



# 2017 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>

## The Problems of Invasive Weeds

**PAT DUGAN**  
Chief Inspector

To maintain their health and productivity, landscapes must be protected from the threat of invasive weeds. Many people are unaware invasive weeds pose a very real environmental threat. When weeds are mentioned, they think of the dandelions in their lawn or the weeds in their vegetable gardens. But some weeds are so competitive once they get started in an area, they can completely dominate the vegetation to the point that more desirable plant species are no longer present. Many of us have encountered large infestations of such weeds without even realizing what we were seeing.

Generally speaking, weeds are plants growing out of place or where they are not wanted. In such situations, weeds can actually reduce the value of the land. We often refer to the really aggressive weeds as "invasive" weeds. These weeds have become common in many areas because they grow vigorously and are competitive. They out-compete other species for light, water, nutrients and space.

Invasive weeds spread rapidly to dominate a site and are extremely difficult to control. They are generally non-native species from Europe or Asia brought to North America. As extreme competitors, they sometimes form dense monocultures, or areas where they completely dominate, and are the only plants growing. Because they reproduce very rapidly, are well adapted to a wide range of environments and are very difficult to control, they are an economic and ecological threat. Some invasive weeds have been legally defined as "noxious" by Nebraska state law, which describes noxious weeds as "detrimental or destructive and difficult to control or eradicate." What makes these weeds so

terrible that people spend much time, energy and money trying to get rid of them? It is because invasive weeds cause several problems; they

- crowd out desirable vegetation,
- cause crop and forage losses,
- reduce property values,
- ruin otherwise good wildlife habitat,
- cause problems in streams and wetlands
- become rangeland fire hazards, and
- spread to neighboring properties.

Some invasive weeds can poison or injure livestock and humans, and some weeds grow in such dense stands, they interfere with recreation. For example, Phragmites, with its massive root structure, can grow in such dense stands a fisherman or wildlife has a difficult time walking to the creek. Noxious weeds are having a severely negative effect on habitat and water flow across Nebraska, reducing usable habitat areas, reducing water flow channelizing river systems and tributaries.

Phragmites is a perfect example of such an invader. Infestation numbers continue to escalate throughout the circulation area of this publication, as well as across the state. In our region, the habitat they prefer to get started are field drainages, lagoons, ponds, creeks and river banks. This plant appears non-threatening as it gets established out in the middle of a corn or bean field drainage area, it's an expert at being out of sight under and along tree canopies or it blends right in with companions, such as cattail, then exploding outward before the landowner knows they are there. By this time, the spark is now a raging fire and a good management plan is a must.

The costs of weed control to taxpayers and landowners are both direct and indirect. First, property owners who must control invasive weeds will incur out-of-

*see Invasive Weeds on next page*



Phragmites small infestation in 2013



Phragmites spreading infestation in 2016

## Facts About the Fast Spread of Phragmites

**BRENT MEYER**  
Weed Control Superintendent

If you ever thought you could take a year or two off and your phragmites wouldn't spread, think again! During our annual survey of Salt Creek, we spotted a patch of phragmites just over the tree line in a wetland we now refer to as "Spider Island." When the crew spotted "a patch," it turned out to be several patches, and when compared to the aerial image from 2013 (image on the left), the original small infestation had grown quite large in 2016 (image on the right) in only three years.

One of the things that

makes phragmites, also called common reed (*phragmites australis*), so difficult to manage is its ability to spread in a variety of ways. One of the ways we commonly think of a plant spreading is by seed. This is true and our seed test at the Nebraska Department of Agriculture Seed Lab shows most the seed heads we tested had at least 70 percent viable seed.

Phragmites is a perennial plant, which means it comes back year after year from roots or rhizomes. This allows the patch to continue to increase, even if it didn't produce viable seed.

Phragmites will also reproduce by sending out

stolons. These are above-ground or above-water roots that quickly spread across a sandbar, river edge or any surface in its path. They send down additional roots and can produce a new plant about every 10 inches. A single stolon can grow up to 30 feet long in just one season. This allows the patch to grow above ground or water, even if it isn't producing seed or spreading by rhizomes.

Awareness of all the methods in which phragmites can spread is especially important when in a moving water system such as a creek, stream or river:

- Moving water can carry the seeds downstream.
- The roots/rhizomes when broken off, can wash up to shore and begin a new patch, while the stolons will also break off and begin new plant growth.
- Phragmites can produce a new plant at every leaf node. So if the plant falls over or washes downstream, it has the ability to survive.

