

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CALIFORNIA STATE OFFICE**

**Curly Top Virus Control on Public Lands in California  
Decision Record - EA Number: DOI-BLM-CA-SO-9300-2013-0001-EA**

**Introduction**

The California Department of Food and Agriculture (CDFA) has applied to BLM for renewal of authorization to control the beet leafhopper *Circulifer tenellus* (BLH) on BLM administered lands in California using the insecticide malathion. The BLH is a known vector for spreading the plant disease curly top virus which causes damage to many important agriculture crops and gardens. Prior to the present permit application, CDFA has received authorizations from BLM to conduct such treatments since 1986 at five year intervals. The most recent authorization expired in April, 2007.

CDFA has requested authorization to apply malathion on BLM administered rangelands in a prescribed manner. Much of the BLM land subject to potential treatment is intermingled with a larger proportion of privately owned lands. The majority of the potential treatment areas administered by BLM are within the San Joaquin and Imperial Valleys. The San Joaquin area is treated most frequently, usually on an annual basis depending on BLH population conditions. The other BLM lands in the project area are treated infrequently; some areas have never been treated. In any given year, CDFA may treat between 582 and 7,970 acres of BLM land. The average treatment during the period 1994-2009 has been 3,959 acres. When treatments are needed, they are applied at critical times during the fall, winter, and spring months for optimum control of BLH. A single treatment for any given area is generally sufficient to control BLH populations in the San Joaquin Valley. For the Imperial Valley, a single treatment applied in the winter or spring is sufficient.

CDFA prepared an EA for the proposed treatment program for consideration by BLM and the environmental document was posted on the California BLM website for public review and comment. It was available for more than a year, with no comments or questions regarding this project received.

Much of the potential treatment area is within the range of plant and animal species listed as threatened or endangered under the Endangered Species Act (ESA). Consultation, pursuant to Section 7 of the ESA, was completed with the U. S. Fish and Wildlife Service (FWS) during the review process. The FWS issued a "no jeopardy" biological opinion on the proposed action on November 21, 2001 and a subsequent amendment to this biological opinion twice. Terms and conditions prescribed in the biological opinion to minimize incidental take of listed animal species have been incorporated as permit stipulations. These terms and conditions are paraphrased below. . During consultation on this current project renewal, FWS determined it would like to modify how it accounts for take, using acreage of treatment as a surrogate. This decision will be codified in a new biological opinion expected in Summer 2014. The BLM does not anticipate any changes to conservation measures or terms and conditions with this new opinion, but if there are any, they would be fully incorporated into the project stipulations.

**Decision**

The decision is to approve the project as proposed in the Environmental Assessment (EA) for the Curly Top Virus Control Program. As part of this project approval, BLM will issue a Pesticide Use Proposals (PUP) to CDFA, every 3 years, as the current policy requires. If the maximum length of a PUP is

changed, this modification would be incorporated into this project. At the time of the PUP renewal, BLM will assess whether conditions have changed sufficiently to warrant new NEPA. Additionally, there will be annual reviews to determine if there are new listed species or critical habitat designations that would result in reinitiation of consultation. CDFA proposed substantial conservation measures (identified below) to provide for the protection of listed species. In addition to CDFA's proposed measures, additional measures, based on terms and conditions in the biological opinion issued by FWS, are amended into the proposed action. The FWS terms and conditions also apply to the PUP being issued to CDFA. The PUP is the BLM instrument for authorizing the project on BLM administered lands and will be issued in March 2014 for a three year period.

## CONSERVATION MEASURES PROPOSED BY CDFA

### GENERAL MEASURES

#### 1. Motorized Vehicle Use

- a. All CTVCP vehicles will be restricted to established roads to prevent damage to flora and fauna and to prevent soil compaction. CTVCP personnel are required to be observant of and avoid wildlife while driving in the area of operation.
- b. While vehicle speeds can vary and are commensurate with the quality and condition of established roads, the speed of vehicles will not exceed 25 mph.
- c. All vehicle restrictions established for travel on BLM administered lands will be adhered too when applicable. Special designated vehicle restrictions in lands administered by State Agencies will be observed.

