

Finding of No Significant Impact
Management of non-native Argentine Ants on Santa Cruz Island
Channel Islands National Park
April 2015

This Finding of No Significant Impact (FONSI) augments the Environmental Assessment for Management of non-native Argentine Ants, Santa Cruz Island (EA) dated January 2015. This FONSI, together with the EA (and an "Errata" prepared as an attachment to the Environmental Assessment to correct minor errors), constitutes a complete record of the conservation planning and environmental impact analysis for this project. Additionally, as required by 2006 NPS Management Policies, a determination of no impairment has been prepared (see attachment).

Purpose & Need for Federal Action

The purpose of this project is to further the protection and restoration of the naturally functioning ecosystem of Santa Cruz Island. These actions are needed because the Argentine ants have spread significantly since their accidental introduction to Santa Cruz Island, thought to have occurred in the 1960s. Since their initial discovery in two locations in 1996, the ants have established in two additional locations and increased the size of each colony. Argentine ants are known to occur on approximately 1,200 acres in four areas of the island. The NPS is concerned that Argentine ants will continue to spread unless there is management action to control or eliminate the infestations.

Range of Alternatives Considered

- Alternative A: No Action
- Alternative B: Eliminate Argentine Ants from all Locations (NPS Proposed Action)

Selected Action

The NPS will implement as its selected action Alternative B as identified and analyzed in the EA, which was also the proposed action and the environmentally preferred alternative.

Under the selected action, the NPS and partner The Nature Conservancy (TNC) will utilize thiamethoxam in a liquid or gel bait to eliminate Argentine ants from the treatment area.

Prior to treatment, a new delimitation of the outer edges of the Argentine ant infested areas would be conducted. Once the delimitation boundary is mapped, the area would be buffered by 50 m to account for the possibility of cryptic ant nests outside the detectable boundary. The resulting area would be considered the treatment area. Monitoring points would be located at points within that treatment area. A commercially available thiamethoxam product, diluted to 0.0006% and 0.0018% thiamethoxam with 1) 25% sucrose solution, and 2) chicken eggs mixed with 25% sugar, and deployed at a maximum rate of 16 gallons per acre. The

25% sucrose and thiamethoxam solution would be deployed in hygroscopic polyacrylamide beads.

The baits may be deployed approximately every 2-4 weeks in May- November for a maximum of 12 treatments per year. Bait may be deployed in the treatment area using a hopper and helicopter and deployed by hand in sensitive areas. GPS navigation technology in the application helicopter would be used ensure the bait is deployed evenly within the treatment area and not outside the treatment area. The hopper is calibrated and controlled by the pilot so the maximum bait application rate is not exceeded.

It is expected that the intensive treatment of the remaining known infestation of Argentine ants (approximately 1600 acres) would take place in one year. Monitoring of the treated infestation sites may occur for up to ten years after treatment begins. If remnant Argentine ant nests are found in the treatment area then field technicians would hand-deploy bait at that site up to four times to ensure that the remnant ant nest is eliminated.

As requested by the Department of Defense (DOD), which leases a facility and houses staff on Santa Cruz Island, NPS and TNC will communicate with DOD on-island staff in advance of aerial application of bait in the area of their facility or travel corridors in order to avoid conflict between on-island operations. NPS will provide project Material Safety Sheets and other applicable safety information to DOD staff prior to project implementation.

Human safety is the number one priority for all activities performed by NPS and TNC. Project managers would be responsible for assuring the appropriate training and materials are made available and the on-island crew leader would be responsible for ensuring personnel abide by all Best Management Practices, safety protocols and County, State, and Federal rules and regulations. All personnel working with pesticides would wear the specific personal protective equipment (PPE) identified on the pesticide label. The appropriate PPE would be worn at all times during handling, mixing, and applying. PPE would include: long shirts, pants, Nitrile gloves, safety glasses, boots and socks.

