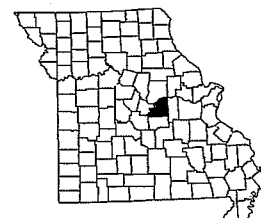




Protecting Endangered Species

Interim Measures

Osage County, Missouri



The information in this pamphlet is similar to what the U.S. Environmental Protection Agency (EPA) expects to distribute once our Endangered Species Protection Program is in effect. The limitations on pesticide use are not law at this time, but are being provided now for your use in voluntarily protecting endangered and threatened species from harm due to pesticide use. We encourage you to use this information. We also welcome your comments.

The Endangered Species Act is intended to protect and promote recovery of animals and plants that are in danger of becoming extinct due to the activities of people. Under the Act, EPA must ensure that use of pesticides it registers will not result in harm to the species listed as endangered or threatened by the U.S. fish and Wildlife Service, or to habitat critical to those species' survival. To implement the Endangered Species Protection Program, labels of certain pesticides will direct users to bulletins similar to this sample pamphlet. This program will protect endangered and threatened species from harm due to pesticide use.

EPA requests your comments regarding the information presented in this publication. Please let us know whether the information is clear and correct. Also tell us to what extent following the recommended measures would affect your typical pesticide use or productivity. This information will be considered by EPA during the final stages of program development.

Please submit comments to:

**Interim Endangered Species
Protection Program (7506C)**
U.S. EPA
401 M Street, SW
Washington, DC 20460



About This Publication

This publication contains a County Map showing the Area within the county where pesticide use should be limited to protect listed species. These areas are identified on the map by a shaded pattern. Each shaded pattern corresponds to a species in need of protection.

The Shading Key shows the name of the species that each shaded pattern represents and often describes the shaded area. The area may be described in terms of Township, Range, and Section or by giving details about the habitat of the species.

The first column of the "Table of Pesticide Active Ingredients" lists the active ingredients for which there should be limitations on use to protect certain species. The next columns are headed by the shaded pattern of the species with Codes listed underneath them.

The Code indicates the specific limitation that is necessary to protect the species. The section titled Limitations on Pesticide Use explains the code.

Does This Information Apply to You?

To determine whether this information applies to your use of a pesticide, review the questions below. The information applies only if you answer "yes" to both questions:

- Do you intend to use pesticides within or near the shaded area on the county map?
- Are any of the ingredients listed on the front panel of your pesticide product label named in the "Table of Pesticide Active Ingredients"?

If you answer "yes" to both questions, you should follow the instructions on "How to Use This Information" to determine if you should limit use of the pesticide to help protect listed species.

If you answer "no" to either question, you should follow the usage directions on the pesticide product label.

Osage County Pesticide Use Limitations to protect the Niangua Darter

How To Use This Information

- 1) On the county map, find the specific shading pattern(s) that cover, or are close to the area where you will apply pesticides.
- 2) Read the descriptor in the Shading Key for those pattern(s); this may further identify the area involved and will indicate the species.
- 3) In the table(s) of pesticide Active Ingredients, locate the product or the active ingredients in the pesticide product you intend to apply.
- 4) When using any of the identified pesticides, you should follow the limitations indicated on the table. On some of the tables the use limitation(s) will be the same for all chemicals and on others there may be a code referring you to different use limitations.
- 5) If you are applying more than one listed active ingredient or applying a listed active ingredient in an area with more than one shaded pattern (species), multiple limitation(s) may apply. If so, you should follow the most restrictive limitation.
- 6) Read the information on Reducing Runoff and Drift on the back of this pamphlet.

