



2019 Weed Awareness

The Weed Control Authority is responsible for implementation of the Nebraska Noxious Weed Control Act throughout Lancaster County. The authority has also provided the inspection and administration of the City of Lincoln's Weed Abatement Program since entering into an interlocal agreement with the city in 1996.



444 Cherrycreek Road, Bldg. 'B', Lincoln, NE 68528 • 402-441-7817 • <http://lancaster.ne.gov/weeds>

10 Years of Growth — Not Always a Good Thing!



Mature phragmites during the growing season.



Phragmites can spread by horizontal, above-ground or above-water stolons.



Phragmites remains standing in the winter with their seed-head attached — making them easy to spot.

In most cases, we think of “growth” as a good or positive thing. Growth in our retirement is good; stock market growth makes us happy; population growth can sometimes lead to good things; when a company grows, we see it as something positive happening; but, when we see 10 years of continued growth with a noxious weed, it is **never** a good sign.

The rapid expansion of non-native phragmites has resulted in adverse ecological, economic and social impacts on the natural resources and people of Nebraska.

Phragmites *australis*, also known as common reed, became a Nebraska noxious weed on April 15, 2008. Since that time Lancaster County has been witnessing a **phragmites explosion!** The number of parcels known to have phragmites infestations grew from 71 in 2008 to 680 in 2018, resulting in an 858 percent increase over the last decade. If we continue with the same rate of growth, by the year 2028, Lancaster County would face a **full-blown epidemic** of 6,514 parcels.

Before we hit the panic button, let's take a look at how we got to this point and what the future realistically looks like. While the number of parcels infested continues to climb, most of the parcels have very small infestations that can still be eradicated. The key is learning how to identify phragmites and everyone using the best management practices available to control it.

The phragmites expansion we're seeing today would be similar to what happened in the mid-1960s and early-1970s when musk thistle was first added to Nebraska's Noxious Weed list. Records from the 1970s show there were more parcels infested with musk thistle at that time, than we have today. Once landowners recognize the

problem caused by phragmites and learn how to control it, we will start to see a reduction. It won't be easy, and it will take every landowner working together to get phragmites under control. Once this happens, our chart should level off and begin to decline.

What Is Phragmites?

Non-native phragmites, also known as common reed, is a perennial, aggressive wetland warm-season grass that out-competes native plants and displaces native animals.

How Did Phragmites Get Here?

In the early 19th century, the non-native variety, most likely European in origin, appeared in coastal ports in the

eastern United States. The rapid spread of phragmites in the 20th century was related to the construction of railroads and major roadways, habitat disturbance, wind and animals.

What Does Phragmites Look Like?

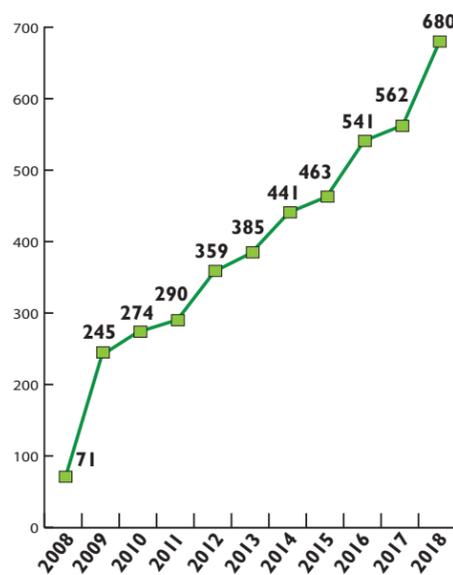
Phragmites plants range from 6 to 15 feet in height, yet 80 percent of the plant is contained below ground in a dense mass of roots and rhizomes that can penetrate the soil to a depth greater than 12 feet. In the summer, its flat, grayish-green leaves are 2–2.5 inches wide, 8–15 inches long and alternate along the stem. Phragmites

has a distinctive purple-brown seedhead with plumes appearing by late July. These feathery plumes that form at the end of stalks are 6–20 inches long and up to eight inches wide with many branches. Phragmites turns a tan color in the fall and most leaves drop off, leaving only the stalk and plume-topped shoot commonly seen throughout winter.

