**APHIS Rangeland Grasshopper and Mormon Cricket Suppression Program**
**FY-2014 Treatment Guidelines**
**Version 2/03/2014**

The objectives of the APHIS Rangeland Grasshopper and Mormon Cricket Suppression Program are to 1) conduct surveys in 17 Western States; 2) provide technical assistance to land managers; and 3) when funds permit, suppress economically damaging grasshopper and Mormon cricket outbreaks on Federal, Tribal, State, and/or private rangeland. The Plant Protection Act of 2000 provides APHIS the authority to take these actions.

## General Guidelines for Grasshopper / Mormon Cricket Treatments

1. All treatments must be in accordance with:
    a. the Plant Protection Act of 2000;
    b. applicable environmental laws and policies such as: the National Environmental Policy Act, the Endangered Species Act, the Federal Insecticide, Fungicide, and Rodenticide Act, and the Clean Water Act (including National Pollutant Discharge Elimination System requirements – if applicable);
    c. applicable state laws;
    d. APHIS Directives pertaining to the proposed action;
    e. Memoranda of Understanding with other Federal agencies.

2. Subject to the availability of funds, upon request of the administering agency or the agriculture department of an affected State, APHIS, to protect rangeland, shall immediately treat Federal, State, or private lands that are infested with grasshoppers or Mormon crickets at levels of economic infestation, unless APHIS determines that delaying treatment will not cause greater economic damage to adjacent owners of rangeland. In carrying out this section, APHIS shall work in conjunction with other Federal, State, Tribal, and private prevention, control, or suppression efforts to protect rangeland.

3. Prior to the treatment season, conduct meetings or provide guidance that allows for public participation in the decision making process. In addition, notify Federal, State and Tribal land managers and private landowners of the potential for grasshopper and Mormon cricket outbreaks on their lands. Request that the land manager / land owner advise APHIS of any sensitive sites that may exist in the proposed treatment areas.

4. Consultation with local Tribal representatives will take place prior to treatment programs to fully inform the Tribes of possible actions APHIS may take on Tribal lands.

5. On APHIS run suppression programs, the Federal government will bear the cost of treatment up to 100 percent on Federal and Tribal Trust land, 50 percent of the cost on State land, and 33 percent of cost on private land. There is an additional 16.15% charged to any funds received by APHIS for federal involvement with suppression treatments.

6. Land managers are responsible for the overall management of rangeland under their control to prevent or reduce the severity of grasshopper and Mormon cricket outbreaks. Land managers are encouraged to have implemented Integrated Pest Management Systems prior to requesting a treatment. In the absence of available funding or in the

place of APHIS funding, the Federal land management agency, Tribal authority or other party/ies may opt to reimburse APHIS for suppression treatments. Interagency agreements or reimbursement agreements must be completed prior to the start of treatments which will be charged thereto.

7. There are situations where APHIS may be requested to treat rangeland that also includes areas where crops are being grown (typically less than 10 percent of the treatment area). In those situations the crop owner pays the entire treatment costs on the croplands.

   NOTE: the insecticide being considered must be labeled for that crop as well as rangeland.

8. In some cases, rangeland treatments may be conducted by other ederal agencies (e.g., Forest Service, Bureau of Land Management, or Bureau of Indian Affairs) or by non-federal entities (e.g., Grazing Association or County Pest District). APHIS may choose to assist these groups in a variety of ways, such as:
   a. loaning equipment(an agreement may be required):
   b. contributing in-kind services such as surveys to determine insect species, instars, and infestation levels;
   c. monitoring for effectiveness of the treatment;
   d. giving technical guidance.

9. In areas considered for treatment, State-registered beekeepers and organic producers shall be notified in advance of proposed treatments. If necessary, non-treated buffer zones can be established.

## Operational Procedures

### *GENERAL PROCEDURES FOR ALL AERIAL AND GROUND APPLICATIONS*

1. Follow all applicable Federal, State, Tribal and local laws and regulations in conducting grasshopper and Mormon cricket suppression treatments.