With so many different ways of spreading, phragmites is, by far, one of the most difficult invasive plants we work to control in Nebraska.



View of phragmites on "spider island" showing stolons growing on the water surface

## Invasive Plants Watch List

The following are plant species considered invasive to Nebraska. Several currently pose a threat to Nebraska's native plant communities, some have potential to cause impacts. Complete lists can be found on the Nebraska Invasive Species Program website at <http://neinvasives.com>



Sulphur Cinquefoil



Caucasian Bluestem



Hoary Cress



Wild Parsnip



St. Johnswort



Houndstongue



Garlic Mustard

# WEED AWARENESS

## INVASIVE WEEDS

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pocket expenditures for labor, herbicides and often the revegetation necessary to effectively exclude weeds. Second, until noxious weeds are controlled, their presence results in damages and costs in the form of forfeited benefits, due to lost land uses and value as previously described. (e.g., livestock grazing, wildlife habitat, outdoor recreation, etc.)

Furthermore, because of the explosive growth potential of invasive weeds, the cost of control multiplies rapidly over time. A failure to act immediately when a weed invasion is first documented will cost the landowner proportionately a larger sum of money as time goes by.

Some ecologists think the spread of noxious weeds may become one of the greatest environmental disasters in North America. These non-natives are spreading at an explosive rate, considered by some, to be the equivalent of a “biological wildfire.” Scientists estimate that in parts of the West, weed-infested acreages may be increasing between 15 and 24 annually.

Some weed species have gone from infesting just a few acres in the 1960s to contaminating hundreds of thousands, even millions, of acres today. On land administered by the Bureau of Land Management (BLM), more than 8 million acres are currently dominated by invasive weeds, compared to 2.5 million acres in 1985. Nationwide, 4,600 acres of wildlife habitat on public land are being lost **daily** to invasive weeds. There is certainly reason to be concerned. An understanding of weed classification and biology is the first step in battling these invasive species.

Preventing or reducing undesirable impacts of non-native invasive plants is a difficult challenge facing all land managers. Non-native invasive plants impact landscapes across the U.S. through changes in the structure, composition and successional pathways of native plant communities. They are estimated to be spreading at the rate of about 1.7 million acres per year. The impact to the U.S. economy is believed to exceed 30 billion dollars annually.

## Not All Thistles Are Bad



**Musk thistle (non-native and noxious)**



**Tall thistle (native)**

### BRENT MEYER

*Weed Control Superintendent*

Thistles, in general, get a bad rap whenever the word “thistle” is mentioned. However, not all thistles are bad for the environment or agriculture. Did you know there are ten thistles identified in Nebraska? Five of these occurred in North America before settlement by Europeans. The other five were brought to the U.S. by various means and are considered “non-native” or “introduced” thistles.

Of the non-native thistles, three are considered “noxious” and required by state law to be controlled by the landowner:

- musk thistle
- plumeless thistle
- Canada thistle

Canada thistle has been on the Noxious Weed List since 1873. Landowners and homeowners realized this plant was a serious problem and needed to be controlled. It wasn’t until 1959 when the rapid infestation rate of musk thistle brought out the public concern of thistles in Nebraska.

Thistles found in Lancaster County NOT considered noxious and control is not required are:

- wavyleaf thistle
- bull thistle
- tall thistle

Some of the other thistles found across Nebraska that are NOT noxious include:

- Platte thistle
- flodman thistle
- yellowspine thistle
- Scotch thistle

The following counties have added some localized, problematic thistles as a county added noxious weed. These are not on the statewide Noxious Weed List:

- bull thistle — Rock County
- scotch thistle — Banner, Box Butte, Cheyenne, Dawes, Morrill, Kimball, Scotts Bluff, Sheridan and Sioux Counties.