Why Should I Be Concerned?

Phragmites is becoming widespread throughout Lancaster County. Urban areas are just as susceptible as rural areas

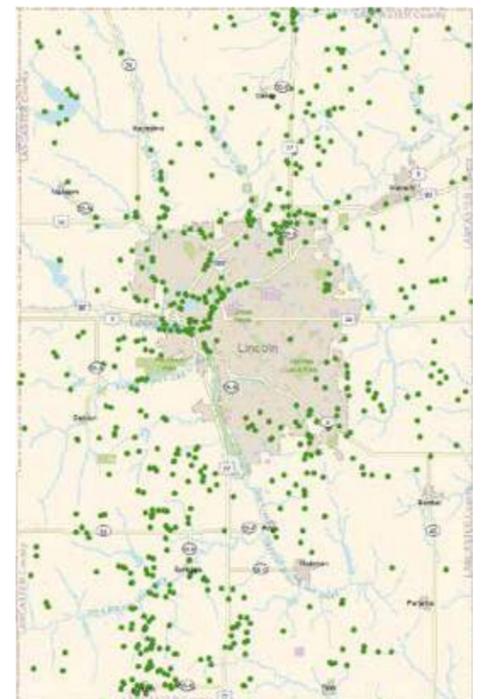
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Number of phragmites sites in Lancaster County, 2008–2018



Locations of phragmites infestations in 2008.



Locations of phragmites infestations in 2018.

Noxious Weed Spotlight: Cutleaf and Common Teasel



Common teasel (inset photo shows flowering stage)

Early Detection Rapid Response (EDRR) is the most economical way to attack invasive weeds. Getting after the problem early is the most economical way to control invasives. The longer we wait, the more expensive it will become to eradicate.

Lancaster County designated Cutleaf teasel (*Dipsacus laciniatus* L.) and Common teasel (*Dipsacus fullonum* L.) as noxious weeds in 2014. Saline County and Johnson County have since followed our lead and have designated both teasels noxious in their counties as well. This designation requires that each landowner in Lancaster,

Saline and Johnson County is responsible for controlling teasel growing on property they own or manage.

Cutleaf or common teasel has been identified in at least 17 Nebraska counties and nine states have already declared one or both teasels as noxious — Iowa, Missouri, Minnesota and Colorado being the closest.

Description

Although usually called a biennial, teasel is better described as a monocarpic perennial. The plant grows as a basal rosette for a minimum of one year until enough

resources are acquired to send up tall flowering stalks and dies after flowering. The period of time in the rosette stage varies depending on the amount of time needed to acquire enough resources for flowering to occur.

Distribution

Teasel is native to Europe. It was introduced to North America as early as the 1700s. Common teasel was introduced for use in raising the nap of cloth. Possibly, cutleaf teasel was introduced with common teasel or introduced accidentally with other plant

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WEED AWARENESS

10 Years of Growth

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for phragmites to establish. Left untreated, it will create a monoculture and crowd out all other vegetation creating a dense jungle of vegetation that native birds, furbearing mammals and even deer cannot penetrate. Phragmites will eliminate natural refuge and feeding grounds for invertebrates, fish and waterfowl as well as limit recreation values for birdwatchers, walkers, naturalists, boaters and hunters.

In some cases, it will close off flowing water and create flooding potential. The tender-dry vegetation left in the fall creates the potential for fast-spreading fire that can threaten surrounding areas including homes and buildings.

How Does Phragmites Spread?

Phragmites can be spread by wind or water dispersal of seeds or by intentional introduction by people. Each mature plant can produce as many as 2,000 seeds annually. Seed viability tests performed by the State of Nebraska Seed Lab showed 75 percent viable seed from mature heads collected in Lancaster County.

