

## **Mouse eradication from South Farallon Islands**

**Wed. May 7, 2008, 11 AM, GFNMS offices, San Francisco, CA**

### **Present:**

Maria Brown, NOAA (GFNMS)

Karen Reyna, NOAA (GFNMS)

Jan Roletto, NOAA (GFNMS)

Gerry McChesney, USFWS (SFBNWRC)

Winnie Chan, USFWS (SFBNWRC)

Jacob Sheppard, IC

By phone: Zach Coffman, USFWS (FNWR)

### **Meeting scope/purpose:**

- To get GFNMS up-to-speed on the history, current status, and upcoming timeline for mouse eradication compliance
- To get GFNMS input on:
  - the proposed project (purpose/need)
  - the alternatives considered
  - the impacts analysis
  - GFNMS compliance requirements
  - GFNMS' desired level of involvement moving forward

### **Need for project**

- Mice contribute to ashy storm-petrel predation by BUOW, ~>60 adults taken yearly
- Mice *may* be preying occasionally or regularly on ASSP as well as other seabirds (feathers & eggshells in dietary analyses, evidence from other islands)
- Mice are likely causing disturbance to breeding seabirds esp. burrow/crevice nesters (based on evidence from other islands)
- Mice have potentially severe impacts on invertebrate community (based on evidence from other islands)
- Mice may have impacts on salamanders (direct, through predation; indirect, through impacts on invertebrate prey resources)

### **Short history of the process thus far**

- Initial scoping incl. public involvement
  - Spring 2006 scoping
  - Comments were overwhelmingly positive incl. from NGOs (Audubon CA & local chapters, Friends of the Farallones)
  - Agencies involved included NOAA, USCG, CDFG, BLM (CA Coastal NM), NPS (GGNRA), Cal-EPA
- EA development
  - Funding from NFWF
  - Delays in Luckenbach funding approval, super-busy staff @ both FWS & IC caused EA to move forward slowly

- Luckenbach funds recently approved by NPFC (source of Luckenbach funds), IC & FWS moving forward now to finish compliance
- Funding environment
  - NPFC funds approval is not yet final
  - Other funds sources may be available if Luckenbach doesn't pan out

### Summary of alternatives

- Alternative A: Aerial broadcast (Proposed Action)
  - Time window: after fall bird migrations, before elephant seal pupping (males would likely be present but no females yet) – mid-Nov. through mid-Dec.
  - Small single up-rotor/single back-rotor machine (Bell 206, NOT larger CG-style helos)
  - Flying @ ~50 knots
  - ~150 ft. above ground
  - Bait swath width: ~200 ft.
  - Up to two passes over all land areas
  - Directional deflector used on coastline
- Alternative B: Bait stations (w/ aerial for inaccessible areas) (less helicopter disturbance, more risk of seabird disturbance)
  - Bait stations reduce non-target exposure, reduce helicopter disturbance, but do not eliminate either
  - Russ estimates 75% of island is theoretically accessible by foot (disturbance potential notwithstanding) – GM's estimate may be less than this
  - Mice have small home ranges, so bait stations would need to closely-spaced: likely every 10 m – ~3,600 stations
  - Station grid would require traces, boardwalks (to protect burrows), ladders/anchors/fixed lines for steep sections
  - Stations installed & loaded first (before seabird season), checked daily, then every few days, then less frequently
  - Inaccessible areas treated by hand when possible, but primarily by helicopter – same protocols as above
- Bait info
  - Brodifacoum: Anticoagulant, most commonly used compound for island rodent eradications
  - Grain-based pellets (sterile/crushed), moisture resistant but designed to break down w/in winter season
  - Active ingredient @ 25 ppm (very low concentration)
  - Same bait would be used for both alternatives
  - Aerial application rate TBD – label maximum is 18 kg/ha which translates to ~1 pellet every 1.33 sq. m.