#### 2. Measures to Reduce Drift and Impacts to Wet Lands

- a. To minimize drift, wind speed and direction will be continually monitored to ensure that aerial applications will remain in the target area. Aerial applications will not be performed when sustained wind velocities exceed 5 mph.
- b. To reduce the potential impacts to sensitive aquatic non-target species from pesticide drift and contaminated runoff, a 200-meter buffer zone will be established around wetland areas.
- c. If a 200-meter buffer will not adequately control BLH populations in a specific area, ground-rig spot applications will be used.
- d. If circumstances preclude the use of ground-rigs, fixed-winged aircraft or helicopters will be used only when wind direction is flowing away from wetland habitat. The CTVCP anticipates that a reduced treatment buffer (<200 meters) may be necessary to control BLH in limited areas adjacent to wetland habitat in the mouth of Zapatos, Jacalitos, Warthan, Cantua, and Los Gatos Canyons.

## SPECIFIC MEASURES -SAN JOAQUIN, MONTEREY & CUYAMA VALLEYS

### 1. Measures Taken within Blunt-nosed Leopard Lizard (BNLL)Conservation Areas

- a. Malathion will not be applied in areas designated as BNLL conservation areas # 1, 2, 3, 4, 8, 9, and10.
- b. Aerial applications of malathion will be applied in designated BNLL conservation areas 5, 6, 7.
  1. Only large BLH populations will be treated (at least 15 BLH's/10 net sweep average).
  2. No more than 50% of the area will be treated by alternating a treated swath with an untreated swath to facilitate the quick establishment of insect prey species and spot applications will not cover contiguous parcels exceeding 20 acres.
  3. BLH control will be restricted to a single annual treatment.

### 2. BNLL Habitat-General Measures

- a. BNLL habitat is based on occurrence data maintained by the NDDDB, BLM, and the Endangered Species Recovery Program (ESRP) outside the CTVCP designated BNLL conservation areas.

- b. No more than 50% of the area will be treated by alternating a treated swath with an untreated swath to facilitate the quick establishment of insect prey species and spot applications will not cover contiguous parcels exceeding 20 acres. BLH control will be restricted to a single annual treatment.
  - c. Intensive spring treatment areas which overlap intensive fall treatment areas, highlighted in Appendix "C", will have the option of a second additional treatment in fall, up to 50% coverage, of delimited BLH populations on Russian thistle.
  - d. USFWS will be consulted prior to the treatment of burn areas requiring more than 50% coverage to control large BLH populations.
  - e. On an annual basis, the CTVCP will consult informally with BLM, USFWS and CDFG, if necessary, to modify designated BNLL conservation habitat areas and review the status of the BNLL conservation strategy and research.
  - f. Additional restrictions to CTVCP activities within potential BNLL habitat exist due to the exclusion of CTVCP's treatment activities from "Specialty Preserves" (as defined within habitat conservation plans), various national and state preserves and refuges, Nature Conservancy lands, Center for Natural Lands Management, wetlands and lands populated by several listed plant species during the spring bloom periods.
3. Tipton Kangaroo Rat and Giant Kangaroo Rats (TKR & GKR)
- a. All malathion applications in the vicinity of known TKR or GKR habitat shall be aerial. CTVCP vehicles are restricted to established roads in known TKR or GKR habitat.
4. San Joaquin Kit Fox (SJKF)
- a. Known and potential dens of SJKF will be avoided during ground surveys. CTVCP vehicles are restricted to established roads within know SJKF habitat.
5. San Joaquin Dune Beetle; Ciervo Aegialian Scarab Beetle
- a. Application of malathion is strictly avoided within 1/4 mile of known habitat of the San Joaquin dune beetle; Ciervo Aegialian scarab beetle.
  - b. Additional potential dune habitat for each species will be inventoried. Malathion application in such areas, found occupied, is strictly avoided.
  - c. Aerial application of malathion within one mile of known and probable population sites are curtailed when sustained wind velocity exceeds 5 mph.
6. San Joaquin and Intercostal Valley Plants of Concern
- a. The CTVCP on an annual basis will consult plant records prepared and maintained by the CNPS, NDDDB, ESRP, CDFG, and the BLM to update known plant locations.
  - b. A 1/4-mile buffer will be maintained around extant populations of Bakersfield cactus, Kern mallow, Monterey spineflower and robust spineflower during the flowering periods.
  - c. A 1 mile buffer will be maintained around extant populations of California jewelflower during flowering periods.
  - d. Malathion will not be applied within a quarter section of extant populations of San Joaquin Woolly-threads during the flowering period; unless, a critically large leafhopper population is found during pre-treatment surveys, averaging 15 BLH's per 10 sweeps. If a critically large leafhopper population is found, malathion treatments will be restricted to a single application every other year.
  - e. If it is not possible to maintain a 1/4-mile buffer, ground-rig spot applications will be utilized.
  - f. If circumstances do not allow the use of ground-rigs, fixed-winged aircraft or helicopters will be used with special effort to minimize pesticide drift and treat only when winds are moving away from the plant location.

