



Weed Control

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MEMO

TO: County Commission
FROM: Stan Wolf
Date: January 10, 2023
Subject: Spotted hemlock

The Cass County Weed Board at their November 13 meeting moved to start the process to add Spotted hemlock to the county noxious weed list. The request was forwarded to the ND Agricultural Commissioner Doug Goehring for his approval. The approval was granted on November 22, 2023. The ND Century Code provides for county and city weed boards to add certain noxious and troublesome weeds to their county or city weed lists, upon approval of the ND Ag Commissioner.

Spotted hemlock is a highly poisonous plant, all parts of the plant are poisonous. As little as 4 to 16 oz. can kill livestock, lesser amounts can cause birth defects of livestock. Handling the plants with bare skin can cause illness, even death of people. Spotted hemlock is listed as noxious in several states, including: Iowa, Minnesota, and South Dakota.

Spotted hemlock has been identified growing in various areas in the county, primarily in cattail infested areas in the Maple River watershed. Several pasture lands have some spotted hemlock though livestock do not readily graze live plants. Many road ditches are cut for livestock hay which will be a concern for livestock producers if Spotted hemlock is present. Presently about 80 acres are known to be infested. A major infestation was identified in a rural development that had a seasonal waterway in the residential backyards. Homeowners were informed of the presence of the weed and given control options. The attached map shows the areas where Spotted hemlock was identified and controlled in 2023.

Spotted Hemlock

(*Conium maculatum*)

Spotted hemlock was identified in Cass County in 2020 growing in hay meadows and several road ditches. Spotted hemlock is among the most poisonous plants in North America. Hay producers need to be aware of the plant and not harvest any plants with the hay. One or two plants can cause death of livestock. Even handling the plant with bare hands will cause severe illness.

Spotted hemlock (Poison hemlock) is native to Eurasia. It was introduced into North America as an ornamental but escaped cultivation and has become naturalized throughout much of the United States and Canada. It is found in roadsides, ditches, and waste areas with soils that tend to be wet. Cattails may grow alongside spotted hemlock. Spotted hemlock also has been found in drier soils and cropland.



Description: Spotted hemlock is a member of the Apiaceae family which includes wild carrot, wild parsnip, dill, parsley, and water hemlock. It is a biennial or perennial plant with smooth, hollow branching stems with purple spots especially near the base. The root is a simple carrot-like taproot. It has small 5-petaled flowers on an umbrella-like cluster. The leaves are delicate, like parsley, and have a white taproot. The plant including the root has a strong pungent odor (likened to mouse urine) which makes the plant generally unpalatable when fresh. The plant can grow from 2 to 10 feet tall.

Spotted hemlock is extremely poisonous, affecting cattle, horses, sheep, goats, pigs, wildlife, birds, and people. All parts of the plant are poisonous, and the effects are usually fatal. The leaves are especially poisonous in the spring, up to the time the plant flowers. Sheep may be poisoned eating as little as 4-8 ounces of green leaves. Cattle that eat 10-16 ounces may be affected. Signs of poisoning usually appear within an hour after the animal eats the plant. Death results from respiratory paralysis in 2-3 hours. Birth defects of sub-lethal amounts of spotted hemlock occur in all livestock and may include crooked legs, cleft palate, and kinked tails.

Live and fresh Spotted hemlock is generally unpalatable to livestock. Livestock can graze areas with Spotted hemlock; however, dried plants in hay or silage can be eaten and poisoning occurs. That is



why it is especially important for producers to watch for water hemlock when baling ditches and low-lying hay lands.

Control options: Small infestations can be pulled by hand being careful to remove the taproot and secondary roots. When handling wear protective clothing and gloves as all parts of the plant are poisonous. Do not burn the plants as toxins can be released in the air. Dispose by burying. Repeated mowing or cultivation can be a means of control by preventing seed formation.

Herbicides can be used, applying in the seedling or rosette plant stages. Spraying flowering or seed-bearing plants is not very effective as plants usually die after producing seeds. Herbicides such as glyphosate, 2,4-D, Method, Streamline, TerraVue, and DuraCor have been effective.