Measures to Minimize Environmental Harm

Best Management Practices when using pesticides: • All pesticides under consideration would be handled and stored in a manner to minimize any risk of accidental exposure. Only Caution labeled pesticides and adjuvants, the least toxic chemicals, would be used on this project. • Pesticides and pesticide containers would be lawfully stored, handled, and disposed of in accordance with the label and in a manner safeguarding human health, fish, and wildlife, and prevent soil and water contamination. • Any pesticide spills would be addressed immediately. • Equipment and supplies used in the field would be inspected for target pests and decontaminated if necessary. • All pesticides would be applied by or under the supervision of person(s) holding a California Pesticide Applicators License. • Pesticides would be mixed and loaded no less than 100 feet from any above ground water sources.

Applying pesticides • Pesticide would be applied no sooner than 48 hours pre- or post-precipitation to reduce the risk of pesticide run-off. Typically, the May to November period has little or no precipitation on Santa Cruz Island. • Applicators would adorn personal protective equipment when mixing, loading, and applying pesticides. • Insecticides would be

deployed by helicopter in all but sensitive areas such as in riparian zones. • Insecticides would be deployed by hand around sensitive areas and in target areas. • Argentine ant bait stations and hand deployment of bait may be used in some sensitive areas.

Helicopter Best Management Practices • Fuel will be stored in approved jet aircraft fuel totes equipped with high-grade electric fuel pumps. • Staging and fueling areas will have a minimum of 50-foot vegetation clearance surrounding the landing zone. • Helicopters will not hover more than two minutes at any one location except at staging areas. • NPS will not contract for helicopter services for this project and will work directly with TNC to ensure that Best Management Practices are followed • All FAA rules and regulations will be strictly followed.

Environmentally Preferred Alternative

The environmentally preferred alternative is the action that best promotes the environmental policies outlined in the National Environmental Policy Act. These policies include fulfilling the responsibilities of each generation as trustee of the environment for succeeding generations; attaining the widest range of beneficial uses of the environment without degradation or risk to health or safety; and preserving important historic, cultural, and natural aspects of our national heritage. The NPS determined that the selected action (described in the EA as Alternative B: Eliminate Argentine Ants from all Locations) is the environmentally preferred alternative because of the long-term environmental benefits from removing Argentine ants from Santa Cruz Island.

Preliminary Options Considered but Dismissed

Sprays or pesticides to directly kill foraging ants - Many products are available for the purpose of killing or repelling ants. These products serve primarily to limit the nuisance effect of Argentine ants in buildings or orchards. Because a very small proportion of an Argentine ant colony is foraging at any one time, contact insecticides do not control the infestation and have short-term effects. Therefore, direct killing of Argentine ants would not achieve the goal of decreasing the extent of the infestation.

Biological Control - In South America, where Argentine ants originated, they are not considered a pest and they have natural predators, parasites and competitors, however, there are no biological control agents for Argentine ants that are approved for importation to the United States. Because of the potential for a biological control agent to reproduce, spread, and negatively affect non-target species, there is a considerable amount of research that is required to develop this potential.

Manual distribution of toxicants on the ground - Distributing bait manually on the ground was tested in the initial field trials, but was deemed to be overly time-consuming, even for the accessible and relatively small areas that were treated in the field trials. The method cannot be scaled up to the size, or the rugged terrain, of the largest infestation area which is the primary focus of future treatments.

WHY THE SELECTED ALTERNATIVE WILL NOT HAVE A SIGNIFICANT EFFECT

Using the ten significance criteria defined in the Council on Environmental Quality's NEPA regulations (Section 1508.27), the NPS has determined that the Selected Alternative will have

no significant adverse effect on the human environment. The Selected Alternative can be implemented with no significant adverse impacts on floodplains, channel migration zones, water quality, soils or surficial landforms, vegetation, wetlands, wildlife, visitor use and experience, public health and safety, socioeconomics, or park management and operations. The following criteria were used to determine the significance of each impact:

- 1. Impacts that may have both beneficial and adverse aspects and which on balance may be beneficial, but that may still have significant adverse impacts that require analysis in an environmental impact statement (EIS).**

No major adverse impacts were identified for the Selected Alternative that would require analysis in an EIS. The majority of impact topics will have long-term beneficial effects. Adverse impacts to invertebrates, terrestrial mammals, federally listed species, water quality, water quantity, aquatic resources, vegetation, visitor use and experience, and cumulative effects were all less-than-significant.