7. San Joaquin Antelope Squirrel (SJAS)
  - a. All malathion applications in the vicinity of known SJAS habitat shall be aerial.
  - b. CTVCP vehicles are restricted to established roads in known SJAS habitat.
  
8. California Red-legged Frog (CRLF), California Tiger Salamander (CTS)
  - a. An aerial buffer of at least 1/4 mile radius will be maintain around occupied CRLF or CTS habitat.
  - b. An aerial buffer of at least 200 meters will remain untreated near aquatic or riparian areas suitable as potential habitat for the CRLF and CTS.
  - c. In CRLF Critical Habitat (Mine Creek, Big Panoche & Little Panoche Creeks)
    1. An aerial buffer of at least 200 meters will be maintained around riparian habitat.
    2. If circumstances do not allow the use of ground-rigs, fixed-winged aircraft or helicopters will be used with specific efforts to minimize pesticide by treating only when wind is flowing away from riparian habitat.
  
9. Giant Garter Snake (GGS)
  - a. An aerial or ground-rig buffer of at least 200 meters will remain untreated near aquatic or riparian areas suitable as potential habitat for the giant garter snake.
  
10. Valley Elderberry Longhorn Beetle
  - a. An aerial or ground-rig buffer of at least 200 meters will remain untreated near riparian areas suitable as potential habitat for Elderberry.
  - b. During the time when adult beetles are active (March 15 through June 15), a buffer of at least 1/4-mile radius will remain untreated near known occurrences of valley elderberry longhorn beetle as defined by the National Diversity Data Base or other available data base sources.
  - c. CTVCP personnel will be trained to recognize elderberry shrubs and potential beetle exit holes.
  
11. Conservancy Fairy Shrimp, Longhorn Fairy Shrimp, Vernal Pool Fairy Shrimp, Vernal Pool Tadpole Shrimp
  - a. The CTVCP, with the assistance of federal and state resource agencies, will identify and inventory vernal pools known to be habitat for listed fairy shrimp within potential CTVCP survey areas.
  - b. A treatment buffer of a 1/2 mile will be maintained around vernal pools.
  - c. A treatment buffer of 200 meters will be maintained around suspected vernal pools.
  
12. Specialty Preserves
  - a. The CTVCP recognizes three “Specialty Preserves” as defined in the Pleasant Valley Habitat Conservation Plan (Hopkins, 1994). These areas are categorized as sand dune or stabilized sand dunes, and fall within the potential winter CTVCP survey area. These areas are potential habitat for the San Joaquin dune beetle (*Coelus gracilis*), ciervo aegelian scarab beetle (*Aegialia concinna*) or the redheaded sphecid wasp (*Euceris ruficeps*).
  - b. All malathion treatments will be eliminated from within the specialty preserves.
  - c. CTVCP vehicles are restricted to established roads within the specialty preserves.
  
13. Doyen’s Dune Weevil
  - a. Malathion will not be applied to dune weevil habitat. (The portion of T22S-R19E-Sec. 30 which lies on the west side of Interstate 5 at the intersection of Hwy 41 and Interstate 5)
  
14. Buena Vista Lake Shrew

- a. The CTVCP will not treat known Buena Vista Lake shrew (BVLS) habitat to reduce the potential for impacts to the Buena Vista Lake shrew population and indirect impacts to insect prey base.
- b. An aerial or ground-rig buffer of at least 200 meters will remain untreated near marsh areas suitable for BVLS habitat.
- c. No treatments will be performed in BVLS Critical Habitat.

15. Center For Natural Lands Management (CNLM) Lands and Nature Conservancy

- a. The CTVCP will not treat Nature Conservancy and CNLM lands are generally dedicated to threatened and endangered species management and habitat preservation.

16. Mountain Plover

- a. All CTVCP personnel will be trained to recognize the mountain plover.
- b. During the winter treatment period, USFWS will be consulted prior to treating habitat with a slope favorable for the mountain plover.

17. South-central California Coastal Steelhead

- a. An aerial and ground-rig buffer of at least ¼ mile will remain untreated adjacent to Critical Habitat designated in the Salinas river and tributaries including agricultural drains and canals.

