**Marin Audubon Farallon Restoration Project Presentation Notes, July 16, 2020**

**Slide 1**

* Thank you all for joining us and thank you to Marin Audubon Society for hosting this program.
* I’ll be providing details of a plan that to many of you, I’m sure sounds crazy and impossible.
* But it’s a plan that science and history tells us is necessary for the health of the islands and that can be done successfully.

**Slide 2 (my background)**

* As Anna mentioned in her introduction, I started my career as a research intern on the Farallones back in 1986.
* I immediately fell in love with the islands and realized I wanted to dedicate my career to the conservation of places like the Farallones and the species that live there.
* That’s what I’ve been doing for the last 35 years.
* Protecting and restoring the Farallones is something I care deeply about.

**Slide 3 Islands Represent**

* We are in an age of mass extinctions.
* Despite small % of earth’s land mass, majority of those extinctions and of today’s endangered vertebrates are on islands.
* Main cause of this situation is invasive species including rats and mice.
* Most islands evolved without mammalian predators. Introductions have been devastating.

**Slide 4 (mouse video)**

* At peak abundance, house mouse densities on the islands are the highest recorded on any island in the world, up to 500 mice per acre.
* This is what it looks like.
* Mice are everywhere. It actually looks like the ground is moving with mice.
* In the houses, you can’t keep them out. They chew through everything.
* And they eat just about everything, too, including each other.

**Slide 5 (Ecosystem Damage from mice)**

* Like Pete Warzybok spoke about in detail, the impacts of all these mice has led to an ecosystem that is severely out of balance.
* Our goal as Refuge managers is to eliminate those impacts and restore the ecosystem.

**Slide 6 Environmental Planning Process**

* Environmental planning has spanned many years, beginning in 2004.
* Process involved experts, other agencies, and the public.
* Extensive research including research trials.
* Planning and permitting still ongoing.

**Slide 7 Alternative Selection**

* The research and planning of this project was probably the most rigorous and comprehensive to date for a project of this type.
* In determining the best method to use to achieve success, we wanted to make sure we left no stone unturned.
* We thoroughly considered and vetted all potential options, which came to be 49 in all.
* Using this rigorous approach, we used a standardized method to evaluate and compare all potential options based on multiple criteria.

These included:

* Environmental Concerns;
* Efficacy at eradicating mice;
* Logistical concerns;
* Human safety concerns;
* Regulatory considerations;
* Mitigation Considerations: As far as protecting other resources.
* This led to our final alternatives that were analyzed in detail in our Environmental Impact Statement.

**Slide 8 (Preferred Alternative – Brodifacoum 25-D Conservation)**

* After extensive research and analyses, we selected the rodenticide Brodifacoum-25D as our preferred alternative.
* This is a rodenticide specially approved by EPA mainly for rodent eradications on islands.
* Only proven effective method for eradicating the mice.
* As many have pointed out, we recognize that using a rodenticide comes with certain risks of environmental side effects.
* But measures employed into the plan address ways of minimizing that risk.

**Slide 9 Worldwide rodent eradication**

* In developing our plan, we have the benefit of lessons learned from the many other rodent eradications projects that have already been done.
* >700 successful rodent eradications have been worldwide, including 57 successful mouse eradications.
* All have used a rodenticide, with most using the rodenticide proposed for the Farallon project.

**Slide 10 Success Stories**

* Here’s a list of just a few of the hundreds of islands where successful rodent eradications have occurred.
* Many of you are probably familiar with Anacapa Island in Channel Islands National Park off southern California A successful rat eradication was conducted there in 2000-2001. The ecosystem there is now recovering from the impacts of the rats.

**Slide 11 Operational Details**

* Would be conducted by highly trained professionals using the techniques developed from past successful projects.
* Operation would be done in about 5 weeks. Not like an ongoing control effort lasting months or years.
* Total amount of rodenticide is actually very small, about 1.6 oz over the entire 121 acres of the Refuge.
* This means that there will be little rodenticide left in the environment when the project is over.

**Slide 12 Protective Measures**

* As I mentioned before, we recognize that using rodenticides comes with inherent risks and we take that very seriously.
* Our goal is to take every precautionary measure possible to make that mice are eradicated without impacting other resources.
* Many protective measures have been incorporated into the plan, including…

**Slide 13 Monitoring**

There will also be extensive monitoring, which will have several components**:**

* Track the success of the eradication operation;
* Pinpoint parts of the operation that are not going to plan and make adjustments;
* Examine possible effects on the environment; and
* Track the ecosystem-level changes that occur after the eradication. Many of those studies have already been started**.**

**Slide 14 Timeline**

* Bringing us back to where we are now. You could say we’re in the latter stages of the planning phase.
* Our step is going before the California Coastal Commission for a Consistency Determination.
* This would be followed by a process of obtaining the many other environmental permits and consultations that will be needed and finalizing our implementation plan before being ready to implement, which we project would occur at the earlies in 2022.

**Slide 15 Restore & Safeguard**

* As Roger and Pete described in the previous talks, the Farallon ecosystem is out of balance because of mice.
* The only way we know of to fix it is a one-time application of the rodenticide Brodifacoum.
* If we don’t act now, the Farallon ecosystem will continue to suffer.
* Species like the Ashy Storm-Petrel will continue to decline.
* History has shown that we don’t want to wait until species are on the brink of extinction to act.
* Our goal should actually be to keep species off the endangered species.
* And that is what this plan is really about.