Most commonly however, phragmites spreads by horizontal above-ground stolons and underground rhizomes. (Stolons grow from an existing stem and are thin, horizontal structures that grow above-ground, sprouting new plants. Rhizomes are underground horizontal stems that also send out roots and shoots to start new plants). Stolons can grow dozens of feet annually and new plants can sprout at nodes located every few inches along the stolon.

Rhizomes, which create thick underground mats, can expand at the rate of 30 feet per year, with new plants sprouting all along the rhizome. In addition, rhizomes broken by natural actions, such as waves, water current in streams or man-made actions — such as dredging or disking — readily root down in new locations. Maintenance equipment used in a wetland with phragmites must be carefully cleaned to avoid transporting phragmites to new locations; it only takes a small piece of rhizome to start new plants.

Phragmites has also been unintentionally introduced by people planting it as a garden ornamental, using it for floral displays or camouflage for duck blinds. Even phragmites that appears to be dead is likely to have viable seeds and rhizomes.

Is There Anything Good About Phragmites?

Uses and values: It is readily eaten by cattle and horses when it is immature. Seeds are eaten by waterfowl, and the rhizomes and stems are eaten by muskrats. Redwing blackbirds preferentially nest in common reed. However, this is also how the plant is spread from one location to another.

Historical: Pieces of the stems were used to make pen points in early America. Some Native Americans used common reed for thatching, mats and arrow shafts. Rhizomes were used as emergency food.

How Can We Control the Spread of Phragmites?

Phragmites control requires a commitment to an integrated and long-term management approach. The easiest way to control phragmites is to begin a control program as soon as it is observed on your property, before the plants become well

established. Few techniques are fully effective when used alone, and reinvasion by phragmites is likely when the management strategy is not maintained.

To achieve desired results, herbicides must be used in conjunction with mechanical methods or burning, and re-applied in subsequent years to spot-treat individual plants or patches of plants not completely eliminated in the first application. University of Nebraska's Guide for Weed Management list herbicide control options as:

- Aquatic glyphosate at 96-120 ounces per acre + surfactant.
- Imazapyr at 2-4 pints per acre + surfactant.
- Apply during the growing season before flower or in the fall before frost.

Use only herbicides labeled for aquatic sites when applying in and around water and wetlands. Always read and follow the label directions for proper use.

Will My Phragmites Come Back Once I've Treated?

Large, dense phragmites stands will likely require follow-up spot treatments, and phragmites will continue to re-establish from remnant and neighboring populations, as well as the existing seedbank. Phragmites typically begins to recover two to three years after treatment and will become re-established unless follow-up annual maintenance occurs, including spot treatment with herbicides. Scout the area several times during the late summer and into the fall looking for any sign of regrowth. Re-treat any phragmites you find re-sprouting. This will likely take several years and you will need to be persistent in order to continue to weaken the root structure.

How Can I Learn More About Phragmites?

Contact the Lancaster Weed Control Authority office for assistance in developing a management plan. Visit our website <http://lancaster.ne.gov/weeds> and click on the link for the "Landowners Guide for Controlling Phragmites."

Teasel

from previous page
material from Europe. Teasel has spread rapidly in the last 20-30 years, spreading from Canada to the northeast United States and now moving southward and is beginning to show up more abundantly in Nebraska.

Teasel has colonized many areas along interstates. Common teasel sometimes is used as a horticultural plant, which has aided in expansion of its North American range. In particular, the use of teasel in flower arrangements has aided its dispersal, especially to cemeteries.

Habitat

Teasel grows in open, sunny habitats such as roadsides and pastures. It prefers disturbed areas, but can invade high-quality areas such as prairies, savannas, seeps and sedge meadows. Lack of natural enemies allows teasel to proliferate. If left unchecked, teasel quickly can form large monocultures excluding all native vegetation.

Life History

A single teasel plant can produce more than 2,000 seeds. Depending on conditions, up to 30-80 percent of the seeds will germinate, so each plant can produce many offspring. Seeds also can remain viable for at least 2-5 years. Seeds typically don't disperse far; most seedlings are located around the parent plant. Parent plants often provide an optimal nursery site for new teasel plants after the adult dies. Dead adult plants leave a relatively large area of bare ground, formerly occupied by their own basal leaves that new plants readily occupy.