SPECIFIC MEASURES-IMPERIAL & PALO VERDE VALLEYS

1. Desert Tortoise

- a. Vehicles used in the CTVCP will not exceed 15 mph while conducting surveys or treatment activities within desert tortoise habitat.
- b. If it is not possible to use a 200-meter buffer, ground-rig spot treatments will be utilized.
- c. Desert tortoises encountered by vehicles used in the CTVCP will be avoided. If a tortoise cannot be avoided without moving the animal out of harm's way, the following procedure will be followed. Stationary tortoises (i.e. those in the path of a survey vehicle) may not be moved out of harm's way until 10 minutes have elapsed from the time of first encounter. Such tortoises may be handled (i.e. moved out of the way) after 10 minutes have elapsed only by personnel who have received instruction in the appropriate procedures for handling tortoises from trained BLM personnel prior to the commencement of surveys.
- d. Trash will be removed daily from within desert tortoise habitat to avoid attracting ravens and other predators.

2. Yuma Clapper Rail (YCR) and California Black Rail (CBR)

- a. No aerial applications of malathion will be made within 300 yards of potential YCR or CBR habitat. Potential rail habitat is defined as any wetland, including agricultural drains with suitable vegetative cover, in the areas shown on Spring Survey Maps, pages D-10 and D-11. of Appendix "D".
- b. Areas containing BLH host material that are between 200 meters and 300 meters from potential YCR or CBR habitat will be treated with ground equipment only.
- c. Areas containing BLH host material that are less than 200 meters from potential YCR or CBR habitat may be treated only with equipment that can deliver the malathion specifically to the target plants harboring the BLH population.
- d. Malathion will not be applied within 5 miles of occupied YCR or CBR habitat if rain is expected within 72 hours of treatment.

3. Desert Pupfish

- a. Application of malathion will not be carried out within a ½ mile of occupied desert pupfish habitat.

- b. Application of malathion within one mile of occupied or designated critical habitat boundaries will not take place when sustained wind velocities exceed 5 mph.
- c. Application of malathion within five miles of designated critical habitat will be curtailed if weather conditions indicate a moderate to high possibility for precipitation within 72 hours of planned treatment.

4. Andrew's Dune Scarab Beetle (ADSB)

- a. Malathion application will be curtailed within the geographic range of the ADSB between the months of February through May to prevent mortality of adult beetles during the breeding season.
- b. Prior to an application in January and June, a field examination of proposed treatment areas will be conducted to determine if adult scarabs are active. If present, the malathion application will be postponed until the beetle flight was completed.

5. Flat-tailed Horned Lizard (FTHL)

- a. No malathion treatments shall occur in designated flat-tailed horned lizard management areas as set forth in the Flat-tailed Horned Lizard Range-wide Management Strategy.
- b. Application of malathion within the geographic range of the FTHL will consist of no more than a single treatment per given area per year.
- c. All application will be aerial. No spraying from off-road vehicles or use of off-road vehicles on other than designated roads will be used within FTHL habitat.

6. Peirson's Milk-vetch

- a. Applications of malathion will not be made within known extant populations of Peirson's milk-vetch.

In addition to the conservation measures proposed in the EA as noted above, the following terms and conditions prescribed by FWS will apply:

1. An employee education program shall be conducted by a FWS-approved biologist to acquaint employees (ground crews, flaggers, and supervisors) as to the identification, avoidance, biology, and conservation of the listed species they may encounter.
2. An approved biologist shall be present during spray operations conducted within threatened and endangered species habitats.
3. An annual report shall be provided to FWS on treatments conducted during the previous year.
4. Quantitative measurements of the amount of malathion deposited downwind of spray areas shall be made at several distances from the edge of the sprayed area.
5. Quantitative measurements of malathion concentrations shall be made of any surface waters in the immediate vicinity of the sprayed area before, immediately after, and 3-5 days after aerial and ground-rig spray events.
6. No treatments shall be applied to riparian habitats used for migration by least Bell's vireos or southwestern willow flycatchers. Buffers of at least 200 meters shall be maintained around such habitats during the applicable migration periods.
7. No treatments shall be applied to mountain plover wintering areas (alkali sink scrub, fallow fields, and annual grasslands) when plovers are present. A minimum buffer of 50 meters shall be left

untreated adjacent to occupied rangeland habitats and agricultural fields that are occupied by mountain plovers.