2. Notify residents within treatment areas, or their designated representatives, prior to proposed operations. Advise them of control method to be used, proposed method of application, and precautions to be taken.

3. One of the following insecticides that are labeled for rangeland use can be used for a suppression treatment of grasshoppers and Mormon crickets:
   a) Carbaryl
      a. solid bait
      b. ultra low volume spray
   b) Diflubenzuron ultra low volume spay
   c) Malathion ultra low volume spray

4. Do not apply insecticides directly to water bodies (defined herein as reservoirs, lakes, ponds, pools left by seasonal streams, springs, wetlands, and perennial streams and rivers).

   Furthermore, provide the following buffers for water bodies:
   - 500-foot buffer with aerial liquid insecticide.
   - 200 foot buffer with ground liquid insecticide.
   - 200-foot buffer with aerial bait.
   - 50-foot buffer with ground bait.

5. Instruct program personnel in the safe use of equipment, materials and procedures; supervise to ensure procedures are properly followed.

6. Conduct mixing, loading, and unloading in an approved area where an accidental spill would not contaminate a water body.

7. Each suppression program will have a Contracting Officer's Repersentative (COR) OR a Treatment Manager on site. Each State will have at least one COR available to assist the Contracting Officer (CO) in GH/MC suppression programs.

   NOTE: A Treatment Manager is an individual that the COR has delegated authority to oversee the actual suppression treatment; someone who is on the treatment site and overseeing/coordinating the treatment and communicating with the COR. No specific training is required, but knowledge of the Aerial Application Manaual and treatment experience is critical; attendace to the Aerial Applicators Workshop is very beneficial.

8. Each suppression program will conduct environmental monitoring as outlined in the 2014 Environmental Monitoring Plan.

   APHIS will assess and monitor rangeland treatments for the efficacy of the treatment, to verify that a suppression treatment program has properly been implemented and assure that any environmentally sensitive sites were protected.

9. APHIS reporting requirements associated with grasshopper / Mormon cricket suppression treatments can be found in the APHIS Grasshopper Program Guidebook: http://www.aphis.usda.gov/import_export/plants/manuals/domestic/downloads/grasshopper.pdf

## *SPECIFIC PROCEDURES FOR AERIAL APPLICATIONS*

1. APHIS Aerial treatment contracts will adhere to the 2014 Statement of Work.

2. Minimize the potential for drift and volatilization by not using ULV sprays when the following conditions exist in the spray area:

