once or that might feed upon animals that have eaten the bait. Due to these risks, second-generation anticoagulant rodenticides no longer are registered for use in products geared toward consumers and are registered only for the commercial pest control and structural pest control markets. Second-generation anticoagulants registered in the United States include brodifacoum, bromadiolone, difenacoum, and difethialone.

Other rodenticides that currently are registered to control mice include bromethalin, cholecalciferol and zinc phosphide. These compounds are not anticoagulants. Each is toxic in other ways.

Rodenticide Products for "Consumer" Use

The rodenticide products currently available on the consumer market are ready-to-use bait stations that contain and/or are packaged with a rodenticide bait that is in block or paste form. Pelleted baits no longer are permitted to be used in rodenticide products targeted for consumer markets.

The bait components of the ready-to-use bait station products currently registered for the consumer market to control mice and/or rats contain one of the following rodenticides:

- Bromethalin.
- Chlorophacinone.
- Diphacinone.

If bait stations are of a refillable design, up to one pound of bait to be used to fill or refill the bait station may be included with the bait station in the retail package. Ready-to-use bait stations that are not refillable must be properly disposed after the bait in them has been consumed or contaminated.

Ready-to-use bait station products are labeled for use:

- indoors; or
- indoors and outdoors within 50 feet of buildings.

Where a specific product is authorized for use depends upon whether the bait station component of the product has been shown to be resistant to tampering by young children and by dogs as well as whether the unit has been found to be weather-resistant. Read the labels of these products before purchasing any of them to make sure that the product obtained is labeled for use in the place(s) that you intend to apply it.

Rodenticide Products for Structural Professional and Agricultural Use Products

These products include rodenticide baits registered for use by professional applicators to control rats and/or mice in or near (within 100 feet of) buildings and other structures or for use in and near agricultural buildings and man-made agricultural structures. They may contain any one of the active ingredients mentioned under [Types of Rodenticides](#).

- Products geared to these categories of users are not to be sold in “consumer” stores, including drug stores, grocery stores, hardware stores, club stores, and similar retail outlets.
- Products containing second-generation anticoagulants must be sold in containers holding at least 16 pounds of bait if they are labeled for use by professional applicators and at least eight pounds of bait if labeled for use in or near agricultural structures.
- Professional- and agricultural-use products containing first-generation anticoagulants, bromethalin, cholecalciferol, or zinc phosphide must be sold in containers that hold at least four pounds of bait.

The bait products marketed to these categories of users may be in block, paste or pelleted form. These products are not packaged in or with bait stations. However, the labels for these products require use of tamper-resistant bait stations:

- If bait is to be placed in any indoor or outdoor location to which children under six years-of-age, pets or nontarget wildlife have access.
- For all applications made outdoors and above ground.

Bait stations suitable for using these bait products in such areas are commercially available. Baiting of burrows outdoors is permitted only for pelleted baits that are placed at least six inches down active rat burrows.

For More Information

- [2008 safety review and risk mitigation decision for rodenticides](#)
- [Canceling Some d-CON Rat and Mouse Control Products](#)

LAST UPDATED ON APRIL 7, 2017

Tab 2

An Investigation of Anticoagulant Rodenticide Data Submitted to the Department of Pesticide Regulation

Introduction

In 1999, the California Department of Pesticide Regulation (DPR) placed pesticide products containing brodifacoum into reevaluation in response to a request from the California Department of Fish and Game (now the California Department of Fish and Wildlife [DFW]). In 2013, DPR assessed available data on second-generation anticoagulant rodenticides (SGARs) currently registered in California (brodifacoum, bromadiolone, difenacoum, and difethialone) and determined that the use of SGARs presented unmitigated risks related to persistent residues in target animals, resulting in impacts to non-target wildlife.

To mitigate the risks identified by the assessment, effective July 1, 2014, DPR designated the SGAR active ingredients brodifacoum, bromadiolone, difenacoum, and difethialone as California restricted materials. As a result, rodenticides containing the four active ingredients can only be sold by licensed dealers and purchased by certified applicators (DPR, 2014). DPR also added additional use restrictions and revised the definition of a private applicator. Products containing first-generation anticoagulant rodenticides (FGARs), which include warfarin, chlorophacinone, and diphacinone, were not included in these regulatory changes.

Since implementation of the regulatory change in 2014, DPR continued to receive and analyze data regarding exposure to non-target wildlife from anticoagulant rodenticides (ARs). Thorough analysis is required to fully assess the impact of these regulatory changes over time and aid in determining if further regulatory action is warranted. This report incorporates information and data from a variety of sources, including peer-reviewed scientific publications, statewide sales and use reporting data, and unpublished wildlife incident and mortality data. Publications and data utilized in the decision-making process are reviewed and discussed below.

On December 22, 2017, DPR received a letter, accompanied by data and exhibits, from the law offices of Michael W. Graf, on behalf of Raptors Are the Solution and Project Coyote, requesting that the following seven pesticide active ingredients be placed into reevaluation based on significant impacts on wildlife health and the environment: 1) brodifacoum, 2) bromadiolone, 3) difethialone, 4) difenacoum, 5) diphacinone, 6) chlorophacinone, and 7) warfarin. DPR currently registers rodenticides containing these active ingredients for sale and use in California.

This report analyzes the data and exhibits submitted to DPR by Mr. Graf, as well as all information and data that has been submitted to DPR by DFW (2014-2018). It also incorporates information and data from a variety of sources, including statewide sales and use reporting data, and unpublished wildlife incident and mortality data.

Background

Anticoagulant rodenticides are typically classified as either first-generation or second-generation. First-generation anticoagulants, such as warfarin, though initially efficacious, began to lose their effectiveness. The appearance of rats and mice resistant to warfarin necessitated the development of alternatives. This eventually led to the development of SGARs, brodifacoum, bromadiolone, difethialone, and difenacoum. FGARs and SGARs share a similar mechanism of action, but SGARS have increased toxicity, prolonged half-lives, and increased lipophilicity.

The increased toxicity of the SGARs corresponds to lower effective doses. For instance, in rats, warfarin has an oral LD₅₀ of 58.0 mg/kg, whereas brodifacoum has an oral LD₅₀ of 0.26 mg/kg (U.S. EPA, 2004; Redfern et al., 1976; Thomson, 1988). Accordingly, it may take multiple feedings of a FGAR to reach a lethal dose, but a single feeding of a SGAR can result in lethality. Table 1 presents a comparison of the most sensitive LD₅₀ values for birds and mammals (not just rats) for the ARs.

Toxicity is one component of the ARs' efficacy in animals. Due to their mechanism of action, there is a delay between consumption of a lethal dose and death of the exposed organism. As a result, the target organism may continue to consume the bait. In the case of an SGAR, this allows for super-lethal concentrations of the rodenticide to accumulate in its body. Secondary non-target wildlife exposure may occur, when non-target wildlife feed on the exposed target pest.

The SGARs are more persistent than FGARs in the livers of animals that have been exposed. For example, warfarin has a hepatic (liver) half-life of 26.2 days, whereas brodifacoum has a hepatic half-life of up to 350 days (Table 2; U.S. EPA, 2004). The significantly extended hepatic half-lives for SGARs means that an animal that ingested the anticoagulant can potentially carry that compound for years, as compared to days or months for an FGAR.

Finally, the increased lipophilicity of the SGARs can increase the amount of AR that is absorbed to the tissues. For example, brodifacoum has an octanol-water partition coefficient (K_{ow}) that is approximately five orders of magnitude higher than warfarin (Table 3). This suggests that if two animals are dosed with equal amounts of brodifacoum and warfarin, the animal dosed with brodifacoum will have a higher initial concentration in its liver because brodifacoum is more lipophilic. A higher initial concentration in the liver tissue means that there will be detectable residues in the liver for a longer time, even if the rate of decline is the same for both compounds. This, in effect, further amplifies the persistence of the SGARs.

Table 1 – Comparison of toxicity values for birds and mammals for ten rodenticides.

Type of Rodenticide	Active Ingredient	Most Sensitive LD ₅₀ for Birds (mg ai/kg bw) ^{a, b}	Most Sensitive LD ₅₀ for Mammals (mg ai/kg bw) ^{a, b}
SGARs	Brodifacoum	0.26	0.13
	Bromadiolone	138	0.56
	Difenacoum	66	0.45
	Difethialone	0.26	0.29
FGARs	Chlorophacinone	>100	0.49
	Diphacinone	96.8	0.2
	Warfarin	620	2.5

Bold font represents those active ingredients that have similar LD₅₀ values for mammals and birds. The other active ingredients have a substantial difference between the LD₅₀ values for mammals and birds.

^a Data summarized from DPR, 2013

^b LD₅₀ values presented in units of milligrams of active ingredient per kilogram of body weight

Table 2 – Hepatic half-lives of seven ARs in the livers of target species.

Type of Rodenticide	Active Ingredient	Hepatic half-lives (Days) ^a
SGARs	Brodifacoum	113.5-350
	Bromadiolone	170-318
	Difenacoum	118
	Difethialone	126
FGARs	Chlorophacinone	< 2
	Diphacinone	3
	Warfarin	26.2

^a Data summarized from DPR, 2013

Table 3 – Octanol-water partition coefficient (K_{ow}) values for seven ARs.

Type of Rodenticide	Active Ingredient	Log K _{ow}
SGARs	Brodifacoum	8.5 ^a
	Bromadiolone	4.3 ^b
	Difenacoum	7.6 ^c
	Difethialone	9.82 ^d
FGARs	Chlorophacinone	1.98 ^e
	Diphacinone	4.3 ^f
	Warfarin	2.70 ^g

References: ^a U.S. EPA, 2016-a; ^b U.S. EPA, 2016-b; ^c U.S. EPA, 2007; ^d U.S. EPA, 2016-c; ^e U.S. EPA, 2015-a; ^f U.S. EPA, 2012; ^g U.S. EPA, 2015-b

Descriptions of Data and Exhibits Submitted to DPR by Michael Graf

- **California Department of Fish and Wildlife (DFW) AR Exposure Cases**

The Department of Fish and Wildlife receives animals from various sources including wildlife rehabilitation centers and County Agricultural Commissioners. These animals are generally necropsied by DFW and then liver samples are sent to the California Animal Health and Food Safety Laboratory at UC Davis for AR testing. DFW then submits loss reports (i.e., necropsy reports) to DPR for non-target wildlife that test positive for exposure to rodenticides. DPR examines the submitted loss reports, compiles them in a database, and analyzes the data (Table 4, Figures 1-5).

There are several limitations in the loss reports provided to DPR that preclude the analysis of trends or overall exposure. First, DFW only provides reports for non-target wildlife that test positive for exposure to rodenticides. DFW does not inform DPR of the total number of animals tested. Second, the animals are not collected randomly. For a sample to be representative of a population, the data must be collected randomly (Ott and Longnecker, 2010). For example, when distressed animals are brought to wildlife rehabilitation centers, they are not collected randomly, are not healthy animals and are, therefore, not representative of the general population of healthy animals. Third, when wildlife rehabilitators suspect that an animal may have been exposed to rodenticides, they send the body to DFW for necropsy. This further biases the data collected toward positive tests for rodenticide exposure. Finally, DFW prioritizes which animals to necropsy and/or test for rodenticide exposure, and the criteria that DFW uses to prioritize animals for necropsy is unknown. This means the data may potentially have multiple levels of bias which result in a high percent of animals testing positive for AR exposure. This does not mean that the data is invalid, or that the data does not have value from a regulatory perspective. However, it must be noted that the data is not representative of the general population of all wild animals, conclusions drawn from these data have to explain the caveats and uncertainties including its limitations in representing the percentage of all wild animals that may be exposed to anticoagulant rodenticides. DPR has requested more information on DFW's methodology and selection procedures.

Table 4 – DPR analysis of AR exposure rates based on DFW loss reports

Parameter	2014	2015	2016	2017	2018
Total Reported Animals Tested	18	42	56	24	12
No. of Reported Mammals Tested	16	28	45	14	6
No. of Reported Birds Tested	2	14	10	10	6
No. of Reported Non-Bird/Mammals Tested	0	0	1	0	0
No. of Reported Animals with Detectable Levels of ARs	16 / 18	41 / 42	52 / 56	20 / 24	12 / 12
Maximum No. of ARs Detected	5	4	5	5	4
Minimum No. of ARs Detected	0	0	0	0	1
Mean No. of ARs Detected	2.5	2.1	2.2	2.5	2.4
No. of Reported Animals with Detectable Levels of FGARs	9 / 18	21 / 42	16 / 56	9 / 24	3 / 12
No. of Reported Animals with Detectable Levels of Chlorophacinone	1 / 18	3 / 42	3 / 56	6 / 24	0 / 12
No. of Reported Animals with Detectable Levels of Diphacinone	9 / 18	18 / 42	15 / 56	6 / 24	3 / 12
No. of Reported Animals with Detectable Levels of Warfarin	1 / 18	1 / 42	1 / 56	1 / 24	0 / 12
No. of Reported Animals with Detectable Levels of SGARs	16 / 18	35 / 42	51 / 56	19 / 24	12 / 12
No. of Reported Animals with Detectable Levels of Brodifacoum	14 / 18	32 / 42	48 / 56	19 / 24	11 / 12
No. of Reported Animals with Detectable Levels of Bromadiolone	14 / 18	18 / 42	32 / 56	13 / 24	7 / 12
No. of Reported Animals with Detectable Levels of Difenacoum	1 / 18	2 / 42	0 / 56	3 / 24	1 / 12
No. of Reported Animals with Detectable Levels of Difethialone	5 / 18	15 / 42	23 / 56	12 / 24	7 / 12

Notes:

This table includes all data provided to DPR by DFW from 2014 to 2018.

ARs: Anticoagulant Rodenticides

FGARs: First Generation Anticoagulant Rodenticides

SGARs: Second Generation Anticoagulant Rodenticides

Figure 1 – DPR’s preliminary analysis of SGAR non-target wildlife exposure rates based on loss reports submitted by DFW.

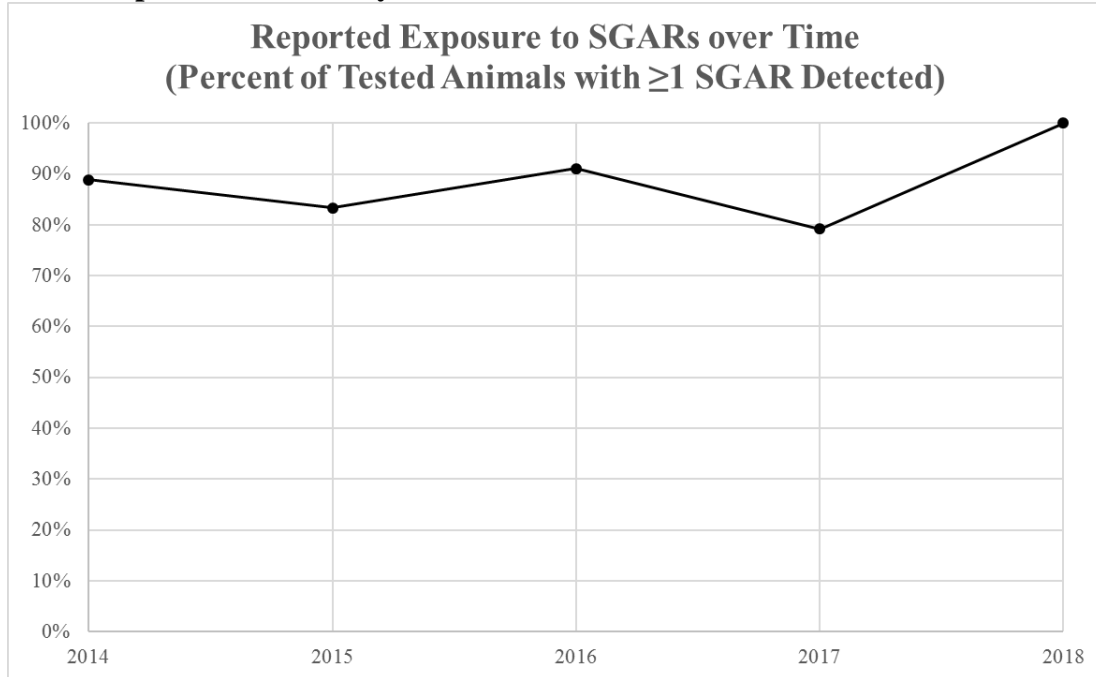


Figure 2 – Exposure rates of individual SGAR active ingredients from 2014-2018 (chart created by DPR scientists from non-target wildlife loss reports submitted by DFW).

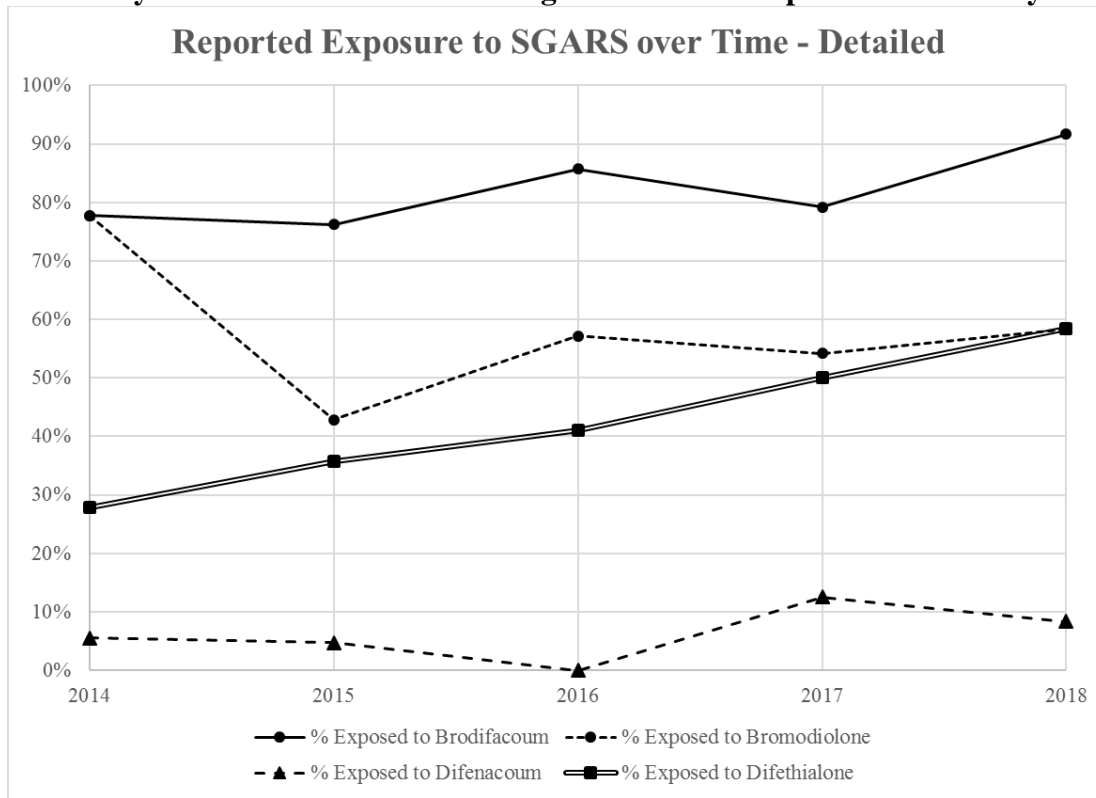


Figure 3 – DPR’s preliminary analysis of FGAR non-target wildlife exposure rates based on loss reports submitted by DFW.

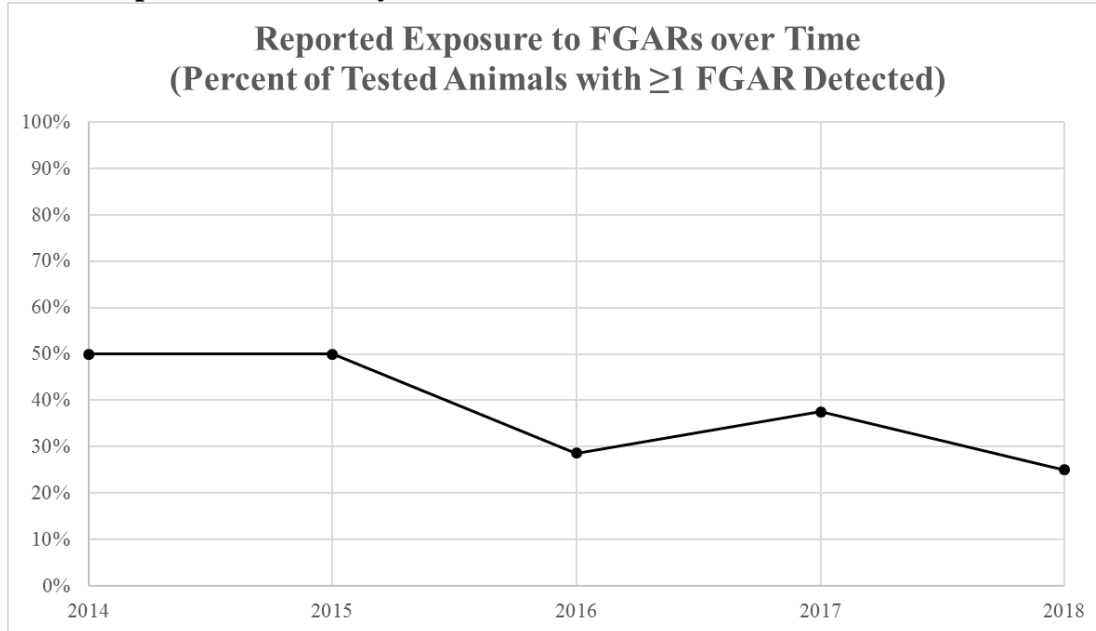


Figure 4 – Exposure rates of individual FGAR active ingredients from 2014-2018 (chart created by DPR scientists from non-target wildlife loss reports submitted by DFW).

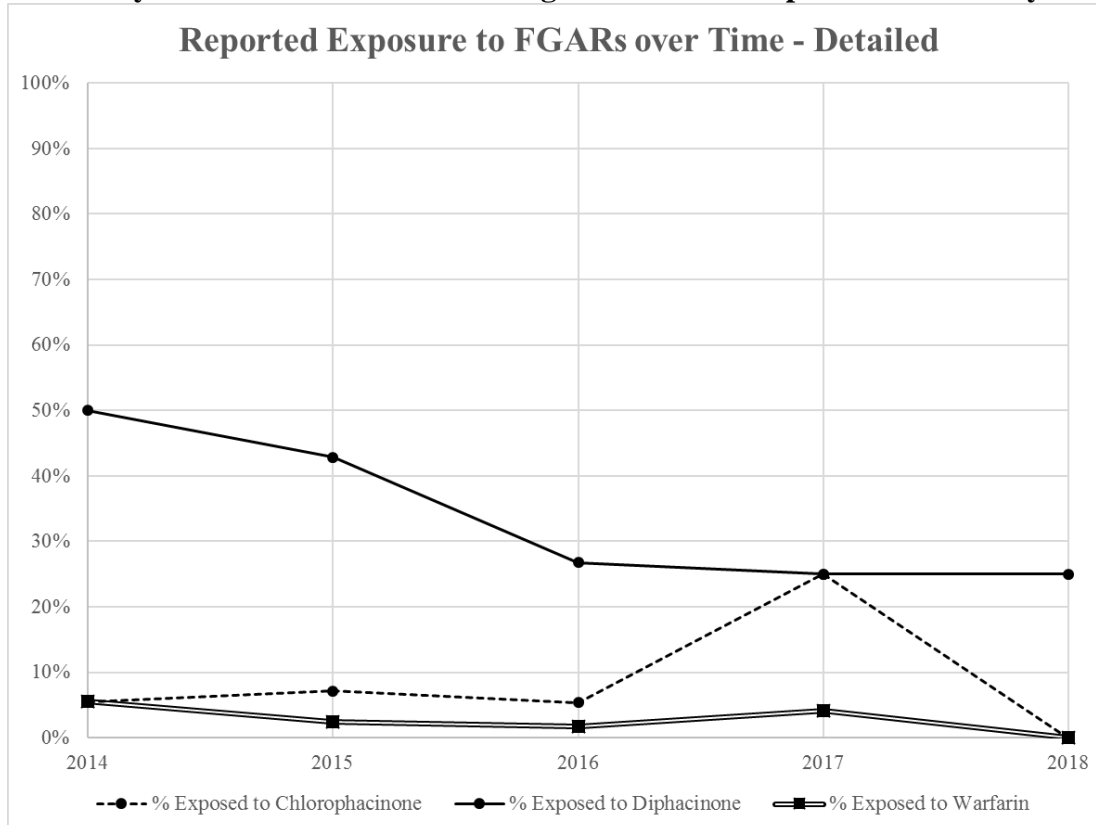
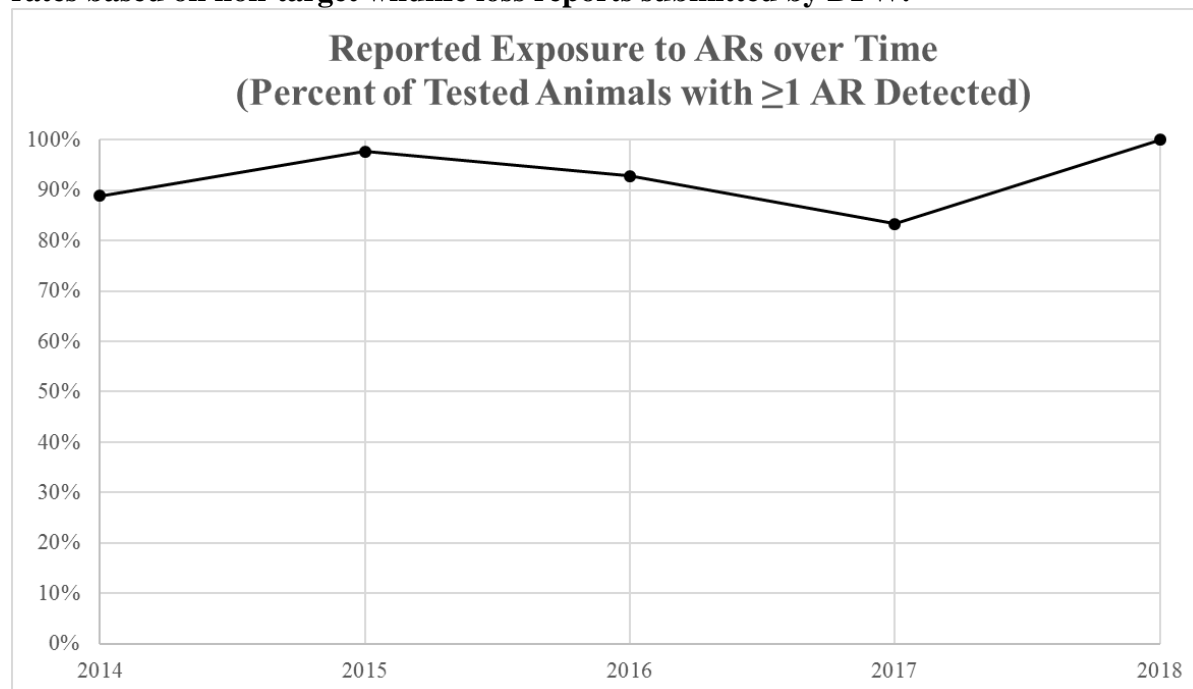


Figure 5 – DPR’s preliminary analysis of AR (all ARs, 1st and 2nd generation) exposure rates based on non-target wildlife loss reports submitted by DFW.



- **DFW Mountain Lion Database**

DFW and Michael Graf both independently provided DPR with the same database of mountain lion AR exposure data. DFW did not provide DPR with a written account of how this data was collected, but in a recent (October 4, 2018) meeting between DFW and DPR scientists, DFW scientists stated that the rodenticide screening for mountain lions was part of a two-year grant in which DFW tested every mountain lion available. DFW stated that many of these mountain lions were killed through depredation permits, but some were also killed in vehicular collisions, as well as other causes of death. Therefore, although the sample collection was not completely random, there is minimal selection bias. DPR scientists conducted an independent analysis of this data. At this time, DPR has excluded four mountain lions without a date of death from its analysis. If additional information is provided by DFW, DPR will include all mountain lions in its analysis.

The exposure rates found in these mountain lions are high. However, given the long hepatic half-lives of the SGARs, it is possible that the mountain lions were exposed before the regulations went into effect (July 1, 2014). Difenacoum has the shortest hepatic half-life (118 days) of the SGARs. A half-life is the time required for a concentration to decrease by half in a given media (e.g., the liver). This should not be confused with the amount of time it takes for a chemical to degrade, or to be eliminated from an animal's body completely. As a rule, the length of time needed for a chemical to degrade (or metabolize) to less than one-percent of the initial concentration (i.e., 99% removal) is seven half-lives. Although this data cannot be used to evaluate the efficacy of the 2014 regulations, it can be used to compare exposure rates among different rodenticide compounds. Among mountain lions that were tested, the AR with the highest exposure rate is brodifacoum, followed by bromadiolone (Table 5, Figures 6 and 7).

Table 5 – DPR's independent analysis of the DFW Mountain Lion Database (excluding four animals without a date of death).

Parameter	2015-2016
Total Number of Animals Reported	64
Percent of Reported Animals with Detectable Levels of ARs	92%
Maximum Number of ARs Detected	6
Minimum Number of ARs Detected	0
Mean Number of ARs Detected	2.7
Percent of Reported Animals Exposed to Detected FGARs	67%
Percent of Reported Animals Exposed to Chlorophacinone	11%
Percent of Reported Animals Exposed to Diphacinone	59%
Percent of Reported Animals Exposed to Warfarin	8%
Percent of Reported Animals Exposed to Coumatetralyl	0%
Percent of Reported Animals Exposed to Detected SGARs	92%
Percent of Reported Animals Exposed to Brodifacoum	91%
Percent of Reported Animals Exposed to Bromodiolone	72%
Percent of Reported Animals Exposed to Difenacoum	0%
Percent of Reported Animals Exposed to Difethialone	25%
Notes:	
This table includes all data provided to DPR by DFW from 2014 to 2018.	
AR: Anticoagulant Rodenticide	
FGAR: First Generation Anticoagulant Rodenticide	
SGAR: Second Generation Anticoagulant Rodenticide	

Figure 6 – Second-generation anticoagulant rodenticide (SGAR) exposure rates among tested mountain lions (bar graph created by DPR scientists using DFW data).

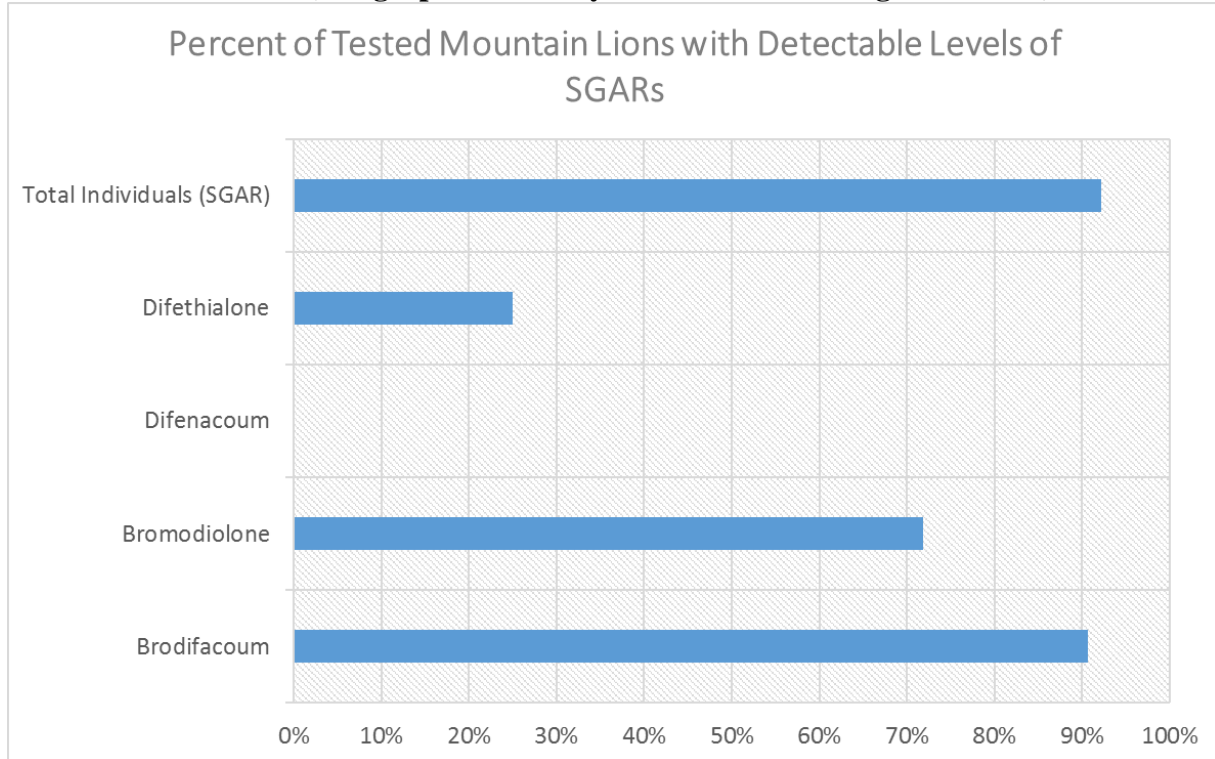
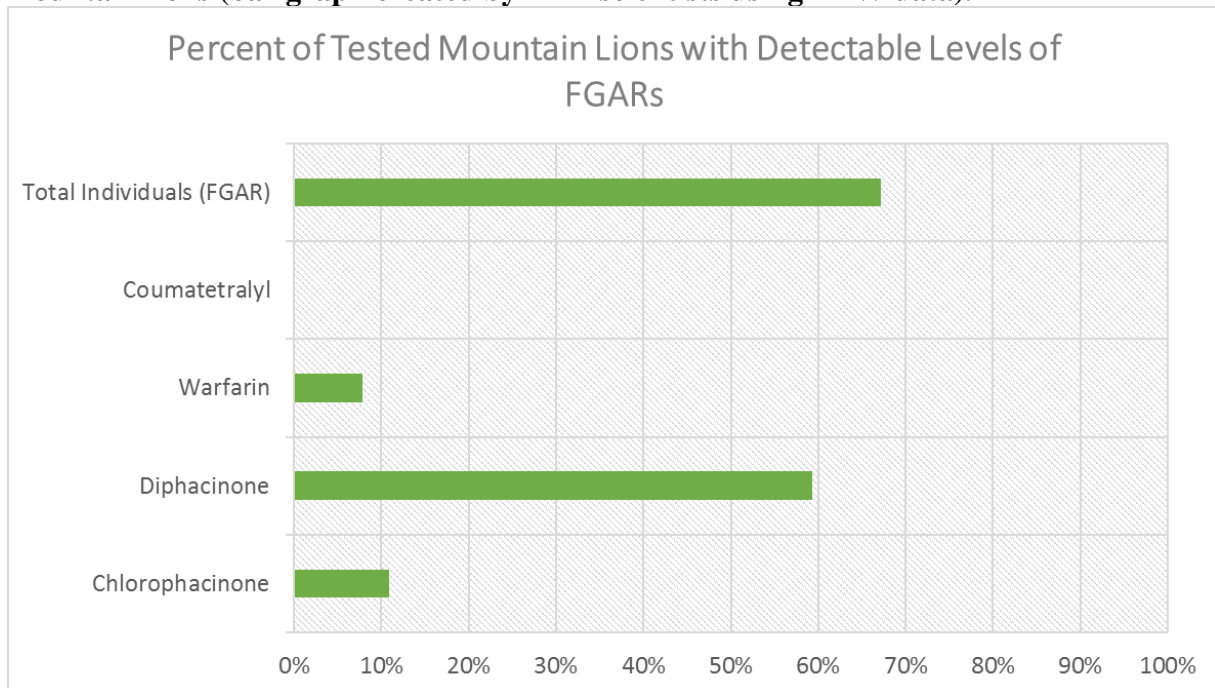


Figure 7 – First-generation anticoagulant rodenticide (FGAR) exposure rates among tested mountain lions (bar graph created by DPR scientists using DFW data).