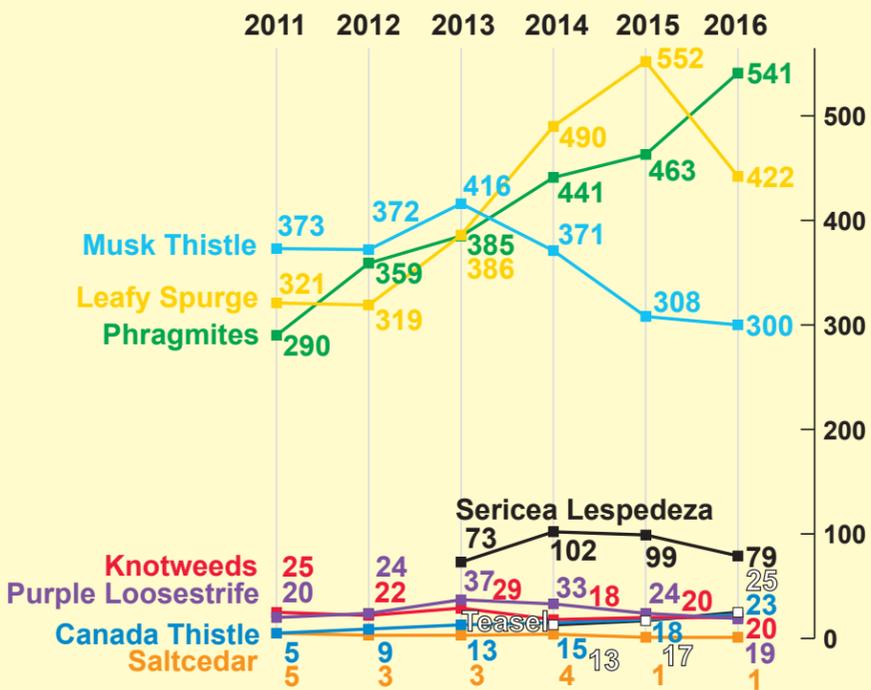
Control methods vary from one thistle to another. Some may be controlled by mechanical methods and others may require herbicide applications. Several control measures should be used at the same time to improve results.

Proper pasture management is the most cost effective and productive of all control measures. This involves improved grass stands and rotational grazing to ensure healthy forage for livestock. Proper pasture management also improves water quality and wildlife habitat.

Biological control is another tool, but it should never be the only control measure utilized. It needs to be incorporated with other control measures to ensure success. Herbicides have been used for many years. They can be effective, but application timing is critical to receive optimum control.

*Source: “The Thistles of Nebraska” by the Nebraska Department of Agriculture/Nebraska Weed Control Association*

## Lancaster County Noxious Weed Infestations 2011–2016

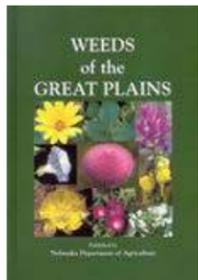


## Weed Crossword

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 17.**

*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.*



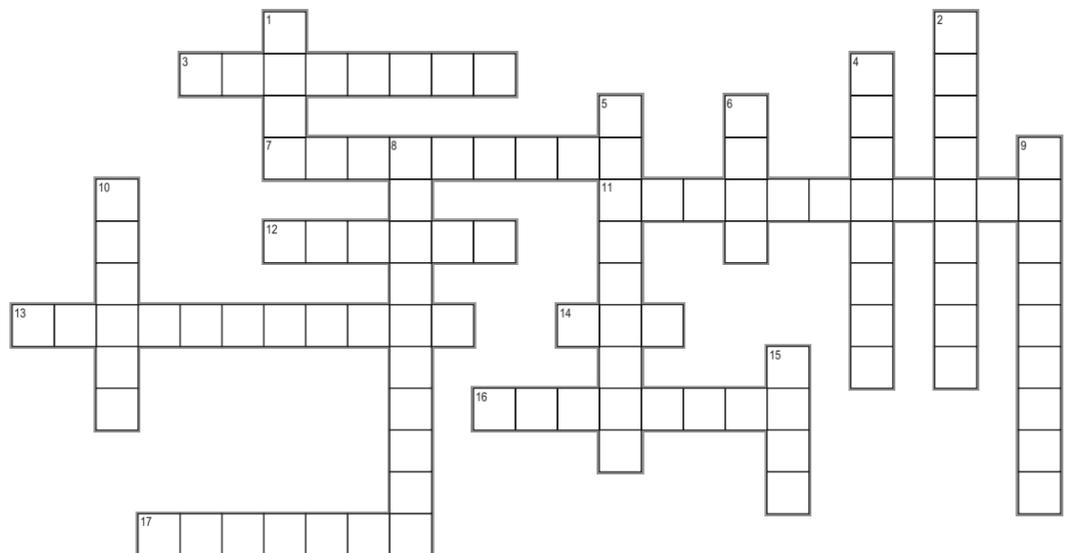
Enter drawing to win:

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



### ACROSS

- Includes spotted and diffuse (noxious)
- Sericea \_\_\_\_\_ is a perennial legume (noxious)
- Purple \_\_\_\_\_ was originally sold as an ornamental (noxious)
- Leafy \_\_\_\_\_ can reduce pasture capacity up to 75% (noxious)
- Stop invasive species in your tracks (name of educational campaign)
- Number of thistle species in Nebraska
- Aggressive, non-native weeds
- Destructive or harmful weeds — control is required by law

### DOWN

- This native thistle is beneficial to pollinators (not noxious)
- Chemically controls plants
- Includes Giant, Japanese and hybrid Bohemian (noxious)
- A mature tree can use up to 200 gallons of water per day (noxious)
- Most reported thistle in Lancaster County (noxious)
- This perennial grass is a major weed species in Nebraska wetlands (noxious)
- Good \_\_\_\_\_ control noxious weeds
- Many landowners consider this most difficult thistle to control (noxious)
- A plant out of place

# Nebraska's Noxious Weeds

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

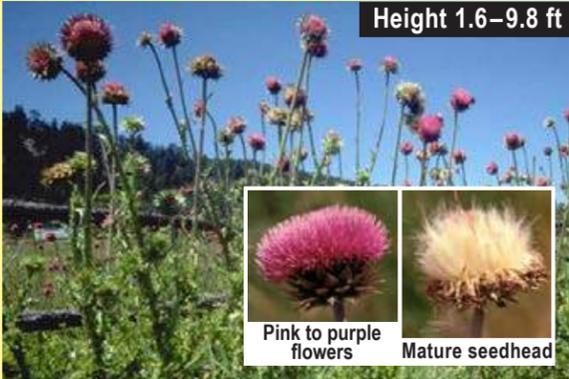
**Noxious weed is a legal term used to denote a destructive or harmful weed for the purpose of regulation.**

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

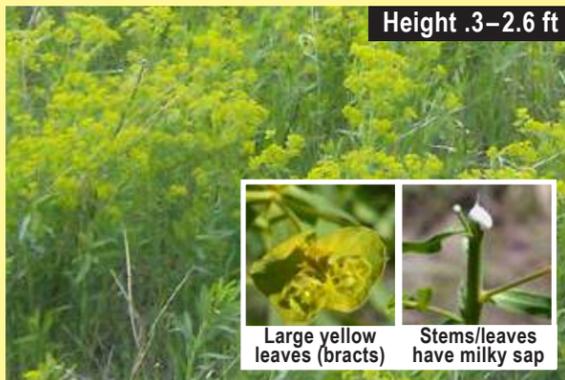


Young seedhead

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

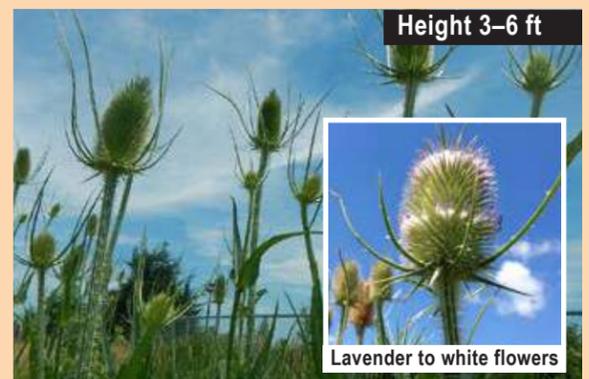
Height 4–8 ft



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](http://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 Jasmine Slezak.

## 2016 Annual Review

Lancaster County Weed Control Authority's purpose is to educate the public concerning noxious weeds, exercise the necessary authority to obtain effective control of noxious weeds county-wide, educate the public concerning weed abatement and to exercise the necessary authority to cut and clear overgrown weeds and worthless vegetation in the City of Lincoln. We accomplish this by:

- educating the landowners of Lancaster County about the legal requirements and benefits of controlling noxious weeds,
- providing information to the citizens of Lincoln about the legal requirements and benefits of cutting and clearing overgrown weeds and worthless vegetation,
- efficiently and effectively exercising authority when necessary to obtain acceptable noxious weed and weed abatement control and
- improving efficiency and effectiveness of operations through management techniques.

### Noxious Weed Program

Lancaster County Weed Control office 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 weed infestations** — Prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Integrated weed management includes preventing encroachment into land not infested, identifying the pathways in which weeds are spread, 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 weeds and to provide educational information to cooperators, land managers and the public. As people become more aware of noxious 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.