January 2021



For questions regarding identification or control options, contact:

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NDSU

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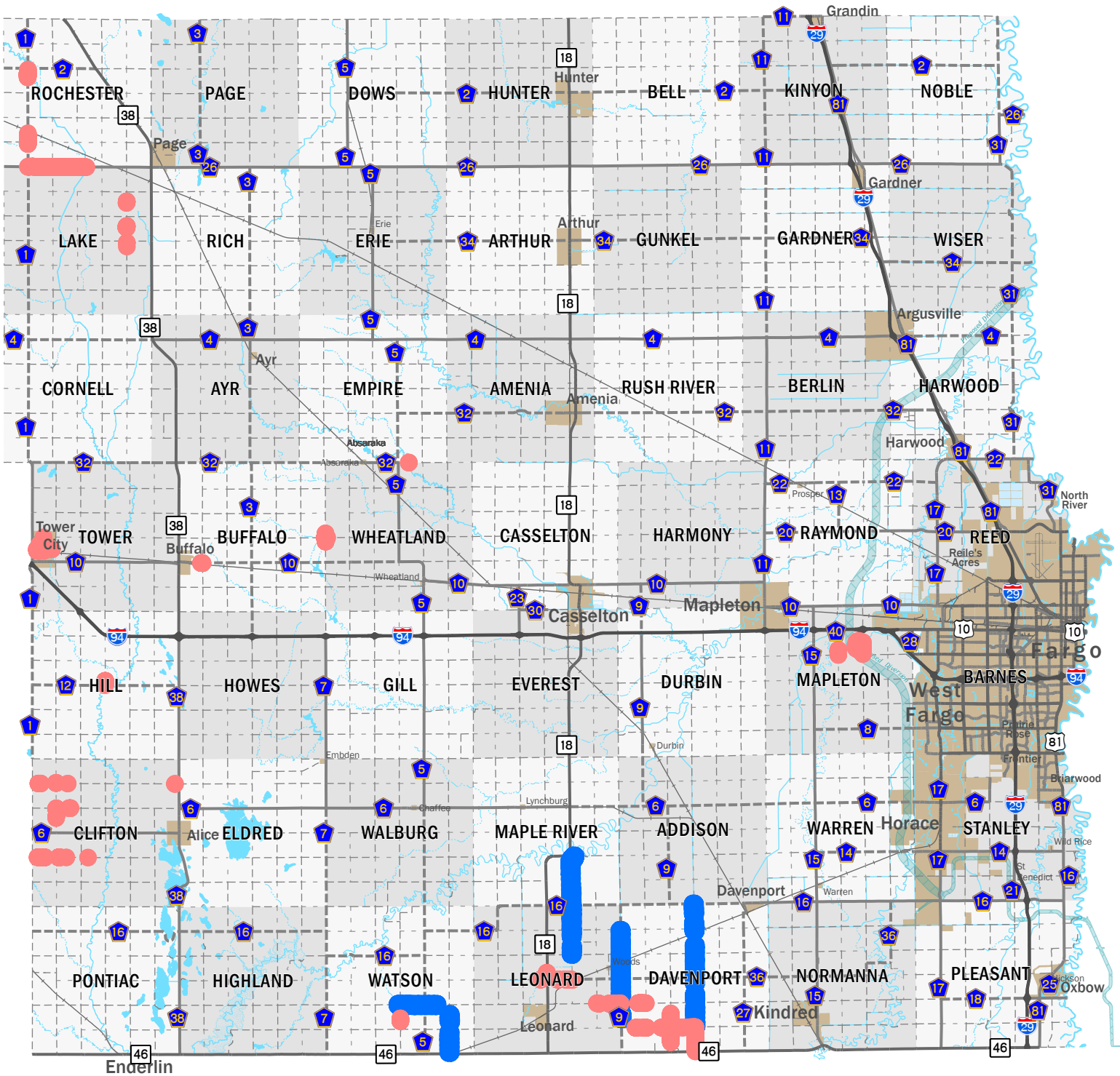
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2023 Spotted Hemlock Identified and Sprayed

