

	U.S. Fish and Wildlife Service Pesticide Use Proposal	Date: 07/20/2011

PUP Number: R1-11-12521-001

Treatment Site: PACIFIC REEFS NATIONAL WILDLIFE REFUGE COMPLEX

Product Trade Name: Brodifacoum-25W Conservation

Region: 1

Org Code: 12521

Year: 2011

State/County: UM/PALMYRA ATOLL

Duty Station: PACIFIC REEFS NATIONAL WILDLIFE REFUGE COMPLEX

Management Unit(s): Palmyra Atoll National Wildlife Refuge

Map Attached: Yes

Status: Reviewed by RO (Dis)Approver and forwarded to WO with modifications

Pesticide Use Pattern:

Need for Treatment: Invasive Species

Treatment Site: Terrestrial

Treatment Site Land Type: forested, shrub, grassland, Beach, Sand Dunes

Is the crop being treated a genetically modified organism(GMO) (Y/N): N

Management Action/Economic Threshold:

Roof rats are a nonnative and invasive species at Palmyra Atoll. This project is designed to remove roof rats from Palmyra Atoll NWR and adjacent lands on The Nature Conservancy Preserve. Given high reproductive capacity of this pest species, the treatment threshold is one individual because eradication is possible under the circumstances at Palmyra Atoll.

How does this pest(s) interfere with achieving habitat and/or wildlife management objectives?:

Nonnative rats at Palmyra may be preventing the breeding of as many as 8 species of tropical seabirds and reducing the reproductive success rates and survival rates of as many as 6 other species currently breeding there. They may prey on native shorebird species that nest there and compete with them for food. They are preventing recruitment of 10 species of native trees by preying on seeds and seedlings of those plants. They have a negative effect on native land crab populations by competition for food and direct predation as well.

Target Pest(s): Roof rat (*Rattus rattus*)

Pesticides:

Trade Name: Brodifacoum-25W Conservation

Common Name: brodifacoum

U.S. EPA Registration Number: 56228-36

Manufacturer: Bell Laboratories, Inc.

Label URL:

MSDS URL:

Pesticide Details:

Restricted Use Pesticide (Y/N): Y

Is the treatment site type listed on the label (Y/N): Y

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Is pest listed on label: Y

If the crop, type of vegetation, or site type is not listed, is there a current Section 18 exemption under which you are proposing to operate (Y/N): N

If the crop, type of vegetation, or site type is not listed, is there a current Section 24c exemption under which you are proposing to operate (Y/N): N

Supplemental Label for Proposed Use (Y/N): Y

Tank Mix (Y/N): N

Adjuvants: None

Other Ingredients: N/A

Number of Applications: 2

Application Period: June

Application(s):

Note: Proposed pesticide applications in this PUP may not reflect actual on-the-ground pesticide applications. Specifically, PUPs may include different application scenarios (e.g., spray equipment and rate combinations) to capture the breadth of application options that could be used to treat target species. Actual pesticide applications must be compliant with the pesticide label(s). The completed pesticide usage report will contain actual usage information associated with this PUP.

<u>Trade Name</u>	<u>Rate & Unit</u>	<u>Method</u>	<u>Equipment</u>
Brodifacoum-25W Conservation	4.20 ounces/bait station	Bait stations	Bait stations
Brodifacoum-25W Conservation	71.30 lbs/acre	Aerial	Helicopter
Brodifacoum-25W Conservation	71.30 lbs/acre	Broadcast	Hand-held

Size of Treatment Area: 618.00 acres

REI (Restricted Entry Interval): None

Applicator Information: FWS

Name of FWS Lead Certified Pesticide Applicator: Elizabeth Flint

Approved IPM Plan (Y/N): N

IPM Plan Year:

Non-Chemical Controls Considered (Y/N): N

IPM Strategy:

Palmyra Atoll NWR staff and partners currently work to prevent new rodent introduction onto rat-free refuge islands. The program includes shore- and ship-based rodent prevention and shipwreck response. The goal is to reduce the likelihood of rats gaining access to Palmyra Atoll NWR. A combination of rodent traps and poison bait will be maintained at arrival points on Palmyra Atoll NWR after the eradication and during monitoring phases. Because the goal of the operation is complete eradication of *Rattus rattus* and the environmental conditions at Palmyra present great challenges to the execution of all eradication techniques a wide variety of methods were considered and

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immediately rejected due to their low likelihood of succeeding. These included use of disease, trapping, biological control and fertility control. More thoroughly considered options included another bait product (Diphacinone-50 Conservation), and employing an all-bait station approach. A combination of literature survey and experimental work at Palmyra supported our final decision to proceed with the use of an aerial broadcast of brodifacoum-25W Conservation in combination with hand broadcast and localized bait stations, with proactive mitigation for nontarget species, as the Preferred Alternative. These alternatives are discussed in the draft Environmental Impact Statement for the project which can be viewed at: <http://www.fws.gov/palmyraatoll/rainforestrestoration.html> (Final EIS on FWS Sharepoint: Programs>NWRS>Pacific Region>Palmyra-Kingman, and available publicly on website above after 29 April 2011)

Best Management Practices:

Calibrate application equipment.

