PTI-1.1: Intermittent Streams

Updated December 2022

Background

Pesticides having a greater than normal tendency to be transported off the target site may have label language that indicates they should not be applied in or near intermittent or perennial streams or impounded water. These label statements are intended to protect surface and groundwater from pesticide contamination, and are fully enforceable under the Nebraska Pesticide Act (NPA) and the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). This Technical Interpretation defines what an intermittent stream is for the purpose of administering the NPA and FIFRA. Pesticide applicators should be familiar with this interpretation before applying pesticides that have label language requiring setbacks or buffer zones for intermittent streams.

Interpretation

Intermittent Streams have flowing water during certain times of the year when seepage from perched water tables, saturated areas, or other groundwater sources provide streamflow in addition to that which occurs from melting snow or runoff from rainfall events. Runoff from rainfall is a supplemental source of water for streamflow. Intermittent streams have surface water in the channel for extended periods of time. This will normally result in a scoured or non-vegetated channel bottom. Depending on the time of year, the water may be flowing or occur in isolated pools. Drainage systems which are not fed by seepage from perched water tables, saturated areas, or other groundwater sources, and only carry water during and for a short time after precipitation events are classified as *ephemeral streams*. Ephemeral streams do not meet the definition of intermittent streams for purposes of pesticide applications and, therefore, are not subject to setbacks or buffer zones required for intermittent or perennial streams. It is important to note that some intermittent streams have been channelized and routed into roadside ditches, thus making the ditch an intermittent stream.

Any person attempting to determine if a streambed or drainage area is classified as intermittent or ephemeral should take the following into consideration:

1. Determine if there is water in the streambed or drainage. If flowing water is present, the site should be considered an intermittent stream. If there is standing water or no water present, proceed to Step 2.

2. Is the streambed or drainage classified as a “three-dot stream” by a U.S. Geological Survey (USGS) topographical map? If so, compare the site conditions to the definition criteria listed above. If not, do not automatically assume the site is not an intermittent stream. If the site in question is classified as a three-dot stream, but has no surface water or other characteristics typical of an intermittent stream, use the information below to determine the classification.

3. Useful resources to determine stream classifications are local Natural Resources District stream determinations, the Department of Natural Resources’ well registration and groundwater level databases, and topographic maps found on their Interactive Maps at dnr.nebraska.gov, or other local experts. Other resources to help reduce pesticide impacts on water resources are listed below.

Other Resources

- Nebraska Natural Resources Districts Directory (nrdnet.org).

- University of Nebraska's Guide for Weed, Disease, and Insect Management (https://marketplace.unl.edu/default/ec130.html). This document contains a considerable amount of information on herbicides and chemical properties that affect off-site movement.

- USDA NRCS's Pest Management Tools page includes information on specific practices for reducing pesticide movement, as well as the Windows Pesticide Screening Tool (WIN-PST) software, that allows users to compare pesticides using site specific conditions for off-site movement potential, and adjust their management decisions accordingly. (https://www.nrcs.usda.gov/resources/tech-tools/windows-pesticide-screening-tool-win-pst)

- Many University of Nebraska or regional Extension publications (http://extensionpubs.unl.edu/) provide information on protecting our valuable water resources from pesticide contamination. These two may also be helpful to pesticide users: Best Management Practices for Agricultural Pesticides to Protect Water Resources (G93-1182-A, bit.ly/UNLextg93-1182, and Agricultural Management Practices to Reduce Atrazine in Surface Water (G96-1299-A, bit.ly/UNLextg96-1299a)

- Recommended Atrazine BMPs for Surface Water Quality (bit.ly/NDAPPatzBMP)

- USDA NRCS Field Office Directory (http://offices.sc.egov.usda.gov/employeeDirectory/app)

- University of Nebraska Extension Office and Expertise Directory (http://extension.unl.edu)

For additional information or help with determining stream classification, you can contact the NDA's Pesticide Program:

Nebraska Department of Agriculture
Animal and Plant Health Protection
P.O. Box 94756
Lincoln, NE 68509-4756
nda.nebraska.gov/pesticide
402-471-2351

Fine Print

Title 25, Chapter 2, Nebraska Administrative Code, §010 states:
"Technical Interpretations. Pursuant to §2-2626(3)(f) of the Pesticide Act, the Department may, as it deems necessary or appropriate, issue technical interpretations that provide further guidance and policy on the use of pesticides to minimize or mitigate potential or documented negative impacts on humans or the environment." Section 010.02 states that technical interpretations shall provide guidance regarding use inconsistent with the pesticide label as set forth in 007.01D.

References to material not prepared by NDA in this document should not be considered an endorsement by NDA, nor is NDA responsible for the content of referenced material.