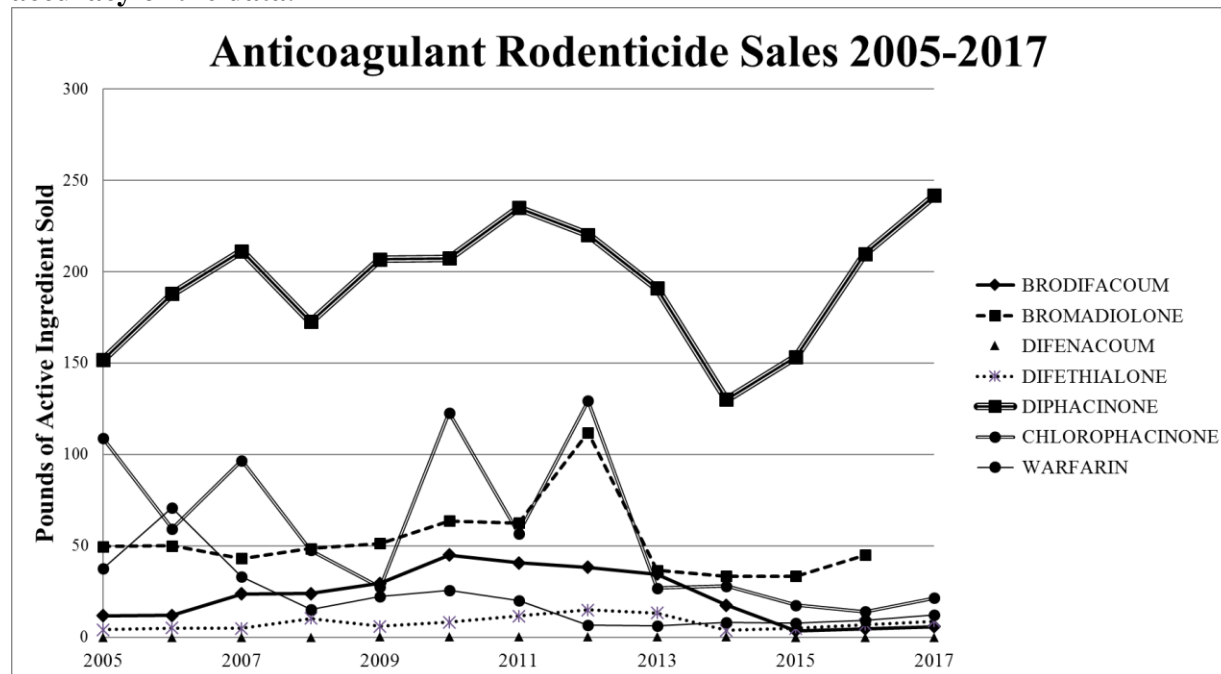
- **WildCare Wildlife Rehabilitation Center Data**

WildCare is a non-profit organization that operates a wildlife rehabilitation hospital in the San Francisco Bay Area. In 2013, DPR entered into a contract with WildCare to provide AR exposure data on non-target wildlife. In 2014, DPR renewed the contract for two more years. As of December, 2016, which is when the contract ended, WildCare provided DPR with exposure data for 115 domestic pets and 276 wild animals. Of the 115 domestic pets tested, two tested positive for exposure to FGARs. Two dogs were exposed to trace amounts of diphacinone. These were the only two exposure cases among tested domestic pets.

It is important to note that the wild animals tested were not selected randomly. This dataset is biased towards distressed animals that were brought to the WildCare wildlife hospital for rehabilitation and subsequently died or were euthanized. This does not mean that this data is not valid, or that it does not have value from a regulatory perspective, but it must be noted that the data from this study is not representative of the general population of all wild animals, so it cannot be extrapolated to draw conclusions about the percent of all wild animals that are exposed to ARs.

Of the 276 wild animals tested, exposure rates were high, both before and after the new regulations took effect (Figure 8). Nearly all SGAR exposed animals were exposed to brodifacoum and many animals were exposed to more than one anticoagulant rodenticide. However, the contract ended in 2016, which was only two years after the regulations went into effect, and it is likely too soon to expect the changes in use patterns enacted with the new regulations to influence SGAR exposure rates because of their prolonged half-lives. For example, the highest recorded concentration of brodifacoum in the liver of any non-target wildlife was 2.1 ppm in a skunk. Using a half-life of 350 days, the concentration in this particular skunk's liver after one year would be approximately 1 ppm, after two years 0.5 ppm, after three years 0.25 ppm, after four years 0.125 ppm, after five years 0.0625 ppm. The minimum reporting limit for this analysis was 0.05 ppm. This means that, had this skunk not died of a bacterial infection, it could have been brought into the WildCare Wildlife Hospital five years later, and still would have had detectable (i.e., >0.05 ppm) residues of brodifacoum in its liver. However, most animals tested (n = 276) had liver concentrations much lower than 2.1 ppm.

Figure 10 – A summary of AR sales data from 2005-2017. Sales data for bromadiolone in 2017 indicated that 638 pounds of active ingredient was sold. This is most likely an error, so 2017 sales data for bromadiolone is not present in this graph. DPR sales reports are based on information obtained from a system of self-reporting, so DPR cannot attest to the accuracy of the data.



Conclusion

As evidenced by its mission statement, DPR is guided by the principle that pesticide use should not cause unacceptable risks to human health or the environment. California law (Food and Agricultural Code 12824) requires DPR to “eliminate from use in the state” any pesticide that “endangers the agricultural or nonagricultural environment, is not beneficial for the purposes for which it is sold, or is misrepresented.” To fulfill this mandate, DPR is required to enact “continuous evaluation” of currently registered pesticides. Multiple programs are set in place for this goal, including DPR’s formal Reevaluation Program. Given evidence that the use of a pesticide may be causing significant adverse effects to people or the environment, DPR is required to investigate. If the Director finds from the investigation that a significant adverse impact has occurred or is likely to occur, DPR is required to reevaluate the pesticide and determine if it should remain registered or if additional mitigation measures are needed.

Risk is the combination of hazard and exposure. When evaluating a pesticide’s risk to non-target organisms, toxicity, persistence, and bioaccumulation are the three main factors that should be considered. These three factors stem from inherent physicochemical parameters of a molecule that cannot be changed and are determined through laboratory testing. They are controlled by the interaction, on a molecular level, between the active ingredients and the biological receptors in target and non-target organisms. In addition, the way that a pesticide product is used (i.e., the use patterns) also affects its risk to non-target organisms. Use patterns can be changed by modifying the directions for use and/or by adding additional restrictions (e.g., only allowing use in or near

structures such as houses). In this case, DPR is investigating the risk of non-target wildlife exposure to anticoagulant rodenticides.

The data currently on file with DPR provide no basis for placing FGARs into reevaluation. First, the physicochemical properties of the FGARs are less toxic (Table 1), less persistent (Table 2), and less bioaccumulative (Table 3) than the SGARs, demonstrating that the inherent risk of the FGARs is lower. Second, the exposure rates among non-target animals are lower for FGARs than for SGARs (Figures 1, 3, 6, 7, and 8). For example, U.S. EPA (2004) observed that owls that were fed rats exposed to FGARs showed no mortalities and no observed sublethal effects. Finally, there is a general downward trend in FGAR exposure rates (Figure 3). As a result, DPR finds that current uses of FGARs are unlikely to have a significant adverse impact to non-target wildlife.

Compared to FGARs, SGARs are all more toxic, more persistent, and more bioaccumulative. Several of the publications submitted by Graf provide lines of evidence showing that there have been population-level adverse effects among bobcats in Southern California due to exposure to SGARs. Of particular note is Serieys et al. (2015), which found statistically significant associations between SGARs and mange, but not between FGARs and mange. These sublethal effects can affect fitness and have population level effects (Serieys et al., 2015). A severe outbreak of mange from 2002 to 2006 caused a genetic bottleneck among bobcats in Southern California (Serieys et al., 2015) which may be irreversible. Though available data is extremely limited and the true extent of exposure is unknown, it is possible that other predatory/scavenger species may also suffer similar significant adverse effects.

DPR enacted regulations in 2014 that were designed to reduce the risk of non-target wildlife exposure to SGARs. The regulations changed the use patterns, and restricted the purchase, sales, and use of second-generation ARs to certified applicators only. However, the limited data that DPR has on file shows that exposure rates have not decreased among SGARs (Figures 1, 2, and 8).

In addition, there is evidence to suggest that brodifacoum may have the highest level of risk within the SGARs. Brodifacoum consistently had higher exposure rates in non-target organisms than any other rodenticide that was disproportionate to its use: in the DFW mountain lion database; in the non-target organism loss reports submitted by DFW (compiled into a database and independently analyzed by DPR scientists); in the WildCare data that DPR already had on file (Part 4); and in the following peer-reviewed publications submitted by Graf: Vyas et al. (2017); Poessel et al. (2015); Gabriel et al. (2017); and Franklin et al. (2018). These lines of evidence indicate that more non-target organisms are exposed to brodifacoum than to any of the other ARs tested.

Collectively, the physiochemical properties of the SGARs, high exposure rates, and population-level impacts demonstrate that SGARs have a significant adverse impact to non-target wildlife.

Tab 3

Farallon Islands National Wildlife Refuge

Estimated Lead Agency Total
Costs Associated with Developing
and Producing This EIS

\$1,185,000

South Farallon Islands Invasive House Mouse Eradication Project: Final Environmental Impact Statement



Photos Courtesy of Island Conservation

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Final Environmental Impact Statement
South Farallon Islands Invasive House Mouse Eradication Project



U.S. Department of the Interior
Fish and Wildlife Service
Pacific Southwest Region

Prepared by:

San Francisco Bay National Wildlife Refuge Complex
Fremont, California

March 2019

1.3.5 Removing the impacts of mice on native plants

The native plants of the Farallones evolved without predation pressure from mammals such as house mice. These mostly annual plants are currently at a competitive disadvantage against the more aggressive invasive plants like New Zealand spinach (*Tetragonia tetragonoides*), narrowleaf plantain (*Plantago coronopus*), and several species of European grasses that have become dominant on large parts of the islands (Hawk 2015, Holzman et al. 2016). Eliminating mouse predation to native plant seeds and shoots will likely increase germination and survival rates of plants like the maritime goldfield, helping to improve the conditions of the native Farallon plant community.

1.4 Past Actions to Reduce Mouse Impacts on the South Farallon Islands

It had been suggested that many burrowing owls that attempt to over-winter on the Farallon Islands starve to death following the cyclic crash of house mice in the winter (Mills 2006). To help protect burrowing owls from potential starvation, the Service experimented with capture and translocation of a small number of owls to sites on the mainland. As a result, translocated owls would be prevented from preying upon storm-petrels on the islands. These attempts proved difficult, and benefits to translocated owls were difficult to ascertain. More intensive studies in recent years have shown that many owls survive the winter on the Farallones, and some individuals have returned to over-winter in subsequent years (Point Blue, unpublished data). Thus, the need for owl translocation to benefit the owls has diminished and translocations were discontinued. Because few owls were translocated, the benefit to storm-petrels was minor.

1.5 Lessons Learned

For the RDEIS, the Service developed action alternatives that incorporated many of the lessons learned from previous eradication projects, including Anacapa Island, Rat Island, Palmyra Atoll, Desecheo Island, Wake Atoll, Henderson Island, and many others). Lessons learned are more often thought of as those that hampered project success, but it also includes those helped project success. However, the RDEIS did not specify how lessons from past projects were applied within the document or how the proposed alternatives would address those lessons. For those reasons, the Service has added lessons learned into three different chapters of the FEIS. Chapter 1 describes the Service's approach to addressing lessons learned from past projects, the overall lessons learned that were accounted for in this project and outlining the Best Management Practices (BMPs) for rodent eradication projects developed by the Service (provide citation here). Chapter 2 incorporates lessons learned from projects that failed to eradicate the target species, a summary of the BMPs developed by the New Zealand Department of Conservation (DOC) for aerial mouse eradications, as well as the specific mitigation measures that have been incorporated into this EIS to address potential impacts. Finally, Chapter 4 incorporates lessons learned from eradication projects where nontarget impacts were greater than expected, as well as how the mitigation measures and contingency planning incorporated into this EIS would minimize the negative impacts to those species most at risk from eradication operations.

1.5.1 Overall Lessons Learned

Careful planning and expert implementation most often result in successful rodent eradications with minimal unexpected results. However, unforeseen scenarios in planning can result in negative consequences during project implementation. A well-known example of this was the 2009 rat eradication on Rat Island in the Aleutian Islands, Alaska. The operation was successful at eradicating the target rat species, but it failed to foresee and plan for non-target impacts that resulted in the deaths of at least 320 glaucous-winged gulls and 46 bald eagles (Ornithological Council 2010). Following the Rat Island project, the Service solicited the Ornithological Council to undertake a third-party review of the project from feasibility to planning and implementation that included recommendations for best management practices and topics for the Service to consider when developing future eradication projects. Section 1.5.2 summarizes the Ornithological Council's findings and recommendations.

With improving eradication methodology and success rates, in the last decade eradication teams have begun to target more islands with increasingly difficult planning environments. This resulted in several projects that failed to eradicate the target species or resulted in unanticipated nontarget mortality, particularly in tropical environments. As a result, an international team of eradication specialists met in New Zealand in 2013 to discuss and examine the factors contributing to eradication failures (Keitt et al. 2015). Ultimately, it was determined that a better understanding of the existing biological structure is imperative to successfully implementing eradication projects on islands. The most likely reasons for eradication failure include nontarget bait consumers that can consume bait intended for the target species, succumb to bait consumption, or act as a secondary toxicant source to their predators; failing to get sufficient bait into every rodent territory to ensure that every target individual can receive a lethal dose; and failure to sufficiently monitor and mitigate impacts to non-target species at a level that is both within permitted levels and socially acceptable (Keitt et al. 2015).

1.5.2 Ornithological Council's Recommendations for Island Rodent Eradications

The Ornithological Council (2010) report on the Rat Island project included four recommendations for future rodent eradication projects conducted by the federal government. The four recommendations include, 1) A concerted effort must be made to use first generation anticoagulants or less toxic alternatives whenever possible; 2) Use best practices outlined by the Ornithological Council when planning future eradication projects on federally owned islands; 3) In cases where project implementation differs from the plan, agencies should document the reasons for any changes and discuss the impacts of any changes; and 4) Make planning documents available to the public. The following outlines the Service's effort to address the four recommendations from the Ornithological Council by providing section numbers and reports where the Service has addressed each specific recommendation.

Recommendation 1: A concerted effort is needed to develop effective methodologies for diphacinone and other toxicants with a goal of reducing non-target mortality. The Council also suggested that first generation anticoagulants such as diphacinone be used in cases where rare species could be imperiled by the use of second-generation anticoagulants and where logistical

considerations did not necessitate the use of a second-generation compound. As part of this same recommendation, the Council also suggested using short-term control measures until effective low-toxicity rodenticides could be developed.

The Service included a diphacinone-based alternative in this EIS (Alternative C). As discussed in the EIS, no rare species (e.g., endangered or threatened) are at substantial risk of non-target mortality from either B or Alternative C. The risks of non-target mortality from each alternative are discussed in Chapter 4. The gull species present on the South Farallon Islands are not considered rare by any standards but are at relatively high risk of non-target mortality. As a result, the Service has developed a robust gull hazing program to reduce this risk. As part of the alternative development process, the Service considered a number of non-toxic methodologies, including control. These were rejected from full consideration in the EIS for the reasons explained in Section 2.7.

Recommendation 2: The Council recommended a list of best practices for rodent eradication projects. Each best practice is listed below with corresponding references to the sections of the EIS where the best practice has been addressed.

- a) Provide an explanation of why a second-generation rodenticide is being considered (Section 2.6)
- b) Conduct site specific studies such as biological surveys and bait uptake (Section 2.8)
- c) Determination of bait rate (Sections 2.8, 2.10.5, 2.11, and 2.12)
- d) Criteria of applying bait above planned rate (Section 2.10.5)
- e) Baiting strategy (Sections 2.8, 2.10.5, 2.11, and 2.12)
- f) Use standard terminology and definitions in operational documents (Operational Plan)
- g) Full and public documentation of planning decisions (Section 1.7 and Chapter 5)
- h) Full and public documentation of external reviews and responses to reviews (Chapter 5 and Public Comment Response Report)
- i) NEPA documents should contain specific information:
The EIS contains all of the specific types of information required by law (Section 1.6) and recommended by the Council. The Service does not anticipate any changes to the project following publication of the FEIS. If changes are made to the project, the Service will assess whether those changes are substantial and relevant to environmental concerns or the impacts of the selected action. A supplemental EIS would be prepared if appropriate.
- j) Bait rate reporting (Section 2.11.2 and Section 2.12.2)
- k) Mitigation measures, including carcass removal where practical (Section 2.10.7 and Section 2.10.10)
- l) Publication and dissemination of results (Chapter 5 and Record of Decision)

Recommendation 3: In cases where project implementation differs from the plan, agencies should document the reasons for any changes and discuss the impacts of any changes.

As a result of public and agency input, the Service has continued to fine tune the alternatives and develop protocols for contingencies. If an action alternative is implemented, the Service will develop contingency plans for unexpected occurrences that jeopardize the success of the project or that may result in significant impacts to non-target resources. Any major changes to a selected

alternative would require approval of a Supplemental EIS. Minor changes, like those used to adaptively manage the project, for example to address weather issues, unexpected discoveries, or to apply additional mitigation measures, do not require a Supplemental EIS but would be documented.

Recommendation 4: The Council recommended that project-related documents, such as feasibility studies, field research reports, operational plans and similar documents, be made available to the public.

The Service has included feasibility studies, site-specific studies, and other reports related to the project in the appendices of the EIS. Responses to public and agency comments are also contained in Appendix P.

1.6 Key Laws and Policies That Guided the Development of the Proposed Project

The Service manages the Refuge in accordance with a number of laws and policies that have guided the development of this project. The primary statute guiding refuge management is the National Wildlife Refuge System Administration Act of 1966, amended by the National Wildlife Refuge System Improvement Act of 1997 and codified at 16 U.S.C. §§ 668dd-668ee. The Refuge Improvement Act provides that the mission of the National Wildlife Refuge System involves the “conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States.” § 668dd(a)(2). Furthermore, the Refuge Improvement Act directs the Service to “ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans.” § 668dd(a)(4)(B).

Another source of guidance for this project is the Presidential Executive Order relating to invasive species. The order directs federal agencies to “eradicate or control populations of invasive species in a manner that is cost-effective and minimizes human, animal, plant, and environmental health risks” (Executive Order 13112 on Invasive Species, February 3, 1999, as amended December 5, 2016). Agencies are further instructed to “provide for the restoration of native species, ecosystems, and other assets that have been impacted by invasive species” (EO 13112).

The Refuge is also managed in accordance with the Wilderness Act of 1964 (16 U.S. C. 1131-1136). The Wilderness Act established a National Wilderness Preservation System composed of federally owned areas designated by Congress as “wilderness areas.” An area designated as wilderness must be managed to preserve its wilderness character. All of the Farallon Islands except for Southeast Farallon Island are designated under this system as the Farallon Wilderness.

In order to fulfill its Congressional and Executive mandates, the Fish and Wildlife Service issues policies that must be followed by Service personnel unless the Service Director provides a waiver (see 010 FW 1.4). Following the passage of the Refuge Improvement Act, the Service issued a policy on Biological Integrity, Diversity, and Environmental Health (601 FW 3). This policy provides that refuges in the National Wildlife Refuge System must be managed in a way

methods, such as liquid chromatography-tandem mass spectrometry, a method that is more sensitive than previous liquid chromatography methods used in earlier island eradication monitoring programs, should be used in future post-eradication monitoring programs.

At the Farallones, several species would be at risk of exposure to rodenticides through a secondary pathway. House mice may be at risk of secondary exposure by consuming invertebrates, such as crickets or other insects, dead birds, and other mice that have previously consumed bait. In addition, a small percentage of house mice diet may include soil (Beyer et al. 1994), which could be contaminated with rodenticide following bait application. Shorebirds, landbirds and salamanders may be at risk of secondary exposure to rodenticide through the consumption of invertebrates that have previously consumed bait and contaminated soil or other environmental media. Gulls and raptors present on the Farallones would also be at risk to secondary exposure by potentially consuming poisoned mice and/or non-target species.

Mice that have consumed bait and die in accessible locations would also pose a hazard for the length of time that the carcass remains palatable. Based on anecdotal evidence, carcasses are expected to fully degrade within a five-week period. Carcass collection would also occur when feasible and safe for operations staff, reducing the exposure risk to wildlife scavenging on mouse carcasses.

4.5.4.3 *Toxicity*

4.5.4.3.1 Toxicity to birds and mammals

The acute toxicity of a particular compound to an individual animal is often expressed in a value known as the “LD₅₀” – the dosage (D) of a toxicant that is lethal (L) to 50 percent of animals in a laboratory test, expressed as parts per million (ppm) or milligrams of active ingredient per kilogram of body weight (mg/kg). The EPA has compiled laboratory LD₅₀ values and data for both diphacinone and brodifacoum for a number of species. However, due to the difficulty and expense of obtaining extensive laboratory data, the LD₅₀ values for many species, including the majority of the species present on the Farallones, are not available for either toxicant. However, it is reasonable to infer LD₅₀ information from tests performed on analogous species (Tables 4.1 and 4.2). For the purposes of this assessment, the hazard to many island species was inferred from the most analogous species.

The EPA has determined the acute toxicity of brodifacoum to birds and most mammals to be high to very high (EPA 1998), with a single 24-hour feeding event often sufficient to be lethal. In contrast, diphacinone is generally considered to have low to moderate toxicity to birds and mammals, typically requiring consumption of the toxicant multiple times over many days to be lethal (Erickson and Urban 2004). The impacts of these toxicants are directly correlated with the type of species in question, its metabolism, its weight, and feeding habits. For example, large animals like pinnipeds would need to consume extremely large quantities of rodent bait in order to cause mortality.

There is considerable variation between species, and sometimes between individuals, in regard to the number of bait pellets an individual animal needs to consume to ingest a lethal dose, and the

lethal dose may not always be predictable. Assuming similar sensitivity to a toxicant, animals with a larger body mass must ingest more of the toxicant to reach a toxic threshold, whether that be death or a sublethal effect; for example a 660 lb (300 kg) animal may need to consume approximately 5,000 pellets, or 5 kg (assuming 1 g per pellet at 25 ppm) of Brodifacoum-25D Conservation bait in order to reach a lethal dose, assuming the animal has a sensitivity similar to the Norway rat (EPA 1998). However, other factors also come into play including age, gender, general health status, history of previous exposure, behavior, and the presence of anticoagulant resistance.

Predators and scavengers can also be exposed through secondary pathways by consuming individuals previously exposed to the toxicant. Numerous studies have identified secondary exposure of and/or toxicity of anticoagulant rodenticides to predatory wildlife, including predatory birds, as well as non-predatory birds. Example species that have exposure, toxicity, or potential impact data associated with them include American kestrel (Rattner et al. 2011), Eastern screech owls (Rattner et al. 2012), little spotted kiwi (Robertson and Colbourne 2001), and other raptor species (Thomas et al. 2011). Because of the challenges associated with estimating how much of a rodenticide-exposed prey item a particular predator or scavenger would need to consume to ingest a lethal dose, and because of the lack of toxicity data for the vast majority of species on the Farallones, the hazard analysis outlined within this FEIS is conservative and estimated based on the risk pathways and potential for exposure rather than toxicity data.

Table 4.1. Acute toxicity of brodifacoum to avian species (modified from Erickson and Urban 2004, Godfrey 1986, Eason et al., 2002, Bowie and Ross 2006).

Species	LD ₅₀ (mg ai/kg bw)	Reference
Mallard	0.26	EPA, 1998a
Canada goose	<0.75 ^a	Godfrey (1986)
Southern black-backed gull	<0.75 ^a	
Purple gallinule	0.95	
Pukeko	0.95	Eason et al. (2002)
Blackbird	>3 ^b	Godfrey (1986)
Hedge sparrow	>3 ^b	Godfrey (1986)
California quail	3.3	
Mallard	4.6	
Black-billed gull	<5 ^a	
House sparrow	>6 ^b	
Silvereye	>6 ^b	Eason et al. (2002)
Ring-necked pheasant	10	Godfrey (1986)

Species	LD ₅₀ (mg ai/kg bw)	Reference
Australasian harrier	10	
Paradise shelduck	>20 ^b	Eason et al. (2002)

^a the lowest concentration tested

^b the highest concentration tested

Table 4.2. Acute toxicity of diphacinone to avian species.

Species	LD ₅₀ (mg ai/kg bw)	Reference
American kestrel	97	Rattner et al. (2011)
Eastern screech owl	130 (LLD) ^a	Rattner et al. (2012)
Northern bobwhite	2,014	Rattner et al. (2010)
Mallard	3,158	Erickson and Urban (2004)

^a Lowest lethal dose (LLD); LD₅₀ could not be calculated.

4.5.4.3.2 Toxicity to amphibians

Except for an acute toxicity study with salamanders completed as part of this FEIS (Witmer 2018; Appendix Q), there are no published or known unpublished studies on the toxicity of brodifacoum or diphacinone to amphibians. In general, however, the primary toxicity of brodifacoum and diphacinone to aquatic organisms ranges from moderate to very high (EPA 1998), which may apply to amphibians where, for many species, part of or their entire life cycle is aquatic. Anti-coagulants like brodifacoum and diphacinone block the vitamin K cycle and impede synthesis of active forms of several blood clotting factors necessary for hemostasis in mammals and birds. Because amphibians are poikilothermic (cold-blooded), their blood chemistry and physiology are different from that of mammals and birds (warm-blooded) (Merton 1987), and blood coagulation mechanisms in amphibians are slower than those of mammals (Frost et al. 1999, Kubalek et al. 2002). Based on recent data from a USDA/APHIS study (Witmer 2018; Appendix Q), salamanders appear less at risk from oral exposure to brodifacoum and diphacinone than other vertebrate species. Data and observations from invasive species eradication and control projects that have used these compounds corroborate these findings, an example being the eradication of rats from Anacapa Island (Croll and Newton 2012, Newton et al. 2016). However, hazard to salamanders dermally exposed to rodenticide bait for up to 14 days appears to be elevated, as evidenced by mortality in two of three test species and skin lesions and other sublethal effects (Witmer 2018; Appendix Q). Although the salamander toxicity study represented a worst-case exposure scenario (i.e. where exposure to a rodenticide is maximized), results from the study indicate that potential hazards to salamanders do exist from consuming or being dermally exposed to rodenticides.

4.5.6.1.7 Impacts Table for Alternative B: Aerial Broadcast of Brodifacoum:

Table 4.4: Impacts of Alternative B on Biological Resources									
Species	Significance determination	Duration of Toxicant Risk ¹	Toxicant Sensitivity ²	Toxicant exposure risk level ³	Overall Toxicant Risk (Sensitivity+ Exposure) ⁴	Disturbance Sensitivity ⁵	Duration of Disturbance risk ⁶	Scale of Negative Impact ⁷	
								toxicant	disturbance
Raptors ^{8,9}	Not Significant	Long	High	High	High	Low/Med	Short/Med	Individ.	Individ.
Burrowing Owl ⁹	Not Significant	Long	High	High	High	Low/High	Short/Medium	Individ.	Individ.
Western Gull	Not Significant	Long	High	High	High	High	Medium	Regional	Regional
Other Gulls ¹⁰	Not Significant	Long	High	High	High	High	Medium	Individ.	Individ.
Ashy and Leach's Storm-petrel	Significant positive effect	Short	High	Low	Low	Low	Short	Regional	Regional
Cassin's Auklet	Not Significant	Short	High	Low	Low	Low	Short	Regional	Regional
Common Murre	Not Significant	Short	High	Low	Low	Medium	Medium	Regional	Regional
Brown Pelican and Cormorants	Not Significant	Short	High	Low	Low	High	Medium	Regional	Regional
Cackling Goose, Green-Winged Teal	Not Significant	Long	High	High	High	Medium	Medium	Individ.	Individ.
Brant	Not Significant	Long	High	High	Medium	Low	Medium	Individ.	Individ.
Rocky Intertidal Shorebirds ¹¹	Not Significant	Medium	High	Low	Medium	Medium	Medium	Individ.	Individ.
Black Oystercatcher	Not Significant	Medium	High	Low	Medium	High	Medium	Individ.	Individ.
Other Shorebirds ¹²	Not Significant	Medium	High	Medium	High	Medium	Medium	Individ.	Individ.
Passerine Omnivores ¹³	Not Significant	Long	High	Medium	Medium	Medium	Medium	Individ.	Individ.
Passerine Insectivores ¹⁴	Not Significant	Long	High	Medium	Medium	Medium	Medium	Individ.	Individ.
Passerine Granivores ¹⁵	Not Significant	Long	High	High	High	Medium	Medium	Individ.	Individ.

Table 4.4: Impacts of Alternative B on Biological Resources

Species	Significance determination	Duration of ToxicantRisk ¹	Toxicant Sensitivity ²	Toxicant exposure risk level ³	Overall Toxicant Risk (Sensitivity+ Exposure) ⁴	Disturbance Sensitivity ⁵	Duration of Disturbance risk ⁶	Scale of Negative Impact ⁷	
								toxicant	disturbance
Anna's Hummingbird	Not Significant	Long	High	Medium	Medium	Medium	Medium	Individ.	Individ.
Northern Elephant Seal	Not Significant	Medium	High	Low	Low	High	Medium	Regional	Regional
Harbor Seal	Not Significant	Medium	High	Low	Low	High	Medium	Regional	Regional
Other Pinnipeds ¹⁶	Not Significant	Medium	High	Low	Low	High	Medium	Regional	Regional
Marine Fish	Not Significant	Short	High	High	Medium	Low	Short	Individ.	Individ.
Salamanders	Significant positive effect	Long	Low	Medium	Medium	Low	Short	World	World
Terrestrial Invertebrates	Significant positive effect	Long	Medium	Low	Medium	Low	Short	Regional	Regional
Other Intertidal Invertebrates	Negligible	Medium	Low	Low	Low	Negligible	Negligible	Individ.	Individ.
Black Abalone	Not Significant	Short	Medium	Low	Low	Negligible	Negligible	Individ.	Individ.
Other Intertidal Gastropods	Not Significant	Short	Medium	Low	Low	Negligible	Negligible	Individ.	Individ.
Camel Cricket	Significant positive effect	Long	Medium	Low	Low	Low	Short	World	World
Vegetation	Significant positive effect	None	None	None	None	Low	Medium	None	Individ.

¹ None: No duration of risk; Short: potential exposure risk for up to 30 days; Medium: potential exposure risk for 31-90 days; Long: potential exposure risk for more than 90 days.

² None: No toxicological sensitivity; Low: Minor toxicological sensitivity; Medium: Moderate toxicological sensitivity; High: High toxicological sensitivity.

³ None: No exposure pathway; Low: Possible exposure pathway; Medium: One exposure pathway; High: Multiple exposure pathways.

⁴ None: Negligible risk from toxicant; Low: Low risk from toxicant; Medium: Medium risk from toxicant; High: High risk from toxicant.

⁵ None: Negligible sensitivity to disturbance; Low: Low sensitivity to disturbance; Medium: Moderate sensitivity to disturbance; High: High sensitivity to disturbance. For cells containing two values separated by a slash (e.g., Low/High), the upper value is for non-captured birds lower value is for captured birds.

⁶ Short: Potential disturbance risk for 1 – 30 days; Medium: Potential disturbance risk for 30 – 90 days; Long: Potential disturbance risk for more than 90 days.

⁷ Individual (Individ.): Few individuals potentially affected; Island population (Island): Many individuals may be affected with potential impacts to the island population; regional population (Regional): Many individuals may be affected with potential impacts to the regional population; Species/Subspecies: Many individuals may be affected with potential impacts to the species or subspecies.

⁸ Northern harrier, sharp-shinned hawk, , American kestrel, merlin, peregrine falcon, long-eared owl, short-eared owl, barn owl, .

Table 4.4: Impacts of Alternative B on Biological Resources

Species	Significance determination	Duration of ToxicantRisk ¹	Toxicant Sensitivity ²	Toxicant exposure risk level ³	Overall Toxicant Risk (Sensitivity+ Exposure) ⁴	Disturbance Sensitivity ⁵	Duration of Disturbance risk ⁶	Scale of Negative Impact ⁷	
								toxicant	disturbance
⁹ For Disturbance Sensitivity and Duration of Disturbance Risk, two outcomes are listed: First – individuals remaining on island / Second – individuals captured and held in captivity.									
¹⁰ Ring-billed gull, California gull, glaucous-winged gull, mew gull, herring gull, Heermann's gull, Thayer's gull.									
¹¹ Wandering tattler, willet, least sandpiper, black turnstone, ruddy turnstone, surfbird.									
¹² Whimbrel, black-bellied plover, Wilson's snipe, killdeer.									
¹³ Hermit thrush, American robin, varied thrush, cedar waxwing, European starling, American pipit, mountain bluebird.									
¹⁴ Yellow-rumped warbler, palm warbler, golden-crowned kinglet, ruby-crowned kinglet, Northern flicker, black phoebe, Say's phoebe, brown creeper, rock wren, Nashville warbler, Townsend's warbler.									
¹⁵ Horned lark, fox sparrow, savannah sparrow, white-throated sparrow, white-crowned sparrow, golden-crowned sparrow, dark-eyed junco, red-winged blackbird, western meadowlark, Brewer's blackbird, purple finch, pine siskin, lesser goldfinch, horned lark, Lapland longspur, house finch.									
¹⁶ Stellar sea lions, California sea lions, northern fur seal, Steller sea lion.									

Disturbance risk

These species could be exposed to disturbances from both ground and air operations, which would likely cause them to flush the area to an alternate site on the islands or perhaps to depart the islands. The impacts associated with disturbance sensitivity for this alternative are high because of their high exposure to gull hazing activities, the duration of the disturbance would be for the short-term, and the scale of impact would be to the few individuals on the Farallones.