ACTIVE INGREDIENT	PRODUCT OR TRADE NAME	LIMITATIONS
Chlorpyrifos on Alfalfa	Lorsban	Do not apply 100 yards from the water's edge (ground application) nor ¼ mile from the water's edge (aerial application) within the shaded area(s) shown on the map.
Chlorpyrifos: all other uses except on Alfalfa, or as a Termiticide	Lorsban, Dursban, Pageant	Do not apply 20 yards from the water's edge (ground application) nor 100 yards from the water's edge (aerial application) within the shaded area(s) shown on the map and ½ mile up all streams joining the shaded area(s).
Carbaryl	Sevin, Sevimol	
Diazinon	Diazinon, D-z-n	
Dicofol	Kelthane	
Disulfoton	Di-Syston	
Endosulfan	Thiodan, Phaser	
Esfenvalerate	Asana	
Isofenphos	Oftanol	
Phosmet	Imidan	
Pyrethrins	Pyrellin, Pyrenone, Pyrethrum, and others	
Sulprofos	Bolstar	
Tralomethrin	Scout X-tra	
Trichlorfon	Dylox, Proxol	
Trifluralin	Treflan, Tri-4, Trific, Trilin, Tri-Scept, Commence, Freedom, Team, Passport, Salute, Snapshot 2.5TG	
Fluridone	Sonar	Do not apply directly to water within the shaded area(s) shown on the map.

Reducing Runoff and Drift

Careful use of pesticides can diminish harm to the environment and reduce exposure of endangered and threatened species to pesticides. Using pesticide runoff and drift measures may be helpful in keeping more of the applied pesticide on the field and may also lower your costs of pesticides.

Runoff

Where possible, use methods which reduce soil erosion, such as limited till and contour plowing; these methods also reduce pesticide runoff.

Where feasible, use application techniques such as T banding and in-furrow techniques, which incorporate the pesticide into the soil.

Pesticides with ground water warning labels are more likely to enter ground and surface water than those without such warnings. When possible, use a pesticide that does not contain a ground water warning label.

Keep Informed about changing weather conditions, and try to avoid pesticide application when heavy rainfall is expected.

Drift

Wind direction, speed, and evaporation are important factors in reducing drift. Most importantly, pesticides should be applied when the wind direction is away from areas of concern; try to avoid application during periods of high winds. Avoiding applications during the hottest part of the day, when evaporation is highest, will further reduce drift.

When high winds and excessive evaporation are not present, a drift retardant may be useful for aerial applications.

Using the largest droplet size compatible with the pesticide coverage will reduce drift. Typically, higher spray volumes will also result in less drift.