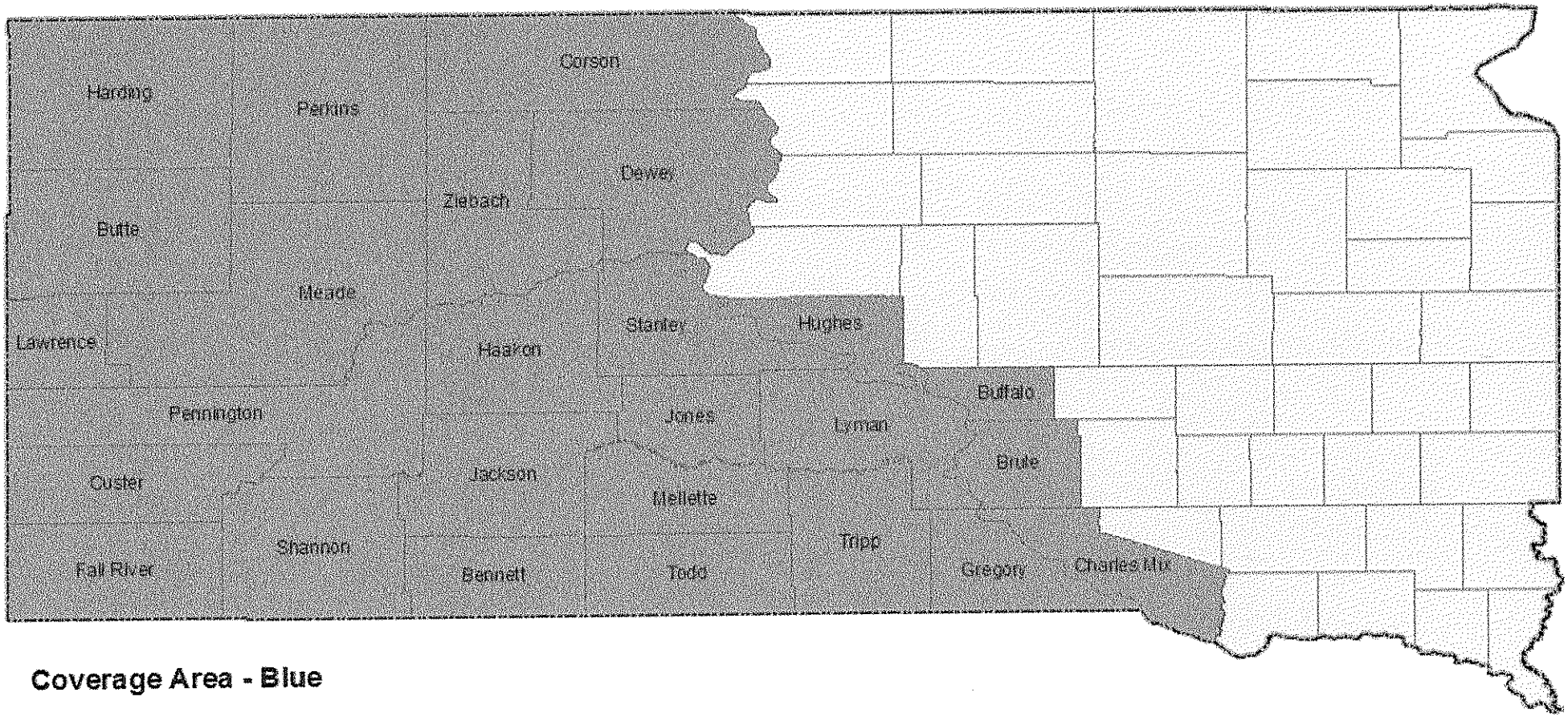
a. Wind velocity exceeds 10 miles per hour (unless state law requires lower wind speed);
b. Rain is falling or is imminent;
c. Dew is present over large areas within the treatment block;
d. There is air turbulence that could affect the spray deposition;
e. Temperature inversions (ground temperature higher than air temperature) develop and deposition onto the ground is effected.

3. Weather conditions will be monitored and documented during application and treatment will be suspended when conditions could jeopardize the correct spray placement or pilot safety.

4. Application aircraft will fly at a median altitude of 1 to 1.5 times the aircraft's wingspan.

5. Whenever possible, plan aerial ferrying and turnaround routes to avoid flights over congested areas, water bodies, and other sensitive areas that are not to be treated.