Significance Determination

Because toxicant and disturbance risks are limited to the few individuals of this species that would likely be present during project implementation, no long-term negative or positive population-level impacts would occur. The significance determination for this species is not significant.

4.5.6.2.1.7 Seabirds:

- **Western Gull**

Toxicant risk

The estimated number of individuals likely to occur on the islands during operations is between 14,000 and 32,000 western gulls. With a successful hazing program, the Service will likely keep the number of individuals landing on the Farallones to a minimum level. Western Gulls would be actively hazed during implementation operations to decrease their risk of exposure to toxicant. However, western gulls not hazed successfully could be exposed to diphacinone through primary and secondary exposure pathways. Western gulls are generalist predators and opportunistic feeders consuming fish, aquatic invertebrates, adult birds, chicks, eggs, carrion, and human refuse (Pierotti and Annett 1995). On the Farallones, this species is numerous in all habitats but distribution changes seasonally. Additionally, western gulls and the closely related glaucous-winged gull have been documented eating non-toxic placebo bait pellets on the Farallones and on other islands on the Pacific Coast. Based on their feeding habits the duration of risk for these gulls would be for the long-term, the toxicant sensitivity would be medium, and the toxicant exposure risk is high due to the range of primary and secondary toxicant exposure pathways. The overall toxicant risk is medium due to the sensitivity to the toxicant and the number of exposure pathways. Given the number of western gulls that could be present during project operations, gulls are analyzed at the regional population level. However, gull hazing efforts are expected to reduce the number of gulls likely to be at risk of toxicant exposure to fewer than 1,700, which is below the level at which population-level impacts are expected.

Disturbance risk

Western gulls could be exposed to disturbances from ground, air, and gull hazing operations. As described in Section 2.10.7.1, gull hazing would be used as a mitigation measure during and after aerial baiting operations to help minimize the number of gulls that are likely to consume bait. Hazing and other activities would cause gulls to flush the area or prevent them from landing on the islands, forcing them to find alternate off-island sites to roost. The disturbance sensitivity for this alternative are high because gulls may be very sensitive to hazing causing them to alter their feeding and roosting habits, disrupting their normal behavior. The duration of the disturbance would be for the long-term, and the scale of impact would be to the regional population.

Significance Determination

Because of their long lifespan, population level impacts were considered to be long-term if impacts to the regional population were detectable after 20 years (Section 4.5.4.4, Appendix N). Mortality of more than 1,700 western gulls would have to occur in order to affect the regional population level after 20 years (Appendix N). The hazing program would keep the number of individuals that would experience lethal effects to below 1,700. Therefore, no long-term negative or positive impacts to the regional population are expected. The significance determination for western gulls is not significant.

- **Ring-Billed Gull**

Toxicant risk

The estimated number of individuals likely to occur on the islands during operations is between zero and seven ring-billed gulls. All gulls would be actively hazed during implementation operations to decrease their risk of exposure to toxicant. However, ring-billed gulls could be exposed to diphacinone through primary and secondary exposure pathways. Ring-billed gulls are omnivorous and opportunistic feeders consuming fish, insects, earthworms, rodents, eggs, and human refuse (Ryder 1993). On the Farallones, this species occurs almost entirely along the immediate shoreline. Additionally, omnivorous gulls have been known to eat rodenticide bait on islands in the region and around the world. Based on their feeding habits the duration of risk for these few individuals would be for the long-term, the toxicant sensitivity would be medium, and the toxicant exposure risk is high due to the range of the primary and secondary toxicant exposure pathways. The overall toxicant risk is medium due to the sensitivity to the toxicant and the number of exposure pathways. The scale of impact would be to the few individuals present on the islands.

Disturbance risk

Ring-billed gulls could be exposed to disturbances from ground, air, and gull hazing operations. As described in Section 2.10.7.1, gull hazing would be used as a mitigation measure during aerial baiting operations to help minimize the number of gulls that are likely to consume bait. Hazing and other activities would cause gulls to flush the area or prevent them from landing on the islands, forcing them to find alternate off-island sites to roost. The disturbance sensitivity for this alternative are high because gulls may be very sensitive to hazing causing them to alter their feeding and roosting habits, disrupting their normal behavior. The duration of the disturbance would be for the long-term, and the scale of impact would be to the few individuals present on the islands.

Significance Determination

Because toxicant and disturbance risks are limited to the few individuals of this species that would likely be present during project implementation, no long-term negative or positive population-level impacts would occur. The significance determination for this species is not significant.

- **California Gull**

Toxicant risk

The estimated number of individuals likely to occur on the islands during operations is between 390-2,800 California gulls. All gulls would be actively hazed during implementation operations

Tab 4



**POPULATION VIABILITY ANALYSIS OF WESTERN GULLS ON THE
FARALLON ISLANDS IN RELATION TO POTENTIAL MORTALITY DUE
TO PROPOSED HOUSE MOUSE ERADICATION**



**REPORT TO THE U.S. FISH AND WILDLIFE SERVICE
FARALLON NATIONAL WILDLIFE REFUGE**
Nadav Nur, Russell W. Bradley, Derek E. Lee,
Pete M. Warzybok, and Jaime Jahncke

California Current Division
PRBO Conservation Science
3820 Cypress Drive # 11
Petaluma, CA, 94954

June 2013

there is also a 25% probability that after 20 years, under this scenario, the population will have grown to 36,500 or more individuals, a 13.4% or greater increase compared to the pre-mortality size of 32,200, even though the population sustains a loss of 1700 gulls.

If near-failure occurs at the recent frequency of 3 times per 12 years, under the “Pessimistic” scenario, then we can expect population declines, at least by year 20 (Figure 6). In the absence of additional mortality, the population is expected to decline by 27% after 20 years, to a median outcome of 23,500 individuals. In addition, there is a 25% probability of a decline of 45% or more after 20 years, and a 25% probability that the decrease after 20 years will be 3.7% or less. In fact, under this scenario, and with no additional mortality, the probability of a net population increase of any magnitude after 20 years is 22%. If the population incurs additional mortality in year 0, after 20 years it is expected to be at a median value of 22,200, a decline of 31.1% compared to the pre-mortality population size of 32,200. Under the same set of assumptions, there is a 25% probability that there will be 17,900 individuals or fewer, which represents a population decline of 44.4% or greater compared to the pre-mortality population size. That said, there is also a 25% probability that after 20 years, under this scenario, the population will have not declined or declined to 29,300 or more individuals; that is, the net decrease compared to the pre-mortality size of 32,200 is a decline of 9.0% or even less of a decline. Under this scenario, a loss of 1700 gulls would likely leave the population at a lower level than at the outset, prior to incurring additional mortality, with only the magnitude of the decline to be established.

CONCLUSIONS

Our modeling effort indicates that, under “no-additional-mortality” scenarios, the Farallon Western Gull population will increase over the next twenty years with “Optimistic” productivity estimates, but will decline with assumption of “Realistic” productivity, and likely decline 3 times faster if incidence of recent near breeding failures were to occur with probability of 25% per year.

In assessing mortality scenarios, we determined the level of mortality that produced 95% overlap in the probability distributions of Western Gull population size 20 years in the future, for scenarios with and without mortality, under “Realistic” productivity conditions, given our estimates of the total Farallon population. This value was 1,700 gulls, assuming a total starting Farallon population of 32,200 birds. These results are independent of any assessment of actual risk to this Western Gull population from rodenticide exposure. We fully support all efforts to mitigate and minimize any mortality associated with any proposed actions.

If the Western Gull population incurs a one-time loss of 1,700 individuals, this could have a detectable effect on the population dynamics compared to no such additional mortality. For example, an expected 8.7% decline after 20 years could become, instead, after the one-time mortality event, a 12.7% net decline under the “Realistic” productivity scenario (Figure 5). Nevertheless, our results indicate that environmental variability due to “normal” variation in demographic parameters as well as the incidence of “near-failures” of reproductive success will have much greater impact than the effects of a mortality event such as loss of 1,700 gulls. Furthermore, the ability of the population to recover from the loss of 1,700 individuals will very much depend on the incidence of reproductive failures in the future, unrelated to the mouse eradication project; such reproductive failures are difficult to forecast.

Our analysis to assess the population viability of Farallon Western Gulls has been conducted using the best available demographic data for this species, in the population of interest, accounting for strong stochastic variability in parameters over a multi decadal time scale. This information should be strongly considered in assessments of population level impacts to this species for any future management actions.

ACKNOWLEDGMENTS

We thank all of the Farallon biologists who supervised this study, and all of the volunteer field assistants who helped collect the data. We thank the US Fish and Wildlife Service for permission to work on the Farallon National Wildlife Refuge. We also thank the Farallon Patrol for their support with transportation to the Farallones.

From: [Zinn, Nancy](#)
To: Energy@Coastal
Subject: Farallones
Date: Friday, July 05, 2019 11:58:48 AM

I support the removal of mice from the island..

Nancy

Nancy Whitten Zinn

From: [David Vander Pluym](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 12:05:15 PM

To whom it may concern,
I am writing in full support of the Farallon Islands mouse eradication. This project is vital in protecting nesting seabirds, especially the Ashy Storm-Petrel. Seabirds have been hard hit and are declining worldwide and part of the problem is invasive mammals brought by humans to nesting islands. Eradication of small mammals has been successful elsewhere in the world including on Anacapa Island off southern California. This project is vital to protect not only nesting seabirds but also the native insects, salamanders, and plants. Thank you for reading my comments and I sincerely hope the mice can be eradicated from the islands.

David Vander Pluym
Lake Havasu City, Az

From: [Brock Dolman](#)
To: Energy@Coastal
Subject: "July 2019 Agenda Item Wednesday 14a CD – 0002 – 19"
Date: Friday, July 05, 2019 12:08:02 PM

Dear Commissioners,

I want to express my support of the proposed project to remove the introduced house mouse population from the Farallon Islands.

Thank You,

Brock Dolman

Brock Dolman
Wildlife Biologist
Wildlands Program & WATER Institute Co-Director
Occidental Arts and Ecology Center
15290 Coleman Valley Road
Occidental, CA 95465
Brock@oaec.org

From: [Nancy Gelbard](#)
To: Energy@Coastal
Subject: Farallon Islands - OPPOSE the use of Rat poison (July 2019 Agenda Item 14a CD-002-19)
Date: Friday, July 05, 2019 12:08:02 PM

July 2019 Agenda Item 14a CD-002-10

Dear Coastal Commission,
I adamantly OPPOSE the proposed drop of 2,900 pounds of rat poison/bait containing brodifacoum onto the Farallon Island National Wildlife Refuge. **This project poses severe risks and will have long term impacts to ALL the living resources within the public trust. USFWS has a legal and moral obligation to protect all of these living resources.**

Please consider using less dangerous and more species-specific ways of getting rid of mice on the Farallones, with non-toxic contraceptive baits now being licensed by the EPA, with none of the threats of biomagnification and the wholesale killing of non-target species posed by the current US Fish and Wildlife Service poisonings scheme.

The Farallones host the largest seabird breeding colony in the continental United States and 25% percent of California's breeding seabirds (more than 300,000 individuals of 13 species). Before human-caused disturbances, more than one million seabirds bred at the Farallones.

Thank you.

Sincerely,
Nancy Gelbard
414 Heron Place
Davis, CA 99516

Sent from my iPad

From: [Susan M. Cashman](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 12:21:00 PM

To: California Coastal Commission
From: Susan Cashman, Ph.D. (geology)
Re: July 2019 Agenda Item Wednesday 14a CD - 0002 – 19

The Farallon Islands are geologically distinctive landforms that host a wealth of coastal and marine habitats; they support a sensitive ecosystem not replicated elsewhere. Fifty years of scientific observations and research by Point Reyes Bird Observatory (PRBO) / Point Blue Conservation Science (PBCS) provides extensive documentation of Farallon Island ecology. PRBO/PBCS maintains a long-term partnership with the US Fish and Wildlife Service (USFWS); the decades of baseline monitoring studies conducted by these collaborating organizations provides a strong scientific background for decisions about conservation management on the Farallon Islands.

The introduction of non-native house mice to the Farallon Islands has disturbed the islands' delicate ecosystem, and impacted resident native species. The islands' breeding seabirds, many of which are burrow nesters, are particularly vulnerable to the harmful impacts of invasive mice. Native salamanders, insects, and plants are negatively impacted as well.

The US Fish and Wildlife Service has produced a thorough and scientifically rigorous Environmental Impact Statement (March, 2019) for the eradication of non-native house mice on the Farallon Islands. The EIS is the product of 10 years of careful study, and incorporates responses to scientific and public review comments. **I strongly support the alternative identified by the Fish and Wildlife Service, an aerial broadcast of the rodenticide Brodifacoum.** I am confident that the US Fish and Wildlife Service has identified, and will follow, best practices learned from successful eradications, and that it will take all precautionary measures to minimize potential negative impacts of the eradication.

--

Dr. Susan Cashman
Dept. of Geology
1 Harpst St.
Humboldt State University
Arcata, CA, 95521
(707) 826-3114

From: [Susan Meiman](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 12:22:34 PM

To whom it may concern,
I support mouse eradication on the South Farallon Islands in order to reduce the vulnerability of native breeding seabirds. Island species and systems are especially vulnerable to destruction by invasive species, and failing to act now will require other costly and extraordinary measure in the future to rescue populations of rare birds, animals, and plants.

Thank you,

--

Susan Meiman
San Clemente Bell's Sparrow Project Manager
Institute for Wildlife Studies
541-908-3259
meimansue@gmail.com

From: [Vishnu](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 12:24:00 PM

Please exterminate the mice on the Farallon Islands. Do it as quickly, as painlessly, and as thoroughly as is humanly possible; **BUT DO IT!!**

Vishnu

From: [Bruce Burdick](#)
To: Energy@Coastal
Subject: Please use a natural way to decrease the mouse population on the Farallon Islands.
Date: Friday, July 05, 2019 12:31:40 PM

Dear EORFC,

Please oppose the United States Department of the Interior's Fish and Wildlife Service (USFWS) proposed "South Farallon Islands Non Native Mouse Eradication Project" to eliminate a population overgrowth of non-native house mice (*Mus musculus*) with poison.

The first attempt to control the mouse population should be with mouse predators like rat terriers as described in the following website using rat terrier dogs.

<https://nypost.com/2017/03/23/these-fearless-pups-thirst-for-rat-blood/>

Thank you for trying to protect the animals and birds that might be poisoned by eating the poisoned mice

Sincerely,

Bruce Burdick
brucenburdick@icloud.com

From: [Dan Grout](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 12:32:22 PM

Dear Commissioners:

I was the Island Conservation Project Manager for this Farallon Mouse Removal Project for several years, coordinating with the dedicated conservation biologists with the U.S. Fish and Wildlife Service and Point Reyes Bird Observatory (now Point Blue) in the creation of and testing of the proposed mouse eradication plan methods. The Farallon Island mouse removal and restoration plan, and all of the accompanying supporting studies and monitoring efforts, makes it one of the most extensively researched rodent eradication plans proposed in the United States. The Final Environmental Impact Statement published in March 2019 is one of the most comprehensively researched environmental documents ever developed to eradicate introduced house mice, approaching 1,000 pages, with all 553 substantive public comments thoroughly addressed.

I worked for several years on the Farallon Islands with USFWS and PointBlue biologists, witnessing and documenting the harmful effects of the massive infestations of introduced mice on the island's Ashy Storm-petrels, other breeding seabirds, native salamanders, crickets and native plants. There is only one known method that has proven effective for island eradications, and that is the preferred alternative: an aerial broadcast of the rodenticide Brodifacoum.

I fully support this project, and I respect the level-headed scientific decisions of all of the dedicated biologists that have been intimately involved with this project for over a decade. The eradication method proposed has been successful in eradicating 100% of rodents from hundreds of fragile island ecosystems all around the world, and no other method or compound has ever worked on any similar island.

While I fully support this careful and **highly controlled one-time use** of this rodenticide on this island refuge to restore the ecosystem and save imperiled native species from the risk of extinction, I should note that I also simultaneously personally oppose the current **public widespread indiscriminate use of rodenticides on the mainland by non-professionals** for residential and agricultural purposes, as the chronic uncontrolled use of such substances has led to it working its way into the natural food chain of several mainland predators and scavengers. All the proper precautions for its controlled use in the Refuge have been anticipated, planned for and adequately mitigated by those biologists who know most about the island's resources: those with the USFWS and Point Blue Conservation Science who have dedicated their careers to protecting the island's precious natural resources and unique species.

Like any potentially toxic compound, rodenticides must be carefully administered. The same anti-coagulant compound that can kill birds and mammals if used in excess is also used daily in hospitals all over the world to save stroke victims. Its' use saved my near-comatose 92-year-old mother's life when she had a debilitating stroke ten years ago, because it was administered by educated and practiced and permitted professionals, who knew exactly how much to use and when to use it. My mother is now over 100 years old today and still dancing, gardening, walking, exercising and dispensing smiles and chatting with grandchildren because of the carefully prescribed permitted and regulated use of this blood thinner. Many other

heart and stroke victims can relate similar stories.

The impassioned pleas of the reactive opponents of this project likely have their hearts in the right place when they instinctively (and loudly) decry the use of "*poison*" on a National Wildlife Refuge, but their opinions are prematurely formed and emotional, and are not informed by reading the plan and environmental documents. Few, if any, have actually read the plan, the EIS, or the dozens of scientific studies and Appendices upon which it's based. No educated objective scientist or dedicated conservation biologist could oppose this carefully and well researched plan to save the island from this enormously destructive invasive rodent. The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication. No recovery plan I am familiar with has been more exhaustively planned and researched than this one.

The emotional but unfounded opinions of most who oppose the removal method proposed have obviously not taken the time to read and understand the plan, nor learn about the several hundred successful rodent eradications that have been completed this way at refuges and island ecosystems throughout the world, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago.

I have dedicated forty years of my life to saving endangered species from human-related threats, spending many years of my career with the U.S. Fish and Wildlife Service in California, Hawaii and the Pacific Islands writing and implementing recovery plans. The most prevalent threat to most endangered species survival is often the presence of an introduced non-native species. I have had the pleasure of seeing some of my conservation efforts result in the recovery of a few species, and I have also been witness to timid lack of conservation actions result in species going extinct in front of my eyes.

Please support and approve this plan and its implementation, as it is entirely consistent with the stated goals and principle upon which of the California Coastal Commission was founded. Thank you for considering the well-researched and objective scientific opinions of the dedicated biologists associated with this project.

Daniel Grout

Wildlife Biologist - 8154 Mill Creek Road, Healdsburg, CA 95448

grout.dan@gmail.com

From: [Patrick Schlemmer](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD - 0002 - 19
Date: Friday, July 05, 2019 12:33:32 PM

Dear Coastal Commission,

I'm writing to express my support for the effort to eradicate invasive mice on the South Farallon Islands.

Thank you,
Patrick Schlemmer
Curator of Invertebrates, San Francisco Zoo
President, San Francisco Naturalist Society

From: [Laura Chariton](#)
To: Energy@Coastal
Cc: [Laura Chariton](#); [Larry Bragman](#); [Jeff Miller](#)
Subject: Farrallons CD-0002-19
Date: Friday, July 05, 2019 12:38:08 PM
Attachments: [Coastal Commission Farallons.pdf](#)
[PastedGraphic-4.tiff](#)

July 4, 2019

California Coastal Commission

Energy, Ocean Resources and Federal Consistency Division

45 Fremont Street, Suite 2000

San Francisco, CA 94105-2219

EORFC@coastal.ca.gov

RE: CD-0002-19 U.S. Fish and Wildlife Service proposal to poison mice on Farallon Islands

Dear Commissioners:

The Watershed Alliance of Marin strongly recommends that you **reject** the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service's poison dispersal plan. This proposal targets the middle of a treasured State Marine Reserve and this area is amidst our longstanding National Marine Sanctuary, within whose waters such activities are expressly precluded. **Sanctuary regulations ban pollutants** that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary.

We are not unmindful and certainly appreciative of the research that went into the proposed recommendation, including the actual island eradications. However, our

questions of mass killings and the effect of contaminated carrion in the food chain have not been answered, nor the "guarantee" that every single mouse in every single crevice will be eliminated----or the entire effort will be for nothing. Also, the islands will have to be quarantined forever.

*A similar poison drop proposal was abandoned by the Obama Administration in 2013 as being **too risky** to our National Marine Sanctuary and **an unacceptable threat** to adjacent fragile coastal ecosystems, while also posing unnecessary danger to non-target species.* This current proposal has not eliminated those risks.

In fact, by using second generation anti-coagulants, the sub-lethal impacts alone can affect generations of non-targeted species. Indeed, the staff report and exhibits fail to reconcile the data and research from the previous decision to the current one. We note that determinative data on the effect of introducing poison into the ocean habitat for thousands of species is missing. Moreover, in the listing of consultation with interested agencies, National Marine Fisheries Service was "informally consulted" on a restricted inquiry to the effect solely on black abalone. Recitation of gaining permits from a host of other agencies is not reassuring since they will look to the advocacy advanced in these reports, which is inadequate. The report rings with "take no prisoners," damn the consequences, with a hope that potentially massive extermination will be retrieved by a merciful act of recovery by Nature—an unusual position for science.

It remains incumbent on the U.S. Fish and Wildlife Service to find a more targeted and environmentally benign approach at the Farallons, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem and thus leaving a toxic legacy with adverse unintended consequences.

Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves the more precautionary approach.

As a constituent of the California Coastal Commission and a watershed and wildlife advocacy group, we must ask that you deny the requested consistency finding for item W14a. To do otherwise would not only reverse prior scientific findings but also set a terrible precedent for both the Coastal Commission and for our Sanctuary waters.

Thank you very much for taking our comments.

Sincerely,

Laura Chariton, President. Watershed Alliance of Marin (501(c)3)

Cc: Larry Bragman, MMWD Board President

Center for Biological Diversity



July 4, 2019

California Coastal Commission
Energy, Ocean Resources and Federal Consistency Division
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219
EORFC@coastal.ca.gov

RE: CD-0002-19 U.S. Fish and Wildlife Service proposal to poison mice on Farallon Islands

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watermarin@comcast.net Watermarin.org 446 Panoramic Hwy, Mill Valley, CA 94941 (415) 234-9007

consequences, with a hope that potentially massive extermination will be retrieved by a merciful act of recovery by Nature—an unusual position for science.

It remains incumbent on the U.S. Fish and Wildlife Service to find a more targeted and environmentally benign approach at the Farallons, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem and thus leaving a toxic legacy with adverse unintended consequences.

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Thank you very much for taking our comments.

Sincerely,

Laura Chariton, President, Watershed Alliance of Marin (501(c)3)

Cc: Larry Bragman, MMWD Board President
Center for Biological Diversity

From: [Sally de Becker](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD - 0002 - 19
Date: Friday, July 05, 2019 12:39:57 PM

Dear California Coastal Commission Members:

Please concur with the USFWS Decision and allow for the full restoration of the Farallon Islands by permitting the attempted removal of the non-native mouse from the island using Brodifacoum-25D. The USFWS has fully researched the question of how best to reduce the threat that house mice cause to the islands' ecosystems in proposing this approach. They have set aside methods that are highly likely to be ineffective. Any approach has associated risks. In this instance the risks have been identified clearly, the risks have been minimized to the greatest extent possible, and the benefits far outweigh the risks.

Sincerely,
Sally de Becker
Wildlife Biologist

Sally de Becker
Telephone: 510.501.0593

From: [Staben, Jeff@Coastal](mailto:Staben.Jeff@Coastal)
To: [Simon, Larry@Coastal](mailto:Simon.Larry@Coastal)
Subject: for your files Document1
Date: Friday, July 05, 2019 12:42:03 PM
Attachments: [Document1.docx](#)

From: [David Kalb](#)
To: Energy@Coastal
Subject: OPPOSE the use of Rat poison -- July 2019 Agenda Item 14a CD-002-19
Date: Friday, July 05, 2019 12:45:18 PM

Dear Coastal Commission,

I strongly OPPOSE the proposed drop of 2,900 pounds of rat poison/bait containing brodifacoum onto the Farallon Island National Wildlife Refuge. **This would pose a severe risk to a wide variety of wildlife and will have long term impacts to ALL the living resources within this geographic area.**

Please consider using less dangerous and more species-specific ways of getting rid of mice on the Farallones. For instance, non-toxic contraceptive baits now being licensed by the EPA, which has none of the threats associated with biomagnification. The wholesale killing of non-target species posed by the current US Fish and Wildlife Service poisonings scheme is without merit.

The Farallones host the largest seabird breeding colony in the continental United States and 25% percent of California's breeding seabirds (more than 300,000 individuals of 13 species). Using the proposed method of killing mice will certainly have many unintended consequences.

As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, please deny the requested consistency finding for item W14a.

Thank you

David Kalb
414 Heron Pl
Davis, CA. 95616

From: [Sidney Dent](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 12:56:12 PM

Attn: to Larry Simone and all commissioners,

I am asking that you deny any move to spread rodenticide on the Farallon islands.
There is a mouse problem. Poison will affect wildlife, birds picking up dead mice will be poisoned, seals may ingest poisoned water, run off will pollute the ocean.
Why not ship in some neutered cats to deal with the mice?
After the mice numbers drop the cats should be retrieved before they start on the bird population.
Please consider other strategies. Why aren't the raptors taking care of the mice?
Please say no to poison.
Thank you,
Sidney Dent
66 Main street, San Quentin Ca 94964

From: [Benjamin Saenz](#)
To: Energy@Coastal
Subject: Support for the mouse eradication in the Farallon Islands
Date: Friday, July 05, 2019 12:57:54 PM

To whom it concerns,

I am marine biologist with 19 years experience studying ecology in the SF Bay Estuary and Sacramento Delta, as well as the Gulf of the Farallones. I writing in support of moving forward with a plan to eradicate invasive mice in the Farallon Islands.

I consider myself a pragmatist in regards to invasive species management. In many cases believe the costs and metrics for success make invasive species eradication unrealistic or a lengthy, impossible-to-win battle. However for islands with rodent problems in particular, there are clear examples of eradication successes with reasonable investment. I believe there are clear paths for success in this project. Since the Farallones are already managed for the benefit of wildlife, any other conservation strategies down the road will also likely benefit from not having rodents interfering in the well being of native species of concern that are not evolved to deal with rodents.

Sincerely,
Ben Saenz, PhD

From: [Michael Pierson](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 12:58:16 PM

Date: July 5th 2019

San Francisco Whale Tours

Pier 39

The Embarcadero @ Beach St.

San Francisco, CA 94133

To: Members of the California Coastal Commission

Here at San Francisco Whale Tours we hold a special connection to the waters of our Marine Sanctuaries and the amazing creatures that call these places home. We also constantly promote responsible practices in order to protect and preserve the areas that we are fortunate enough to spend so much time in. We are a respected operation locally and beyond with key partnerships that allow us to be a leader in our industry. It is with all of this in mind that we inform you that we join Point Blue Conservation Science, the U.S. Fish and Wildlife Service and others, in offering our full and unwavering support of the planned Farallon Island Restoration Project in which rodenticides will be used to eliminate the non-native and highly problematic house mice from the islands.

Years of irresponsible practices in the late 19th and early 20th centuries led to the introduction of many invasive species on the Farallons. While this project doesn't come without risk, the benefits to the islands sensitive ecosystem are far greater than the potential risks this project presents. Some of our own employees have been on the islands and have seen first hand how much direct and indirect harm these invasive species have caused. Only 100% eradication of the invasive house mice will be effective in restoring the islands sensitive ecosystem. This project is the next crucial step in undoing the damage done to the islands seabirds, amphibians and invertebrates over the years. Furthermore the success of this kind of project on over 700 islands around the world including Anacapa Island right here in California's Channel Islands should make this an easy decision to make.

It may seem out of character for us to support the use of poisons as pest control and you are not wrong in thinking so. We do not take this stance lightly. This should be an indication to you of exactly how important this project is. We have read the EIU and have full faith in the U.S. Fish and Wildlife Services ten years worth of research, planning and future execution of this project. We recognize that there is a small but vocal group who sit in opposition to this plan using misinformation like comments suggesting thousands of pounds of poison will be dropped on the islands when in fact it is thousands of pounds of bait containing less than 2 ounces of brodifacoum, to confuse members of the public who genuinely care for this incredible place. We at San Francisco Whale Tours thank you for your time and attention to this very serious issue.

From: [Emily](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 1:03:52 PM

As a professional botanist and as a lover of native California ecosystems, birds, and flora, I urge you to proceed with the mouse eradication on the Farralons. Non-native fauna cause irreparable harm to our precious islands, and these types of eradications are vital in conserving species that currently face myriad threats on many fronts. I have worked on various California channel island islands projects for nearly a decade, and the work being done to preserve and restore them gives me hope for the future in this changing world. Please do not let well-meaning but misinformed naysayers interfere with sound science and proven restoration techniques!

Emily Howe
Restoration Ecologist

From: [Korie Merrill](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19 , mouse eradication effort on Southeast Farallon Island
Date: Friday, July 05, 2019 1:04:08 PM

CCC,

As a conservation biologist and as a CA resident, I am writing in **support** of the mouse eradication effort on Southeast Farallon Island. As I am sure you are aware, the introduction of the invasive house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ashy storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants. Unless action is taken soon, the risk of losing these incredible natural resource is significant.

Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication. For these reason I fully support this project.

Respectfully,

Korie C. Merrill

From: [Claire Peaslee](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 1:05:45 PM

Dear Commissioners and staff,

I support eradication of the non-native house mouse population from the South Farallon Islands. I understand that a rodenticide will be used to universally kill the mice and that it will also impact non-target organisms -- in the interest of ensuring the survival of native and endemic species in the Farallon Island National Wildlife Refuge. Thorough evaluation of viable options has shown that only the recommended one can be effective for the protection of vulnerable species. Islands are unique, and the Farallones have no parallel in the northeastern Pacific. This means the ground-nesting seabirds and other organisms have no fall-back position if predation by barn owls threatens their populations' survival. As in the cases of many other islands worldwide -- and certain situations in the California Current such as the Channel Islands -- a one-time measure to permanently eliminate a threat can be the clear choice for protecting biodiversity and ensuring the survival of vulnerable species. Please approve the recommendation in the EIS published this past March.

S. Claire Peaslee
Point Reyes Station, California

From: noreen@naturetrip.com
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD - 0002 - 19 - Support
Date: Friday, July 05, 2019 1:11:55 PM

**Support
Agenda Item W14a
CD-00020-19**

July 5, 2019

California Coastal Commission
San Luis Obispo, CA 94560
E-mail: EORFC@coastal.ca.gov

**Re: Item W 14a CD-0002-19
U.S. Fish and Wildlife Service, San Francisco
Support for Southeast Farallon Island Nonnative Mouse Eradication Project**

Dear Commissioners:

The house mouse issue on the South Farallon Islands is a problem that has been studied by experts from US Fish and Wildlife and Point Blue Conservation Science for over 10 years.

The proposed plan is the best for the California Species of Special Concern –the Ashy Storm Petrel which breeds on this island. It is also important for other breeding seabirds, an insect, the island Camel Cricket, an island arboreal salamander, marine mammals and native plants including the maritime goldfield.

Science based organizations including Audubon California, the American Bird Conservancy and Golden Gate Audubon support this proposal. The CA Coastal Conservancy Staff recommend support the project.

Much has been learned at other islands and there have been successful eradication of the nonnative, invasive rodents. In California a similar project occurred at Anacapa (one of the Channel Islands).

<<https://www.nps.gov/chis/learn/nature/restoring-anacapa-island-sea-bird-habitat.htm>>

Now bird and other species are returning and recovering on Anacapa Island.

US Fish and Wildlife considered 49 alternatives and recommended this plan for the house mouse eradication. The lessons learned from other islands have been incorporated into this proposed project. Information on the island and the proposed project have been well

communicated on the website Restore the Farallones.

I urge you to support the house mouse eradication project for the future of the native species that depend on this unique island habitat.

Sincerely,

Noreen Weeden

noreen@naturetrip.com

San Francisco, CA

From: [Michelle Raine](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 1:20:53 PM

Regarding Item W14a: Trump Administration's proposed helicopter dispersal of 1.5 tons of poison bait pellets in the Greater Farallones National Marine Sanctuary off of Marin and San Francisco this Fall

To the Coastal Commission:

This controversial poisoning plan by the US Fish and Wildlife Service was abandoned by the Obama Administration in 2013 as being too risky to the Sanctuary and a threat to adjacent fragile coastal ecosystems, while also posing unnecessary danger to non-target species, the poison drop proposal here has recently been revived by federal officials, who are now pushing the Coastal Commission to find their scheme to be "consistent" with California's Coastal Plan. The US Fish and Wildlife Service asserts that burrowing owls from Marin pose a threat to Ashy Storm Petrels, a seabird that frequents the islands, but the same agency has also declined petitions to list the Ashy Storm Petrel as at risk under the Endangered Species Act, noting that their population is on the increase. The Wildlife Service is now claiming that not one single poison pellet will reach the water and that killing every single one of the islands' house mice using a slow-acting poison, represents the only way to discourage the small number of burrowing owls (6-8) from being attracted from Marin's coastal headlands to feed on the mice. The poisons being proposed are the subject of increased scientific scrutiny because of non-target wildlife disasters during similar air drops on island locations elsewhere. The State of California has outlawed retail sale of the same toxic compounds due to the unintended damage they inflict on mountain lions, bobcats, an iconic mammal called the Pacific Fisher, and in terrestrial urban interface locations, the dangers they pose to pets and children. Legislation limiting their use is now moving through the California State Legislature. Some within the Wildlife Service admit that large numbers of gulls ingesting the poison pellets offshore during a helicopter drop this fall could return to die in mainland locations they frequent, such as at Fishermen's Wharf. Any accidental wind- or wave-borne discharges of the poison into the ocean pose a contamination hazard to fish, crabs, and abalone.

I have experienced first-hand the problem with these toxins when our County (Tuolumne) where I used to live used these same products to kill mice in the attic of the old courthouse. They later found five full grown owls dead in the attic from ingesting the dead mice. This is a horrible death and these toxic poisons should be outlawed.

Some regulations should not be ignored and are there for a good reason.

I will try to come to the hearing, but may not be able to make it, so please accept these comments for the hearing.

Thank you.

Michelle and James Raine
1310 Buena Vista Avenue
Pacific Grove, CA 93950

From: [Anne Chadwick](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 1:31:19 PM

Dear Commissioners,

I serve on the board of Point Blue Conservation Science and would like to voice my strong support for the proposed project. I am not a scientist myself, but our staff members are top-notch scientists who have conducted extensive and rigorous original scientific research over 50 years of living on and studying the Farallones. Based on their extensive research, here's what we know:

- The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, especially ash storm-petrels, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.
- The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly.
- At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.
- The US Fish and Wildlife Service has produced one of the most thorough and scientifically rigorous EIS documents on record. The final product represents over ten years of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments and addressed all substantive comments in its final report.
- Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.
- The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take to minimize any potential negative impacts of the eradication.