### Summary of impacts to biological resources

- Aerial (Proposed Action)

- Hauled out pinnipeds would be flushed by helo ops – will be applying for IHA
- Roosting pelicans would be flushed by helo ops – FWS will undergo Sec. 7 consultation
- Mortality likely in wintering gulls – flock size unclear, but based on experience from Anacapa, no population level impacts
- Individual mortalities likely in granivorous passerines
- Mortalities possible but unlikely in predatory birds (PEFA)
- No toxin impacts to pinnipeds
- No toxin impacts to seabirds other than gulls
- No toxin impacts to intertidal resources
  - Bait drift would be minimal (on Anacapa, measured @ 1 pellet every 7.14 m)
  - Most fish would be unlikely to consume pellets
  - Pellets would dissolve very quickly with no measurable residue
- Bait stations (w/ aerial for inaccessible areas)
  - Bait station grid would impact seabird breeding habitat for up to two years
  - Limited amounts of bait would be available for up to 2 years
  - Aerial broadcast would flush pinnipeds according to a similar profile to aerial-only (because most inaccessible areas are coastal anyway)
  - Mortality likely in wintering gulls (exposure to mice, limited aerial broadcast, crumbled bait pellets) – lower mortality rate than Alternative A
  - Mortality w/ granivorous passerines unlikely (bait stations would be used in most passerine habitat on the island)
  - Bait would still enter intertidal at low rates but over limited areas (less than Alternative A)

### **Summary of impacts to other resources (recreation, fisheries)**

- Aerial (Proposed Action)
  - Area immediately surrounding island would be closed for access for three weeks during mid-Nov. to mid-Dec.
  - No other impacts (to recreation or fisheries)
- Bait stations
  - Visual alteration of Farallones due to bait stations, for up to two years
  - Area immediately surrounding island would be closed for access for less than three weeks during mid-Nov. to mid-Dec.
  - No other impacts

### **Specific issues raised**

- Bait station grid: General consensus that this alternative would likely cause unacceptable effects to sensitive wildlife (seabirds & pinnipeds) due to installation of infrastructure, long duration of bait station refilling
  - JS: This alternative, while likely not acceptable in terms of environmental impacts, addresses two major issues – 1) minimizing helo disturbance, and 2) minimizing non-target exposure to bait. This is the rationale for its

inclusion (primarily to show diligence in addressing all of the relevant environmental issues)

- Treatment of pinniped haulout areas
  - Concern that helicopter flyover in a few specific areas would cause too much disturbance
  - Could these specific areas be hand-treated? Animals could be flushed “slowly”
  - Could these areas be treated with bait stations? General consensus (JR & GM) is that bait station installation & maintenance on West End would be unacceptable from a resource management perspective (too many disturbance events, too much infrastructure in a wilderness area)
- Toxin effects to suckling pups (SSL, fur seals) that might suck on pellets?
  - Would need to eat a large amount of pellets scattered over a large area to reach a toxic threshold
- Pellet exposure in intertidal fish
  - EA will need to examine intertidal fish populations
  - Can GFNMS provide me with a list of intertidal fish species expected?
  - IC will work w/ GFNMS & FWS to incorporate fish response to bait pellets (will any of them eat them?) during fall/winter bait trials (possibly in spring as well, for subtidal fish – to avoid inadvertent shark food preference trials...)
- JR requests funding for intertidal monitoring, before/after comparisons
  - No resolution – IC, FWS will discuss options

#### **Clarification of permits needed from GFNMS**

- “Manager’s permit” needed
- Take permits may be needed (depending on pending rule changes)
- JS will work w/ KR to ensure EA has adequate information on effects to all marine resources

#### **Coordination of document review from GFNMS**

- JS, FWS will also be meeting w/ NMFS in Long Beach in early June
- GFNMS to provide “early comments” on EA to head off potential issues: by the end of May?
- Document will be ready for a “rolling administrative review” within month of June (depending on duration of FWS internal review)

#### **Future coordination w/ GFNMS**

- GFNMS will utilize their public outreach capacity once EA is ready for public review

#### **Follow-up**

- IC, FWS, and GFNMS will follow up when document goes out for “administrative review” – will assess need for further meetings then