Seeds have the capacity to be water-dispersed, which may allow seeds to be dispersed over longer distances. Immature seedheads of teasel are capable of producing viable seed.

Identification

Root: Taproot up to 2 feet long.

Rosettes: Both rosettes are similar when small. As they get bigger the cutleaf leaves are more deeply lobed than the common.

Height: Cutleaf teasel typically grows taller than common. Cutleaf grows up to 8 feet while common may reach 6 feet tall.

Leaves: The leaves of cutleaf teasel are deeply lobed and prominently fused toward the bases, forming cups that may hold water. Common teasel leaves are oblong and taper to a point. In both species the leaves are opposite, stemless and prickly, especially on the lower midrib.

Bracts: The bracts on the cutleaf are shorter, more leaf-like around the base of the seedhead, the common bracts are usually thinner and extend up past the seedhead.

Flower: Cutleaf usually has white flowers and will flower from July to September while the common has lilac to lavender flowers and will flower from April to September.

Impacts

Both teasels form large, dense stands that choke out desirable plant species. This can reduce forage, wildlife habitat and species diversity. Teasel is not eaten by livestock and has no forage value. Because of the thorny nature of the plant, livestock avoid the areas where teasel grows.

Prevention and Management

Do not plant teasels or intentionally move soil, including soil adhered to recreational vehicles or lawn/garden equipment, containing seed of this species. Do not use seedheads in floral arrangements.

Infested sites will need to be monitored and treated repeatedly until the seedbank is depleted. Teasel seedbanks

remain viable for a relatively short time, 2-5 years. With diligent control, eradication may be feasible within this time frame.

Hand pulling and digging are management options for small infestations, but the large, fleshy taproots are difficult to remove. Flowers and seedheads will need to be bagged and disposed.

This species also responds favorably to annual herbicide treatments. The University of Nebraska Guide For Weed Management (EC-130) recommends treatment at the rosette stage in the fall or early spring. The three different treatment options are:

- 2,4-D 4# Amine at 32 ounces per acre.
- Garlon 3A at 3-4 pints per acre.
- Overdrive at 4-8 ounces per acre.

Always read and follow the label directions.

Biological control is not a management option at this time, but is in development.

Failed or Ineffective Practices

Mowing is ineffective because the root crown will re-sprout and flower after being cut. Even repeated mowing is ineffective. Repeated mowing will stop some plants from flowering, but others will produce short, flowering stems that may be short enough to be below the height of the mower. Plants knocked over by a mower and not cut off will lie horizontally and produce short, flowering stalks below the height of the mower.

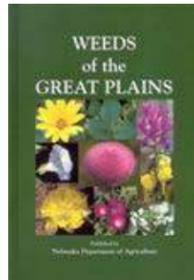
Prescribed burning alone is ineffective. Prescribed burning may kill some of the isolated small seedlings, but is ineffective against dense seedlings or large rosettes.

Hidden Word Find

Responsible landowners take pride in their management efforts to control weeds in order to protect our environment. Sometimes the greatest challenge is to understand how invaders spread, the groups involved in treating them and tools they use.

Find the words in the puzzle and send your completed form to Lancaster County Weed Control for your chance to win the "Weeds of the Great Plains" book published by Nebraska Department of Agriculture. **All entries must be postmarked by April 15.**

If your name is drawn, the book will be mailed to you. This information will not be used to contact you with any other offer.



Enter drawing to win:

Name _____

Address _____

City/State/Zip _____

Send completed word find to: Lancaster County Weed Control, Weed Book Drawing, 444 Cherrycreek Rd., Bldg. B, Lincoln, NE 68528

Annual
Biennial
Canada thistle
Common Teasel

Cutleaf Teasel
Diffuse Knapweed
Giant Knotweed
Herbicide

Introduced
Invasive
Japanese Knotweed
Lancaster

Leafy spurge
Mapping
Musk thistle
Noxious weeds

Perennial
Phragmites
Plumeless thistle
Purple loosestrife

Saltcedar
Sericea lespedeza
Spotted Knapweed
Weed watcher

W P I C O M M O N T E A S E L P N A L
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J T C I R N M A P P I N G R B E U O N
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Nebraska's Noxious Weeds

It is the duty of each person who owns or controls land to effectively control noxious weeds on such land.