### Noxious Weed Overview

No piece of land is safe from noxious weeds. They are found wherever they are able to establish a root system. In 2016, our inspectors documented 1,430 sites infested with noxious weeds, 432 of those sites were located within city limits. Due to their introduction as ornamentals, saltcedar, purple loosestrife and knotweed are more commonly found in the city than rural areas in Lancaster County. In order to prevent the spread of noxious weeds, an aggressive management plan is required on all noxious weed sites no matter where they are found.

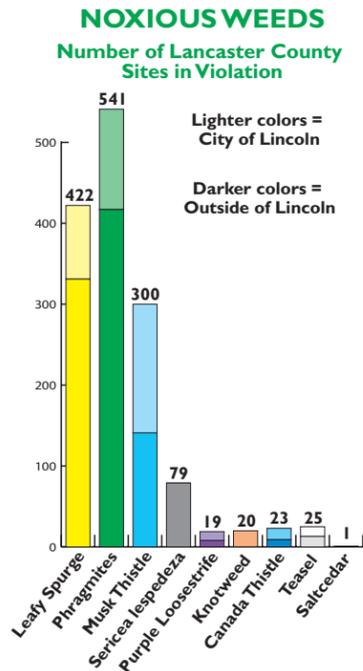
**Musk Thistle** — Musk thistle is a commonly-reported noxious weed due to its easily-identifiable bright rose-purple colored head. The key to successful musk thistle control is to prevent seed production. A total of 772 inspections were made on 423 sites. There were 300 sites found to be in violation amounting to 670 acres infested. Legal action was taken on two parcels, resulting in landowners paying \$895 in control cost.

**Phragmites** — Our inspectors continue to find new infestations of phragmites throughout Lancaster County. Phragmites is an aggressive perennial grass and immediate action is required to keep this noxious weed under control. In 2016, we identified 541 sites infested with phragmites, resulting in a 16.8 percent increase from the previous year.

**Leafy Spurge** — Leafy spurge seems to sneak up on us in the spring. It can be very easy to detect when the grasses are still trying to grow. Leafy spurge continues to be very difficult to control and requires multiple years of management. In 2016, we made 894 inspections and found 422 infestations. Our office conducted four enforcements on leafy spurge to bring infestations under control.

**Purple Loosestrife** — Purple Loosestrife is the best noxious weed success story in Lancaster County. Wild purple loosestrife is found in Lincoln city limits as well as rural Lancaster County. Most commonly, purple loosestrife is found as ornamental plantings within the Lincoln city limits. Purple loosestrife was added to the State Noxious Weed list in 2001 and, at the time, we had identified 490 locations. In 2016, our infestation totaled only 19 sites of ornamental or wild purple loosestrife.

**Knotweed** — The majority of knotweed found in Lancaster County is the ornamental variety. The key to successfully eradicating knotweed is to



educate the landowners about the impact knotweed can have on the environment and on proper control methods. In 2016, there were 20 known sites of knotweed in Lancaster County, only six of those are found in the wild.

**Canada thistle** — Canada thistle continues to increase in Lancaster County. Currently, we have 23 known infestations in the county and city. Canada thistle, typically known as a row crop problem, is being transported with nursery root stock and is commonly showing up in landscaping around trees and shrubs.