- 2. Effects on public health and safety.**

The Selected Alternative introduces a minor risk to human health and safety by use of a helicopter over public and private land. The project is not in a location where any facilities developed for the public, such as campsites or trails, are located. Project chemicals will be securely stored in an area that is not open to the public. NPS and TNC will communicate with island residents who may be in the vicinity of the project area during application of bait.

- 3. Unique characteristics of the area (proximity to historic or cultural resources, wild and scenic rivers, ecologically critical areas, wetlands or floodplains, and so forth).**

The project will not impact any of the unique resources of Santa Cruz Island. The selected alternative will not adversely affect the wilderness values of the potential wilderness on Santa Cruz Island, including the NPS lands that are part of this project. The NPS lands are recognized to need the active restoration actions of the type proposed by this project. The Environmental Assessment identified necessity of taking action to manage Argentine ants. The impacts to wilderness resources are temporary and the minimum necessary to achieve the goal of elimination of Argentine ants. This project will increase, rather than diminish, the suitability of NPS lands for future designation as wilderness. The selected alternative will not negatively affect floodplains or wetlands.

- 4. Degree to which impacts are likely to be highly controversial.**

The results of the public involvement process do not indicate that the project is controversial. Public comments were few and indicated support for the eradication of non-native ants.

- 5. Degree to which impacts are highly uncertain or involve unique or unknown risks.**

The project does not have substantial uncertainty or risk. The project is an expansion of laboratory and field trials that have involved monitoring at each stage of implementation. The toxicant is permitted for public use and regularly utilized at greater concentrations.

- 6. Whether the action may establish a precedent for future actions with significant effects, or represents a decision in principle about a future consideration.**

The Selected Alternative neither establishes a precedent for future actions with significant effects, nor represents a decision in principle about a future consideration.

7. Whether the action is related to other actions that may have individual insignificant impacts but cumulative significant effects.

The EA considered the cumulative impacts of the pesticide treatments with several past, present, and future actions. Cumulative impacts for the Selected Alternative range from none to negligible.

8. Degree to which the action may adversely affect historic properties in or eligible for listing in the National Register of Historic Places, or other significant scientific, archeological, or cultural resources.

None of the archeological or historical sites identified within the APE will be directly affected by mechanical treatments associated with the applications of the pesticide

9. Degree to which an action may adversely affect an endangered or threatened species or its habitat.

The Selected Alternative will not adversely impact nesting habitat for migratory birds, an endangered plant, island foxes, or habitat for these species.

10. Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

Implementing the Selected Alternative would not violate federal, state, or local environmental laws or requirements imposed for the protection of the environment.

Public Involvement

In fall of 2009 TNC and NPS, hosted 16 Argentine ant biologists and pest control experts to view the infestations and present recommendations for future Argentine ant management. The workshop participants felt that it was desirable, and still possible, to contain or eliminate Argentine ants from Santa Cruz Island with a well-executed management program. They cautioned that, if not contained, Argentine ants are likely to cause significant damage to the Island's biological diversity, particularly to native ants and other arthropods.

In 2011 and 2012 NPS and TNC completed internal review and scoping for the 2012 and 2013 pilot projects. TNC and NPS concluded that the pilot studies would be conducted to 1) test the efficacy of a newly designed bait and delivery system, and 2) document the effect of the baiting strategy on non-target species. USFWS was informally consulted regarding impacts to listed species.

A Research Authorization was obtained by TNC from the California Department of Pesticide Regulation authorizing the use of two low-concentration baits on Santa Cruz Island (permit no. 1204015 and 1305028). In 2012 the EPA issued a letter exempting the project from an Experimental Use Permit (EUP) because the small extent of the 2012 project.