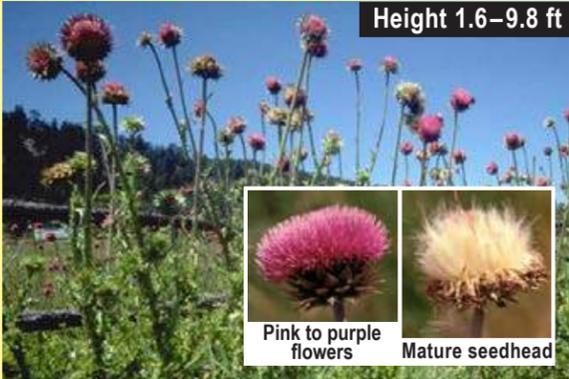
Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.

The Director of Agriculture establishes which plants are noxious. These non-native plants compete aggressively with desirable plants and vegetation. Failure to control noxious weeds in this state is a serious problem which is detrimental to the production of crops and livestock, and to the welfare of residents of this state. Noxious weeds may also devalue land and reduce tax revenue.



Musk Thistle

Height 1.6–9.8 ft



Pink to purple flowers

Mature seedhead

Canada Thistle

Height 1–3.9 ft



Pink to purple flowers

Plumeless Thistle

Height 1–4.9 ft



Purple flowers

Phragmites

Height 3.2–20 ft

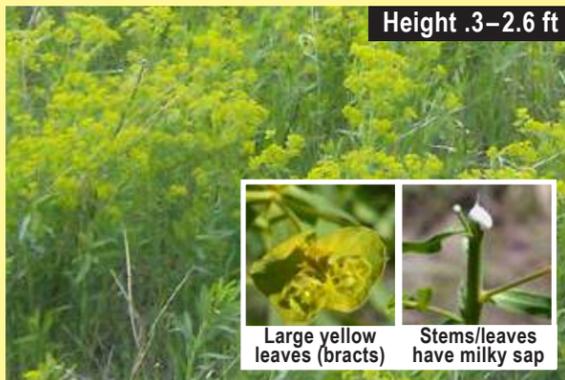


Young seedhead

Mature seedhead

Leafy Spurge

Height .3–2.6 ft



Large yellow leaves (bracts)

Stems/leaves have milky sap

Sericea Lespedeza

Height 1.5–6.5 ft



White or cream to yellowish white flowers

Japanese Knotweed

Height 3–10 ft



Creamy white to greenish white flowers

Giant Knotweed

Height 8–13 ft



Creamy white to greenish white flowers

Purple Loosestrife

Height 1.3–8 ft



Purple to magenta flowers

Saltcedar

Height 3.3–20 ft



Pink to white flowers

Spotted Knapweed

Height 1–3.9 ft



Lavender to purple flowers

Diffuse Knapweed

Height 1–3.9 ft



White/purplish flowers

Lancaster County's Noxious Weeds

Cutleaf Teasel

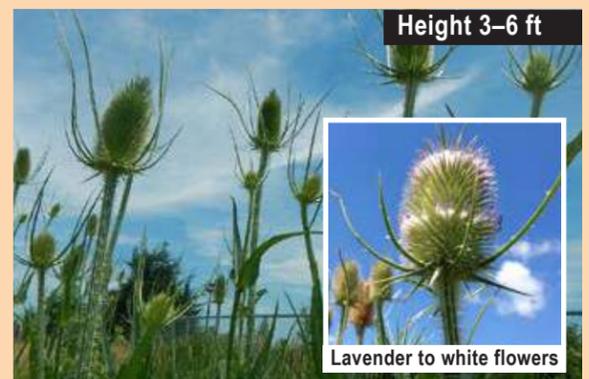
Height 4–8 ft



White flowers

Common Teasel

Height 3–6 ft



Lavender to white flowers

Good neighbors control noxious weeds — If you have questions or concerns about noxious weeds, please contact your local county noxious weed control authority, Nebraska Weed Control Association (www.neweed.org) or Nebraska Department of Agriculture.