# Environmental Assessment Coverage Area

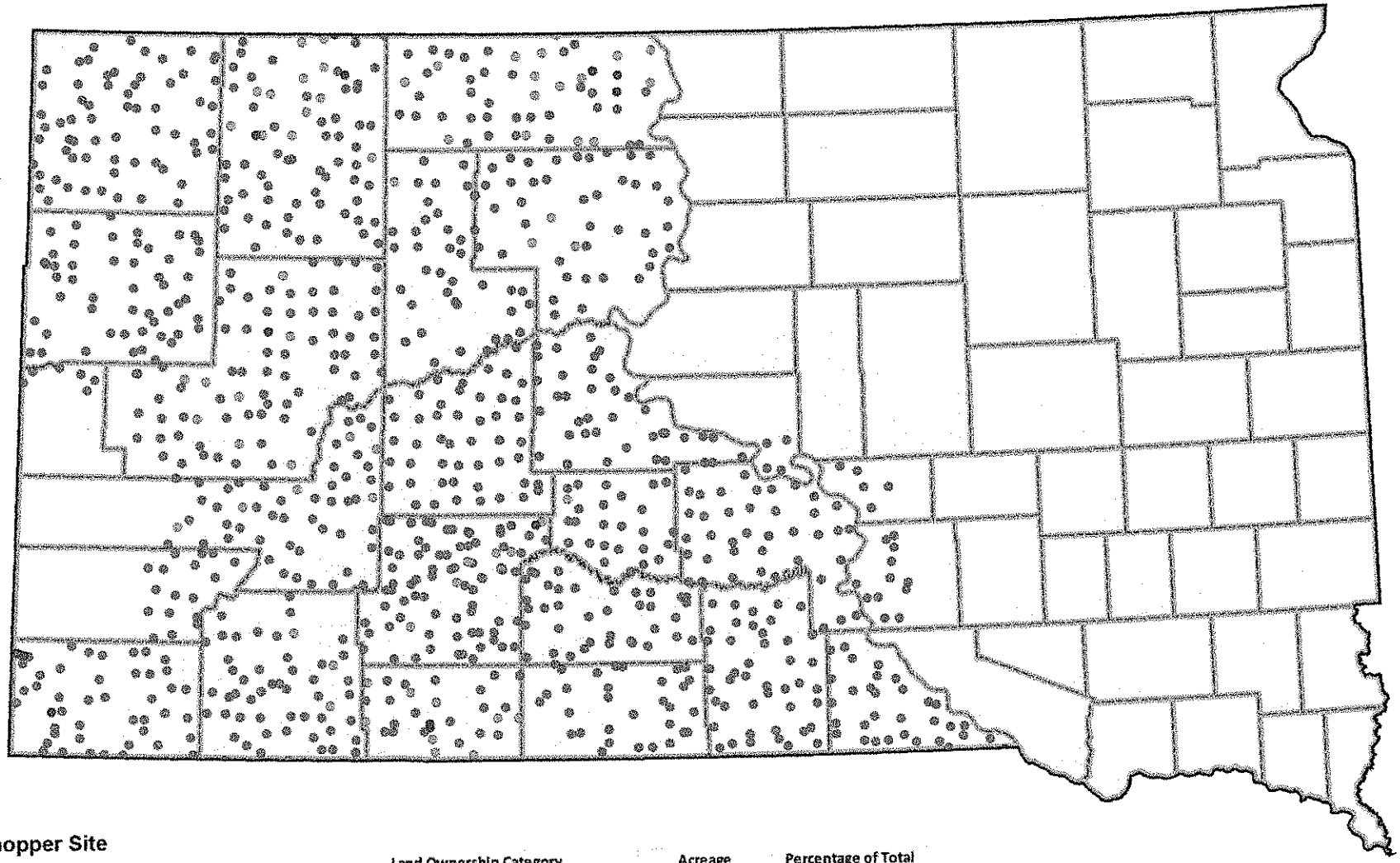



**Coverage Area - Blue**

APPENDIX 2

USDA United States Department of Agriculture

# 2013 Adult Grasshopper Density - South Dakota



**Grasshopper Site**
**(Adult GH per Sq Yd)**

- 0 - 3
- 4 - 7
- 8 or more

| Land Ownership Category | Acreage | Percentage of Total |
|---|---|---|
| Forest Service | 7,926.7 | 21.28% |
| Indian Reservation | 9,996.7 | 26.84% |
| Department of Reclamation | 415.0 | 1.11% |
| Private | 18,906.7 | 50.76% |
| **Total** | **37,245.1** | **100.00%** |

0 12.5 25 50 Miles

N

USDA APHIS PPQ
314 Henry Street, Suite 200
Pierre SD 57501

Data Source: USDA APHIS PPQ South Dakota, ESRI, and US Census Bureau
Date: 1/3/2014
Coordinate System: NAD 1983 StatePlane South Dakota South FIPS 4602 Feet

These data, and all the information contained thereon, have been collated by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), or by its cooperators on APHIS' behalf, for restricted government purposes only and is the sole property of APHIS. Data may be disseminated on a need-to-know basis only and must be used for their intended government purpose(s). All information contained within these data are subject to required Federal safeguards and shall only be shared and/or used consistent with the Trade Secrets Act (18 U.S.C. 1905), the Privacy Act of 1974, as amended (5 U.S.C. 552a), the Freedom of Information Act (5 U.S.C. 552), the confidentiality provisions of the Food Security Act of 1985 (7 U.S.C. 2276), Section 1619 of the Food, Conservation, and Energy Act of 2008 (7 U.S.C. 8791), and other applicable Federal laws and implementing regulations, as well as with the confidentiality or non-disclosure provisions of any other agreement entered into between APHIS and a cooperator.