8. No treatments shall be applied in designated flat-tailed horned lizard management areas, as set forth in the Flat-tailed Horned Lizard Rangeland Management Strategy. Treatments within other flat-tailed horned lizard habitats shall be limited to not more than one application in a given area per year.
9. Harvester ant monitoring shall be conducted in association with any treatments that occur in flat-tailed horned lizard habitat in the Imperial Valley.
10. Treatments in desert tortoise habitat shall be conducted in accordance with the following conditions: (a) spraying in desert tortoise habitat shall be restricted to the winter months to the maximum extent practicable; (b) vehicles shall not exceed 15 miles per hour while conducting surveys or treatment activities; (c) any desert tortoises encountered during survey or treatment activities shall be avoided to the maximum extent practicable; and (d) trash shall be removed daily from desert tortoise habitat to avoid attracting ravens or other predators.
11. Prior to the aerial application of malathion in the vicinity of habitats occupied by listed vernal pool crustaceans, the vernal pools on BLM lands in the Salinas and Cuyama Valleys shall be identified and digitally mapped. Surveys shall be conducted for vernal pool crustaceans in at least 50 per cent of the identified vernal pools.

#### **Alternatives Considered but not Selected**

Alternatives to the proposed action identified and analyzed in the EA include a reduced project alternative in which no treatments would occur on public lands and a no action alternative in which the project would not use pesticides anywhere for controlling BLH.

#### **Decision Rationale**

The proposed project is an ongoing program between BLM and CDFA and is crucial to protecting agricultural crops in the state from the effects of curly top virus (CTV). CDFA's past control efforts on selected BLM lands have resulted in effective population control of the vector that transmits CTV. The virus affects sugar beets, tomatoes, melons, peppers, beans, cucumbers, squash, pumpkins, spinach, vine seed and other commercially important crops, including ornamentals. CTV not only infects commercial crops, but at times devastates backyard vegetable and flower gardens. The BLH often spends a part of its life cycle on rangelands near or adjacent to agricultural fields. Rangelands, some of which are administered by the BLM, produce annual vegetation during periods of rapid plant growth which serve as desirable host plants for the BLH. The implementation of the proposed project, as modified by the above terms and conditions, is compatible with other uses and resource values on BLM lands.

#### **Consultation and Coordination**

Pursuant to Section 7 of the ESA, BLM requested formal consultation on the renewal of CDFA's pesticide use permit for curly top virus control on April 30, 2013. The FWS issued an amendment its biological opinion (FWS #1-1-00-F-0212). This "no jeopardy" opinion addressed 23 listed and proposed listed species distributed among Imperial, Fresno, Kings, Kern, Los Angeles, Merced, Monterey, San Luis Obispo, Santa Barbara, Stanislaus, and Ventura Counties. The terms and conditions in this biological opinion are paraphrased as measures 1 through 11 above and have been incorporated as permit stipulations. A more detailed description of these terms and conditions is presented in the biological opinion and its amendments.

**Public Involvement**

The environmental assessment has been available to the public on the California BLM website for more than a year. During this time no comments or questions concerning this document have been received.

**Plan Consistency**

Based on information in the EA, the project record, and recommendations from BLM specialists, I conclude that this decision is consistent with the following land use plans governing use of BLM administered lands: California Desert Conservation Area Plan, 1980 (as amended); South Coast Resource Management Plan, 1994; Southern Mountain Diablo Range and Central Coast of California, 2007; and Caliente Resource Management Plan, 1997. It is also consistent with the Endangered Species Act; the Native American Religious Freedom Act; other cultural resource management laws and regulations; Executive Order 12898 regarding Environmental Justice; and Executive Order 13212 regarding potential adverse impacts to energy development, production, supply and/or distribution.

**Administrative Remedies**

Administrative remedies may be available to those who believe they will be adversely affected by this decision. Appeals may be made to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of Interior, Board of Land Appeals (Board) in strict compliance with the regulations in 43 CFR Part 4. Notices of appeal must be filed in this office within 30 days after publication of this decision. If a notice of appeal does not include a statement of reasons, such statement must be filed with this office and the Board within 30 days after the notice of appeal is filed. The notice of appeal and any statement of reasons, written arguments, or briefs must also be served upon the Regional Solicitor, 2800 Cottage Way, Sacramento, CA 95825.

The effective date of this decision (and the date initiating the appeal period) will be the date this notice of decision is posted on BLM's internet website.

  
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Tom Pogacnik  
Deputy State Director, Natural Resources

02/03/2014  
Date