WEED AWARENESS

The County Commissioners serve as the Lancaster County Weed Control Authority. Currently Brent Meyer serves as the superintendent and supervises a seasonal staff of six weed inspectors with the assistance of Chief Inspector Pat Dugan and Account Clerk Danni McGown.

2018 Annual Review

The Lancaster County Noxious Weed Control Authority serves the citizens of Lancaster County to protect effectively against designated noxious weeds which constitute a present threat to the continued economic and environmental value of lands in Lancaster County. Our office implements the mandates of the State of Nebraska Noxious Weed Control Act — known as Title 25, Chapter 10 — by setting forth management objectives and plans, methods or practices which utilize a variety of techniques for the integrated management of noxious weeds. In establishing a coordinated program for the integrated management of noxious weeds, it is the Weed Control Authority's intent to encourage and require all appropriate and available management methods, while promoting those methods which are the most environmentally benign and which are practical and economically feasible.

Noxious Weed Program

The Weed Control Authority utilizes a three-phase program to assist landowners in reducing the number of noxious weed infested acres in the county.

1: Prevent the development of new noxious and invasive weed infestations — Prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Integrated weed management includes identifying the pathways of how weeds spread, preventing encroachment onto land that is not infested, detecting and eradicating new weed introductions, containing large-scale infestations using an integrated approach and often re-vegetation.

2: Provide education and public outreach on noxious and invasive weed control — The public is generally not aware of the economic and environmental impacts of noxious weeds. There is a need to improve awareness of noxious and invasive weeds, providing educational information to cooperators, land managers and the public. As people become more aware of noxious and invasive weeds, the probability of detecting them is greatly increased, which allows for more effective and timely control.

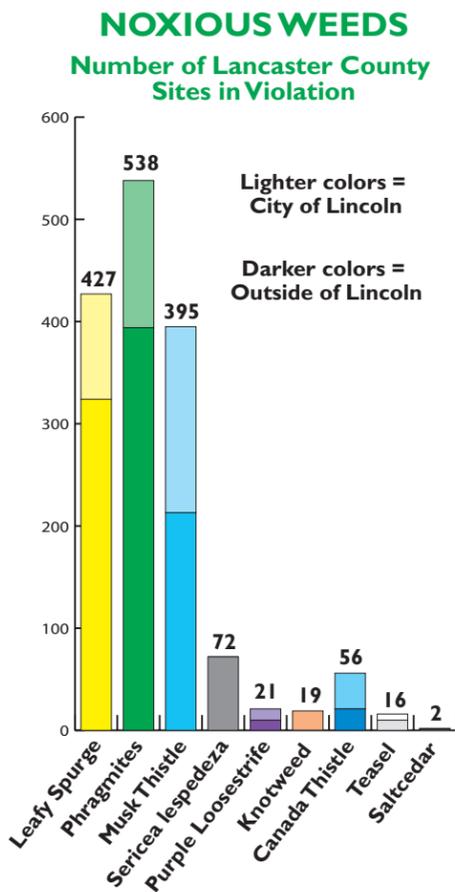
Education and awareness assist:

- Weed identification
- Reporting new infestations
- Prevention
- Control
- Fostering cooperation and partnerships

3: Provide for ongoing management of State of Nebraska-mandated noxious weeds — Noxious weed management is the systematic approach to minimize noxious weed impacts and optimize intended land use. It is very important for all infested areas to be treated with effective methods. Integrated management is a program of noxious weed control that properly implements a variety of coordinated control methods. Types of control methods include mechanical, cultural, chemical and biological. Integrated management greatly improves the success rate for your weed control plan. All noxious weed management must be applied and evaluated over an extended period of time to be successful.