APPENDIX 4

RECEIVED
APR 08 2014
U.S. FISH & WILDLIFE SERVICE

USDA
United States Department of Agriculture

Animal Plant Health Inspection Service

Plant Protection and Quarantine

314 S. Henry, Suite 200
Pierre, SD 57501
Phone: 605/224-1713
FAX:605/224-0172

April 8, 2014

The U.S. Fish and Wildlife Service concurs with your conclusion that the described project will not adversely affect listed species. Contact this office if changes are made or new information becomes available.

4/17/14 Natalie Gates
Date SD Field Supervisor
Acting USFWS

Subject: Concurrence of 2014 USDA, APHIS, PPQ South Dakota Rangeland Grasshopper Endangered Species

To: Natalie Gates
Biologist

From: Amy Mesman
Domestic Program Coordinator

We are seeking your concurrence on the endangered species protection measures as described in the species assessment section of our 2014 Rangeland Grasshopper Environmental Assessment.

As in the past, please consider the following when making your determination for concurrence. Grasshopper outbreaks are cyclical. Our surveys during the 2013 grasshopper season recorded the lowest populations of grasshoppers in the last 20 years. We anticipate finding similar low numbers during the 2014 survey year. When population levels warrant control, control programs are still infrequent. Since 1990, only 14 control programs have been conducted on a total of 165,000 acres. Our programs have ranged from 50 acres to 80,000 acres in 1990 and are geared toward rangeland forage protection. We do not treat cropland.

During our last control program in 2012, we protected 17,212 acres from rangeland grasshopper infestations in Shannon County, South Dakota near Kyle. Of the 17,212 protected, approximately 10,327 were treated with dimilin utilizing the reduced area/agent treatments. Survey following the control program showed efficacy of 90%.

As addressed in our Environmental Impact Statement, we have three chemical control options available to us for grasshopper treatment; dimilin, Malathion and carbaryl in both bait and liquid form. When PPQ conducts a program we pay 100% costs of federal land, 50% of the costs on state land and 33% of the cost on private lands.

We continue to utilize the reduced acre/agent treatment application method known as RAATS or skip swathing when conducting a control program. This method leaves approximately 50% of the intended protected area untreated. Only in the case of a crop protection program would 100% of the area be covered. These programs involve a quarter to half mile buffer treatment on rangeland directly adjacent to agricultural lands to prevent grasshopper migration.

Dimilin is always our preferred choice. Dimilin is a growth regulator, a chitin inhibitor. Based on the mode of action, chemical price and available cost share, dimilin continues to be our first choice when conducting grasshopper control over large areas of rangeland. Dimilin is an environmentally friendly product and has the fewest non target impacts of the three products available for our use.

In regards to crop protection programs, based on the time of year in which these programs typically occur, life stage of the grasshopper and the need to quickly eliminate the threat of grasshopper migration into adjacent lands, Malathion or carbaryl would be the preferred options.

Per your request I have included summaries for the following proposed species to include the Rufa Red Knot, Dakota Skipper, Poweshiek Skipperling and the Northern Long Eared Bat. Outside of those species summaries there have only been cursory changes in this draft from the final 2013 environmental assessment. We are seeking to finalize our environmental documentation and hope to receive concurrence by April 18th, 2014. Thank you.

If you should have any questions or concerns please feel free to contact me at 605/224-1713 or via email at amy.mesman@aphis.usda.gov.

Sincerely,

Amy Mesman
Domestic Program Coordinator

Enclosure