For the Protection of Your Land, Always Read and Follow Label Directions



United States
Environmental Protection
Agency
(7506C)
Washington, DC 20460

Official Business
Penalty for Private Use
\$300

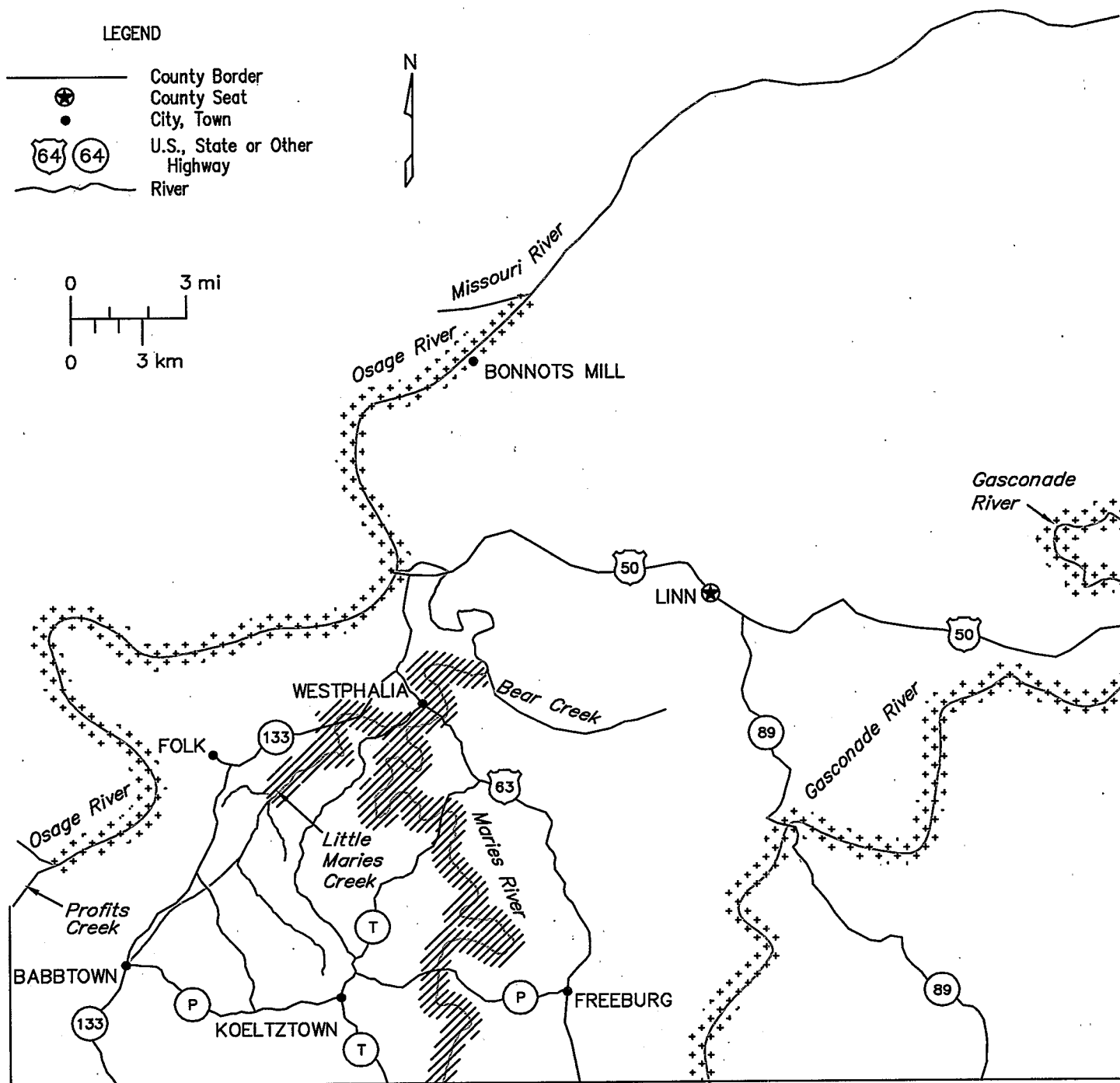
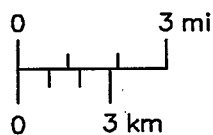
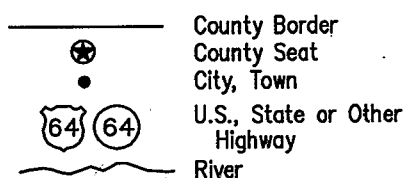
**Pesticide Use Limitation
to protect the Pink Mucket Pearly Mussel
(Osage and Gasconade Rivers)**

ACTIVE INGREDIENT	PRODUCT OR TRADE NAME	LIMITATIONS
Propiconazole	Tilt, Orbit, Banner	Do not apply 20 yards from the water's edge (ground application) nor 100 yards from the water's edge (aerial application) within the shaded area(s) shown on the map and ½ mile up all streams joining the shaded area(s).

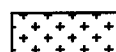
Trade names provided by the University of Missouri Extension Service.
For additional information, contact your local University Extension office.


OSAGE COUNTY, MISSOURI

LEGEND



SHADING KEY

 Freshwater mollusks [*Pink mucket pearly mussel*, *Lampsilis abrupta*]. The shaded areas shown on the map are the Osage and Gasconade Rivers.

 *Niangua darter* (fish); *Etheostoma nianguae*. The shaded area shown on the map is Little Maries Creek from an unnamed tributary near Folk to Maries River; and Maries River from the county border to Bear Creek.