Additional Best Management Practices:

Application only at windspeed less than 29 mph (25 knots) as directed by label

Bait application rate determined by bait uptake not to exceed label

Carcass searches and retrieval to monitor non-target impacts

Bait application timing designed to minimize non-target risk and maximize uptake by target species

Bait pellet and composition selected for effectiveness

Bait hopper designed to minimize drift, bait fragmentation, and prevent bait spread into water

Flight plan designed to minimize non-target impact

Personal Protective Equipment as directed by label

Treatment Site Conditions:

Topography (Degree Slope): Flat

Soil Texture: Gravel, Sand, Loamy Sand, Sandy Loam, Loam, Silty Loam

Soil pH: 6.9 to 7.7

Soil Organic Matter: 1.0

Surface Water Type(s): Ocean

Distance to nearest: Within 25 ft

Depth to Groundwater: Less than 2 feet

Distance to nearest potable water: Not Applicable

If Spot Treatment, Estimated % Cover to be Treated:

Is the Treated Area Naturally Flooded or Irrigated (Y/N): N

Irrigation Method: N/A

Non-Target Species At/Near Treatment Area during or immediately after treatment (taxonomic groups):

Crustaceans, Reptiles, Shorebirds

Are Impacts to Non-Target Species Expected? (Y/N): Y

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Federally Listed Species and Critical Habitat(s):

Key:

NE = No Effect

NLAA = Not Likely to Adversely Affect

LAA = Likely to Adversely Affect

JAM = Jeopardy/Adverse Modification

NJNAM = No Jeopardy/No Adverse Modification

Note: ESA Documentation is required for NE, NLAA, LAA, JAM and NJNAM Effects Determinations. Please ensure you are in compliance with the current Endangered Species consultation procedures.

Species Common Name/Critical Habitat	Effects	Optional: Provide ESA text here or attach documents
	NE	

Are there any other federally listed, proposed or candidate species or critical habitat(s) that occur (or may occur) at or near the site that are not listed above? (Y/N): Y

Other Federally Listed, Proposed, Candidate Species, or Critical Habitat(s):

Species Common Name/Critical Habitat: Green Turtle

Scientific Name: Chelonia mydas

Effects: NLAA

Optional: Provide ESA text here or attach documents: Internal FWS Section 7 for species while on land attached.
NMFS Section 7 for species while in marine environments attached.

Species Common Name/Critical Habitat: Hawksbill Turtle

Scientific Name: Eretmochelys imbricata

Effects: NLAA

Optional: Provide ESA text here or attach documents: Internal FWS Section 7 for species while on land attached.
NMFS Section 7 for species while in marine environments attached.

Are there any state listed, proposed or candidate species or their habitats or other species of concern that may be affected by the proposed activity? (Y/N): Y

Other Species of Concern:

Note: If State listed species are in/near your treatment area, it is recommended that you contact the appropriate state agency for consultation procedures.

Species Common Name/Critical Habitat: Bristle-thighed Curlew

Scientific Name: Numenius tahitiensis

State Status (if applicable): SOC

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Effects/Comments: Four species of shorebirds, including some individuals of the bristle-thighed curlew, a species of concern, would likely be present during the eradication operational window (June through July) and could potentially be exposed to rodenticide through several pathways. Alternative C (Preferred Alternative) of the Palmyra Atoll NWR Rat Eradication Project Final EIS includes measures to reduce risk to shorebirds that may be present during the operational period. A link to the details of the Final EIS, including mitigation for impacts to shorebirds, can be found on the Submitters Comments tab of the PUP.

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Submitter Comments:

USFWS Palmyra Atoll National Wildlife Refuge has completed an Environmental Impact Statement for this project that can be viewed at:

<http://www.fws.gov/palmyraatoll/rainforestrestoration.html>

The Final EIS is available on "InsideFWS" Sharepoint and will be publicly available at the above website on 29 April 2011.

Sharepoint path is: Programs>NWRS>R1 Pacific Region>Palmyra-Kingman NWRs

Attached is the supplemental label for use of brodifacoum-25W Conservation at Palmyra.

Also attached is the WO Memo formally approving the brodifacoum-25W Conservation PUP for use on Palmyra Atoll. This memo serves as formal WO PUP Approval.

Reviewer Information:

Date: 04/21/2011
Reviewer: Susan_White@fws.gov
Reviewer Type: Field (Dis)Approver

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Action Taken: Reviewed by Field (Dis)Approver and forwarded to RO

Comments: Immediate review of this PUP is needed through FWS in order to meet operational window of June 2011, set to minimize impacts to nontarget birds.

To the best of the Field Approver's knowledge, this PUP is accurate, complete, and the information provided is in compliance with the pesticide label(s), with Service Policy, and with any pertinent local and State laws, regulations, and restrictions concerning each pesticide's use.

Date: 04/22/2011

Reviewer: Bridgette_Flanders-Wanner@fws.gov

Reviewer Type: Regional (Dis)Approver

Action Taken: Reviewed by RO (Dis)Approver and forwarded to WO with modifications

Comments: In accordance with verbal approval from Beth Flint, Supervisory Wildlife Biologist, on April 22, 2011, the following modifications were made prior to forwarding to WO:

1. Effects finding for 2 species of federally listed sea turtles was changed from No Effect (NE) to Not Likely to Adversely Affect (NLAA) to be in accordance with the Section 7 consultations.
2. The bristle-thighed curlew was added under "Other Species of Concern" in accordance with the Final EIS.

Approval Period: 1 year

Approval Expires: 12/31/2011