Cass County Weed Control



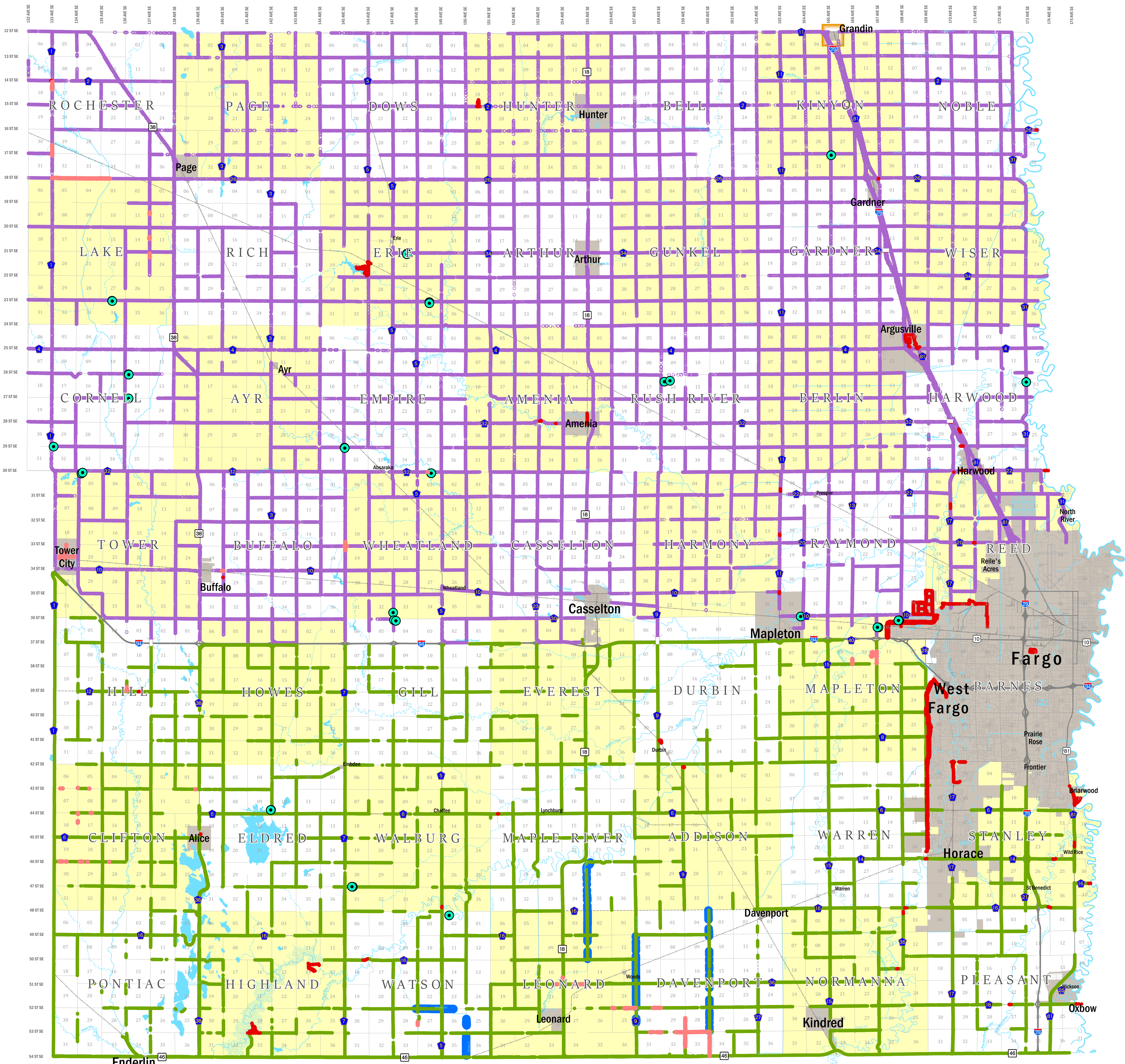
- Spotted Hemlock sprayed by Cass County staff
- Spotted Hemlock sprayed by DL Barkie - WRD

Maps and data are to be used for reference purposes only and Cass County, ND, is not responsible for any inaccuracies herein contained. No responsibility is assumed for damages or other liabilities due to the accuracy, availability, use or misuse of the information herein provided.



Cass County Weed Control

2023 Road Right-of-Way Sprayed Areas



Spray Location by Contractor

- Cass County staff
- J & J Spraying
- Walker's Lawncare

Noteable Areas

- CT Stem Mining Weevil introduced 2020, 2021, 2022
- Palmer Amaranth identified (removed by Cass County staff)
- Spotted Hemlock identified (sprayed by Cass County staff)
- Spotted Hemlock identified (sprayed by DL Barkie - WRD)