Thank you for your thorough consideration of this issue. I trust you will make the right decision based on sound science.

Sincerely,

Anne Chadwick
PO Box 823
Graton, CA 95444
www.annechadwick.com

From: [Weinstein, Anna](#)
To: [Simon, Larry@Coastal](#); [CentralCoast@Coastal](#)
Cc: [Garske, Lauren@Coastal](#)
Subject: comment on Item 14, Federal Consistency
Date: Friday, July 05, 2019 1:34:31 PM
Attachments: [AudCA Farallon CCC 7.5.2019.pdf](#)

Hi Larry & Lauren,

Please accept this comment on behalf of Audubon. I was unable to submit the comment via the link provided on the agenda item itself. Thank you,

Anna

Anna Weinstein
Marine Program Director
220 Montgomery Street
Suite 1000
San Francisco, CA 94104
415-644-4613
www.ca.audubon.org





July 5, 2019

**Re: Support for Agenda Item w14a, Consistency Determination No. CD-0002-19
Invasive Mouse Eradication, Farallon Islands National Wildlife Refuge**

Dear Chair Bochco and Commissioners,

Audubon California is writing in support of the staff recommendation of Concurrence under the Coastal Act, for the U.S. Fish and Wildlife Service's ("USFWS") *Farallon Islands National Wildlife Refuge: South Farallon Islands Invasive House Mouse Eradication* project ("Project"). The staff report found the Project fully consistent with Articles 2-5 of the Coastal Act. In addition, the Project complies with Objective 1.1 of the USFWS's 2009 Comprehensive Conservation Plan, which established a goal of reducing the impacts of invasive wildlife on the island ecosystem. Finally, the Project is the top recommended action of the rangewide *Conservation Action Plan for the Ashy storm-petrel*: to eradicate invasive house mice from the islands in order to protect the species from invasive mammalian, and associated avian predators. We therefore support Coastal Commission approval of the concurrence recommendation at its July, 2019 meeting.

Audubon's interest in the Farallon Islands

Audubon's mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Many of our >65,000 members in California are part of our 19 coastal chapters. These chapters have an especially strong interest in the conservation and restoration of the Farallon Islands National Wildlife Refuge. The Refuge is a global Important Bird Area, and hosts the largest seabird breeding colony in the continental United States, with more than 300,000 individuals of 13 species cherished by our members including Tufted Puffin, Common Murre, Cassin's Auklet, Ashy Storm-petrel and Brandt's Cormorants.

We agree with the staff report's finding that "the benefit of this conservation action is significant from a national perspective because of the importance of the South Farallon Islands for breeding seabirds and for their endemic species... the policies in Section 30240 [of the Coastal Act] call for environmentally sensitive habitat areas to be protected against any significant disruption of habitat values."

Further, of special interest to Audubon are the anticipated direct benefits of the Project for the Ashy Storm-petrel, a rare, elusive seabird that is almost entirely endemic to California, with a small global population of 10,000-20,000 individuals. After petitions for listing the species under

the federal Endangered Species Act were unsuccessful,¹ we organized the world's experts on the species and secured funding to complete the *Conservation Action Plan*.^{2,3} The goal of the Plan, completed in 2016, is to inventory and prioritize conservation and monitoring activities needed to stabilize and increase the species' population; to attract funding; and to provide a platform for continued collaboration. The eradication of invasive mice on the Farallon Islands is the top priority identified by the >18 experts who completed the Plan, for actions needed now to protect the species from further declines.

Preferred Alternative of FEIS is the best course of action to protect the Refuge from the continuing impacts of invasive house mice

The staff report reviews the Service's Preferred Alternative to "Eradicate invasive house mice from the South Farallon Islands by aerial broadcast of the rodent bait Brodifacoum-25D Conservation as the primary method of bait delivery." The report reviews the FEIS's description of toxicological and disturbance risks, mitigation measures, contingency plans, monitoring, and other components of the Preferred Alternative, and found the FEIS to be consistent with the Coastal Act. We agree with this finding, and we also note that Service and other experts evaluated nearly alternatives for eradicating the invasive mice. The Preferred Alternative was chosen only after a rigorous and thorough review of options. We recognize the gravity of using Brodifacoum-25D Conservation in the environment, yet agree with the FEIR it is the best path forward for this critically needed action.

Also providing reassurance is the fact that invasive rodent removals have been successfully completed on nearly 500 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

The Service's FEIS satisfies our concerns regarding the impact of the Project on Burrowing Owls, which often occur on the island in small numbers, and comprise a key reason underlying the need to eradicate the invasive mice. As explained in the FEIS, Burrowing Owls are a grassland species that naturally occur in small numbers on the Farallones as they undertake their annual migration. However, the few owls that remain on the Farallones – the maximum ever observed is eight individuals - do so in large part because of the convenient food source provided by the mice. When the mice die back in the winter, the owls turn to ashy storm-petrels, and can kill hundreds each year. We are satisfied the Service's plan to haze owls, raptors and other birds before, during and after the operation will minimize risk to the owls and other birds.

Summary

¹ U.S. Fish and Wildlife Service, 2013. Endangered and threatened wildlife and plants; 12-Month finding on a petition to list Ashy Storm-Petrel as an endangered or threatened species. Notice of 12-month petition finding. Federal Register 78: 62523-62529. <https://www.federalregister.gov/documents/2013/10/22/2013-24170/endangered-and-threatened-wildlife-and-plants-12-month-finding-on-a-petition-to-list-ashy>

² Carter, H., Ainley, D., Wolf, S. and A. Weinstein. 2016. Rangewide conservation and science of the Ashy-storm petrel. *Marine Ornithology* 44: 53–62 (2016)

³ Parker, M. et al. 2016. Conservation Action Plan for the Ashy Storm-petrel. <http://colibri-ecology.com/wp-content/uploads/2018/12/Parker-2016.pdf>

We applaud the USFWS's persistence and leadership in completing the FEIS which resolved key concerns raised by commenters on the DEIS. We appreciate the careful review of Coastal Commission staff to ensure consistency of the Project with the Coastal Act. We recommend the Commission approve the staff's recommendation, and we look forward the completion of the Project. The result will be a far healthier Farallon Islands ecosystem for the Ashy Storm-petrel, 12 other breeding seabirds, other endemic species, and the entire Farallon wilderness, for generations to come.

Sincerely,

A handwritten signature in cursive script, reading "Anna Weinstein".

Anna Weinstein
Marine Program Director

From: [marsha_armstrong](#)
To: [Simon, Larry@Coastal](#)
Cc: [marsha_armstrong](#)
Subject: CD-0002-19; agenda W14a
Date: Friday, July 05, 2019 1:38:34 PM

Killing thousands of non-target animals to prevent predation by a few owls on a few non-endangered birds is insane overkill. I have read many of the comments from individuals,(which you had received as of 5 PM on June 27 2019), and will not repeat their many cogent as well as emotional statements, which I fully support.

I hope you will at least respect the wishes of the Board of Supervisors of the County of Santa Cruz (letter dated June 25,2019) and the Board of Supervisors of the County of Marin,(letter dated June 26,2019)as expressed in their official letters, wherein they requested that the Coastal Commission deny the U.S. Fish and Wildlife Service "consistency determination" for their plan to disperse a very long acting poison over the Farallon Islands National Wildlife Refuge.

From: jeremiah.psiropoulos
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD-0002-19
Date: Friday, July 05, 2019 1:55:49 PM

To whom it may concern,

As wildlife managers we must do everything in our power to protect native species and habitat. Unfortunately, sometimes that means removing one species to protect another. Non-native and invasive species must be managed whenever and wherever possible, especially when they threaten native, endemic or endangered species. It is for this reason that I support an effort to eradicate non-native mammals from the Farallon Islands to protect its vital and sensitive ecosystem. It may be a politically difficult decision to make but doing the right thing isn't always easy. Thanks for your time,

Jeremiah Psiropoulos
Wildlife Biologist
Ventura, California

From: [Robin Leong](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 2:02:49 PM

Dear California Coastal Commission

You might know that the Farallones are sometimes referred to as “California’s Galapagos.” the Farallones. Those islands are host the largest seabird breeding colony in the continental United States and 25% percent of California’s breeding seabirds (more than 300,000 individuals of 13 species). Before human-caused disturbances, more than one million seabirds bred at the Farallones. Over the last 40 years, the USFWS has strived to restore the Farallones by removing invasive plants and animals that have negatively impacted the island ecosystem. As an example, introduced, invasive cats and rabbits were removed in the 1970’s with positive ecological responses including the return of breeding rhinoceros auklets after a long absence.

I am writing to you today about the eradication of the invasive house mouse is the last invasive vertebrate remaining on the Farallones. It was probably introduced by sailing vessels, likely in the 19th century, these mice exist on the islands in plague-like levels—at times reaching as many 1,270 mice per hectare, one of the highest observed densities in the world. The presence of invasive house mice is negatively impacting the Ashy Storm-petrel, other seabirds, Burrowing Owls, Farallon arboreal salamanders, Farallon camel crickets, and the islands’ vegetation. Threats to the rare and threatened Ashy Storm-petrel’s declining population are of particular concern.

Thirteen years ago, the USFWS began a thorough review of available options to remove mice from the island. This spring, the Service published one of the most thorough and scientifically rigorous Environmental Impact Statements on record, extensively referencing original, peer-reviewed science by Point Blue. The final product represents over a decade of careful study, with a final report of 322 pages supported by an appendix 577 pages long. Before publishing the final EIS document, USFWS reviewed each of the 553 public comments that were made on the draft EIS and addressed all substantive comments in its final report.

Invasive rodent removals have been successfully completed on nearly 60 islands worldwide, including on California’s Anacapa Island in the Channel Islands National Park, three National Wildlife Refuges in the Pacific, two islands off the coast of Mexico, many islands off the main islands of New Zealand, and recently, multiple islands in the Galápagos Archipelago. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication. The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. The survival of even a single pair of mice jeopardizes the whole project, as the mouse population can recover incredibly quickly. At present, there is only one known method that has proven effective for island eradication, and that is the “preferred alternative” (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019. The USFWS will follow best practices learned from successful eradications and has outlined in the final EIS all of the precautionary measures it will take

to minimize any potential negative impacts of the eradication.

The Farallon Islands are a world-famous local treasure. The USFWS has a unique opportunity in this moment to take a giant step forward in restoring the island's fragile ecosystem and protecting the many species that rely on it. I applaud the USFWS for their careful, transparent process and their commitment to science-based decision making. Based on Pt. Blue's fifty years of experience studying birds and other wildlife on the islands, as a past Board member I strongly support the conclusions of the Service's EIS and hope you'll do the same.

Thank you for allowing me to comment on this important matter to save an endangered species, the ashy storm-petrel, but also on Leach's storm-petrels, as well as on native salamanders, crickets and other invertebrates, and native plants.

--

Be the Change

Robin Leong

That's whoo

..+..(•^•)..+ .

+...((____))

-----" "-----

"We will be known forever by the tracks we leave." -Dakota proverb

This email has been checked for viruses by Avast antivirus software.

<https://www.avast.com/antivirus>

From: [Nancy Emerson](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 2:06:08 PM

Dear Commissioners:

I am horrified that the US Fish and Wildlife Service would apply for permission and support to use a highly toxic rodenticide on the Farallon Islands to kill non-native mice. The contingent harm to other fish, bird and mammal species is too great to allow the application of this toxic substance.

Please deny this application. If the problem requires the removal of the mouse population, less invasive and dangerous solutions, including a specific mouse rodenticide approved by the EPA, are available.

The health and well-being of our ecosystem depends on your reasonable protection.

Thank you,
Nancy Emerson
517 Montford Ave.
Mill Valley, CA 94941

Sent from my iPhone

From: [Peter Hodum](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 2:11:51 PM
Attachments: [PSG comment Farallon house mouse eradication 03july2019.pdf](#)

To the California Coastal Commission,
Attached please find a letter written on behalf of the Pacific Seabird Group (PSG) in support of the South Farallon Islands House Mouse Eradication Project.

Please let me know if PSG can be of any further assistance.

Yours sincerely,
Peter Hodum
Vice-Chair for Conservation
Pacific Seabird Group

--



Peter Hodum, Ph.D.
Chile Program Director
Tacoma, WA USA
Oikonos Ecosystem Knowledge
www.oikonos.org | +1.808.369.5747



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July 3, 2019

California Coastal Commission
45 Fremont Street, Suite 2000
San Francisco, CA 94105-2219

To the California Coastal Commission:

The Pacific Seabird Group (PSG) is writing this letter in strong support of the proposed South Farallon Islands Invasive House Mouse Eradication Project. PSG is an international, non-profit professional organization that was founded in 1972 to promote the knowledge, study, and conservation of Pacific seabirds. It has a membership drawn from the entire Pacific basin, including Canada, Mexico, Japan, China, Malaysia, Australia, New Zealand, Peru, Chile and the USA. Among PSG's members are biologists who have research interests in Pacific seabirds, government officials who manage seabird refuges and populations, and individuals who are interested in marine conservation. PSG members serve as scientific experts and conservation leaders within their local communities, nationally and around the world.

Invasive species are considered to be one of the greatest threats confronting global biodiversity. The threats posed by invasive species, particularly rodents and feral cats, are even more pronounced on islands, where they have been a major driver of extinctions of island species. Given their life histories and dependence on mammal-free islands for breeding, many seabird species are particularly vulnerable to the impacts of invasive mammals. Eradication of invasive mammals from islands is a well-documented and highly successful method for protecting species and natural ecosystem processes on islands.

In 2013, PSG previously provided a letter supporting Alternative B to the US Fish and Wildlife Service during the Draft Environmental Impact Statement comment period, citing the significant conservation benefits that would be accrued from the project and the fact that the proposed method of eradication has been used successfully on dozens of islands worldwide, including Anacapa Island in the Channel Islands National Park. Our position remains consistent in support of the project, and we summarize our major arguments below.

Introduced rodents, including house mice, have had devastating impacts on islands worldwide. On the Farallon Islands, house mice have significant negative impacts at the level of both species and ecosystems. House mice have had documented impacts on the islands' breeding seabird community, one of the most significant and diverse in the contiguous United States, as well as on

native salamanders, an endemic species of cricket, other native invertebrates and the native plant community.

One of the priority seabird species on the islands is the Ashy Storm-petrel (*Oceanodroma homochroa*), one of the rarest species of storm-petrels in the world. The breeding population of Ashy Storm-petrels, endemic to the Southern California Current System and globally listed by the IUCN as Endangered and declining, is directly impacted by predation by house mice. In addition, the removal of house mice would result in significant benefits to other burrow- and ground-nesting seabirds on the South Farallon Islands, including Leach's Storm-petrel (*Oceanodroma leucorhoa*), another species of conservation concern in the California Current.

Although ongoing control of invasive species can mitigate their impacts, eradication is the most effective method to recover insular ecosystems. A compelling example is the successful rat eradication on Anacapa Island in 2002 that has resulted in significant recovery of the target seabird species, Scripps's Murrelet (*Synthliboramphus scrippsi*), globally listed as Vulnerable, as well as of the island's terrestrial plant communities.

The second generation anticoagulant Brodifacoum has been used successfully in invasive rodent eradication programs for more than 25 years. It is the only known and documented method for eliminating invasive rodents, as explicitly stated in the US Fish and Wildlife Service Final Environmental Impact Statement published in March 2019. The technique of systematically deploying poisoned bait from a helicopter was developed by New Zealand conservationists and has been employed in all successful invasive rodent removal programs.

The US Fish and Wildlife Service (USFWS), with Point Blue Conservation Science collaborating as a science partner, produced a thorough and scientifically rigorous EIS based on more than a decade of focused study on the benefits as well as issues associated with the proposed eradication. Prior to publication of the final EIS document, reviewed all of the 553 public comments and addressed all substantive comments in the final version of the EIS.

While PSG, consistent with the assessment included in the EIS, acknowledges that there are risks attendant with the application of Brodifacoum in terms of incidental short-term mortality of non-target species and other unintended consequences, we firmly accept the premise that significant long-term conservation and restoration benefits will accrue, and those benefits will enhance the conservation status of species of concern as well as the long-term ecological resilience of the ecosystems of the South Farallon Islands.

To put the proposed project in a broader context, invasive rodent removals have been completed successfully on nearly 700 islands worldwide, including the aforementioned project on Anacapa Island in the Channel Islands National Park and islands in New Zealand, Mexico, and the Galápagos Islands. Of those rodent eradications, more than 60 have involved the successful removal of house mice, the vast majority of which have used comparable techniques to those proposed for the South Farallon Islands.

Given the extensive record of rodent removal projects globally, best practices are now well established. PSG is confident that the USFWS will follow best practices derived from the more

than 60 successful mouse eradication projects around the world and will take the precautionary measures outlined in the final EIS to minimize potential short-term negative impacts due to the eradication. The USFWS and its cooperators have the collective expertise as well as the commitment to safety and environmental protection to complete the project successfully and, as such, advance the conservation status of the South Farallon Islands ecosystem.

Thank you, and please let us know if we can be of further assistance.

Sincerely,

A handwritten signature in cursive script that reads "Peter J. Hodum".

Peter Hodum, Ph.D.

Vice-Chair for Conservation

From: [christa.burgoyne](#)
To: Energy@Coastal
Subject: July 2019 Agenda item Wednesday 14a CD - 0002 - 19
Date: Friday, July 05, 2019 2:13:47 PM

I have done a lot of reading on this controversial issue and I am IN FAVOR OF THE PROJECT.

Sincerely,

Christa Burgoyne
Inverness and Berkeley CA

From: [Scott Miller](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 2:32:29 PM
Attachments: [Poison Farallones CCC.pdf](#)

Hi,
Happy 5th!
PDF:

*Scott Miller
P.O. Box 145
Dillon Beach, CA. 94929
(707) 878-2167*

July 5, 2019

California Coastal Commission
45 Fremont St., suite 2000
San Francisco, Ca. 94105-2219



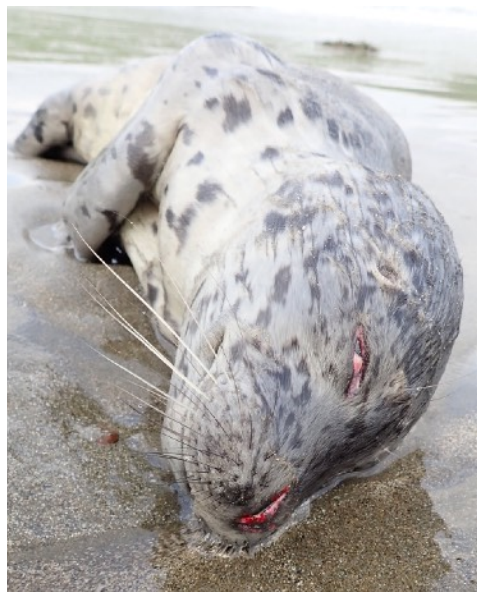
Re: Farallones Poison Drop (CD-0002-19)

Dear Commissioners,

The plan is to air-drop 2,900 pounds of poison pellets onto a tiny island with unpredictable weather and waves.

What could possibly go wrong?

Sincerely,
Scott Miller



From: [Andrew Meyer](#)
To: Energy@Coastal
Cc: [Jim Peugh](#); [Muriel Spooner](#)
Subject: Farallon Islands USFWS EIR
Date: Friday, July 05, 2019 2:33:30 PM
Attachments: [SDAS CoastalCommission Farrallon Islands.pdf](#)

Hello, please see our letter attached in support of the Farallon Island eradication project.

Thank you very much,
Andrew

--

Andrew Meyer
Director of Conservation
San Diego Audubon
(858) 273-7800 x 101
meyer@sandiegoaudubon.org

July 5th, 2019

Re: Statement in Support of Farallon Islands Invasive Species Eradication Effort

Dear Honorable Members of the California Coastal Commission:

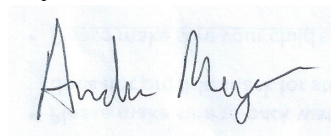
On behalf of the San Diego Audubon Society and our 3,000+ members, I am writing to support the restoration of the Farallon Islands through an invasive species eradication project. San Diego Audubon has been a leader on wildlife conservation and environmental stewardship for over 70 years, and we are highly invested in protecting birds as well as other wildlife, their habitats, and the resources that they rely on. I had the great opportunity early in my career to work on the successful eradication project on Anacapa Island in the mid 2000s. That project is a success because of the dramatic increase in nesting success of several seabird species, with other important benefits to native amphibians, mammals, invertebrates and plants. As managers and stewards of California habitats, we sometimes have to choose the long-term benefit over the short-term consequences, and San Diego Audubon Society thinks the Farallon Islands eradication project is exactly one of these situations. The USFWS has created a rigorous EIR and is pursuing the best course of action, with substantial long-term benefits to the ash and Leach's storm-petrels as well as several other native species of amphibians and invertebrates.

We note that the California Assembly and Senate are currently considering bill AB 1788, which seeks to put in place common sense controls on anticoagulant rodenticides while providing exemptions for agricultural activities, true public health emergencies and invasive species control. We support that bill, view this Farallon Island project as exempt under the bill, and see no conflict between both of these stances.

California has the opportunity to continue to be a world leader on environmental protection and habitat restoration through this project. San Diego Audubon urges you to support the restoration of the Farallon Islands for the long term protection and conservation of our native plants and animals, including especially the birds that need to breed on offshore islands.

Thank you for your attention to this critical issue.

Sincerely,



Andrew Meyer
Director of Conservation
San Diego Audubon Society

From: [boyce thorne Miller](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 3:01:40 PM

Dear Coastal Commission

I am writing to urge you to soundly reject the consistency determination submitted by the USFWS for the South Farallon Islands Invasive House Mouse Eradication Project in the Farallon Islands National Wildlife Refuge, located approximately 27 miles west of San Francisco, and surrounded by waters of the Greater Farallones National Marine Sanctuary.

My comments are based on decades of work as a scientific. Toxins, including pesticides that are meant to target pest species, do not select their victims and are not benign to non-target species. They constitute a Pandora's box of known and unknown impacts on the life forms occupying the area they contaminate. Exposure may be through ingestion, inhalation, and absorption through membranes. If a toxin is waterborne its mobility in the environment and its exposure and availability to all organisms it contacts is enhanced. In places like the Farallon Islands, the many species that have been identified as threatened or endangered are certainly vulnerable to the impacts of toxic pellets scattered haphazardly about the terrestrial environment and the toxins that dissolve into water pools and coastal ocean waters where the pellets land. There are many, many more vulnerable species, some of which are not even visible to us, but nevertheless are important to sustaining a healthy ecosystem. Furthermore, these chemicals work their way through food webs, where they are lost to monitoring but still continue to spread negative toxic impacts that can alter the larger ecosystem in unpredicted ways. Aerial dispersal of the pesticide merely increases the coverage and opens opportunities for drift and runoff into areas not intended to receive the poison. It is foolish to expect that can be controlled.

This project is taking a narrow and short-sighted view by focusing on as few species as possible, as if no others will be affected. The problem appears not to have been thoroughly studied to determine all the key biological interactions that are used to justify the proposed mice eradication, and certainly has not investigated the likely and potential consequences for other species. Nor has it been shown what important impacts the action would have on affected ecosystems over both short and long terms.

Having worked on the designation of National Marine Sanctuaries in the past, and on coastal issues that impact marine protected areas of all sorts, I am appalled by the idea that any governmental entity charged with protecting coasts would agree to a plan to spread toxins in that environment, knowing the wide spectrum of impacts it could have on individual species and whole ecosystems that have been designated to be protected. I have never seen evidence of toxins helping any environment but there is a mountain of evidence that toxins destroy ecosystems. That a protected area would be subjected to purposeful, government-sanctioned injection of poisons into the ecosystem, is unthinkable. Surely there are other less damaging "solutions" and effective measures that could be designed to address a problem, if it is proven to exist. The Coastal Commission would be well advised to send the USFWS back to the drawing board, as well as to ask for more scientific evidence justifying an eradication effort.

Because I only recently became aware of this proposed project and the looming issue of extermination of rodents on islands in California, I am not able to give detailed comments. However, I have read comments already submitted to you by Mary McAllister, and have confirmed the references and believe her assessment to be valid. I therefore wish to associate myself with her comments, which are attached below.

Sincerely,
Boyce Thorne Miller
Watsonville, CA

attachment:
To: EORFC@coastal.ca.gov
Date: June 28, 2019 at 2:09 PM

Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

The plan to aerial drop rodenticides on the Farallon Islands to kill mice is deeply flawed. The stated purpose of this project was to protect the ash storm petrel, a legally protected species of concern. The mice are not a direct threat to the petrel. Rather, USFWS claims that another legally protected species of concern, the burrowing owl, eats the chicks of the petrel when the population of mice dwindles, as it does every year. Because the average population of burrowing owls on the Farallons is said to be only 8-10 burrowing owls, the scale of their predation of petrel chicks seems minimal given that their preferred prey is mice. USFWS theorizes that if the mice are killed, the burrowing owls will leave the Farallons. This fanciful scenario is less credible than the more likely outcome that the burrowing owls will either be killed by the poison or eat yet more petrel chicks if their mice diet is eliminated.

Aside from the convoluted and questionable rationale for this project, the main concern is the anticipated collateral damage caused by aerial bombing huge quantities of rodenticide (brodifacoum). We should learn from similar projects done elsewhere. In those few cases when after-the-fact monitoring was done, there is considerable evidence that many non-target animals were killed and the water was polluted.

In the case of Rat Island, off the coast of Alaska, no monitoring was planned after the aerial bombing of 46 metric tons of anti-coagulant rodenticide to kill rats. However, neighbors of Rat Island demanded an investigation when they saw dead birds and animals floating in the vicinity of the island after the project was done. That investigation was done by USFWS Law Enforcement. (https://drive.google.com/file/d/0BwdOUBgcb_baeXIYTzZ0X05hWFU/view) The investigation found that the manufacturer's recommendations regarding dosage were exceeded, that instructions to collect dead rats so they would not be eaten by birds were not followed, and that hundreds of birds died, including many legally protected bald eagles. The investigation was not done until 7 months after the project was completed. We should assume that the number of dead animals found would have been greater if the investigation had been done promptly after the project was completed.

In the case of Palmyra Island, off the coast of Hawaii, the scientific study conducted after the aerial bombing of rodenticides reported, "We documented brodifacoum [rodenticide] residues in soil, water, and biota, and documented mortality of non-target organisms. Some bait (14–19% of the target application rate) entered the marine environment to distances 7 m from the shore. After the application commenced, carcasses of 84 animals representing 15 species of birds, fish, reptiles and invertebrates were collected opportunistically as potential non-target mortalities. In addition, fish, reptiles, and invertebrates were systematically collected for residue analysis. Brodifacoum residues were detected in most (84.3%) of the animal samples analyzed. Although detection of residues in samples was anticipated, the extent and concentrations in many parts of the food web were greater than expected." (William Pitt, et. al., "Non-target species mortality and the measurement of brodifacoum rodenticide residues after a rat (*Rattus rattus*) eradication on Palmyra Atoll, tropical Pacific," Biological Conservation, May 2015, 36-46)

The most damning evidence of all is that after killing untold numbers of animals, including those not meant to be killed, and poisoning the environment with a deadly toxin that bioaccumulates and persists in our bodies, the rat population often returns to pre-project levels within a few years. Henderson atoll in the Pacific is an example of such a failure. Eighty tons of rodenticide pellets were aerial bombed on Henderson in 2011. Apparently, at least two rats survived, one presumably male and one presumably female. Within a few years the rat population had returned to pre-projects levels of 50,000 to 100,000 rats. (<https://news.nationalgeographic.com/2016/04/160419-rats-exploded-poison-henderson-island/>)

The rats were said to have been introduced to Henderson over 800 years ago. Surely they had reached some balance between population size and available food sources. Rats are an ancient species that would not be here if they completely wiped out their food sources. Rat population growth is modulated by available food sources. Hence, when almost completely eradicated, the rats rapidly reproduced back to equilibrium with food sources.

Claims that the Henderson project was urgently needed to prevent the extinction of a bird species with

which rats had co-existed for over 800 years were bogus. If rats had not exterminated the birds within 800 years, they weren't likely to do so before this pointless project killed tens of thousands of animals, probably including many birds.

The failure of the extermination attempt on Henderson is not an isolated incident. Lehua is one of the Hawaiian Islands on which extermination was attempted and failed. An evaluation of that attempt was published in 2011 to determine the cause of the failure so that a subsequent attempt would be more successful. That evaluation included this report on the success of similar attempts all over the world: "An analysis of 206 previous eradication attempts against five species of rodents on islands using brodifacoum or diphacinone is presented in an appendix to this report. For all methods, 19.6% of 184 attempts using brodifacoum failed, while 31.8% of 22 attempts using diphacinone failed." Brodifacoum and diphacinone are both anti-coagulant rodenticides. Diphacinone is considered less toxic and less persistent than brodifacoum.

The California Coastal Commission has a responsibility to protect the coast of California and the people and animals that inhabit the coast. I respectfully request that CCC fulfil its mission by declaring the project inconsistent with that mission.

Thank you for your consideration.
Mary McAllister

From: [Gail Raabe](#)
To: Energy@Coastal
Cc: [C/H High](#); [Florence LaRiviere](#)
Subject: CCCR Comments on July 2019 Agenda Item Wednesday 14a CD-0002-19
Date: Friday, July 05, 2019 3:29:37 PM
Attachments: [CCCR comments on Farallon Islands Mouse Eradication Project July 2019.pdf](#)

California Coastal Commission:

Please find attached a comment letter from the Citizens Committee to Complete the Refuge regarding the U.S. Fish and Wildlife Service South Farallon Islands Invasive House Mouse Eradication Project (July 2019 Agenda Item Wednesday 14a CD-0002-19).

An acknowledgment that our comments have been received would be greatly appreciated.

Thank you,

Gail Raabe, Co-Chair
Citizens Committee to Complete the Refuge



CITIZENS COMMITTEE TO COMPLETE THE REFUGE

453 Tennessee Lane, Palo Alto, CA 94306 Tel: 650-493-5540 www.bayrefuge.org cccrrefuge@gmail.com

July 5, 2019

California Coastal Commission
San Luis Obispo, CA
Via email: EORFC@coastal.ca.gov

Re: July 2019 Agenda Item Wednesday 14.a. CD-0002-19
Comments in Support of the U.S. Fish and Wildlife Service South Farallon Islands
Invasive House Mouse Eradication Project

Dear Commissioners,

The Citizens Committee to Complete the Refuge and its 2000 members have a decades-long history of devotion to the wetlands and wildlife of the San Francisco Bay region. The efforts of our senior members led to the establishment of the Don Edwards San Francisco Bay National Wildlife Refuge in 1972.

We strongly support the use of the rodenticide on the South Farallon Islands for the USFWS Invasive House Mouse Eradication Program. The Farallon Islands are vital to 13 species of breeding seabirds. The Ashy Storm-Petrel, a bird of Special Concern whose numbers have dropped precipitously, will especially benefit from the removal of the non-native mice. Indeed, with so many human impacts on these birds, it behooves us to do all we can to protect them.

We acknowledge that this is a controversial issue; however, other avenues of eradication have failed. We support the use of the rodenticide at this island location for the following reasons:

- The introduction of invasive, non-native house mice to the Farallon Islands has caused significant disturbance to the islands' sensitive ecosystem. The house mice have direct and indirect harmful impacts on the islands' breeding seabirds, as well as on native salamanders, invertebrates and native plants.
- The only way to allow the ecosystem to recover is to ensure 100% eradication of the house mice. At present, there is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019.

- This report is one of the most thorough and scientifically rigorous EIS documents on record, and the final product represents over ten years of careful study. Before publishing the final EIS document, USFWS reviewed and addressed 553 public comments.
- Land managers have successfully eradicated house mice from more than 60 islands worldwide, and nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.
- The USFWS will follow best practices learned from successful eradications, and will implement the mitigation measures outlined in the final EIS to minimize any potential negative impacts of the eradication.

Thank you for the opportunity to provide comments. We urge you to support the efforts of the U.S. Fish and Wildlife Service to protect and enhance this unique island ecosystem.

Sincerely,



Florence LaRiviere, Chair Emeritus



Carin High Gail Raabe
Co-Chairs, Citizens Committee to Complete the Refuge

From: [Mary Ellen Hannibal](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 3:30:57 PM

This memo is to support the proposal to eradicate mice from the Farallon Islands. I'm a long-time environmental journalist and author and have studied the situation of invasive species, particularly on islands, and reported on these in my book referenced below (Citizen Scientist).

As you know, if we don't eradicate the mice from the Farallons, many of the bird species who nest will continue to suffer and to dwindle in numbers. With this sort of pressure continuing on them, some of these species may become endangered if they aren't already. Sea birds face horrifying anthropogenic challenges these days, everything from global warming to pollution to ocean acidification. Sea birds are among those targeted to go extinct within the proximal future unless we act decisively to protect them. That means protecting their habitat from human-caused impacts. The Farallon mice infestation is a direct result of human impacts on the islands, since they were brought there by humans.

The Farallons are a rare and special place for nesting sea birds. They are not a special place for mice, who can proliferate elsewhere without putting undue pressure on birds or any other species.

The idea of eradication is hard to take at first and nobody wants to have to do it. But sea birds play a vital role not only in ocean ecosystem health but also in terrestrial ecosystem health, providing a connective tissue, moving nutrients around, and helping to sustain global life processes as they fly over both land and sea.

We have a moral duty to do what we can to stem the extinction pressures on sea birds at the Farallon Islands. That means eradicating the mice. We are lucky our technological know-how is such that this can be done efficiently and relatively quickly.

I urge you to protect Farallon sea birds and to eradicate the mice.

v. sincerely,
Mary Ellen Hannibal
www.maryellenhannibal.com
(415)931-3750

--

[Citizen Scientist: Searching for Heroes and Hope in an Age of Extinction](#)
One of the best books of 2016, SF Chronicle; Nautilus Book Award
[Stanford TEDx talk](#)

From: [Cameron Rutt](#)
To: Energy@Coastal
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 3:46:11 PM

Dear Commission,

I would like to submit a brief letter in support of the mouse eradication project on the Farallon Islands.

Having worked on the Farallon Islands for two months during the Fall of 2013, the island and the ecosystem there hold a very special place in my heart. Thus, it is with great hope and excitement that I read about the planned eradication of the invasive, non-native House Mouse from the islands. Completely removing this species from the island would be a huge boon to the native birds (particularly Ashy Storm-Petrels) that rely on the island for safe breeding - given that it was historically mammal-free - and would be a huge missed opportunity if it did not come to pass, especially after so much diligent scientific research to address the issue in a comprehensive Environmental Impact Statement from the US Fish and Wildlife Service. Eradication efforts such as this have been successful at dozens of other islands around the world and offer one of the greatest potentials to enact meaningful, results-driven conservation on our planet today.

This proposed mouse eradication offers a massive upside to the islands' unique community, not only for breeding seabirds, but also for native salamanders, crickets, and native plants.