TNC and NPS updated island biologists and managers regarding the Argentine ant project at the 2012 and 2013 Island fox Recovery Meetings. A thorough discussion of the bait and the LD50 levels in rodents was presented. Initial data on fox use of the bait record via camera traps (2012) and live trapping (2013) was presented.

In early 2013, a second meeting of Argentine ant biologists and pest control experts was convened to review the results of the 2012 pilot study and provide recommendations for a 2013 study. The group concluded that the results of the 2012 pilot study merited a second

pilot study that should be conducted over entire infestations to reduce the confounding effects of re-infestation from outside of treatment boundaries. The group recommended additional treatments (more than the four treatments conducted in 2012) to increase the likelihood of eradication. Also that the use of a hopper and a helicopter would increase the efficacy of the treatment by speeding up the delivery system and increasing the rate of the application may achieve better coverage of infested areas.

In December 2013, TNC and NPS held a teleconference with Argentine ant biologists and pest control experts to review the results of the 2013 pilot and provide suggestions for the program. The group concluded that the monitoring conducted in 2013 showed promising results using the new methodology. The data warranted further investigation via monitoring and treatment of any spot populations found inside the treatment area. It was recognized that if the infestations on SCI are treated sooner, they will be smaller. As a result, less toxicant and fewer logistics will be required to control or eradicate the infestations.

In August 2014, NPS hosted a meeting with park staff (including the Superintendent and biologists), TNC, and two biologists with U.S. Fish and Wildlife Service to discuss the field trial results and the proposed expansion of the project to treat the entire Argentine ant infestation area. Much of the discussion focused on the interaction between federally endangered Santa Cruz Island fox and the project. Issues of particular concern were a) potential for impacts to reproduction and pup survival by project activities, b) potential impacts from ingestion of bait gel beads, and c) potential impacts for the insecticide in the gel beads. All participants felt that there is no evidence from field trials or from data regarding the insecticide that the project would adversely affect island foxes. However, because the foxes have been observed to eat the bait, it was decided that the correct determination under ESA was that the project “may affect; not likely to adversely affect” the island fox.

Public scoping began on August 22, 2014 with a press release, a letter to interested public and organizations (61 entities), and establishment of a project web site. The Ventura Star published an article regarding the project and the scoping process on August 28, 2014. Responses of interest in review of the Environmental Assessment were received from three federal agencies (Department of Defense, U.S. Fish and Wildlife Service, and National Oceanic and Atmospheric Administration – Sanctuaries) that have stewardship responsibilities at the Channel Islands.

Distribution of the Environmental Assessment

On January 15, 2015, the Environmental Assessment was sent to the current mailing list of interested public and organizations (67 addresses). The Environmental Assessment was available digitally on the NPS web site. Printed copies of the document were sent to six local libraries. The public comment period was open from January 15 to February 22, 2015.

Five comments were received, of which two were substantive. None of the commenters expressed concern or disagreement with the proposed action, environmental analysis, or determination of adequacy for an Environmental Assessment. No new relevant environmental information was presented by any of the respondents.

Conclusion


Based on the environmental analysis, together with consideration of the minor nature of

public response, and the relation between public interest and laws, statutes, and regulations for managing NPS units, the ability of the mitigation measures to reduce or eliminate adverse impacts, and the concurrence of agencies responsible for natural and cultural resources in the project area, the NPS will implement Alternative B to accomplish the Management of non-native Argentine Ants on Santa Cruz Island.

It is the determination of the National Park Service that the selected action does not constitute a major federal action significantly affecting the quality of the human environment, nor is this project without precedent or similar to ones that normally require an environmental impact statement.

Therefore, in compliance with the National Environmental Policy Act, the National Park Service will not prepare an Environmental Impact Statement and will proceed with implementation of the project as soon as practicable.

Recommended:



Russell E. Galipeau, Jr.
Superintendent, CHIS

April 24, 2015
Date

Approved:



Acting Regional Director
Pacific West Region

May 5, 2015
Date

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