Today's noxious weeds aren't your regular "run of the mill" variety and need to be managed differently. We are seeing a time where weeds are becoming chemical resistant and our global trade moves products around the world more rapidly, allowing new invasives to take root in Nebraska. As the times change, we need to constantly update our management efforts to meet today's challenges.

Lancaster County Noxious Weed Authority is focused on being the education and outreach resource for the residents in



our county. Our staff is constantly trained on the latest management tools of today's invasives and we are always working on ways to help our landowners with the latest techniques to protect their property. Think of Lancaster Weed Control Authority as your "Lancaster County Protective Property Management Division" — helping citizens manage invasive weeds more efficiently and effectively!

The Weed Control Authority is charged with enforcing the State of Nebraska Noxious Weed Control Act when a landowner fails to control noxious weeds on property they own. This is necessary to protect neighbors from having noxious weeds spread to their property and potentially devaluing their land.

Noxious Weeds in County Roadsides

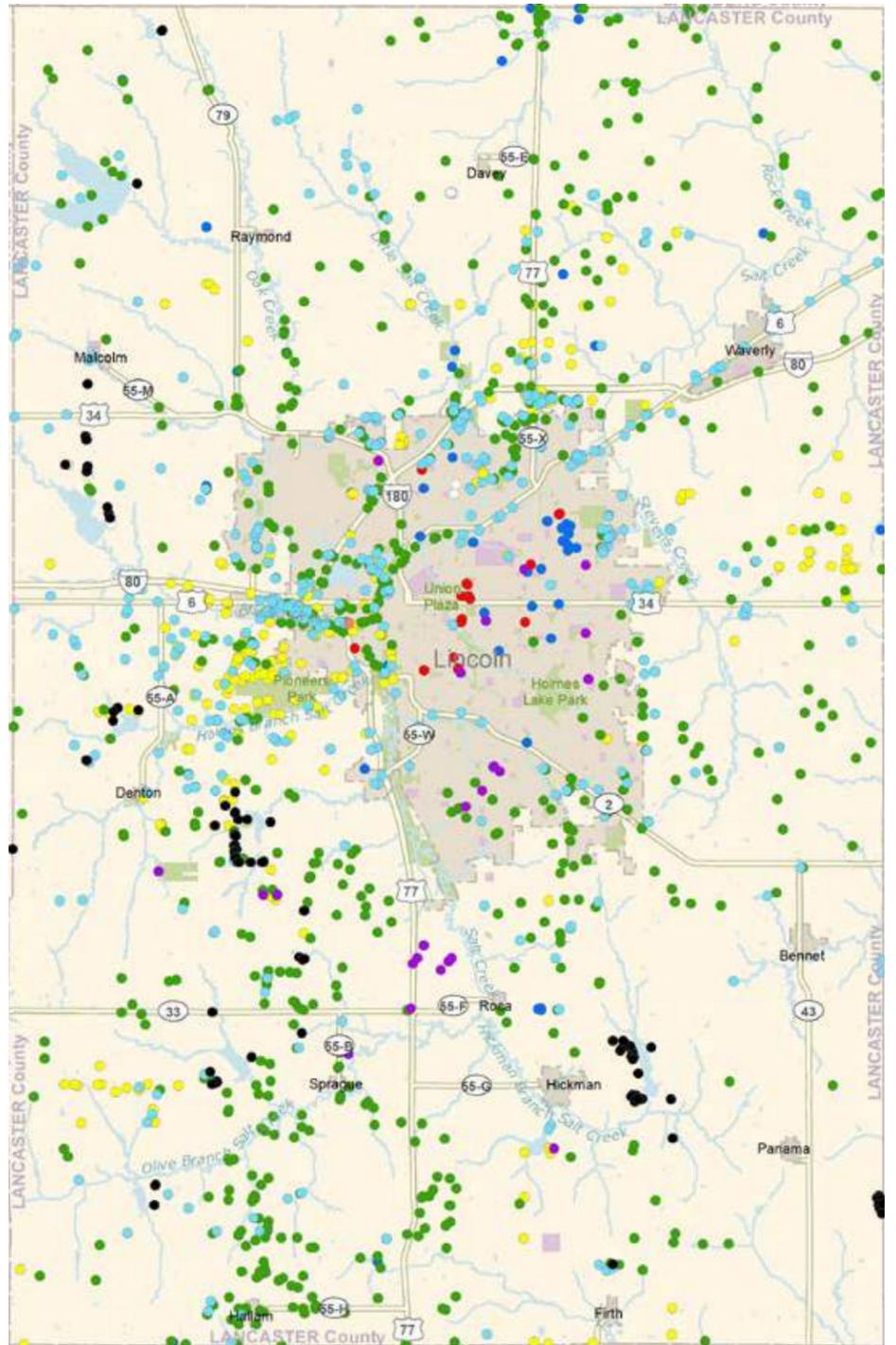
Landowners are encouraged to control noxious weeds along property they own. If not controlled by the adjacent owner, Lancaster County Weed Control will control the perennial noxious weeds such as phragmites, sericea lespedeza and leafy spurge in the county roadsides. A GPS point is recorded for each noxious weed location, making it very easy to find when the time is right to do the application.