Thank you for your time and for your careful consideration of this important conservation action. The native community on the Farallon Islands will forever be grateful if the House Mouse could be completely exterminated from the islands.

Sincerely,
Cameron

--

Cameron L. Rutt

PhD Candidate
Louisiana State University
School of Renewable Natural Resources
Baton Rouge, LA 70803

From: [Booker, Melissa A CIV USN \(USA\)](#)
To: Energy@Coastal
Cc: [Hebshi, Aaron J CIV USN COMNAVREG SW \(USA\)](#)
Subject: Letter of Support for House Mouse Eradication at the Farrallon Islands
Date: Friday, July 05, 2019 4:02:48 PM

To: California Coastal Commissioners

RE: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19 – house mouse eradication on the Farallon Islands

The US Navy manages the natural resources at San Clemente Island, a training space crucial to maintaining military readiness for our sailors and marines. The Navy protects and enhances the natural resources on San Clemente Island while balancing the requirements of operating a live-fire training range. In addition, the Navy manages and monitors the resources on a number of offshore rocks surrounding San Clemente Island which are part of the Coastal California National Monument (CCNM). The Ashy Storm-petrel, a rare seabird of the California islands, breeds on San Clemente Island (including, but not limited to the offshore rocks) in low numbers. Because of the this seabird's rarity and the threat of decline, particularly on the Farallon Islands where introduced house mice directly and indirectly negatively affect their numbers, the species was petitioned for listing under the Endangered Species Act (ESA) in 2013 and may be petitioned again in the future.

The Navy benefits from the work of our partners, who manage the other California Islands, to promote healthy populations of our shared resources across the region. In this case, specifically, an Ashy Storm-petrel listing under the ESA has the potential to constrain critical Naval training on San Clemente Island. The Navy funds monitoring and management for Ashy Storm-petrel at San Clemente Island and the adjacent CCNM offshore rocks, but it will take a rangewide conservation effort to achieve success for seabirds in the Channel Islands. Thus, as the Navy's Wildlife Program Manager for San Clemente Island, I would like to express my support for the invasive house mouse eradication on the Farallon Islands and its objective of enhancing the Ashy Storm-petrel's population size.

Due to time constraints in the comment period, this email was not staffed up the Navy chain of command, and therefore does not constitute a formal endorsement of the project by the US Navy.

Thank you for considering my comments,

Melissa Booker

San Clemente Island Natural Resources Manager & Wildlife Biologist

NASNI Office 619-545-7188

SCI Office (no VM) 619-524-9058

From: [Sara Barnes](#)
To: Energy@Coastal
Cc: [Andy Barnes](#)
Subject: July 2019 Agenda Item Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 4:04:56 PM

Dear California Coastal Commission Members,

First of all, thank you for the important work you are doing to preserve our unique California coastline.

We are writing to support the eradication of the invasive house mouse from the Farallon Islands. We believe that the house mice have caused significant disturbance to the islands' ecosystem, particularly its breeding seabirds. Further, we know that an aerial broadcast of the rodenticide Brodifacoum has been identified as the most effective way to eradicate all the mice and has been used safely in other, similar locations.

We urge you to vote to support this project.

Thank you, again,
Sara and Andy (William) Barnes
376 Magee
Mill Valley, CA 94941

From: [angeline rivera](#)
To: Energy@Coastal
Subject: Letters from concerned children re: item W14a - Jul 5, 2019
Date: Friday, July 05, 2019 4:08:07 PM
Attachments: [Letters from concerned children re- item W14a - Jul 5 2019 - 15-53.pdf](#)

Scanned with TurboScan.

Sent from my iPhone

Dear Commissioner,

I am writing to inform you that if you decide to drop thousands of millions of poison pellets on the islands you will not just be killing the mice but you also will be killing non targeted animals because predators will eat the poisoned mice and that will pass on through the predators.

I hope you will choose to protect all the amazing animals that live on the island.

From

Shona Parle, age 11

~~Taguinitas CA~~
94933

Member of the arctic club (we don't only help the arctic)

X ~~my address~~

~~PO box 205~~

My address

Shona Parle

PO box 205

Forest Knolls, CA

94933

Hello Commissioner

I am sending you this letter because I want
you to Reject the request for the US Fish and Wildlife
Service Poison dispersal Plan. This is bad because it's killing
animals. we don't want animals dropping poison pellets in our homes.
So why drop some ~~on~~ to theirs. Please don't let the USFWS
do this.

From

Adriana 11 yrs

an Arctic Club member (we don't only help the arctic!)

4 rally ct

Fairfax CA

94930

Dear Commissioner:

I am writting because As you are planning the Aerial dumping of thousands of Pounds of toxic rodent poison On the farallon Islands to eradicate non-native House Mice.

I am Writting to request that you reject this decision.

Animals will die from consuming the highly toxic And long-lasting Poison Pellets, from feeding on sick and dying Poisoned Victims, and from this toxic Pesticide's integration into the entire island ecosystem.

Do you what this to happen? I don't please don't.

From Nina Molony,

Age 11

member of the

Arctic club

369 Oak Manor dr. Fairfax CA
94930

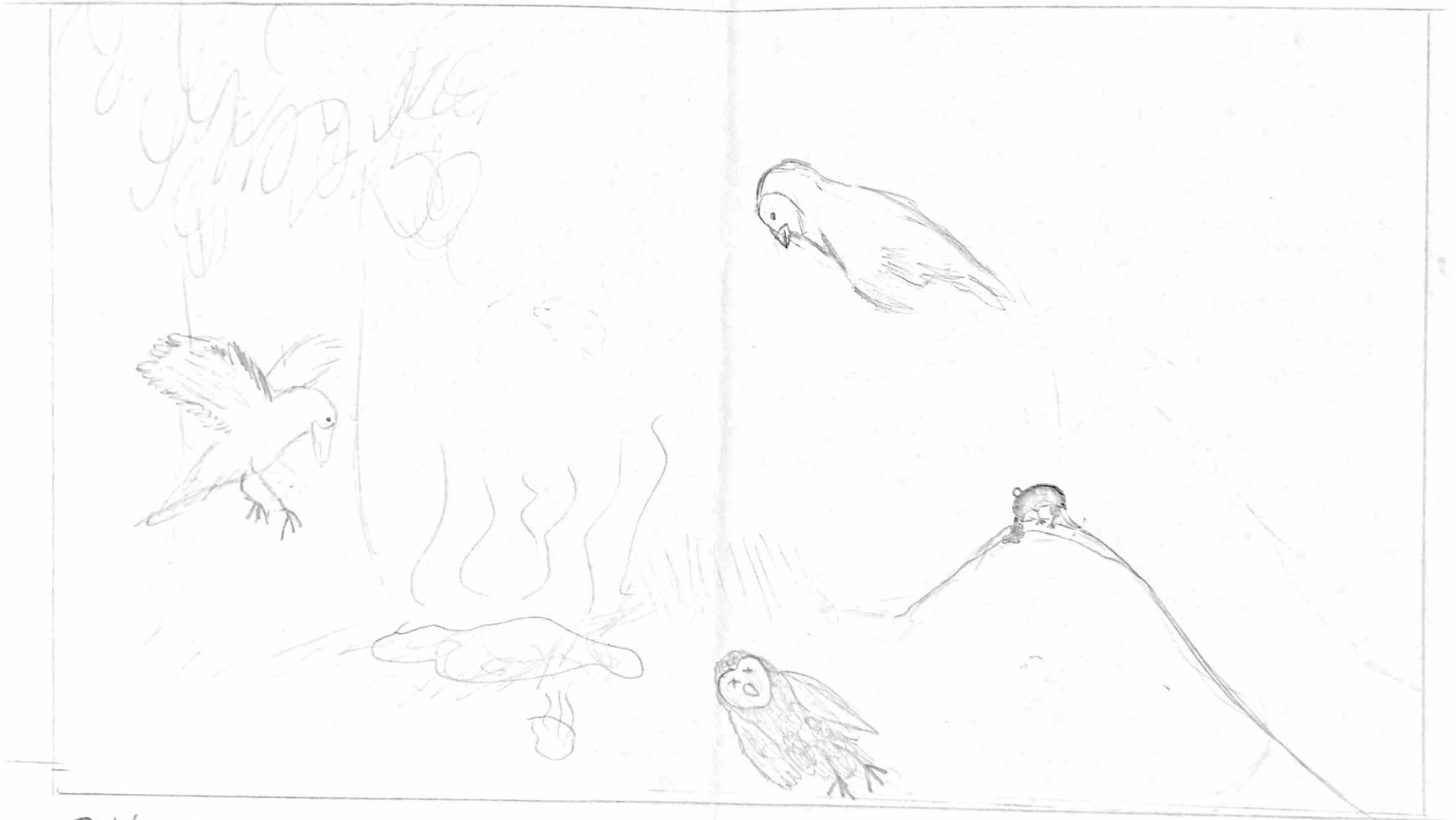
Dear Commissioner:

I am writing to plead that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison disposal. This is dreadful because it will kill our sacred species of sea ~~gutter~~ birds, marine mammals, and aquatic life. Since we are technically in the midst of a 6th mass extinction, this could potentially be a dramatic impact on our environment. Please protect our beautiful islands and beaches.

Thank you very much,

Lua Parle, age 14
Lagunitas, CA

Consider this,



This is not even worse case Scenario.

Please Sign here for the request to
reject the pending idea

Lisa Lazar

Nancy Meadows

AARON SPINDELL

Helga Kaufman

Emily Zhang

Jordan Terpstra

Lesley Desautels

Jacob Birmingham

Christie Winn

~~Aaron Spindel~~

~~Helga Kaufman~~

~~Emily Zhang~~

~~Lesley Desautels~~

~~Christie Winn~~

Petition

Ronan

Rhebe

MIVAKO

Cayser

Milo

Ben Loveman

Camille Langlois

Justin

Adriana, C.

Nina M

The United States Fish and
Wildlife Service A.K.A. USFWS
is planning to dump thousands of
toxic rodent poison on the farallon
islands.

Do you want this to happen?

sign here

Arthur Whitman-Bradley
Cynthia Whitman-Bradley

Jemi Barber

Susanna Grohman

Arriera

Shona Parle

John

Edessa

Melany

over my mark

From: [Richard Charter](#)
To: Energy@Coastal
Cc: Simon.Larry@Coastal
Subject: CD-0002-19 (W14a) for the packet, on Poison Characteristics
Date: Friday, July 05, 2019 4:17:49 PM
Attachments: [Farallones 11-20-13 \(1\).pdf](#)

Please enter this into the record for the Commission packet for CD-0002-19 for agenda item W14a.

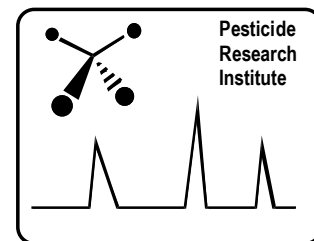
Thank you very much.

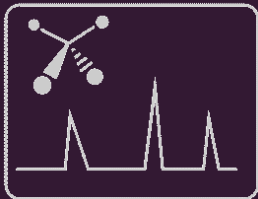
Richard Charter
Senior Fellow
The Ocean Foundation
707-875-2345
707-875-3482

Rodenticide Use for Mouse Eradication on the Farallones: Food for Thought



Susan E. Kegley, PhD
skegley@pesticideresearch.com





Pesticide Research Institute

- **Our Philosophy**

At PRI, we empower individuals, governments and organizations to make informed decisions about pesticides by:

- Seeking out and providing the best available information on pesticides for use in risk assessments, IPM programs and research
- Providing quantitative tools for predicting pesticide exposure and risk
- Facilitating the understanding of issues surrounding pesticide use
- Providing resources to determine the lowest-impact pest control methods for a particular pest problem

Overview

- Rodenticide properties
- Assessment of exposure potential
- Likely outcomes for the preferred alternatives
- Assessment of need for the project
- Re-consideration of alternatives

Properties of Brodifacoum: Solubility

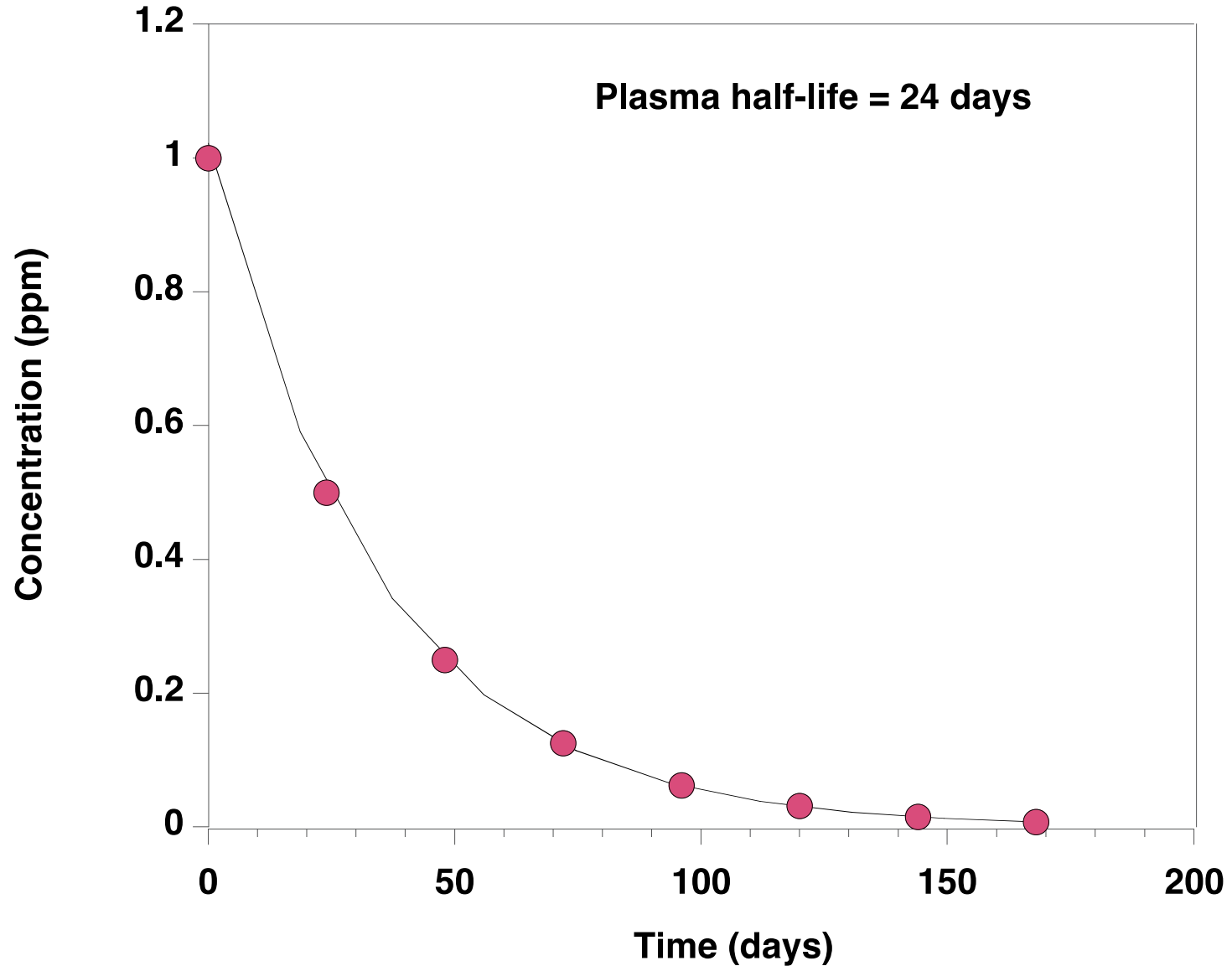
- Solubility in water (DPR data)
 - Governs runoff potential
 - Water solubility = 0.0038 mg/L → very low
 - Pellet washoff potential → very high, due to steep terrain in the islands
- Solubility in fat tissue (EU Footprint data)
 - Octanol-water partition coefficient, K_{ow}
 - $K_{ow} = 316,227,766$, $\log K_{ow} = 8.5$
 - Bioaccumulation potential → very high

Properties of Brodifacoum:

Persistence

- Half-life: The time required for half of the substance to degrade
- Dry pellets: Stable for years
- In soil and water (DPR data)
 - Soil half-life: 84–157 days
 - Water half-life: >30 days (dissipation dominant)
- In biological systems (US EPA data)
 - Long plasma half-life
 - Average: 24 days
 - Rat: 7 days
 - Dog: 120 days
 - Humans: 49 days

Brodifacoum Excretion for Plasma Half-Life of 24 Days



Properties of Brodifacoum: Toxicity

- LD_{50} : The dose that kills 50% of a test population
 - Lower $LD_{50} \rightarrow$ more toxic
 - Higher $LD_{50} \rightarrow$ less toxic
 - Typically acquired on a test species. Variation in sensitivity among species is common.
- $LD_{50} < 1 \text{ mg/kg}$
- Bioaccumulation in the liver

Second Generation Rodenticides

- Brodifacoum, bromadiolone, difethialone, difenacoum
 - Anticoagulant effects
 - Very low LD₅₀ (< 1 mg/kg for most species)
 - Single dose poison
 - Excretion is not rapid—bioaccumulation occurs
 - Effects are not immediate—mouse or bird may take several weeks to die, providing a dose of rodenticide to any predator that consumes the animal
 - High risk of secondary poisonings

Federal Restrictions for Second Generation Anticoagulant Rodenticides

- 2008: US EPA imposed restrictions on all rodenticides sold to consumers
 - No loose bait
 - Tamper-proof bait stations
 - Package size, sales/distribution/use restrictions
- The reason: High rates of both primary and secondary poisonings of children, pets and wildlife
- Reckitt-Benckiser (D-Con brand) refused to comply
- EPA initiated cancellation proceedings against Reckitt in 2013

California Restrictions for Second Generation Anticoagulant Rodenticides

- 2013 (proposed): CA Dept. of Pesticide Regulation
 - All SGARs to be designated as CA Restricted Materials
 - Limits possession and use to licensed pesticide applicators only
 - Package size, sales/distribution/use restrictions
- The reason: High rates of both primary and secondary poisonings of children, pets and wildlife. US EPA restrictions did not go far enough.

First Generation Rodenticides

- Chlorophacinone, diphacinone, warfarin
 - Anticoagulant effects
 - LD₅₀ (20–200 mg/kg)
 - Multiple-dose poison, sequential feedings provide a fast kill
 - Excretion (if dose not sufficient to cause death) occurs within 48 hours
 - Effects are immediate if dose is sufficient—mouse dies quickly
 - Secondary poisonings do occur, but less common than with second generation rodenticides because they do not bioaccumulate

Diphacinone Physical Properties

- Water solubility: 0.3 mg/L
- Average aerobic half-life: 5 days
- Excretion: 80% in rats in ~8 days
- Plasma half-life in dogs: 6 days
- Bioaccumulation potential much lower than brodifacoum

Exposure Potential

- Primary exposure: Eating the bait directly
 - Western gulls and other omnivorous birds
 - Fish
 - Marine mammals
- Secondary exposure: Predation on animals or insects that have consumed the bait
 - Western gulls
 - Burrowing owls
 - Other raptors
 - Marine mammals

Concerns About RDEIS

- Increased burrowing owl predation of ASSP not considered. No mice → ASSP a likely food source
- Translocation of owls “too labor-intensive” for preventing ASSP predation problem and permits under the MBTA “would not be possible,” but used as a mitigation for protecting the owl and other birds from rodenticide poisoning.

Concerns About RDEIS

- Bait stations ruled out as too labor intensive, but carcass removal (same process) is an integral part of the mitigations.
- Sub-lethal effects on Western Gull not examined

Concerns About RDEIS

- Hazing effectiveness overrated
 - 75% efficacy as “worst-case”, but a prior study* (not cited) shows that hazing success drops off rapidly over time:
 - T = 0 minutes, 95% success
 - T = 15 minutes, 73%
 - T = 20 minutes, 53%
 - T = 60 minutes, 0% (hazing site equivalent to control site)
- Indicates that predicted losses of Western Gulls (1,700) are substantially lower than what will actually occur

Jonas *et al.*, 2008. An Evaluation of the Non-Lethal Hazing of Gulls (*Larus* spp.) at Lower Columbia River Dams, 2005.

Concerns About RDEIS

- Estimate of number of mice remaining above-ground after death at 13% of killed is an underestimate.
 - Prior IC study* demonstrated that 40% of radio-collared rats died above-ground
 - Result is an underestimate of gull deaths

*Buckelwe *et al.*, 2008.

Concerns About RDEIS

- Brodifacoum risks *underestimated*
- High sensitivity of gulls to brodifacoum
- Modeled population effects on gulls dependent on LD₅₀ value used
 - Southern black-backed gull, LD₅₀ <0.75 mg/kg
 - Mallard duck, LD₅₀ = 4.6 mg/kg
 - LD₅₀ used for Rat Island assessment = 0.26 mg/kg
 - LD₅₀ used for Farallones assessment = 0.59 mg/kg
- Probit approach used to obtain Farallones LD₅₀ is unreliable, according to Mineau *et al* (1994, 2001) and Giddings *et al.* (2004)

Concerns About RDEIS

- Diphacinone risks *overestimated*
- LD₅₀ value used was the most sensitive one
 - American Kestrel, LD₅₀ 97 mg/kg
 - Non-raptors, LD₅₀ = 2,000–3,150 mg/kg
- Predicted availability of dead mice above-ground was 100% in this case
- Same dose rate of diphacinone used for second and third applications, while subsequent dosing rates for brodifacoum are halved, skewing the results

Possible Outcomes Not Considered

- Burrowing owls running out of mice to eat could start eating Ashy Storm Petrels, driving the population down further
- Food web around the islands becomes contaminated for the better part of a year or more.
- Hazing efforts disturb other nesting birds, leading to nesting failures
- The final number of dead Western Gulls is significantly higher than predicted

Potential Off-Island Effects

- Poisoned birds die a gruesome death in very public places, e.g. Fishermans Wharf
- Raptors from the mainland (e.g., raptors migrating through the area (GGNRA) in the winter months) die from consuming poisoned gulls/mice



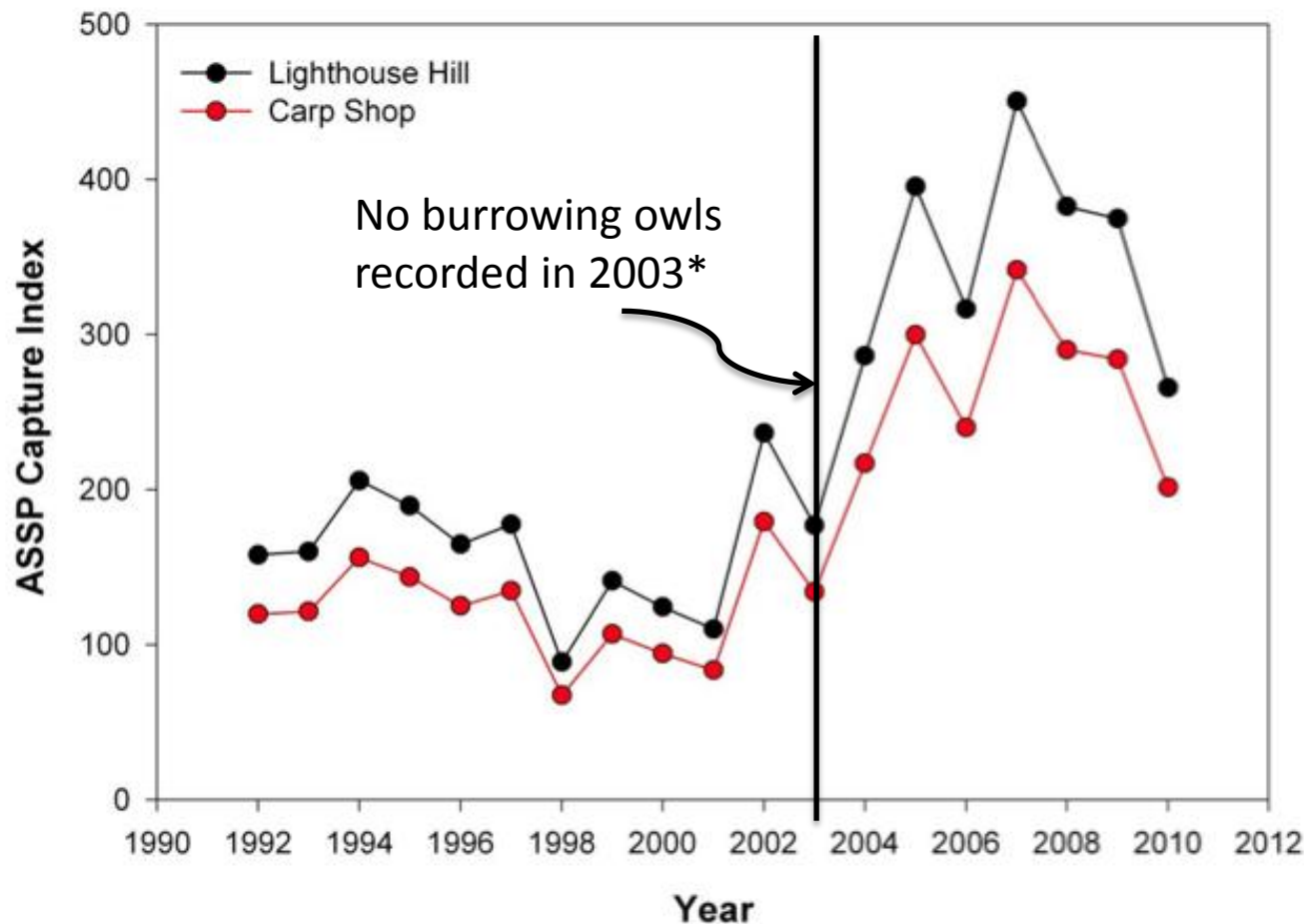
Is it necessary?

US FWS Declines to List ASSP

- October 21, 2013: US FWS concluded that the ASSP does not warrant protection under the Endangered Species Act.

... the population trend data for ASSP indicates that the species is currently undergoing natural population fluctuations and that the species is not in a long-term decline.

Trend in ASSP population over time



Data source:
PRBO Technical Brief,
2/23/2011

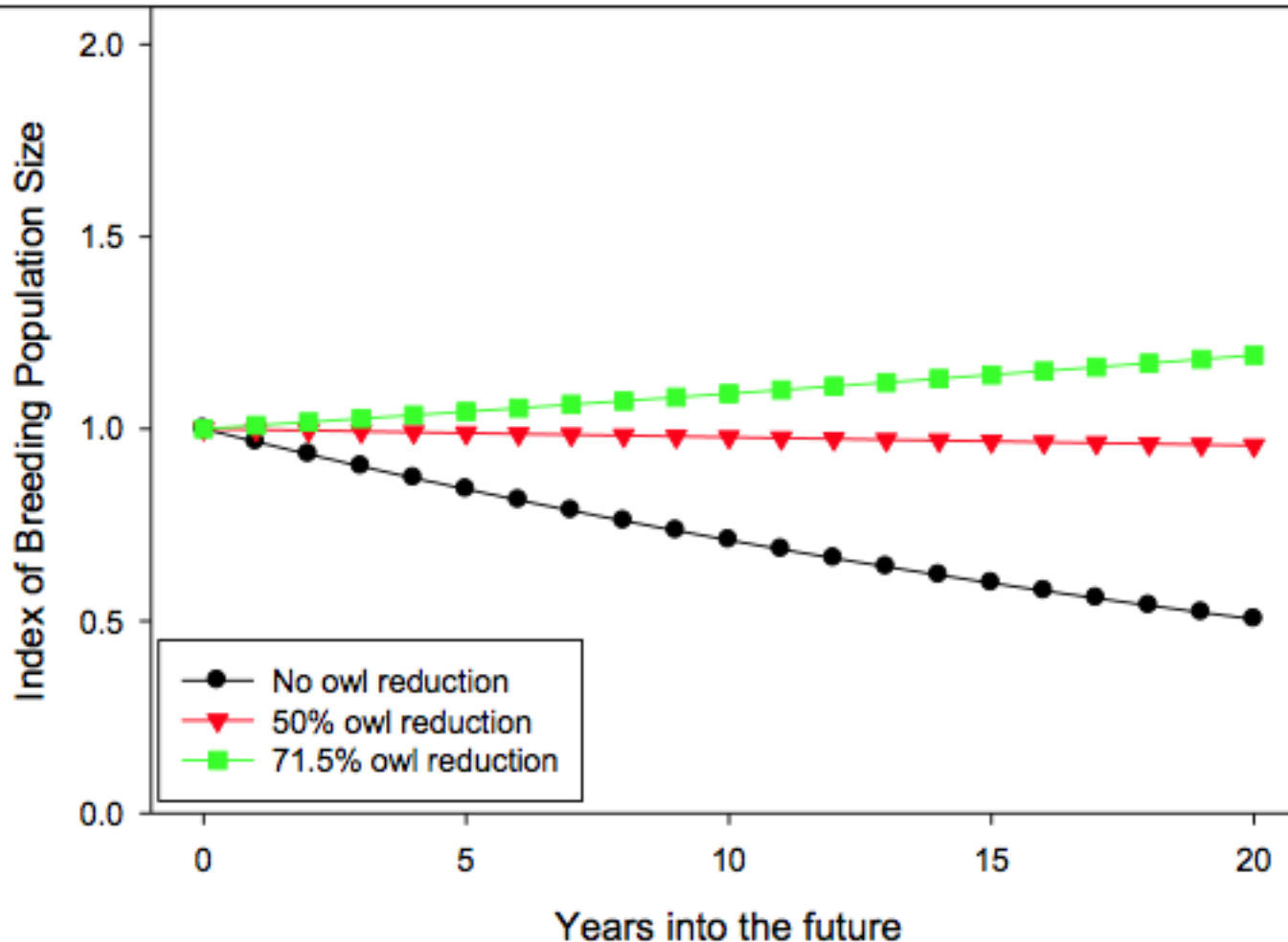
*Richardson *et al.* 2003. Migratory Birds on Southeast Farallon Island, *Western Birds*, Vol. 34, No. 2.

Burrowing Owl Population

- Number of burrowing owls visiting the islands each year ranges from 2 to 11, on average about 6

RDEIS Projections

Ashy Storm-Petrel Population Projections Under Three Levels of Burrowing Owl Abundance on the Farallon National Wildlife Refuge



Error bars?

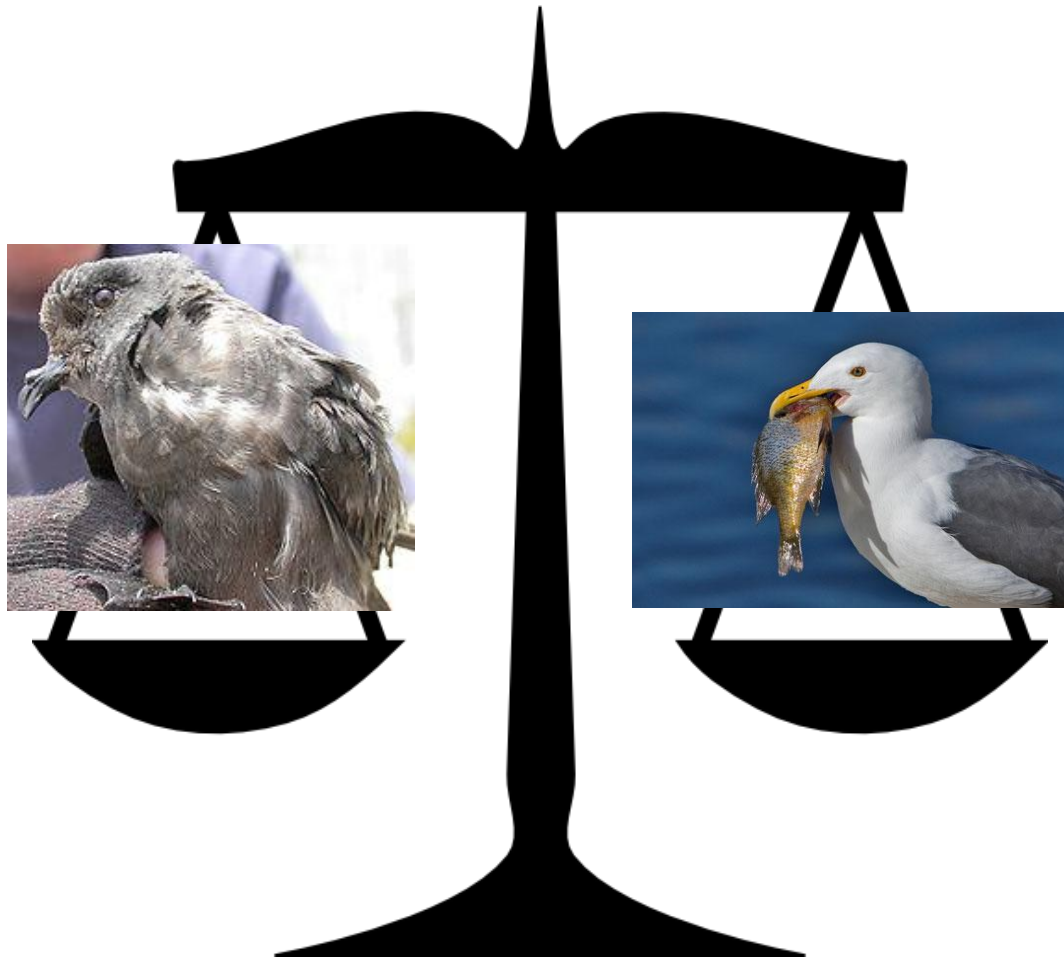
Is this the best approach to protect the ASSP?

- Alternatives with less collateral damage
 - Remove or reduce mouse's food supply
 - Remove burrowing owls
 - Use traps in accessible areas
 - Use bait stations in accessible areas
 - Use diphacinone instead of brodifacoum to reduce primary and secondary poisonings
 - Use the funding to find a solution with less collateral damage

Weighing One Species Against Others



Weighing One Species Against Others



Weighing One Species Against Others



Weighing One Species Against Others



Weighing One Species Against Others



Weighing One Species



From: [Devin Peipert](#)
To: Energy@Coastal
Subject: Please Support the Invasive Mouse Eradication Program on Southeast Farallon Island: July 2019 Agenda Item
Wednesday 14a CD – 0002 – 19
Date: Friday, July 05, 2019 4:35:39 PM

To Whom It May Concern,

I am writing in support of the mouse eradication program on Southeast Farallon Island to help protect the ashy storm petrels.

Introduction of invasive house mice to the Farallon Islands has had a detrimental impact on the islands' sensitive ecosystem. These non-native house mice are especially dangerous to the islands' breeding seabirds. Bird at particular risk include **ashy storm-petrels** and **Leach's storm-petrels**. In addition, other animal species have been threatened by the mice like native salamanders, crickets and other invertebrates, as well as native plants.

There is only one solution to this problem: 100% eradication of the non-native, invasive house mice. Eradicating the house mice is the only way to allow the ecosystem to recover. I want to ensure you that I am not exaggerating. If even a one pair of mice survives, the mouse population can recover extremely quickly, and ashy-storm petrels, along with the Farallon Islands' entire ecosystem, is at risk.