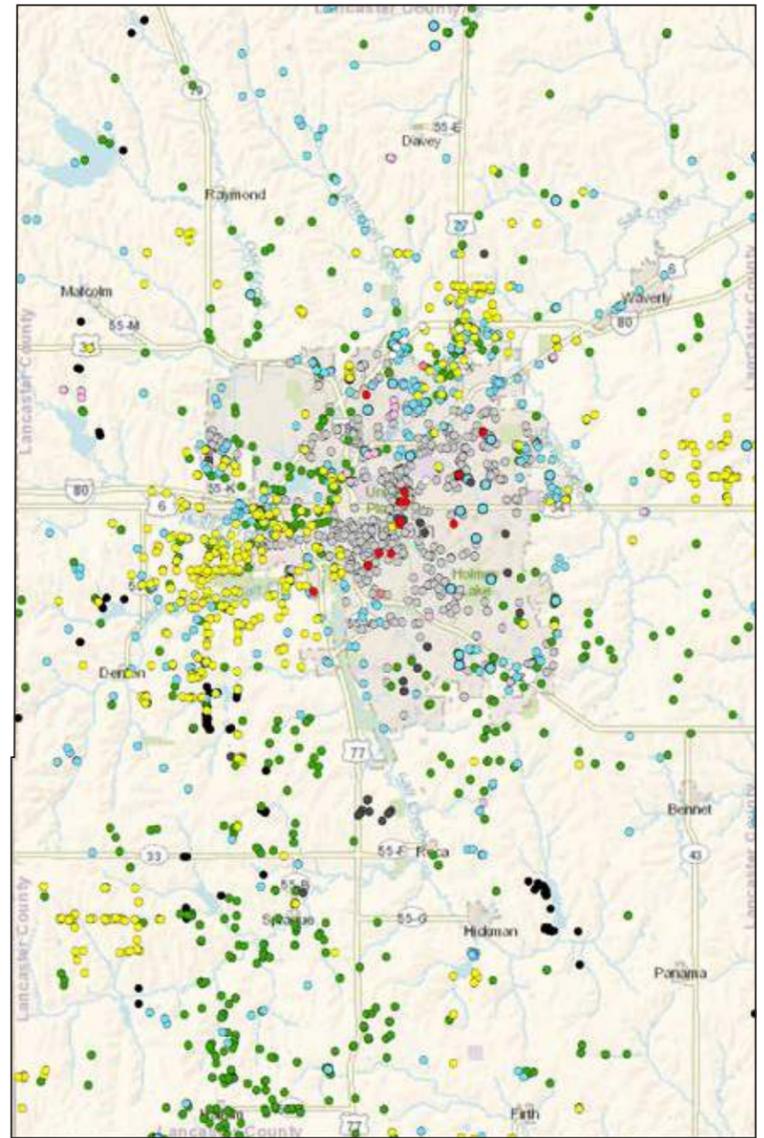
**Saltcedar** — Currently, Lancaster County has one uncontrolled infestation of saltcedar. This low number is due to Early Detection-Rapid Response (EDRR). Saltcedar, a deciduous shrub/small tree which grows along streams or wetlands, was identified early on as having the potential to cause problems and action was taken to eradicate it.

**Sericea lespedeza** — Sericea lespedeza is generally a rangeland problem and is commonly found within one mile of wildlife management areas since it was introduced into those sites years ago. It is also found in other areas including some CRP fields. In 2016, our inspectors found 79 sites infested, totaling 136 acres.

**Teasel** — In July 2014, cutleaf and common teasel were added to the Lancaster County Noxious Weed List. Our inspectors found 25 infestations in 2016. While we continue to find new infestations, our office is hopeful Early Detection-Rapid Response (EDRR) will be effective with this plant. We will continue to target teasel in 2017 to ensure it does not spread.

### Noxious Weeds in County Roadsides

Landowners are encouraged to control noxious weeds along property they own. If not controlled by the owner, Lancaster County Weed Control will control the perennial noxious weeds such as phragmites, sericea lespedeza and leafy spurge in the county roadsides. Our inspectors are now using GPS to mark the locations, providing this information to our contractor to treat the locations.



### Lancaster County Noxious Weeds

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

### City of Lincoln Weed Abatement

- Weeds & worthless vegetation above 6"

Since beginning this process in 2014, we are seeing better control while saving the county money. 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

The City of Lincoln Weed Abatement Ordinance 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, complaints from the public that are received in our office and by observing severe yards while conducting other inspections.

In 2016, our office received 1,760 complaints from the public and additional 1,131 properties were observed as having violations. Our office made 6,210 initial and follow-up inspections on 2,891 sites. Properties not in compliance were notified of the violations 896 times by posting the property, mailed 996 letters, 920 legal notices, 455 reminder letters and 64 personal contacts. Landowners cut 2,633 sites and forced cutting was contracted on 258 sites.

Landowners are responsible to pay the cost of control plus an administrative fee. A lien is placed against the property until the bill is paid.

### City Landfills

The Weed Control Authority is responsible for managing noxious weeds at the 48th Street landfill and the Bluff Road landfill. Presently, we deal with musk thistle and leafy spurge at both landfills and phragmites at the 48th Street landfill. The landfills are annually inspected and mapped. This helps to keep track of the spread of noxious weeds and the effectiveness of the control. Maps are provided to a contractor to complete the control work and follow-up inspections are completed.

### 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
- Boy Scouts of America Troop 64 for mowing Dietz
- Troy Henning for mowing Highland & Uphoff