Lancaster County works closely with landowners with specialty crops and offers free-of-charge "No Spray Zone" signs when an agreement is signed. The agreement requires the landowner to control all the noxious weeds in their adjacent right of way.

City of Lincoln Weed Abatement Program

Lancaster County Weed Control Authority is responsible to carry out the administration of the City of Lincoln's Weed Abatement program since entering into an interlocal agreement with the city in 1996.

The City of Lincoln's Weed Abatement Ordinance 8.46 requires landowners within city limits to maintain the height of weeds and worthless vegetation below six inches. This includes all areas to the center of the street and/or alley that adjoins their property. Three seasonal inspectors assist in administering this program. The seasonal employees complete inspections based on pre-selected properties due to their history,



Lancaster County Noxious Weeds

- | | | |
|----------------|----------------------|------------------|
| ● Musk thistle | ● Sericea lespedeza | ● Canada thistle |
| ● Phragmites | ● Purple loosestrife | ● Saltcedar |
| ● Leafy spurge | ● Knotweed | ○ Teasel |

complaints from the public that are received in our office and by observing severe yards while conducting other inspections.

In 2018, the Weed Control Authority received 2,246 complaints from the public and additional 449 properties were observed as having violations. Our office made 5,891 initial and follow-up inspections on 2,695 sites.

When a property is found to be in violation, the owner of record is notified with a legal notice sent by certified U.S. mail to the last known legal address obtained from the Lancaster County Assessor's office. If the property remains uncontrolled at the expiration of the legal notice, the Weed Control Authority will hire a contractor to cut the property. Our office

carried out enforcement on 183 properties in 2018. Landowners are responsible to pay the cost of control plus an administrative fee. If the cost of control remains unpaid, a lien is placed against the property until paid.

City Landfills

The Weed Control Authority is responsible for managing noxious weeds at the 48th Street and the Bluff Road landfills. Presently, we treat the infestations of musk thistle and leafy spurge at both landfills, and phragmites at the 48th Street landfill. The landfills are annually inspected and mapped prior to treatment. This helps to keep track of the spread of noxious weeds and the effectiveness of the control.

Lancaster County Abandoned Cemeteries

Mowing and general maintenance on six abandoned cemeteries throughout the county falls under the supervision of the Weed Control Authority. Cemeteries included are the County Poor Farm, Dietz, Evangelical, Highland Precinct, Jordan and Uphoff.

Special recognition goes to the following volunteers:

- Lincoln Tree Service for tree trimming and removal.
- Dave Miller for mowing Jordan.
- Terry Briley for mowing Evangelical.
- Clark Liesveld and Boy Scouts of America Troop 64 for mowing Dietz.
- Troy Henning for mowing Highland Precinct and Uphoff.



A property in violation of the City of Lincoln's Weed Abatement Ordinance.