Fortunately, we know how to completely eradicate the house mice from the Farallon Islands. There is only one known method that has proven effective for island eradications, and that is the "preferred alternative" (an aerial broadcast of the rodenticide Brodifacoum) identified by the US Fish and Wildlife Service in the Final Environmental Impact Statement published in March 2019. Invasive rodent removals have been successfully completed on nearly 700 islands worldwide, including on California's Anacapa Island in the Channel Islands National Park. Land managers have successfully eradicated house mice from more than 60 islands worldwide. Nearly all of these successful projects utilized techniques like that proposed for the South Farallon Islands house mouse eradication.

I sincerely appreciate your consideration. I know you share my passion and concern for California's native ecosystems and animal habitat.

Do contact me with any questions you have.

Sincerely,

John Peipert

From: [Kaia Colestock](#)
To: Energy@Coastal
Subject: July 2019 - 14a CD 0002 - 19
Date: Friday, July 05, 2019 4:47:55 PM

To whom it may concern,

I strongly support the eradication of the invasive house mouse on the Farallon Islands. Please vote to allow the United States Fish and Wildlife Service to exterminate this species on the Farallons.

Thank you,

Kaia Colestock

From: [Sharon Cavallo](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 4:58:55 PM

I strongly oppose the plan to use rat poison on the Farallon Islands. Secondary poisons should be replaced with Quintox bait that does not kill non-target animals. Please take more time and listen to scientists before agreeing to this outdated and unnecessary plan. Thank you.

From: [Leslie Purcell](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Friday, July 05, 2019 5:00:19 PM

To the Commission;

Some years ago, I spoke at a CCC hearing in Santa Barbara, where the Commission required a condition (for the first time, I believe) for development at the Bolsa Chica Mesa that would not allow use of anti-coagulant rodenticides as are proposed to be used in the current Item. Further, the homeowner regulations also disallowed the use of such poisons, in part because of the secondary kill aspect. At the upland bluff of the Ballona wetlands in Los Angeles, where rodenticide was used, we saw animals die from secondary poisoning--a gopher snake, cats, possibly a great blue heron and other birds.

I oppose this plan to aerial drop large quantities of anti-coagulant poison on the Farrallon Islands. There is just too much likelihood of secondary effects on birds and other wildlife, including possibly fish, marine mammals, and other sea-life. Have studies been done of the effect of such anti-coagulants in the near-shore environment? These are protected areas, as a marine sanctuary.

Please vote against this project, and find that it is not consistent with the Coastal Zone Act.

Leslie Purcell
Ventura, CA

From: alison.neil@sght.org
To: Energy@Coastal
Subject: Letter of support for the proposed mouse eradication project on the Farallon Islands
Date: Thursday, July 04, 2019 1:26:27 AM
Attachments: [July 2019 Agenda Item Wednesday 14a CD - 0002 - 19 - SGHT.doc](#)

Dear Sir/Madam,

Please find attached a letter of support from the South Georgia Heritage Trust for the mouse eradication project on the Farallon Islands, to help save Ashy Storm-petrels.

Sincerely,
Alison

Alison Neil MBE

Chief Executive
South Georgia Heritage Trust
Verdant Works, West Henderson's Wynd, Dundee DD1 5BT
+44 (0) 1382 229792



*Registered Scottish Charity No. SC036819
South Georgia Heritage Trust,
Verdant Works, West Henderson's Wynd, Dundee DD1 5BT
Patron HRH The Princess Royal
Hon. President: Baroness Young of Old Scone*

4 July 2019

Dear Sir/Madam,

I write in support of the Farallon Island Restoration project on behalf of the South Georgia Heritage Trust (SGHT), based in Dundee, Scotland.

The basis of our support of this work is the transformation of the island of South Georgia after a similar rodent eradication operation carried out by SGHT with the full support of the South Georgia and UK Governments (see <http://www.sght.org/habitat-restoration/> for details). The methodology we used with such success - spreading bait pellets laced with Brodifacoum by helicopter - is identical to that proposed for the Farallons. The evidence from South Georgia, as with many hundreds of other islands around the world, is clear and unambiguous - that any short-term ecological costs of rodent eradication are overwhelmed by the long-term benefits.

Every proposed eradication project attracts concern and criticism, often from well-meaning people who are alarmed at the thought of large quantities of toxic bait being 'dumped' on a fragile ecosystem. But a calm, objective assessment of the consequences of carrying out such a project on the Farallon Islands could only conclude that it would be environmentally irresponsible *not* to eradicate the mice that must be having a profoundly negative impact on so many elements of Farallon fauna and flora. Humans introduced mice to so many islands across the world, and now have the ability to remove this pest, allowing a rebirth of the native wildlife. We would urge the seizing of a great opportunity to liberate the Farallon Islands from this deceptively destructive rodent.

Yours sincerely,

Alison Neil MBE

Chief Executive, SGHT

Tel: +44 (0)1382 229792

Web: www.sght.org

Email: info@sght.org

Trustees: Mr N. Prentice (Chairman), Professor E. Shemilt (Vice Chair), Professor B. Basberg, Mr A. Borodin, Mrs J. Cheek, Professor J. Croxall FRS CBE, Mr J. Hall MBE, Ms D. Landau, Professor F. Paulsen, Mr G. Ellingsen, Professor M. Richardson CMG

South Georgia Heritage Trust is a Scottish Guarantee Company (Company No. SC466431)
Registered Office: Verdant Works, West Henderson's Wynd, Dundee, DD1 5BT

CALIFORNIA COASTAL COMMISSION

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W 14a

CD-0002-19 (USFWS)

June 27, 2019

CORRESPONDENCE

Note: As of 5:00 pm on June 27, 2019, prior to the publication of the staff report on the Commission's website, the Commission received 48 emails commenting on the proposed project. Of those emails, 27 were form emails. This Correspondence file includes two of the form emails and all of the remaining emails received as of the referenced date and time.

Future emails and other correspondence received by 5:00 pm on July 5 will be added to the Correspondence file.

From: [Ainsworth, John@Coastal](mailto:Ainsworth_John@Coastal)
To: [Delaplaine, Mark@Coastal](mailto:Delaplaine_Mark@Coastal); [Simon, Larry@Coastal](mailto:Simon_Larry@Coastal)
Subject: FW: mice control on the Farallon Islands
Date: Sunday, June 23, 2019 1:18:30 PM

From: Kim Sandholdt <sandholdt@att.net>
Sent: Sunday, June 23, 2019 10:36 AM
To: Ainsworth, John@Coastal <John.Ainsworth@coastal.ca.gov>; Batha, Carey@Coastal <carey.batha@coastal.ca.gov>; Carl, Dan@Coastal <Dan.Carl@coastal.ca.gov>; Cuffe, Kelly@Coastal <Kelly.Cuffe@coastal.ca.gov>; Garske, Lauren@Coastal <Lauren.Garske@coastal.ca.gov>; Hansch, Susan@Coastal <Susan.Hansch@coastal.ca.gov>; Huckelbridge, Kate@Coastal <Kate.Huckelbridge@coastal.ca.gov>; Koteen, Laurie@Coastal <Laurie.Koteen@coastal.ca.gov>; Luster, Tom@Coastal <Tom.Luster@coastal.ca.gov>; Matella, Mary@Coastal <Mary.Matella@coastal.ca.gov>; Metz, Vanessa@Coastal <Vanessa.Metz@coastal.ca.gov>; Miller, Vanessa@Coastal <Vanessa.Miller@coastal.ca.gov>; Modellmog, Robert@Coastal <robert.moddelmog@coastal.ca.gov>; Sandecki, Michael@Coastal <Michael.Sandecki@coastal.ca.gov>; Street, Joseph@Coastal <Joseph.Street@coastal.ca.gov>; Teufel, Cassidy@Coastal <Cassidy.Teufel@coastal.ca.gov>
Subject: mice control on the Farallon Islands

Dear all,

Your very own front page of your website states:

We protect the wildlife, habitats, and cultural resources of one of the most diverse and bountiful marine environments in the world, an area of 3,295 square miles off the northern and central California coast. The waters within Greater Farallones National Marine Sanctuary are a nationally significant marine ecosystem, and support an abundance of life, including many threatened and endangered species.

If this is true, dropping rat poison is NOT protecting wildlife and habitats. Do you not realize that rat poison is secondary, and not only will you be killing the mice, you will be killing everything that comes in contact with the poison and the dead mice? Including getting into the water. Of course you do, because you have what looks to be very knowledgeable staff working at the CCC.

While the mice are a problem, there needs to be a better solution to the situation. Rat poison is the easy way out. It will take a lot of time and labor to get out there and trap and eradicate the mice. Figure it out, please!

NO POISON!

This is the very poison that is slated to be banned in California.
Seriously, what are you thinking?

There is a better way. And after all these years, had it been employed sooner it would not be a question today.

Sincerely,
Kim Sandholdt
118 Ross St. #8
San Rafael, CA 94901

From: [Michelle MacKenzie](#)
To: Energy@Coastal
Subject: Oppose "Poison Drop" In Farallones National Marine Sanctuary
Date: Tuesday, June 25, 2019 10:42:38 AM

To whom it may concern

I write as a frequent visitor to the Greater Farallones National Marine Sanctuary. I also write to oppose the plan to drop 1.5 tons of poison bait pellets in the Greater Farallones National Marine Sanctuary later this year. I am concerned that non-target species will be impacted. The compound to be dropped is outlawed for retail sale in California because it causes secondary poisoning of other animals who ingest poisoned animals. It is reasonable to assume that gulls or other species could ingest this poison and secondarily poison other animals.

Further, the plan is to kill all of the islands non-native mice as a way to discourage the 6-8 burrowing owls in the region, which Wildlife Services claim threaten the Ashy Storm Petrels. This is a seabird which has not been listed under the Endangered Species Act. This seems like a lot of risk for a very small problem and very small benefit.

Please oppose the plan to drop poisoned bait in the Farrallones National Marine Sanctuary.

Sincerely

Michelle MacKenzie
980 Berkeley Ave
Menlo Park, CA 94025

From: [Marianne](#)
To: Energy@Coastal
Subject: Poison drop Farallone Islands
Date: Tuesday, June 25, 2019 10:53:41 AM

PLEASE DO NOT DO THIS!! PLEASE FIND ANOTHER METHOD THAT WILL NOT HARM NON-TARGET SPECIES!!

The possibility of unintended consequences could be disastrous at worst, harmful all the way up the food chain at best. Please use a more appropriate method to control the mice and burrowing owls.

Marianne Bertuccelli

Get [Outlook for Android](#)

From: [Dan Haifley](#)
To: [Jillian Ritter](#)
Cc: [Energy@Coastal](#); [Allison Endert](#); [Ryan Coonerty](#); [waterway@monitor.net](#)
Subject: Re: CD-0002-10 (Agenda Item: W14a) Please Deny Consistency
Date: Tuesday, June 25, 2019 3:10:01 PM

Thank you Richard Charter, and Team Coonerty!

Dan Haifley
2635 Fresno Street
Santa Cruz, CA 95062
(831) 234-8148

On Tue, Jun 25, 2019 at 1:49 PM Jillian Ritter <Jillian.Ritter@santacruzcounty.us> wrote:

Hello,

Please see attached regarding CD-0002-10 (Agenda Item: W14a) from Santa Cruz County Supervisor Ryan Coonerty.

Thank you,

Jillian

Jillian F. Ritter

County Supervisors' Analyst

Santa Cruz County Board of Supervisors

701 Ocean Street, Room 500

Santa Cruz, CA 95060

831-454-3516 (direct) | 831-454-2200 (main)

Jillian.ritter@santacruzcounty.us

From: [Kim Fitts](#)
To: Energy@Coastal
Subject: Poison bait drop W14a
Date: Tuesday, June 25, 2019 6:35:45 PM

Dear Coastal Commissioners,

I am writing today regarding a USFWS proposal to drop 1.3 metric tons of brodifacoum over the Farallon Islands; in an effort to reduce the prey base for 6 Burrowing owls to save the nesting Ashy Storm Petrels; I can hardly believe this is even been contemplated.

As a wildlife biologist, I spend my entire career working within the coastal zone from Point Arena to Point Reyes. I have worked as a biologist in many coastal commission CDP and enforcement projects, and know that the commission is Very strict; a landowner cannot even construct a non-porous driveway and strict setbacks to all ESHA's are required. If this is a real proposal, I urge for a commissioners to deny any such proposal.

Undoubtedly the poison will travel up the food chain; not only killing the intended mice, but also the entire predator/carnivore community living with the coastal zone. This is exactly how the food web is destroyed for generations.

Although the burrowing owl should have been listed as threaten years ago when petitioned, it would be logical and undeniably better to have a sharp shooter pick off the few remaining owls during the nesting season than to indiscriminately drop a ton of poison.

Please do your job and protect the natural resource that you as a agency are deemed to protect.

Thank you
Kim Fitts

From: [Justyne Triest](#)
To: Energy@Coastal
Subject: Comment on Agenda Item W14a
Date: Tuesday, June 25, 2019 9:41:34 PM

To whom it may concern-

I'm writing to express my deep concerns for dropping poison pellets on in the area of the Farallones Sanctuary. I'm emailing within 5 minutes of seeing a news article about this proposal, from the Google news alert I have for the Farallone Islands. I am an Oregon resident but I was born in Oakland CA. The Farallones are an area that I have a deep interest in and passion for. I've made several trips to California specifically to take eco boat tours to the Islands. Just this past weekend I made a trip out of my way to Novato to visit the visitors center for the Farallones in Crissy Field (I've been trying to go for several years but always am in the area when it's closed- it was wonderful and I had a great visit with the staff there).

These are wild and protected areas and much of their beauty and importance comes from them remaining that way. I donate monthly to Point Blue and often to the Gulf of the Farallones Sanctuary. This area is well managed by people who are very knowledge and care deeply and decisions about its maintenance should be left to them- certainly not to Trump officials acting on a plan the Obama Administration deemed too risky.

This is a fragile area and should be treated with deep respect and care by those who know it so that others who love it and learn from it can continue to do so.

Respectfully,
Justine Triest

From: [Mary S.](#)
To: Energy@Coastal
Subject: NO to Dumping Rat Poison on the Farallon Islands
Date: Wednesday, June 26, 2019 5:28:59 AM

Please do not use the proposed poisons because of non-target wildlife disasters during similar air drops on island locations elsewhere. The State of California has outlawed retail sale of the same toxic compounds due to the unintended damage they inflict on mountain lions, bobcats, an iconic mammal called the Pacific Fisher, and in terrestrial urban interface locations, dangers to pets and children.
Mary Sarumi

From: [erica.felsenthal](mailto:erica.felsenthal@coastal.ca.gov)
To: [Energy@Coastal](mailto:Energy@Coastal.ca.gov)
Subject: Poison
Date: Wednesday, June 26, 2019 9:24:29 AM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Erica Felsenthal
Beverly Hills, CA
Sent from my iPhone

From: [Josette Brose-Eichar](#)
To: Energy@Coastal
Subject: Public Comment on July 2019 Agenda Item Wednesday 14a - CD-0002-19 (U.S. Fish and Wildlife Service, San Francisco)
Date: Wednesday, June 26, 2019 9:35:51 AM

Please tell me what you are thinking? Why on earth is rat poison being considered to be dropped on the Farallons? I just found out about this today. Every day here in Sonoma some idiot uses this stuff to kill rodents. Every day the collateral damage mounts. Other animals die, painful and horrible deaths too because of it's use. In my mind I see sea gulls flying back to shore after eating this stuff and slowly bleeding to death and dropping from the sky. This is just one of the unintended consequences of using this stuff.

Think before you act. There is a proven contraceptive alternative to get rid of mice in the Farallons. You do not have to kill every other living thing to get rid of mice. Use your brains here.

Sincerely,

Josette Brose-Eichar
1110 Loma Court
Sonoma, CA

From: [David Sandage](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 9:43:01 AM

Please do not reconsider allowing the use of the toxic anticoagulant poison on the Farallon islands. There are nine-toxic methods available to eradicate the rodents without threatening the raptors and other members of the food chain.

David Sandage
7145 La Honda Rd
La Honda, CA 94020

From: [Kathleen Barbera-Keen](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 9:43:16 AM

This is an ill-conceived plan with far ranging consequences for unintended targets.
Please do not approve this proposal.

Sent from [Mail](#) for Windows 10

From: [Patti Lessels](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 9:46:35 AM

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that "enter and injure" sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Patti Lessels

San Diego, CA 92127

From: [Kirsten Cutler](#)
To: Energy@Coastal
Subject: helicopter drop of rat poison pellets
Date: Wednesday, June 26, 2019 10:14:11 AM

Please do not authorize the US Fish and Game Department to helicopter drop rat poison pellets. We need to protect our wildlife and habitats from additional toxins that threaten their continued existence and also human health and life expectancy. Thank you. Kirsten Cutler
39035 Hedgegate Road, The Sea Ranch, Ca. 95497

From: [McCoy Landscap Service](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 10:14:18 AM

Dear Madames and Sirs,
Please do not drop poison on the Farallone Islands that you know will have negative knock-on effects for the entire area. There must be an integrated approach to eradication of invasive/ unwanted animal specie. In this day and time the indiscriminate and irresponsible use of non-specific poison is unacceptable (where are the scientists here?).
kind regards, Kevin McCoy

From: [Vesta Copestakes](#)
To: Energy@Coastal
Subject: CD-0002-19 - Sanctuary means SAFE - Please VOTE NO POISON on the Farallones
Date: Wednesday, June 26, 2019 10:14:27 AM

Not long ago I convinced our veterinarian columnist - ***Family Pet*** by Dr. Michael Trapani - to write about the impacts of rat and rodent poison on critters other than rats. A local housing development was finding that mice were eating the wiring harnesses of Prius cars because they use soy-based insulators instead of petroleum-based wire insulation. So they put out rodent poison to kill the mice. I wanted the homeowners to understand the impact of this poison on everything from their family cat to the Raptors in the forests above them.

<https://www.sonomacountygazette.com/sonoma-county-news/dangers-of-rat-poison-the-family-pet-by-dr-michael-trapani-february-2018>

I also want the Coastal Commission to understand the far-reaching impact of poison. Just because these islands are separated from the mainland does not mean they are isolated. Birds fly. They carry rodents in their mouths and settle somewhere else to eat them. They accidentally drop the squirming critters as well. There is ZERO way to keep this poison on the islands and out of the water. The impacts will reach far because that's the nature of nature. It's all connected.

This sanctuary is supposed to be a SAFE place for life in all its complexities. We have learned that whenever we mess with one part of the system we throw it into imbalance. It seeks balance on its own, but that can take a very long time. Our job as humans is to support nature's way and let the balance evolve over time. If the Farallones are, indeed, a sanctuary, then our job is to provide PROTECTION, not to destroy.

Please vote NO on this poison project. It can only bring harm to this delicate part of our coast sanctuary...from mice, the birds, to fish, and even water. Everything has the potential to be impacted.

Vesta Copestakes, publisher
Sonoma County Gazette
BUILDING COMMUNITY
6490 Front Street #300
Forestville, CA 95436
<http://www.sonomacountygazette.com/>
707-887-0253
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From: [Olive DePonte](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 10:18:36 AM

This is worse than using a bomb to kill a mosquito. Rat poison kills not only the rats, but all the animals and birds that might eat the rats (especially the birds), or swim in the ocean that the poison will reach. **DO NOT LET THEM DROP RAT POISON ON THE FARALLONS!!** Our land and water are polluted enough already. Do not let them add to the destruction.

Yours sincerely,
Olive DePonte

A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, that he is wiser today than he was yesterday. -Alexander Pope, poet (21 May 1688-1744)

From: [Christina Ku](#)
To: Energy@Coastal
Subject: CD-0002-19 Rat poison?
Date: Wednesday, June 26, 2019 10:24:13 AM

Dear commissioners,

I cannot believe our government, especially the department that is supposed to protect our marine sanctuaries are the ones considering to drop rat poison.

Can you please leave the wildlife alone?

This is the only home to wildlife. Humans can trash this planet and go to Mars, but wildlife cannot!! So we have a duty to keep this planet safe for them at least.

Thank you.

Chris

Sent from my iPhone

From: Carl_Dan@Coastal
To: Delaplaine_Mark@Coastal; Simon_Larry@Coastal
Cc: Black_Abigail@Coastal; Rexing_Stephanie@Coastal; Manna_Jeannine@Coastal; KoppmanNorton_Julia@Coastal; Martinez_Erik@Coastal; Pfeifer_Sara@Coastal
Subject: RE: Poison Use on Farallon Island
Date: Wednesday, June 26, 2019 12:36:18 PM

FYI and for file

From: Collin or Kevin Woodall <kcnles@sbcglobal.net>
Sent: Wednesday, June 26, 2019 12:33 PM
To: Carl, Dan@Coastal <Dan.Carl@coastal.ca.gov>
Cc: Black, Abigail@Coastal <abigail.black@coastal.ca.gov>; Rexing, Stephanie@Coastal <Stephanie.Rexing@coastal.ca.gov>; Manna, Jeannine@Coastal <Jeannine.Manna@coastal.ca.gov>; KoppmanNorton, Julia@Coastal <julia.koppmannorton@coastal.ca.gov>; Martinez, Erik@Coastal <erik.martinez@coastal.ca.gov>; Pfeifer, Sara@Coastal <Sara.Pfeifer@coastal.ca.gov>
Subject: Poison Use on Farallon Island

Dear Commissioner:

I am writing to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan. As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded. Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Collin Woodall
Corte Madera, CA

From: [Ann Rennacker](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 4:12:10 PM

Dear Commusioner,

It is an unconscionable violation of the protection for a marine sanctuary to deliberately drop an anticoagulant poison from the air into the Farallon Island to kill mice and rats. There are many other birds, wildlife species that will be impacted and it seems false to claim that no poison pellets will find their way into the water. The water is full of marine creatures that need protection from poisoning. Birds that ingest poisoned rodents will die and fall into the water where they will spread poisons throughout our Oceans.

Our Ocean is already suffering from acidification, warming, the Navy Warfare testing which explodes bombs and lets them fall to the Ocean floor. Stop this madness now and adopt toxin free methods of protecting our Sanctuaries. Whatever affects the Farralone Island will affect San Francisco and there is a huge population dependent on a clean environment.

Thank you for considering my opinion.
Ann Rennacker

From: [Lonna Richmond](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Wednesday, June 26, 2019 4:29:01 PM

Dear Commissioner,

I am writing you today to request that you reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

Anytime there is a blanket spraying of poison, you are going to harm more species than the targeted one. This is a wrong approach. It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Sincerely,

Lonna Richmond
185 Sunset Way
Muir Beach, CA 94965

From: [Anna Br-An](#)
To: Energy@Coastal
Subject: CD-0002-19 No to rat poison!
Date: Thursday, June 27, 2019 1:42:53 AM

Dear Commissioner:

Please reject the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

As you know, this proposal targets the middle of a treasured State Marine Reserve and would also be right in the midst of our longstanding National Marine Sanctuary within whose waters such activities are expressly precluded.

Sanctuary regulations even ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary. As a constituent and admirer of the Greater Farallones National Marine Sanctuary, as well as a constituent of the California Coastal Commission, I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, in order to prevent a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you.

Sincerely: Anna Brewer, Tina Beurtels; John Summers; Henry T.; Vickey Osborn; Teddy Miller , New York; Amanda Fields; Jurgen Sorens; Rita Suffolk; Mary Dalton; Joseph Pritchard; Kimberley Fields; Simon Sears; Beverly Woods; Anita Brewer; Daniel Russel; Petra Stafford; Kim Wright; Daphne Harlington, New Mexico; Kathy Stafford, Joan Butterfield, Kenneth Lawson, Myrthe Low, Diane Bremer, US

From: [Anna Hicks Kraemer](#)
To: Energy@Coastal
Subject: W14a Poison Dispersal Plan Objection
Date: Thursday, June 27, 2019 1:46:36 PM

Dear Commissioner:

I am writing to request that you REJECT the pending request for a consistency determination on item W14a, the US Fish and Wildlife Service poison dispersal plan.

I am a California native, having been born and raised in San Diego County. My father is a retired Damage Control Chief in the U.S. Navy, having dedicated over 22 years to his country. His love for the ocean and all things marine has never wavered, and he has passed that love on to children. My heart breaks for my treasured state when it even considers creating intentional harm to such a beloved place.

You cannot allow a treasured State Marine Reserve to become a target for this indiscriminate assassination of the lives and environment of marine and other animals which thrive in this National Marine Sanctuary. Sanctuary regulations ban pollutants that “enter and injure” sanctuary resources from outside of the boundary of the sanctuary, and I must ask that you deny the requested consistency finding for item W14a.

It remains incumbent on the Wildlife Service to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Responsible stewardship of America’s public trust living resources, particularly within our National Marine Sanctuaries and elsewhere on the California coast, deserves a more precautionary approach.

Please reject consistency for item W14a, since to do otherwise would set a terrible precedent for both the Commission and for our Sanctuary waters.

Thank you very much.

Anna M. Kraemer

35396 Ede Rd., Scio, OR 97374

From: [Bryan Spencer](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, June 27, 2019 3:28:28 PM

Dear Commissioner:

I have learned that the US Fish and Wildlife Service is considering introducing poison into the Farallon Islands ecosystem. I'm appalled that such an idea would have any sort of consideration at all and I request that you reject this idea as an indiscriminate threat to wildlife. It might be challenging but I think the proper solution is to trap and relocate them. This is a humane solution.

Thank you

Bryan Spencer

From: [Alison James](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, June 27, 2019 3:38:44 PM

Dear Commissioners,

What are you thinking? Or not thinking?

When you tell your grandchildren...will they be proud of you killing so much off? Or will you hide that from them? I don't know if you are part of USF&W, but if so your department is killing full speed ahead like USF&W.

Your plan is preposterous. I can't put it any other way.

Disgusted sadly,

Alison James

Sandy Hook, CT.

Sent from my iPad

From: [Jeannie Peterson](#)
To: Energy@Coastal
Subject: CD-0002-19
Date: Thursday, June 27, 2019 5:46:00 PM

Dear Commissioner,

I am writing to request that you reject the proposed poison dispersal plan.

Thank you.

Jeannie Peterson

Creswell, OR

From: [ann White](#)
To: [Energy@Coastal](#)
Subject: CD-0002-19
Date: Thursday, June 27, 2019 11:47:14 PM

This is absurd that you would kill animals at a wildlife preserve. Poison is not the answer. Why don't you relocate the owls that you say are the problem. I resent your using my tax dollars to kill MY wildlife. Shame on you. Are you retarded? You all should be fired.

From: [Nicole Ilani](#)
To: Energy@Coastal
Subject: No poison bait pellets in the Farallons
Date: Friday, June 28, 2019 1:33:01 AM

I'm writing to voice my deep concern and outrage upon hearing of the plan to helicopter disperse poison bait pellets on the Farralones. Please block this action as it will have devastating environmental consequences. I'm writing on behalf of the WCA in Sonoma county an organization of hundreds of parents working to find better solutions to pesticides. Thank you,
Nicole Ilani

From: [Vivien Straus](#)
To: Energy@Coastal
Subject: W14a
Date: Friday, June 28, 2019 6:07:36 AM

In regards to W14a.

NO! NO! NO!

The law of unintended circumstances will prove this to be the biggest mistake. Other animals will eat this poison. It will build up through biomagnification. And in the end, both other species and humans will lose.

A big No! Let's not be stupid.

Thank you.

Vivien Straus
Marshall, CA 94940
Marin County Property Owner

From: [Melissa Bennett](#)
To: Energy@Coastal
Subject: W14a - poison pellet drop on Greater National Farallones National Marine Sanctuary
Date: Friday, June 28, 2019 7:15:34 AM

To Whom It May Concern,

I wish to submit a public comment vehemently opposing the Trump Administration's plan to drop 1.5 tons of poison pellets on the Farallones. This plan has already been deemed as too risky by a previous administration because of the devastation it would cause to already sensitive, threatened and endangered sea and bird life. This plan would also affect humans creating additional poisons in food sources and impact tourism in places where these deceased animals would return to after ingesting the poison. Please Coastal Commission deny this plan and come up with an alternative that won't have such catastrophic impact.

Thank you for your time, consideration, and work on this matter.

Sincerely,

Melissa Bennett

From: Cea Higgins <Cea@coastwalk.org>
Sent: Monday, June 24, 2019 3:35 PM
To: Simon, Larry@Coastal
Cc: Energy@Coastal
Subject: RE: CD-0002-19 (USFWS)
Attachments: Comment for CD-0002-19 (USFWS).docx

Hello Mr. Simone

Thank you for providing the Federal Consistency Determination per request.

Please include the attached and also printed below- independently prepared document in your report and review of California Coastal Commission's Evaluation of the Consistency Determination for the South Farallones Islands Mouse Eradication project CD-0002-19.

Thank you

Background Materials for the California Coastal Commission
Evaluation of the Consistency Determination for the
South Farallon Islands Mouse Eradication Project
CD-0002-19 (USFWS)

1. Introduction

This document provides an independent, critical analysis of the proposal by USFWS to use aerial applications of the anticoagulant rodenticide, brodifacoum, in an attempt to eradicate the introduced mouse population from the South Farallon Islands. We strongly believe that much of the data provided by USFWS in their Consistency Determination is biased and unrealistic as to the likelihood of eradicating every single mouse on the South Farallon Islands.

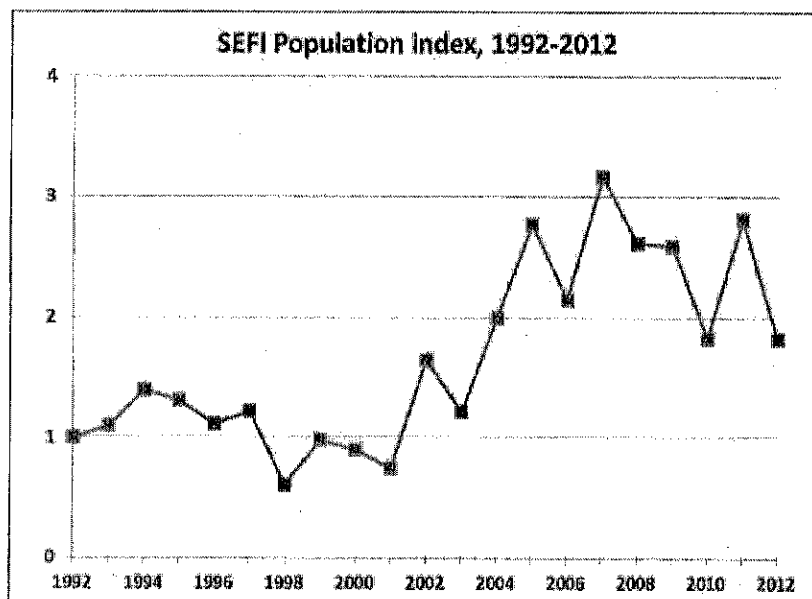
More importantly, the FEIS and the subsequent request for a Consistency Determination by USFWS intentionally downplay the long-term environmental risks to the full Farallon Islands ecosystem, and misrepresent the plan to mitigate those risks.

2. Overview – Is Attempting to Eradicate Mice on the South Farallon Islands Necessary?

This is the most difficult question to answer and every situation is different. To make this decision, every island must be carefully studied to determine whether a specific animal, plant or insect is truly dominating the ecosystem in a negative way. While the answer may appear to be yes from the human point of view, it is also true that plants, animals and insects have been migrating around the globe for as long as the living world has existed. In short, if a creature is populating an island to the point that no habitat remains for anything else, then, yes, some form of control may be justified, but the method applied must be one that does not destroy the very ecosystem we are trying to preserve.

In evaluating the data provided by USFWS concerning the introduced mice on the Farallon Islands, and the assumption that, indirectly, the mice are attracting an average of six burrowing owls a year, which occasionally kill the chicks of the ash storm-petrel, USFWS has failed to demonstrate that the mice are having a negative impact on the Farallon Islands.

Data provided by USFWS concerning the ash storm-petrel, a bird that is naturally a slow breeder, shows the population is not in decline.



Population of ash storm petrel, provided by USFWS

Additionally, in 2013 USFWS, endangered species division, denied giving the ash storm petrel endangered species status with the following statement.

"The Service has determined that population trend data for ash storm-petrel indicates that the species is currently undergoing natural population fluctuations and that the species is not in a long-term decline." — USFWS, Endangered Species Division

3. High Failure Rate

Eradicating rodents from island ecosystems is very difficult to achieve and "success" implies that every single animal has been killed and no re-invasion has or will occur. It is impossible to determine that every animal has been killed on a rugged and/or heavily vegetated island since comprehensive monitoring is expensive, and, if performed by the same contractor doing the eradication, may be biased toward claiming success when it has not been achieved. Also, the possibility of re-invasion always exists, meaning that millions of dollars may be spent for nothing. In addition, we believe that "success" should mean that the ecosystem is intact and functioning with no or very little impact to non-target animals. That is very difficult or impossible when using poisons which will, to some extent, enter the food chain. It is also true, as New Zealand has discovered, that removing one predator species may mean an explosion in the population of other predator species, further unbalancing the ecosystem. The law of unintended consequences tends to prevail.

The removal of mice has proven to be more challenging than the removal of rats. According to this published paper out of New Zealand last updated in 2007, the failure rate for eradicating

mice for islands is 38%.

https://drive.google.com/file/d/oBwdOUBgcb_baU2xCaoc4WVZVbHM/view?usp=sharing

4. History of Repeated Violations

Projects carried out by USFWS and their preferred partner, Island Conservation, contain a history of egregious violations of federal and state laws designed to protect all the living resources within the public trust. These serious issues demand the thoughtful attention of the California Coastal Commission.

Rat Island:

During the Rat Island eradication project in Alaska in 2008, federal and state laws were violated, resulting in numerous violations including the Migratory Bird Treaty Act, the Bald & Golden Eagle Protection Act and several violations of FIFRA. The following document contains a listing of violations issued by the State of Alaska.

https://drive.google.com/file/d/oBwdOUBgcb_baMoJMVGZjTml6YWc/view?usp=sharing

While the non-target mortality was officially listed as 467 poisoned birds, including 46 bald eagles, the search for carcasses did not begin until USFWS and Island Conservation returned to the island nine months later. And then, only a partial search of the island was carried out. Undoubtedly, the total number of non-target kills was much higher, and the true death toll will never be known.

Additionally, USFWS, Office of Law Enforcement filed the following law enforcement report (#20099703127R001), as part of their investigation into the large numbers of wildlife mortality that occurred. This document was released under a FOIA request filed in 2014.

https://drive.google.com/file/d/oBwdOUBgcb_baeXlYTzZoXo5hWFU/view?usp=sharing

In 2010 The Ornithological Council also issued the following, highly critical paper—The Rat Island Eradication Project: A Critical Evaluation of Non-Target Mortality, authored by Terry Salmon and Ellen Paul.

https://drive.google.com/file/d/oBwdOUBgcb_baak5VRU5XWVpXYVU/view?usp=sharing

Lehua Island:

In late August and early September of 2017, a similar rodent eradication attempt was undertaken by the USFWS, Hawaii's Department of Land and Natural Resources (DLNR) and Island Conservation on Lehua Island, which is located approximately 30 miles west of Kauai.

On September 3, the following video was shot by residents of Kauai four days after the second of three drops scheduled for Lehua Island. The total amount of anticoagulant rodenticide dropped was 11.5 tons, over a 284 acre wildlife sanctuary, and the poison drop failed to eradicate the rats.

Green poison pellets can clearly be seen in the surrounding marine environment, in addition to dead fish and birds. <https://www.youtube.com/watch?v=1Q7YGcq5Lh8>

An investigation was done by Hawaii Department of Agriculture or HDOA (the regulatory agency for pesticide use in Hawaii).

In the report dated April 18, 2019, numerous pesticide violations and warnings were issued to Island Conservation (the USFWS sole source contractor carrying out the poison drop), DLNR and Aspen Helicopter. Additional comments on the Inspection Tracking Report included failure to notify HDOA pesticides branch of a large fish kill, wind speed not being recorded, the pesticide label not being in possession of the helicopter pilot, and the helicopter pilot not being properly licensed.

Key points worth mentioning in this report by HDOA include

- On August 30, 2017, the HDOA BI Inspector and on September 12, 2017, the HDOA Oahu Inspector did not observe any efforts to collect and dispose of waste resulting from RUP DITRAC D-50 PELLETS. The RUP DITRAC D-50 PELLETS were clearly available to birds and aquatic organisms.
- On August 30, 2017, when questioned about the availability of RUP DITRAC D-50 PELLETS to non-target pests, a member of the ground crew asserted that the pellets dissolve and sink too quickly to be retrieved. The video posted on social media was purportedly taken three or four days after the August 30, 2017 broadcast application. The RUP DITRAC D-50 PELLETS can be seen littering the shoreline and floating in the water along with the dead birds and fish.
- It can be inferred from the HDOA BI Inspector's August 30, 2017 observations of the RUP DITRAC D-50 PELLETS in varying stages of decomposition and the HDOA Oahu Inspector's September 12, 2017 observations of the RUP DITRAC D-50 PELLETS in varying stages of decomposition that the RUP DITRAC D-50 PELLETS were allowed to remain in tide pools and on the shoreline, with no effort to collect and dispose of the waste materials.

A full report of the Inspection Tracking Report, with redactions can be found here - <https://www.dropbox.com/home/Lehua%20drop%20enforcement?preview=Lehua+Island+Complaint-+entire+KA-17-08+Redacted.pdf>

5. Flaws in USFWS Request for Coastal Consistency Determination

Page 2 of the request for Coastal Consistency Determination makes the following false statement – Pellets are dyed green to make them less attractive to birds and reptiles (Pank 1976, Tershy et al 1992, Tershy and Breese 1994). This statement, extrapolated from data over 25 years old is proven false by this video taken from New Zealand wildlife documentary filmmaker, Clyde Graf after an aerial drop of Compound 1080 in New Zealand.

https://youtu.be/_r5rDBrzjOU

Invertebrates such as these crayfish have also been captured on film consuming bait pellets dyed green. https://youtu.be/gUq_HtWBIRE

Page 2 - calls for the use of approximately 50 bait stations containing brodifacoum, however there is no mention of the pathway that exists for the Farallon arboreal salamander and the Farallon camel cricket to enter the bait boxes, consume the poison, and either die of direct poisoning, or become a poisoned food source later consumed by other animals on the island. Page 3 – Projections on gull mortality (the threshold of 1700 dead gulls was used) are grossly underestimated. More importantly, gull hazing trials mentioned in 2012 were not conducted early during their breeding season— when the gulls will be vigorously defending their territories. And then, this trial was successful in keeping away an estimated 75% of the birds for only 14 days. With an estimated gull population on the Farallones of 30,000 (USFWS data), 25% of the population would mean that 7,500 gulls would be coming back to the island. It is estimated there will be 2-3 lethal doses of fish flavored pellets in every gull territory. Every gull flies daily back to the mainland. The majority of gulls (95%) at the San Francisco Zoo, Fisherman's Wharf and Alcatraz Island are from the Farallones. The time frame it takes for brodifacoum to kill a bird is approximately four to seven days. All of the birds will be flying back and forth from the Farallones to the mainland until they get sick and die. The odds are highly likely that half will die in San Francisco, and at a minimum that number will be 3000, more if the hazing program is not successful.

The following, detailed comment letter from Dr. Michael Fry, USFWS Contaminants Specialist addresses some of the inconsistencies around the Avian Risk Assessment and gull hazing strategy for the South Farallon Islands. This document was released under a FOIA request. https://drive.google.com/file/d/1dtxeYED_jsUKsCh4VXF7ol_Udgxi530a/view?usp=sharing

Page 4 – Impacts to raptors are incredibly underestimated and fail to include any reference to the Golden Gate Raptor Migration—which, begins in fall and ends in early December. At the peak of this critical migration, as many as 1000 raptors can be counted overhead daily. This migration of hawks, eagles, kites, falcons, vultures and harriers, in addition to non-raptor migrants (three species of swift, six species of swallow and band-tail pigeons) will be migrating through the San Francisco Bay Area during the proposed rat poison drop. The failure to mention this migration is disturbing, as it has been well documented that available food sources and climate change are believed to be changing the migratory patterns of certain species of birds. During the Rat Island eradication project in 2008, USFWS scientists failed to anticipate that bald eagles from neighboring islands in the Aleutian chain, would be attracted to the deluge of dead rats and gulls strewn across the island as a readily available food source. The result of this failure by USFWS led to a higher than expected rate of non-target mortality, however, it needs to be duly noted that the final death toll of animals poisoned during the Rat Island project will always remain unknown. The data cited in literature is 467 poisoned birds, including 46 bald eagles, as that was the number of carcasses collected nine months later.

Page 4 – the following statement on the last paragraph, *“the manual removal of all visible mouse and bird carcasses will reduce exposure risk to scavengers,”* is overly optimistic and misleading. Much of the terrain of the South Farallon Islands is extremely steep and too dangerous to permit humans to conduct a search. Humans would not be able to search intertidal areas for excess bait and carcasses due to dangerous wave action. The result is that bait and carcasses will be left in these areas, only to be consumed by non-target species. The risk of food web contamination cannot be underestimated. The statement that, *“surveys would be continued until the primary exposure risk period has ended, estimated to be about five weeks,”* is incorrect. According to data from the California Department of Pesticide Regulation, dry bait pellets of brodifacoum are stable for years, and the soil half-life is 84-157 days.

Page 5 – Makes the following statement that an *“extensive monitoring program will be conducted to track and document mouse eradication success, bait update and degradation, success of mitigation measures, toxicant exposure to the environment, and population-level changes of conservation measures.”* Historically, eradication projects have been criticized for the lack of any long-term, comprehensive, ecosystem monitoring. Lack of funding for monitoring has always been the impediment, and with no operational plan released for monitoring, or any reference as to how long-term monitoring will be funded, one has to question what type of monitoring will actually take place. Furthermore, recent studies have revealed that exposure to anticoagulant rodenticides have caused genetic changes in certain species. Any long-term monitoring plans must include research as to whether exposure to brodifacoum has caused any changes in the genetics or immune systems of non-target species on the South Farallon Islands. <http://newsroom.ucla.edu/releases/household-rat-poison-changes-in-la-bobcats-immune-system> <https://royalsocietypublishing.org/doi/full/10.1098/rspb.2017.2533>

Page 7 – Makes the statement at the bottom of the second paragraph, *“The project will not result in any changes to recreational fishing opportunities.”* During the attempt to eradicate rats from Wake Island in 2012, an effort which failed to eradicate the rats, testing of fish in the surrounding marine environment was carried out by the USAF, which maintains a base on Wake Island. After fish exposure to brodifacoum was found a recommendation came back from that a fishing ban should be enacted for 942 days. This entire email discussion can be

found at the link below. This information was released under a FOIA request. https://drive.google.com/file/d/oBwdOUBgcb_baWVd3YoJhMU14eTA/view?usp=sharing

Key points of the email discussion include the following internal comments -

"Attached you will find our analysis of the Brodifacoum testing performed on Wake Atoll. I appreciate everyone's patience on this report, as it has ventured into uncharted waters with regards to human risks. Due to the potential severity of human health risk, we proceeded with slow but purposeful intent." - Wesley Walker, USAF

"FYI - note the Wake atoll brodifacoum results analysis. We have a couple options. I guess it comes down to how long we want to restrict consumption of fish at Wake. The current recommendation is approximately 942 days. Also with no money are furloughs occurring July 8- end of September, it is unlikely that a sampling project will occur this FY. I'll keep you in the loop, but I thought you might like this info for future projects." - Matt Moran, USAF

6. Viable Alternatives – Contraception

Page 46 of the FEIS provides a single paragraph dismissing the possibility that rodent contraception is a viable option. Shockingly, two technologies—genetic mutation and contraception are lumped together as one and disqualified for being experimental. While it is true that use of genetic mutation, also known as CRISPR, is premature, untested (and comes with its own set of risks), rodent contraception is EPA approved and available from Senestech, a biotechnology company based in Tuscon, AZ. It has been revealed in a telephone conversation with the founder and co-creator of the contraception technology, Dr. Loretta Mayer, that not only was the description on page 46, item 2.7.8 incorrect, Senestech has recently signed an MOU with USFWS preferred partner, Island Conservation to do island eradication projects. The first project is scheduled for next spring in the Caribbean. <https://senestech.com/>

Since this technology and partnership agreements are already in place, it is troubling as to why rodent contraception is not being considered for the Farallon Islands.

We appreciate the inclusion of this document provided to us in the Coastal Commissions review and staff report of the Federal Consistency Determination for Evaluation of the Consistency Determination for the USFWS South Farallon Islands Mouse Eradication Project.

Kind Regards,

Cea Higgins

Executive Director

Coastwalk/California Coastal Trail Association

707 829 6689 office

707 217 9741 cell

555 South Main St. Suite 3

Sebastopol, CA 95472

Cea@coastwalk.org

www.coastwalk.org

Simon, Larry@Coastal

From: Cea Higgins <Cea@coastwalk.org>
Sent: Tuesday, June 25, 2019 9:52 AM
To: Simon, Larry@Coastal
Cc: Energy@Coastal
Subject: Re: CD-0002-19 (USFWS)
Attachments: 2019_04_15_ EPA Comments on Farallon Mouse Eradication FEIS.pdf; GFNMS comment letter USFWS mouse eradication project 2-11-19.pdf

Dear Mr. Simon

The FEIS for the Mouse Eradication Project released in March of 2019 did not provide the opportunity for an updated public comment process; however there were comments and recommendation submitted by Federal and State agencies that should be included in the record and as part of the Commissions review for Federal Consistency Determination.

The EPA is charged, under section 309 of the Clean Air Act, to review all Federal agencies' EISs and to comment on the adequacy and the acceptability of the environmental impacts of proposed actions in the EISs. EPA documents are available for public review.

The Greater Farallones National Marine Sanctuary manages the waters and submerged lands adjacent to the South Farallon Islands below the MHW mark.

Please find attached the comments recommendations of these agencies to be published and considered in your staff report.

Thank you

Kind Regards,

Cea Higgins
Executive Director

Coastwalk/California Coastal Trail Association

707 829 6689 office

707 217 9741 cell

555 South Main St. Suite 3



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE

Greater Farallones National Marine Sanctuary
991 Marine Dr., The Presidio
San Francisco, CA 94129

February 11, 2019

Mr. Gerry McChesney, Refuge Manager
U.S. Fish and Wildlife Service
San Francisco Bay National Wildlife Refuge Complex
1 Marshlands Road
Fremont, CA 94555

Sent Via Email

RE: Comments on the Administrative Draft of the Final Environmental Impacts Statement for the South Farallon Islands Invasive House Mouse Eradication Project

Dear Mr. McChesney:

Greater Farallones National Marine Sanctuary (GFNMS or sanctuary) has reviewed the Administrative Draft of the Final Environmental Impact Statement (FEIS) for the South Farallon Islands Invasive House Mouse Eradication Project. As stated in the Draft FEIS, the project goal is to eradicate introduced, invasive house mice (*Mus musculus*) from the South Farallon Islands within the Farallon Islands National Wildlife Refuge (Refuge), in order to help restore natural ecosystem processes on the islands and benefit native seabirds, amphibians, terrestrial invertebrates, and plants. We appreciate that the U.S. Fish and Wildlife Service (USFWS) has provided GFNMS with the opportunity to comment on this document. We also thank the USFWS for their time in providing a briefing conference call to further discuss the project with GFNMS staff on October 29, 2018.

GFNMS manages the waters and submerged lands adjacent to the South Farallon Islands (below the mean high water (MHW) mark). It is important that any site-specific projects that may result from the project be designed and implemented in a manner that prevent negative impacts to the waters and habitats of the sanctuary. As such, the following comments provided herein discuss GFNMS' jurisdiction and current regulations.

With few exceptions, discharging or depositing any material or other matter is prohibited and thus is unlawful for any person to conduct or to cause to be conducted within the Sanctuary. In addition, discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality is also prohibited [15 CFR Part 922, § 922.82 (a)]. The National Marine Sanctuaries Act defines "injure" as "to change adversely, either in the short or long term, a chemical, biological or physical attribute of, or the viability of. This includes but is not limited to, to cause the loss of or destroy." "Sanctuary quality" is defined as "any of those ambient conditions, physical-chemical characteristics and natural processes, the maintenance of which is essential to the ecological health of the Sanctuary, including, but not limited to, water quality, sediment quality and air

quality” (15 CFR § 922.3). These prohibitions in combination would apply to any activities beyond the Sanctuary, in which matter could be discharged and ultimately enter the Sanctuary and cause injury, even in the short term. Such activities could include staging, transport of equipment and rodent bait, and the aerial dispersion of rodent bait over the landside of the South Farallon Islands that occur outside Sanctuary boundaries. Activities associated with both Alternatives B and C may result in incidental discharges that enter the sanctuary and thus USFWS should continue to coordinate closely with GFNMS staff to address best management practices and potential permitting requirements. In addition, flying an aircraft (either fixed wing or an unmanned aerial system (UAS)) below 1,000 feet within a NOAA Regulated Overflight Zone would need to be permitted as this is an activity prohibited by 15 CFR 922.82(a)(11). There is a NOAA Regulated Overflight Zone surrounding the nearshore waters of Southeast Farallon Island (SEFI). Thus, any operation of aircraft below 1,000 feet associated with either Alternatives B or C would require a sanctuary permit. For more information, please see <http://sanctuaries.noaa.gov/management/permits/aircraft.html> and the map of GFNMS’ regulatory zones at <https://farallones.noaa.gov/gallery/maps.html>. Lastly, all activities requiring a sanctuary permit must meet the specific permit review and issuance criteria listed in 15 CFR Part 922, § 922.83. More information on GFNMS regulations and permit procedures can be found here: <https://farallones.noaa.gov/manage/regulations.html>.

GFNMS Comment Matrix

Please note that GFNMS staff carefully reviewed the Draft FEIS and provided a complete list of comments in Attachment 1 to this letter, entitled “GFNMS Comment Matrix.” This matrix provides numerous administrative and grammatical comments on the document along with substantive comments on the proposed Alternatives. Key comments from the matrix are summarized in this section.

In general the substantive comments request that the Final DEIS include more discussion on the following:

- *Address the impacts to the large numbers of pups now expected to be present on the islands when aerial bait drops and hazing efforts of gulls are occurring.*
- *Consider both the presence or pupping of pinnipeds and also timing of weaning or dependence of pups to mothers.*
- *Provide further discussion on how the proposed alternatives may be affected during a rain event.*
- *Provide additional analysis on the estimated amount (weight) of pellets and anticoagulant that may be accidentally spilled into the sanctuary.*
- *Address how long non-target scavengers might be exposed to the anticoagulant in rodent carcasses.*
- *Provide more discussion on how rodent carcasses would be disposed.*
- *Address whether there is a monitoring plan or information on tests to be done on intertidal species in the event of a spill into the intertidal that is greater than negligible.*
- *Provide information about transmission and exposure to food supply, i.e. Dungeness crab, salmon, in the event of a large spill in the marine environment before Nov 1 (recreational crab season begins) and during commercial salmon season.*
- *Address any literature on toxicity to predators that consume mussels or limpets that have*

been exposed to the rodenticide.

Impacts to Other Sanctuary Users

In Section 4.6.2.3, on page 233, the document states that the project may overlap with the annual white shark season at Southeast Farallon Island (SEFI). Permitted research vessels and educational tour vessels operate at the islands each year from September through November. Specifically, USFWS has stated that an overwater closure around SEFI (extending approximately 0.5 miles from shore) would be necessary during times when rodent bait and rodenticides are being aurally broadcast over the island. GFNMS recommends that USFWS make every effort to minimize the number of overwater closure days that would occur during white shark season. Further, because the majority of white shark viewing trips occur during the weekends (Friday through Sunday), GFNMS recommends that USFWS conduct the project to avoid closures during the weekend, to the extent this is feasible, to avoid disruptions to these vessel operators.

GFNMS appreciates this opportunity to comment on the Administrative Draft of the FEIS for the South Farallon Islands Invasive House Mouse Eradication Project and we look forward to coordinating closely with USFWS on future phases of the proposed project. Please contact Max Delaney at max.delaney@noaa.gov or 415-970-5255 if you have any questions.

Sincerely,



Maria Brown
Sanctuary Superintendent

Attachments (1):
GFNMS Comment Matrix



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

April 15, 2019

Gerry McChesney, Refuge Manager
Farallon National Wildlife Refuge
9500 Thornton Ave.
Newark, CA 94560

Subject: Final Environmental Impact Statement (FEIS) for the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California (EIS No. 20190027)

Dear Mr. McChesney:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The U.S. Fish and Wildlife Service (FWS) proposes to eradicate non-native house mice from the South Farallon Islands off the coast of San Francisco using aerially broadcast rodenticide in an effort to restore the ecosystem. As a cooperating agency for the project, EPA provided scoping comments to the FWS on June 10, 2011, and well as early input on the alternatives selection report and the Administrative Draft Environmental Impact Statement (February 16, 2012 and February 5, 2013 respectively). EPA reviewed the Revised Draft Environmental Impact Statement (RDEIS) and provided extensive comments to the FWS on December 9, 2013. In that letter, we commented on the necessity for thorough planning and analysis of impact assessment, mitigation, and monitoring due to the complexity of the project. We also provided comments regarding the potential population level impacts to gulls and the effectiveness of the proposed gull hazing operation. In addition, we recommended an independent third-party post-project review to maximize lessons learned from this eradication effort.

EPA supports the concept of a well-planned restoration. We acknowledge that the FWS, the government agency with trust responsibility for managing wildlife within a national wildlife refuge, is responsible for determining the acceptability of nontarget mortalities versus benefits to vulnerable species. We note that the project can proceed utilizing existing registered rodenticides; however, should the project require application rates or other application parameters that are not allowed by existing product labels, FWS will have to work with the registrant of the product selected for use to submit an application to EPA's Office of Pesticide Programs for revised labeling.

EPA continues to highlight the considerable complexity of this project over other recent island rodent eradications, due to mice being harder to eradicate than rats, and the indirect effect the mice have on the bird species targeted for the restoration - the ash and Leach's storm-petrels - by attracting burrowing owls that prey on them after mouse levels seasonally decline. Even in cases of direct impact by rodents,

predicting treatment effects has proven difficult and has sometimes resulted in more non-target mortality than expected. Changes to the FEIS indicate that the petrels are no longer the primary target for the restoration, but instead the goal is to eradicate mice to eliminate their impacts on the native ecosystem. The FEIS acknowledges the "imprecise knowledge of impacts of mice to resources" (p. 141) but states that there has been sufficient planning and consideration and that the project's predicted effects are not overly optimistic as EPA had suggested (Appendix P, p. 68).

Following our review of the RDEIS, our main recommendations regarded the need for adequate planning to avoid the problems experienced in past failed rodent eradications, including contingency planning as a part of the adaptive management plan. We recommended disclosing specific mitigation and Best Management Practices (BMPs) that would be applied in the FEIS. The FEIS indicates that contingency plans are being developed, adaptive management and mitigation plans would be prepared should the project proceed, and the specific BMPs that would be applied will be identified in the Record of Decision. Other information, such as application of bait and carcass removal, would be contained in the Operational Plan that would be developed, and a detailed plan for monitoring of operational, mitigation, and ecosystem restoration objectives will be part of the Operational Plan, according to the FEIS. Much information is deferred to these plans. While the FEIS states that "The Service has committed to allow the operational team the opportunity to fully review the operational plan, ask questions, and suggest revisions prior to initiation", we note that Recommendation #4 by the Ornithological Council, cited in the FEIS, recommends that project-related documents, including operational plans, be made available to the public (p. 22).

Recommendation: Since the Operational Plan will not be made public, we recommend that it be offered to other knowledgeable third-party experts, in addition to the operational team, for review prior to implementation.

The predicted success of the gull hazing plan remains at 90% (p. 161), the level necessary to avoid population-level effects to the Western Gull, the largest known colony of which exists in the South Farallon Islands (p. 157). In our comments on the DEIS, we questioned whether the predicted staff level of 10-12 people would be sufficient for gull hazing, given the hazing trial's much smaller area and time period and the habituation that was observed. According Appendix P, p. 38 (response to comments), FWS confirmed that 10 personnel would be sufficient to handle all of the hazing duties for the duration of the project, and if additional hazing personnel are needed, the Service would be prepared to add hazing staff and haze for as much time as is necessary to minimize the numbers of gulls consuming rodenticide bait.

Recommendation: EPA recommends the FWS ensure sufficient funding is secured for additional hazing staff, as needed, prior to project implementation, and that this commitment be identified in the Record of Decision.

EPA's comments on the RDEIS addressed carcass removal, which is a pesticide label requirement, and we requested that the FEIS include a commitment for monitoring of mainland beaches for gull carcasses and that public notification be extended to all segments of the public (in addition to boaters). We appreciate that FWS acknowledges that sickened or dead birds could show up on mainland beaches or other areas (Appendix P, p. 29), and that monitoring would occur via volunteers of the Sanctuary's Beach Watch program. The FEIS states that public notices would be posted about the eradication project but doesn't indicate where this will occur. Posting on websites is not sufficient to reach all potentially affected people.

Recommendations: EPA recommends the public notification include communications to media outlets as well as other organizations that utilize the beaches, such as the Surfrider Foundation, the Golden Gate National Parks Conservancy beach stewards, and dog recreational organizations such as SFDog.

EPA's RDEIS comments recommended that the impact assessment include an analysis of risks in case the eradication is not successful, since house mouse eradications historically have had relatively high failure rates compared to rats¹ and the possibility exists that, should the effort fail, resources may have to withstand impacts from rodenticide along with the continued impacts from mice. The FEIS states that assessments of potential impacts assuming eradication failure is beyond the scope of the EIS, and that if the project proceeds, the FWS assumes that the eradication will be successful (Appendix P, p. 66).

Recommendations: We strongly suggest that FWS arrange for an independent third-party review of the project to maximize lessons learned. This occurred for projects that failed, such as Rat Island and Wake Island, but also for successful projects including Palmyra atoll. We request that FWS commit to and ensure funding for this independent post-project review in the Record of Decision.

EPA appreciates the opportunity to review the FEIS. We appreciate that FWS may consider collaborating with interested wildlife rehabilitation organizations, as we suggested, to care for wildlife impacted as a result of the Farallon mouse eradication project, if funds are available (Appendix P, p. 67). If you have any questions, please contact me at 415-947-4161, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

Connell Dunning

Connell Dunning, Acting Manager
Environmental Review Section

¹ According to the FEIS, Table 2.2, just under 69% of mouse eradication attempts using Brodifacoum were successful

Simon, Larry@Coastal

From: Richard Charter <waterway@monitor.net>
Sent: Tuesday, June 25, 2019 4:13 PM
To: Simon, Larry@Coastal
Subject: Staff Report Materials CD-0002-19 (Agenda item: W14a)
Attachments: StaffReportMaterialsFarallonesDrop19.docx

Dear Larry:

This material is for your consideration for the staff report for CD-0002-19. My own comments will follow next week under separate email cover.

Thanks very much.

Richard

Richard Charter
Senior Fellow
The Ocean Foundation
707-875-2345
707-875-3482

Background Information:
CD-0002-19 (Agenda item: W14a)

1. The US Fish and Wildlife Service (USFWS) has failed to address alternatives to the preferred option and to other options it proposes, including the use of contraceptive baits, which have advanced in both effectiveness and availability since the publication of the agency's Revised DEIS. This constellation of issues has been raised, and continually ignored by the agency, during comments duly submitted throughout the NEPA process.
2. USFWS has failed to provide any documentation of the anticipated success rate of both the planned hazing of non-target species, in hopes they can be forced to move out of and away from the poison application zones on Southeast Farallon Island (SEFI), and of the proposed "translocation" of non-target species off of the SEFI during the protracted period of time that these two approaches would need to be flawlessly executed and maintained 24-7 in an attempt to avoid adverse impacts to Sanctuary and Refuge public trust resources. The agency also fails to identify failsafe collection and disposal options for carcasses of dead rodents to preclude ingestion by predator species or wind or water transport of dead rodents into the ocean. The agency, at no juncture, addresses the implications of an unanticipated rain event on the proceedings, nor does it have a contingency plan for such a meteorological event.
3. USFWS has failed to consider or acknowledge that the California State Legislature is currently in the process of moving to strictly constrain the use on California lands of the primary poison bait identified as the preferred option in the consistency determination, Brodifacoum. This legislation has become necessary due to the increased prevalence of secondary poisoning of non-target wildlife and the emergence of toxic impacts throughout the food chain. The relevant legislation, AB 1788, has already passed the California State Assembly and was again advanced by the California State Senate Committee on Environmental Quality on June 19, 2019.
4. USFWS makes the arbitrary but unverified claim that one of the primary rationalizations for pursuing the project is to create stronger resiliency in one certain wildlife population in the face of climate warming and climate-related changes to the ocean environment. But the consistency determination fails completely in addressing the emerging scientific data indicating that a changing climate may affect the movement and levels of organochlorine pesticides and other chemicals in the environment, and might weaken the ability of animals and humans to tolerate such pollutants. The emerging chemical-climate connection is well-known to researchers and should not be hidden from the USFWS analysis, particularly since these kinds of factors contraindicate any claimed theoretical climate-related advantages of the proposed project.
5. USFWS fails to acknowledge that both Brodifacoum and Diphacinone-50 have justifiably been the focus of serious public policy controversy and increased regulatory scrutiny, and the consistency determination fails to provide notice that Brodifacoum has raised concerns at both the U.S. Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation, due to the propensity for this compound to transport up the food chain and become subject to biomagnification to the degree that it impacts non-target species to an unacceptable level.
6. USFWS has shown that it is fundamentally biased toward justifying the approval of a poison-application project while failing to carry out a realistic comparative analysis of competing poisons, while the agency does not compare relative risks of one poison versus another. Further, USFWS virtually ignores the

question of whether or not one poison may be more or less prone to causing unacceptable levels of collateral damage to non-target species.

7. USFWS has failed to consider the ESA-listing of the Black abalone, and the fact that a Section 7 consultation still has not been conducted for the Black abalone relative to the proposed project, and the fact that data critical to such consultation appears to have been misplaced by government researchers and cannot be found.
8. USFWS reflects a casual and dismissive attitude throughout the consistency determination regarding the inevitable mortality of public trust living resources, including numerous non-target species, in a manner which hardly presents a fairly-considered cost-benefit analysis. The agency instead attempts to rationalize the unnecessary killing of what it admits will be a substantial amount of innocuous wildlife in the process of trying to eradicate one species – the mice – but the document provides no conclusive evidence that the Ashy Storm-Petrel will benefit over the long term from inflicting all of this collateral damage throughout the overall ecosystem. Past efforts to secure ESA-listing of the Ashy Storm-Petrel were denied by USFWS, which cited rising population numbers. The USFWS also fails to address the presence and pupping of pinnipeds, their timing of weaning, and dependence of pups to mothers, from activities related to attempted hazing and from project elements including protracted helicopter overflights and poison dispersal activities. Flying an aircraft - fixed wing or unmanned aerial system (UAS) - below 1,000 feet within a NOAA Regulated Overflight Zone would need to be permitted as this is an activity that is prohibited by 15 CFR 922.82(a)(11). Such a NOAA Regulated Overflight Zone is in place surrounding the nearshore waters of SEFI, something the USFWS fails to consider.
9. USFWS has failed to analyze economic impacts of the project to commercial and sport fishing activities, including reduced marketability of catch, because the agency ignores the high probability of adverse fiscal impact resulting from rumors about contaminated seafood (a similar consideration resulted in the delayed opening of Dungeness crab season in the wake of San Francisco's 2007 Cosco Busan oil spill), and because the agency does not provide any analysis of the economic costs associated with a "worst case" accident involving discharge of one or more aerial delivery bucket(s) of Brodifacoum into the marine environment during transit to the Islands. USFWS must include the multiplier costs and indirect damage to the regional economy in the event that tainted fish products make it to consumers or are found in the marketing stream and an entire fishing season is lost as a result, whether it be for crab - since the project timeline calls for poison application to the Islands at the beginning of Dungeness crab season - or for other fisheries, or for party-boat activities. Fishing closures of 942 days were recommended by the US Air Force as a result of a similar helicopter dispersal of poison bait on Wake Island. In the summer of 2017, helicopters dropped 11.5 tons of rodenticide poison over the 279-acre island of Lehua, located off Kauai. This video was taken 4 days after one of the drops: <https://youtu.be/1Q7YGcq5Lh8>
10. USFWS has failed to evaluate and provide suggested mitigations for the cumulative impacts of multiple applications of toxic materials during any one season, and/or during subsequent seasons, in the likely eventuality that future follow-up poison applications are necessary due to failure to eradicate the mice during the first effort. The agency also fails to consider the cumulative impacts of the aerial poison application in combination with bait stations and the other proposed ongoing biosecurity measures, including the potential for continued annual poison applications, that apparently would need to become a routine lasting USFWS wildlife management tool on the Islands.
11. USFWS has failed to consider the economic impacts of seabirds ingesting the poison pellets, or ingesting

poisoned mice on the Islands, and then slowly dying in a grotesque manner in public places in Bay Area communities or along the San Mateo, Sonoma, Marin, or San Francisco coastal beaches and parklands. The consistency determination also fails to provide a mortality number for various species of non-target animal casualties that the USFWS would find "acceptable", and fails to note that such numbers will obviously vary species-by-species. The agency fails to note probable impacts to the California State Parks and to various County Parks in the event of non-target mortality and wildlife distress occurring in locations other than on the Farallones.

12. USFWS has failed to disclose the inherently inhumane method of killing embodied by both the Brodifacoum and Diphacinone-50 rodenticides. Brodifacoum, in particular, causes mice, and any bird or mammal that eats enough of them, to slowly bleed to death over the course of about twenty days, while any unconsumed Brodifacoum rodenticide remains toxic on the ground for up to 120 days, depending on the weather. The agency must address a comprehensive evaluation of the inherently inhumane aspect of the protracted suffering resulting from these broad-spectrum poisons and their multi-generational epigenetic effects on various species that will almost certainly come into contact with them.
13. USFWS has failed to disclose and justify what the proponents of the project consider their assessment of an "acceptable" threshold of incidental mortality for all species to be potentially directly or indirectly affected by the poison, and further, the agency fails to consider the epigenetic effects of the poison in causing multigenerational mutagenic damage to species poisoned but not killed by the toxic materials used in the project.
14. USFWS has failed to provide adequate evidence that the underlying hypothesis for going forward with the project is trustworthy; i.e., that killing the mice will in fact cause the burrowing owls to depart from the Islands, and that the burrowing owls hopefully will therefore cease predation on the Ashy Storm-Petrels. This chain of assumptions, while fundamental to the project's claimed benefits, is not fully substantiated with examples for other locations, or through experience with other analogous species assemblages, anywhere in the consistency determination.
15. USFWS has failed to provide a formula under which a Natural Resource Damage Assessment (NRDA) would ensure full compensation and reimbursement to the Gulf of the Farallones National Marine Sanctuary (GFNMS) for any and all damage to public trust living resources resulting from both the project's "normal" operations and from a worst-case release of poison and/or aviation fuel resulting from an aircraft accident or a mechanical failure of one of the laden bait application buckets. USFWS still fails to include the methodology for an appropriate NRDA valuation that would be utilized, since multiple dollar values can be assigned to each individual specimen of various taxa under different valuation assumptions in any subsequent NRDA settlement.
16. USFWS has failed to provide full legally-binding assurances that no waiver, implied or express, of the longstanding Greater Farallones National Marine Sanctuary (GFNMS) "*Enter and Injure*" regulations shall be construed in the event that the proposed rodenticide activity eventually secures approval by the Department of Interior, nor should the granting of any related permit, if executed, be implied to represent any waiver of any fines that may be incurred under Sanctuary regulations, and any such permit approval by the Department of Interior or GFNMS shall in no instance be misinterpreted to establish any precedent for any future proposed activities affecting GFNMS Sanctuary or other Sanctuary resources elsewhere.
17. Prior to consideration or issuance of any permit or approval for any part of this project, the USFWS must disclose a robust and comprehensive Incident Response Plan that addresses all emergency response

contingencies, including incident chain of command, the regional U.S. Coast Guard response capability for coping with and responding to three-dimensional maritime spills of toxic materials throughout the water column, including an inventory of spill response equipment available for sea-states that may occur during the project timeframe in the event of a worst-case accident or a spill involving poisoned bait and/or fuel or other substances of concern.

18. USFWS has failed to disclose the half-life or anticipated lethal dose level for bait on land and in water after application, or for bait in various weather conditions, nor does the agency disclose the time from first exposure until mortality of various species that are expected to consume bait directly, or for species that can be anticipated to consume bait-contaminated prey.
19. USFWS failed to disclose that the World Health Organization (WHO) states that "Brodifacoum is toxic to aquatic wildlife." WHO further cautions "Avoid accidental contamination of water."
See page 12 at <http://www.who.int/whopes/quality/en/Brodifacoum.pdf>
20. USFWS does not provide a fail-safe mechanism for full financial reimbursement of local and regional public agencies, fishing interests, the State of California, and the GFNMS for any and all damages incurred in the conduct of the project. The agency must provide an analysis of how the USFWS and any and all subcontractors to the agency would post a surety bond extending to the maximum credible cost of full damage recovery that could be anticipated in the event of a worst-case event during the project. Such surety bond shall provide indemnification for dollar amounts including but not limited to fisheries, pinnipeds, avian, terrestrial and marine wildlife, and invertebrates; for damages to water quality; for unintentional mortality or other harm caused by any operations associated with the proposed project, or by an accidental spill or release of any toxicant or fuel product into any part of the terrestrial or marine environment. Such surety bond shall be in an amount representing the fiscal equivalent of a total amount sufficient to fully reimburse and compensate the GFNMS and any other public agency or private party for any and all deliberate or unintentional mortality or damage, and/or accidental mortality or ecosystem damage, and such bond shall be of an amount based on the maximum potential per-individual valuation for each affected species, in addition to any and all cleanup costs of any kind, in addition to any post-event monitoring or rehabilitation of terrestrial or marine habitat deemed necessary by GFNMS for areas that may be affected by normal project operations or by accidental spillage of toxicant materials or aviation fuel within or outside of Sanctuary boundaries.



THE OCEAN FOUNDATION

Coastal Coordination Project

June 20, 2019

Mr. Gerry McChesney
Refuge Manager
Farallon National Wildlife Refuge
US Fish and Wildlife Service
1 Marshlands Road
Fremont, CA 94555
(sent via email and US Postal Service)

and:

Public Comments Processing
Attn: FWS-R8-NWRS-2013-0036
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 N. Fairfax Drive, MS 2042-PDM
Arlington, VA 22203
(sent via US Postal Service)

Re: Comments on the Inadequacies of the FEIS for the proposed South Farallon Islands Invasive House Mouse Eradication Project (The Project); Farallon National Wildlife Refuge, California

Dear Mr. McChesney and Division of Policy and Directives Management:

I am hereby submitting the following technical comments on the Final Environmental Impact Statement (FEIS) issued on March 13, 2019 by the US Fish and Wildlife Service (USFWS), included herein on behalf of myself as an individual and also on behalf of the Coastal Coordination Program of The Ocean Foundation. We have previously duly submitted written comments via Regulations.gov and in writing by mail on the USFWS 2013 Revised Draft Environmental Impact Statement (DEIS) at FWS-R8-NWRS-2013-0036-0484. I was instrumental, in providing staff support to numerous local government agencies and by my work with a number of supportive NGOs and Members of Congress, in the 1981 designation of the original Farallon Islands National Marine Sanctuary, in formulating the management plan for the Farallon Islands National Marine Sanctuary as a member of the relevant working group of the Farallon Islands National Marine Sanctuary Advisory Council, and in ultimately securing the 2015 boundary expansion which led to the Greater Farallones National Marine Sanctuary. I also served on the stakeholder's negotiating group, as an alternate participating in all meetings, throughout the lengthy and detailed proceedings of the California Marine Life

Protection Act (MLPA), that ultimately led to the designation of the waters surrounding the Southeast Farallon Island (SEFI) as a State Marine Reserve (SMR) as of 2009. I continue to hold the Conservation Primary seat on the Greater Farallones National Marine Sanctuary Advisory Council (GFSAC), a panel I chaired for two terms until "termed out". I also served as Vice-Chair of this panel for one term.

These written comments also apply to the USFWS forwarding of a flawed consistency determination for consideration by the California Coastal Commission (CD-0002-19), submitted on or about April 5, 2019 absent any public notice being provided by USFWS at that time and prior to issuance of a Record of Decision (ROD) identifying the option selected by USFWS for the Project. The FEIS fails to comply with applicable federal laws, including but not limited to NEPA, ESA, and the MMPA, but also fails to comply with several relevant state laws of the State of California, including the California Environmental Quality Act, CEQA guidelines, and the California Coastal Act.

USFWS personnel who are tasked to serve on the Greater Farallones National Marine Sanctuary Advisory Council appear to have each avoided their customary attendance at this body's February 2019 and May 2019 meetings, thus predictably precluding the conveyance of timely information about the Project to stakeholders who have exhibited a strong interest in the Project in the past.

The Greater Farallones National Marine Sanctuary has jurisdiction over the waters surrounding the Southeast Farallon Island extending to the mean high tide line, and discharging or depositing any material or other matter is prohibited and thus is unlawful for any person to conduct or cause to be conducted within the Sanctuary. Further, discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality is also prohibited [15 CFR Part 922, subsection 922.82 (a)]. The National Marine Sanctuaries Act defines "injure" as to "change adversely, either in the short or long term, a chemical, biological or physical attribute of, or the viability of. This includes but is not limited to, to cause the loss of or destroy". "Sanctuary quality" is defined as "any of those ambient conditions, physical-chemical characteristics and natural processes, the maintenance of which is essential to the ecological health of the Sanctuary, including, but not limited to, water quality, sediment quality, and air quality" (15 CFR, subsection 922.3). These prohibitions in combination would apply to any activities beyond the Sanctuary, in which matter could be discharged and ultimately enter the Sanctuary and cause injury, even in the short term. Such activities could include staging, transport of equipment and rodent bait, and aerial dispersion of rodent bait over the terrestrial portions of the South Farallon Islands, that occur outside of Sanctuary boundaries.

The detailed comments that are included herein reflect the many inadequacies of the FEIS as a NEPA document, the flawed logic behind the project, and the failure of the preparers of the FEIS to respond to our (and other timely commenters') expressed legitimate questions as were previously raised on the DEIS, the USFWS' ignorance of CEQA, and the failure of the USFWS to incorporate a reasonable cost-benefit analysis that considers the economic and ecosystem risks, including the unacceptable level of predictable collateral damage, balanced fairly with any hypothetical possible benefits this Project may provide.

We base these observations on the following shortcomings which remain unaddressed in the FEIS:

1. The FEIS fails to disclose that certain favored non-profit and for-profit entities that have had and are having pre-existing non-competitive contracts for a range of purposes and that these same organizations will be doing much of the onsite and preparatory work associated with The Project, nor does the FEIS rationalize the fact that The Project does not include a "buy American" clause, hence overseas contractors will almost certainly secure most if not all of the contracts for the helicopter dispersal. Special-interest favored contractors and subcontractors that will likely be doing work on this Project must be disclosed in advance in the FEIS.
2. The FEIS is inadequate because, rather than being tailored from the outset to the proposed project at hand, your document appears to be replicated or copied in major sections from similar older documents previously prepared for unrelated island eradication projects elsewhere, while including no discussion of some of the notable failures or "lessons learned" in those previous projects and the ways in which the prior documents for those projects failed to accurately predict or propose mitigations for a range of unanticipated adverse project outcomes that ultimately occurred. USFWS should not repeat those mistakes on SEFI, nor rely on similarly flawed rationalizations in replicate documents, in an attempt to justify the agency's pre-ordained conclusions.
3. The FEIS document fails to address alternatives to the preferred option and to other options it proposes, including the use of contraceptive baits, which have advanced in both effectiveness and availability since the publication of the Revised DEIS.
4. The FEIS fails to provide any documentation of the anticipated success rate of both the planned hazing of non-target species, in hopes they can be forced to move out of and away from the poison application zones on SEFI, and of the proposed "translocation" of non-target species off of the SEFI during the protracted period of time that these two approaches would need to be flawlessly executed and maintained 24-7 in an attempt to avoid adverse impacts to Sanctuary and Refuge public trust resources. The FEIS also fails to identify failsafe collection and disposal options for carcasses of dead rodents to preclude ingestion by predator species or wind or water transport of dead rodents into the ocean. The FEIS does not address the implications of an unanticipated rain event on the proceedings.
5. The FEIS fails to acknowledge that the California State Legislature is currently in the process of moving to virtually preclude the use on California lands of the primary poison bait identified as the preferred option in the FEIS, Brodifacoum, due to secondary poisoning of non-target wildlife and toxic impacts throughout the food chain. The relevant legislation, AB 1788, has already passed the California State Assembly and was again advanced by the California State Senate Committee on Environmental Quality on June 19, 2019.
6. The FEIS is inadequate because it makes the specious claim that one of the primary rationalizations for pursuing the project is to create stronger resiliency in one certain wildlife population in the face of climate warming and climate-related changes to the ocean environment. But the FEIS fails completely in addressing the emerging scientific data indicating that a changing climate may affect the movement and levels of organochlorine pesticides and other chemicals in the environment, and might weaken the ability of animals and humans to tolerate such pollutants. The emerging chemical-climate connection is well-known to researchers and should not be hidden from the FEIS analysis, particularly since these kinds of factors contraindicate any claimed theoretical climate-related advantages of the

proposed project.

7. The FEIS is inadequate because it fails to acknowledge that both Brodifacoum and Diphacinone-50 have justifiably been the focus of serious public policy controversy and increased regulatory scrutiny, and the FEIS fails to provide notice that Brodifacoum has raised concerns at both the U.S. Environmental Protection Agency (EPA) and the California Department of Pesticide Regulation, due to the propensity for this compound to transport up the food chain and impact non-target species to an unacceptable degree.
8. The FEIS is inadequate because it is fundamentally biased toward justifying the approval of a poison-application project while failing to carry out a realistic comparative analysis of competing poisons, does not compare relative risks of one poison versus another, and virtually ignores the question of whether or not one poison may be more or less prone to causing unacceptable levels of collateral damage to non-target species.
9. The FEIS is inadequate because it fails to consider the ESA-listing of the Black abalone, and the fact that a Section 7 consultation still has not been conducted for the Black abalone relative to the proposed Project, and the fact that data critical to such consultation appears to have been misplaced by researchers.
10. The FEIS is inadequate in reflecting a casual and dismissive attitude throughout the document regarding the inevitable mortality of public trust living resources, such as numerous non-target species, including birds and marine life, in a manner which hardly presents a fairly-considered cost-benefit analysis. Throughout the FEIS the document instead attempts to rationalize the unnecessary killing of a lot of innocuous wildlife in the process of trying to eradicate one species – the mice – but the document provides no conclusive evidence that the Ashy Storm Petrel will benefit over the long term from inflicting all of this collateral damage throughout the overall ecosystem. Past efforts to secure listing of the Ashy Storm Petrel were denied by USFWS, which cited rising population numbers. The FEIS also fails to address the presence and pupping of pinnipeds, their timing of weaning, and dependence of pups to mothers, from activities related to attempted hazing and from Project elements including protracted helicopter overflights and poison dispersal activities. Flying an aircraft - fixed wing or unmanned aerial system (UAS) - below 1,000 feet within a NOAA Regulated Overflight Zone would need to be permitted as this is an activity that is prohibited by 15 CFR 922.82(a)(11). Such a NOAA Regulated Overflight Zone is in place surrounding the nearshore waters of SEFI, something the FEIS fails to consider.
11. The FEIS is inadequate because it fails to analyze economic impacts of the project to commercial and sport fishing activities, including reduced marketability of catch, because it ignores the high probability of adverse fiscal impact resulting from rumors about contaminated seafood (a similar consideration resulted in the delayed opening of Dungeness crab season in the wake of San Francisco's 2007 Cosco Busan oil spill), and because the FEIS does not provide any analysis of the economic costs associated with a "worst case" accident involving discharge of one or more aerial delivery bucket(s) of Brodifacoum into the marine environment during transit to the Islands. The FEIS must include the multiplier costs and indirect damage to the regional economy in the event that tainted fish products make it to consumers or are found in the marketing stream and an entire fishing season is lost as a result, whether it be for crab - since the project timeline calls for poison application to the Islands at the beginning of Dungeness crab season - or for other fisheries, or for party-boat activities. Fishing closures of hundreds of days resulted from a similar helicopter dispersal of

poison bait on Lord Howe Island in the Tasman Sea near Australia. In the summer of 2017, helicopters dropped 11.5 tons of rodenticide poison over the 279-acre island of Lehua, located off Kauai. This video was taken 4 days after one of the drops:

12. <https://youtu.be/1Q7YGcq5Lh8>
13. The FEIS remains inadequate because it fails to evaluate and provide suggested mitigations for the cumulative impacts of multiple applications of toxic materials during any one season, and/or during subsequent seasons, in the likely eventuality that future follow-up poison applications are necessary due to failure to eradicate the mice during the first effort. The FEIS also fails to consider the cumulative impacts of the aerial poison application in combination with bait stations and the other proposed ongoing biosecurity measures, including the potential for continued annual poison applications, that apparently would need to become a routine lasting USFWS wildlife management tool on the Islands.
14. The FEIS is inadequate because it fails to consider the economic impacts of seabirds ingesting the poison pellets, or ingesting poisoned mice on the Islands, and then slowly dying in a grotesque manner in public places in Bay Area communities or along the San Mateo, Sonoma, Marin, or San Francisco coastal beaches and parklands. The FEIS also fails to provide a mortality number for various species of non-target animal casualties that the USFWS would find "acceptable", and fails to note that such numbers will obviously vary species-by-species. The FEIS fails to note probable impacts to the California State Parks and to various County Parks in the event of non-target mortality and wildlife distress occurring in locations other than on the Farallones.
15. The FEIS fails to disclose the inherently inhumane method of killing embodied by both the Brodifacoum and Diphacinone-50 rodenticides. Brodifacoum, in particular, causes mice, and any bird or mammal that eats enough of them, to slowly bleed to death over the course of about twenty days, while any unconsumed Brodifacoum rodenticide remains toxic on the ground for up to 120 days, depending on the weather. The FEIS must address a comprehensive evaluation of the inherently inhumane aspect of the protracted suffering resulting from these broad-spectrum poisons and their multi-generational epigenetic effects on various species that will almost certainly come into contact with them.
16. The FEIS is inadequate because it fails to analyze what went wrong during the prior Island Conservation application of rodenticide on Alaska's Rat Island, in which permit conditions, according to an independent analysis of that project's causal relationship with non-target mortality of other species there, were said to have been grossly violated, see: <http://www.nature.com/news/2011/110407/full/news.2011.24.html> and: <http://www.seabirdrestoration.org/pdf/RatIslandReview.pdf>
The FEIS also fails to incorporate similar information about the Brodifacoum drops on New Zealand's Rangitoto and Motutapu Islands, see: <https://www.youtube.com/watch?v=8Skm8f2yvNg>
17. The FEIS fails to disclose and justify what the proponents of the project consider their assessment of an "acceptable" threshold of incidental mortality for all species to be potentially directly or indirectly affected by the poison, and further, the FEIS fails to consider the epigenetic effects of the poison in causing multigenerational mutagenic damage to species poisoned but not killed by the toxic materials used in the project.

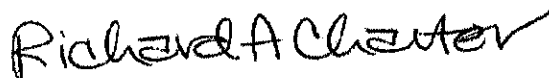
18. The FEIS is inadequate because it fails to provide adequate evidence that the underlying hypothesis for going forward with the project is trustworthy; i.e.; that killing the mice will in fact cause the burrowing owls to depart from the Islands, and that the burrowing owls hopefully will therefore cease predation on the Ashy Storm Petrels. This chain of assumptions, while fundamental to the project's FEIS, is not fully substantiated with examples for other locations, or through experience with other analogous species assemblages, anywhere in the FEIS.
19. The FEIS is inadequate in failing to provide a formula under which a Natural Resource Damage Assessment (NRDA) would ensure full compensation and reimbursement to the Gulf of the Farallones National Marine Sanctuary (GFNMS) for any and all damage to public trust living resources resulting from both the project's "normal" operations and from a worst-case release of poison and/or aviation fuel resulting from an aircraft accident or a mechanical failure of one of the laden bait application buckets. Such an analysis must be incorporated in the FEIS still fails to include the methodology for an appropriate NRDA valuation that would be utilized, since multiple values can be assigned to each individual specimen of various taxa under different valuation assumptions in any subsequent NRDA settlement.
20. The FEIS shall provide full legally-binding assurances that no waiver, implied or express, of the longstanding GFNMS "*Enter and Injure*" regulations shall be construed in the event that the proposed rodenticide activity eventually secures approval by the Department of Interior, nor should the granting of any related permit, if executed, be implied to represent any waiver of any fines that may be incurred under Sanctuary regulations, and any such permit approval by the Department of Interior or GFNMS shall in no instance be misinterpreted to establish any precedent for any future proposed activities affecting GFNMS Sanctuary or other Sanctuary resources elsewhere.
21. Prior to consideration or issuance of any permit or approval for any part of this project, the FEIS must disclose a robust and comprehensive Incident Response Plan that addresses all emergency response contingencies, including incident chain of command, the regional U.S. Coast Guard response capability for coping with and responding to three-dimensional maritime spills of toxic materials throughout the water column and includes an inventory of spill response equipment available for sea-states that may occur during the project timeframe in the event of a worst-case accident or a spill involving poisoned bait and/or fuel or other substances of concern.
22. The FEIS is inadequate since it fails to disclose the half-life or anticipated lethal dose level for bait on land and in water after application, or for bait in various weather conditions, nor does the FEIS disclose the time from first exposure until mortality of various species that are expected to consume bait directly, or for species that can be anticipated to consume bait-contaminated prey.
23. The FEIS fails to disclose that the World Health Organization (WHO) states that "Brodifacoum is toxic to aquatic wildlife." WHO further cautions "Avoid accidental contamination of water."
See page 12 at <http://www.who.int/whopes/quality/en/Brodifacoum.pdf>
24. Further, the FEIS is inadequate since it does not provide a fail-safe mechanism for full financial reimbursement of local and regional public agencies, fishing interests, the State of California, and the GFNMS for any and all damages incurred in the conduct of The Project.

The FEIS must provide an analysis of how the USFWS and any and all subcontractors to the agency would post a surety bond extending to the maximum credible cost of full damage recovery that could be anticipated in the event of a worst-case event during the project. Such surety bond shall provide indemnification for dollar amounts including but not limited to fisheries, pinnipeds, avian, terrestrial and marine wildlife, and invertebrates; for damages to water quality; for unintentional mortality or other harm caused by any operations associated with the proposed project, or by an accidental spill or release of any toxicant or fuel product into any part of the terrestrial or marine environment. Such surety bond shall be in an amount representing the fiscal equivalent of a total amount sufficient to fully reimburse and compensate the GFNMS and any other public agency or private party for any and all deliberate or unintentional mortality or damage, and/or accidental mortality or ecosystem damage, and such bond shall be of an amount based on the maximum potential per-individual valuation for each affected species, in addition to any and all cleanup costs of any kind, in addition to any post-event monitoring or rehabilitation of terrestrial or marine habitat deemed necessary by GFNMS for areas that may be affected by normal project operations or by accidental spillage of toxicant materials or aviation fuel within or outside of Sanctuary boundaries.

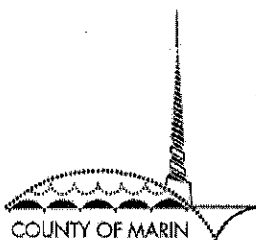
It remains incumbent on the USFWS to find a more targeted and environmentally benign single-species approach at the Farallones, one less dependent on persistent food-chain poisons that have a known record of killing animals that are not part of the problem. Stewardship of America's public trust living resources, particularly within our National Marine Sanctuaries and National Wildlife Refuges, deserves a more precautionary approach.

Thank you for your kind attention to these comments.

Sincerely,



Richard A. Charter
Coastal Coordination Program
The Ocean Foundation
Conservation Primary Seat, Greater Farallones National Marine Sanctuary Advisory Council
email: waterway@monitor.net



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June 26, 2019

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45 Fremont Street, Ste. 2000
San Francisco, 94105-2219
(by mail and via email to EORFC@coastal.ca.gov)

RE: CD-0002-19 (Agenda item: W14a)

Dear Commissioners,

The County of Marin has long been a central hub of the movement that led to the designation of the original Farallon Islands National Marine Sanctuary in 1981, in cooperation with our congressional representatives, our state legislators, our governor, and Marin's neighboring counties and cities. Our Board of Supervisors was one of the first local agencies to adopt formal resolutions of support for permanent marine sanctuary protection off our coastline.

We are writing at this time to request that the Coastal Commission deny a federal consistency finding to the US Fish and Wildlife Service's proposed aerial application of brodifacoum rodenticide in our Greater Farallones National Marine Sanctuary and amidst our coastal waters pursuant to CD-0002-19. The County of Marin has adopted an Integrated Pest Management Plan (IPM) which recognizes the hazards of secondary poisoning with the use of second generation (or single-dose anticoagulant) rodenticides of the type being proposed for CD-0002-19. Marin County successfully manages sites under our IPM Plan without the application of such materials on County of Marin lands.

Since EPA Region IX has duly cautioned USFWS that secondary human exposure from the Farallones "drop" could occur at mainland shoreline locations, which includes the Marin coastline (see attached EPA letter of April 15, 2019), we must emphasize that we have a direct interest in this matter.

Thank you for this opportunity to provide comments on CD-0002-19. Please deny a finding of federal consistency to this proposal.

Sincerely,

Kathrin Sears, President
Marin County Board of Supervisors

Attachment: EPA letter of April 15, 2019 in comment on the USFWS FEIS

cc: Honorable Senator Dianne Feinstein
Honorable Senator Kamala Harris
Honorable Congressman Jared Huffman



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

April 15, 2019

Gerry McChesney, Refuge Manager
Farallon National Wildlife Refuge
9500 Thornton Ave.
Newark, CA 94560

Subject: Final Environmental Impact Statement (FEIS) for the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California (EIS No. 20190027)

Dear Mr. McChesney:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The U.S. Fish and Wildlife Service (FWS) proposes to eradicate non-native house mice from the South Farallon Islands off the coast of San Francisco using aerially broadcast rodenticide in an effort to restore the ecosystem. As a cooperating agency for the project, EPA provided scoping comments to the FWS on June 10, 2011, and well as early input on the alternatives selection report and the Administrative Draft Environmental Impact Statement (February 16, 2012 and February 5, 2013 respectively). EPA reviewed the Revised Draft Environmental Impact Statement (RDEIS) and provided extensive comments to the FWS on December 9, 2013. In that letter, we commented on the necessity for thorough planning and analysis of impact assessment, mitigation, and monitoring due to the complexity of the project. We also provided comments regarding the potential population level impacts to gulls and the effectiveness of the proposed gull hazing operation. In addition, we recommended an independent third-party post-project review to maximize lessons learned from this eradication effort.

EPA supports the concept of a well-planned restoration. We acknowledge that the FWS, the government agency with trust responsibility for managing wildlife within a national wildlife refuge, is responsible for determining the acceptability of nontarget mortalities versus benefits to vulnerable species. We note that the project can proceed utilizing existing registered rodenticides; however, should the project require application rates or other application parameters that are not allowed by existing product labels, FWS will have to work with the registrant of the product selected for use to submit an application to EPA's Office of Pesticide Programs for revised labeling.

EPA continues to highlight the considerable complexity of this project over other recent island rodent eradications, due to mice being harder to eradicate than rats, and the indirect effect the mice have on the bird species targeted for the restoration - the ash and Leach's storm-petrels - by attracting burrowing owls that prey on them after mouse levels seasonally decline. Even in cases of direct impact by rodents,

predicting treatment effects has proven difficult and has sometimes resulted in more non-target mortality than expected. Changes to the FEIS indicate that the petrels are no longer the primary target for the restoration, but instead the goal is to eradicate mice to eliminate their impacts on the native ecosystem. The FEIS acknowledges the "imprecise knowledge of impacts of mice to resources" (p. 141) but states that there has been sufficient planning and consideration and that the project's predicted effects are not overly optimistic as EPA had suggested (Appendix P, p. 68).

Following our review of the RDEIS, our main recommendations regarded the need for adequate planning to avoid the problems experienced in past failed rodent eradications, including contingency planning as a part of the adaptive management plan. We recommended disclosing specific mitigation and Best Management Practices (BMPs) that would be applied in the FEIS. The FEIS indicates that contingency plans are being developed, adaptive management and mitigation plans would be prepared should the project proceed, and the specific BMPs that would be applied will be identified in the Record of Decision. Other information, such as application of bait and carcass removal, would be contained in the Operational Plan that would be developed, and a detailed plan for monitoring of operational, mitigation, and ecosystem restoration objectives will be part of the Operational Plan, according to the FEIS. Much information is deferred to these plans. While the FEIS states that "The Service has committed to allow the operational team the opportunity to fully review the operational plan, ask questions, and suggest revisions prior to initiation", we note that Recommendation #4 by the Ornithological Council, cited in the FEIS, recommends that project-related documents, including operational plans, be made available to the public (p. 22).

Recommendation: Since the Operational Plan will not be made public, we recommend that it be offered to other knowledgeable third-party experts, in addition to the operational team, for review prior to implementation.

The predicted success of the gull hazing plan remains at 90% (p. 161), the level necessary to avoid population-level effects to the Western Gull, the largest known colony of which exists in the South Farallon Islands (p. 157). In our comments on the DEIS, we questioned whether the predicted staff level of 10-12 people would be sufficient for gull hazing, given the hazing trial's much smaller area and time period and the habituation that was observed. According Appendix P, p. 38 (response to comments), FWS confirmed that 10 personnel would be sufficient to handle all of the hazing duties for the duration of the project, and if additional hazing personnel are needed, the Service would be prepared to add hazing staff and haze for as much time as is necessary to minimize the numbers of gulls consuming rodenticide bait.

Recommendation: EPA recommends the FWS ensure sufficient funding is secured for additional hazing staff, as needed, prior to project implementation, and that this commitment be identified in the Record of Decision.

EPA's comments on the RDEIS addressed carcass removal, which is a pesticide label requirement, and we requested that the FEIS include a commitment for monitoring of mainland beaches for gull carcasses and that public notification be extended to all segments of the public (in addition to boaters). We appreciate that FWS acknowledges that sickened or dead birds could show up on mainland beaches or other areas (Appendix P, p. 29), and that monitoring would occur via volunteers of the Sanctuary's Beach Watch program. The FEIS states that public notices would be posted about the eradication project but doesn't indicate where this will occur. Posting on websites is not sufficient to reach all potentially affected people.

Recommendations: EPA recommends the public notification include communications to media outlets as well as other organizations that utilize the beaches, such as the Surfrider Foundation, the Golden Gate National Parks Conservancy beach stewards, and dog recreational organizations such as SFDOG.

EPA's RDEIS comments recommended that the impact assessment include an analysis of risks in case the eradication is not successful, since house mouse eradications historically have had relatively high failure rates compared to rats¹ and the possibility exists that, should the effort fail, resources may have to withstand impacts from rodenticide along with the continued impacts from mice. The FEIS states that assessments of potential impacts assuming eradication failure is beyond the scope of the EIS, and that if the project proceeds, the FWS assumes that the eradication will be successful (Appendix P, p. 66).

Recommendations: We strongly suggest that FWS arrange for an independent third-party review of the project to maximize lessons learned. This occurred for projects that failed, such as Rat Island and Wake Island, but also for successful projects including Palmyra atoll. We request that FWS commit to and ensure funding for this independent post-project review in the Record of Decision.

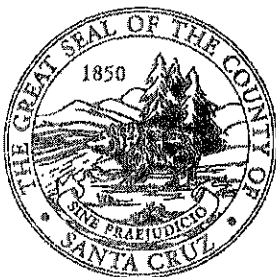
EPA appreciates the opportunity to review the FEIS. We appreciate that FWS may consider collaborating with interested wildlife rehabilitation organizations, as we suggested, to care for wildlife impacted as a result of the Farallon mouse eradication project, if funds are available (Appendix P, p. 67). If you have any questions, please contact me at 415-947-4161, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,



Connell Dunning, Acting Manager
Environmental Review Section

¹ According to the FEIS, Table 2.2, just under 69% of mouse eradication attempts using Brodifacoum were successful



County of Santa Cruz

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June 25, 2019

California Coastal Commission
ATTN: Mr. Larry Simone c/o All Commissioners
Energy Ocean Resources and Federal Consistency Division
45 Fremont Street, Suite 2000
San Francisco, 94105-2219
(by mail and via email to EORFC@coastal.ca.gov)

RE: CD-0002-19 (Agenda item: W14a) Please Deny Consistency

Dear Commissioners:

The County of Santa Cruz, during the 1970's, pushed for the designation of the Farallon Islands National Marine Sanctuary, and our work reached fruition in 1981 with its designation.

I therefore hereby request that the Coastal Commission deny a federal consistency finding to the US Fish and Wildlife Service's proposed aerial application of a controversial second-generation brodifacoum rodenticide in our Greater Farallones National Marine Sanctuary and amidst our coastal waters pursuant to CD-0002-19.

We are in receipt of an EPA Region IX letter cautioning the US Fish and Wildlife Service that secondary human exposure from the proposed Farallones brodifacoum rat poison helicopter dispersal could occur at mainland shoreline locations. Given the prevailing seasonal current patterns, this anticipated human exposure impact zone includes the Santa Cruz County coastline (see attached EPA letter of April 15, 2019).

Since Santa Cruz County relies on our clean coast economy and is concerned about the dangerous precedent of the erosion of protection of our Sanctuary waters from

Page 2
June 25, 2019

introduced pollutants of any kind, I must request that the Commission deny a finding of federal consistency to this proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Ryan Coonerty', written over a horizontal line.

RYAN COONERTY, Supervisor
Third District

RC:jfr

Enclosure: EPA letter of April 15, 2019 in comment on the USFWS FEIS

CC: Dan Haifley
The Ocean Foundation- Save our National Marine Sanctuaries



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

April 15, 2019

Gerry McChesney, Refuge Manager
Farallon National Wildlife Refuge
9500 Thornton Ave.
Newark, CA 94560

Subject: Final Environmental Impact Statement (FEIS) for the South Farallon Islands Invasive House Mouse Eradication Project, Farallon National Wildlife Refuge, California (EIS No. 20190027)

Dear Mr. McChesney:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

The U.S. Fish and Wildlife Service (FWS) proposes to eradicate non-native house mice from the South Farallon Islands off the coast of San Francisco using aerially broadcast rodenticide in an effort to restore the ecosystem. As a cooperating agency for the project, EPA provided scoping comments to the FWS on June 10, 2011, and well as early input on the alternatives selection report and the Administrative Draft Environmental Impact Statement (February 16, 2012 and February 5, 2013 respectively). EPA reviewed the Revised Draft Environmental Impact Statement (RDEIS) and provided extensive comments to the FWS on December 9, 2013. In that letter, we commented on the necessity for thorough planning and analysis of impact assessment, mitigation, and monitoring due to the complexity of the project. We also provided comments regarding the potential population level impacts to gulls and the effectiveness of the proposed gull hazing operation. In addition, we recommended an independent third-party post-project review to maximize lessons learned from this eradication effort.

EPA supports the concept of a well-planned restoration. We acknowledge that the FWS, the government agency with trust responsibility for managing wildlife within a national wildlife refuge, is responsible for determining the acceptability of nontarget mortalities versus benefits to vulnerable species. We note that the project can proceed utilizing existing registered rodenticides; however, should the project require application rates or other application parameters that are not allowed by existing product labels, FWS will have to work with the registrant of the product selected for use to submit an application to EPA's Office of Pesticide Programs for revised labeling. .

EPA continues to highlight the considerable complexity of this project over other recent island rodent eradications, due to mice being harder to eradicate than rats, and the indirect effect the mice have on the bird species targeted for the restoration - the ash and Leach's storm-petrels - by attracting burrowing owls that prey on them after mouse levels seasonally decline. Even in cases of direct impact by rodents,

predicting treatment effects has proven difficult and has sometimes resulted in more non-target mortality than expected. Changes to the FEIS indicate that the petrels are no longer the primary target for the restoration, but instead the goal is to eradicate mice to eliminate their impacts on the native ecosystem. The FEIS acknowledges the "imprecise knowledge of impacts of mice to resources" (p. 141) but states that there has been sufficient planning and consideration and that the project's predicted effects are not overly optimistic as EPA had suggested (Appendix P, p. 68).

Following our review of the RDEIS, our main recommendations regarded the need for adequate planning to avoid the problems experienced in past failed rodent eradications, including contingency planning as a part of the adaptive management plan. We recommended disclosing specific mitigation and Best Management Practices (BMPs) that would be applied in the FEIS. The FEIS indicates that contingency plans are being developed, adaptive management and mitigation plans would be prepared should the project proceed, and the specific BMPs that would be applied will be identified in the Record of Decision. Other information, such as application of bait and carcass removal, would be contained in the Operational Plan that would be developed, and a detailed plan for monitoring of operational, mitigation, and ecosystem restoration objectives will be part of the Operational Plan, according to the FEIS. Much information is deferred to these plans. While the FEIS states that "The Service has committed to allow the operational team the opportunity to fully review the operational plan, ask questions, and suggest revisions prior to initiation", we note that Recommendation #4 by the Ornithological Council, cited in the FEIS, recommends that project-related documents, including operational plans, be made available to the public (p. 22).

Recommendation: Since the Operational Plan will not be made public, we recommend that it be offered to other knowledgeable third-party experts, in addition to the operational team, for review prior to implementation.

The predicted success of the gull hazing plan remains at 90% (p. 161), the level necessary to avoid population-level effects to the Western Gull, the largest known colony of which exists in the South Farallon Islands (p. 157). In our comments on the DEIS, we questioned whether the predicted staff level of 10-12 people would be sufficient for gull hazing, given the hazing trial's much smaller area and time period and the habituation that was observed. According Appendix P, p. 38 (response to comments), FWS confirmed that 10 personnel would be sufficient to handle all of the hazing duties for the duration of the project, and if additional hazing personnel are needed, the Service would be prepared to add hazing staff and haze for as much time as is necessary to minimize the numbers of gulls consuming rodenticide bait.

Recommendation: EPA recommends the FWS ensure sufficient funding is secured for additional hazing staff, as needed, prior to project implementation, and that this commitment be identified in the Record of Decision.

EPA's comments on the RDEIS addressed carcass removal, which is a pesticide label requirement, and we requested that the FEIS include a commitment for monitoring of mainland beaches for gull carcasses and that public notification be extended to all segments of the public (in addition to boaters). We appreciate that FWS acknowledges that sickened or dead birds could show up on mainland beaches or other areas (Appendix P, p. 29), and that monitoring would occur via volunteers of the Sanctuary's Beach Watch program. The FEIS states that public notices would be posted about the eradication project but doesn't indicate where this will occur. Posting on websites is not sufficient to reach all potentially affected people.

Recommendations: EPA recommends the public notification include communications to media outlets as well as other organizations that utilize the beaches, such as the Surfrider Foundation, the Golden Gate National Parks Conservancy beach stewards, and dog recreational organizations such as SFDOG.

EPA's RDEIS comments recommended that the impact assessment include an analysis of risks in case the eradication is not successful, since house mouse eradications historically have had relatively high failure rates compared to rats¹ and the possibility exists that, should the effort fail, resources may have to withstand impacts from rodenticide along with the continued impacts from mice. The FEIS states that assessments of potential impacts assuming eradication failure is beyond the scope of the EIS, and that if the project proceeds, the FWS assumes that the eradication will be successful (Appendix P, p. 66).

Recommendations: We strongly suggest that FWS arrange for an independent third-party review of the project to maximize lessons learned. This occurred for projects that failed, such as Rat Island and Wake Island, but also for successful projects including Palmyra atoll. We request that FWS commit to and ensure funding for this independent post-project review in the Record of Decision.

EPA appreciates the opportunity to review the FEIS. We appreciate that FWS may consider collaborating with interested wildlife rehabilitation organizations, as we suggested, to care for wildlife impacted as a result of the Farallon mouse eradication project, if funds are available (Appendix P, p. 67). If you have any questions, please contact me at 415-947-4161, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano,karen@epa.gov.

Sincerely,



Connell Dunning, Acting Manager
Environmental Review Section

¹ According to the FEIS, Table 2.2, just under 69% of mouse eradication attempts using Brodifacoum were successful