

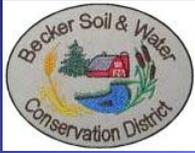
**MINNESOTA'S NEW NOXIOUS
WEED LAW
&
INVASIVE SPECIES RESOURCES
OCTOBER 25, 2011**

Prepared by
Marsha Watland
Becker County Agriculture Inspector



Cooperative Weed Management Area

Partnership/Steering Committee



Brad Grant
Marsha Watland



Anthony Cortilet



Rick Hoium
Brad Wenz



Dennis Redig



Brad Green



Rhett Johnson



Brian Torgusson
Dave Johnson



Ed Muscielewicz



Monica Zachey



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Louanne Brooks



Ryan Frohling



Scott Ohnoutka



Nathan Peterson



Dawn Kier



Kathy Stenger
Ric Jasken



Howard Kluender
Gary Thompson

Invasive Weed Species in Becker

- ◆ Crown Vetch
- ◆ Houndstongue
- ◆ Leafy Spurge
- ◆ Spotted Knapweed
- ◆ Common Tansy
- ◆ Wild Parsnip
- ◆ Buckthorn

Impact of Invasive Weeds

- ◆ Timber industry
- ◆ Agriculture reduction in yield & nutrients in soil
- ◆ Recreational activities such as fishing, hunting, hiking, wildlife viewing, water-based recreation.
- ◆ Health impacts
- ◆ Toxic to animals
- ◆ Phytophotodermatitis to skin
- ◆ Native Plant Sites

How Weeds Are Spread

- ◆ Human Introduction: ex. shoes of hikers
- ◆ Animals and seeds carried with them
- ◆ Animals and plants released through the pet trade
- ◆ Stowed away on every type of transport vehicle
- ◆ Livestock feed, hay used as mulch and contaminated crop seeds
- ◆ Gravel
- ◆ Road Maintenance
- ◆ Water, wind and fire



COMMISSIONER'S ORDER FOR NOXIOUS WEED LISTING AND APPROVAL

Pursuant to the authority vested in me, under Minnesota Statutes, Chapters 18.79, Subd. 13 and 18.91, Subds. 1 and 3, I hereby authorize the designation of the following noxious weed listing categories and their respective plants as noxious weeds and specially regulated plants in the state of Minnesota.

Prohibited Noxious Weeds

Eradicate List

Common Name	Genus	Species
Yellow Starthistle	<i>Centaurea</i>	<i>solstitialis</i> L.
Grecian Foxglove	<i>Digitalis</i>	<i>lanata</i> Ehrh.
Oriental Bittersweet	<i>Celastrus</i>	<i>orbiculatus</i> Thunb.

Control List

Common Name	Genus	Species
Purple Loosestrife	<i>Lythrum</i>	<i>salicaria</i> (L.)
Garlic Mustard	<i>Alliaria</i>	<i>petiolata</i> (M. Bieb.) Cavara & Grande
Leafy Spurge	<i>Euphorbia</i>	<i>esula</i> (L.)
Canada Thistle	<i>Cirsium</i>	<i>arvense</i> (L.) Scop.
Musk Thistle	<i>Carduus</i>	<i>nutans</i> (L.)
Plumeless Thistle	<i>Carduus</i>	<i>acanthoides</i> (L.)
Wild Parsnip	<i>Pastinaca</i>	<i>sativa</i> L.
Common Tansy	<i>Tanacetum</i>	<i>vulgare</i> L.
Spotted Knapweed	<i>Centaurea</i>	<i>stoebe</i> L. ssp. <i>micranthos</i> (Gugler) Hayek

Restricted Noxious Weeds

Common Name	Genus	Species
Common or European Buckthorn	<i>Rhamnus</i>	<i>cathartica</i> (L.)
Glossy Buckthorn (& all cultivars)	<i>Frangula</i>	<i>alnus</i> Mill.

Specially Regulated Plants

Common Name	Genus	Species	Restrictions
Poison Ivy	<i>Toxicodendron</i>	<i>radicans</i> (L.) Kuntze	Must be eradicated for public safety along rights-of-way, trails, public accesses, business properties open to the public or on parts of lands where public access for business or commerce is granted. Must also be eradicated along property boarders when requested by adjoining landowners.

3/10/11
Date


Dave Frederickson, Commissioner
Department of Agriculture

Signed Order
from
Commissioner
of Agriculture
for
Noxious Weed
Listing
March 2011

Minnesota Noxious Weed Law

- ◆ MN Statutes 18.75 – 18.91 (formerly 18.75 – 18.88)
- ◆ In 2009, the MN Legislature completed a major revision of the statutes
- ◆ Three sections were added
- ◆ 18.89 – Noxious Weed and Invasive Species Account
- ◆ 18.90 – Grant Program
- ◆ 18.91 – Advisory Committee; Membership
- ◆
- ◆ The MN Noxious Weed Law applies to ALL persons owning land in the State
- ◆ There are no exemptions!
- ◆ It is the policy of the legislature that residents of the state be protected from the injurious effects of noxious weeds on public health, the environment, public roads, crops, livestock, and other property. Sections 18.76 to 18.91 contain procedures for controlling and eradicating noxious weeds on all lands within the State.
- ◆ *Minnesota Statute 18.75*

8.81 Duties of Inspectors

- ◆ The county agricultural inspector or county-designated employee SHALL be responsible for 1) the enforcement provisions under sections 18.78, 18.82, 18.83, 18.84, 18.86 & 18.87 and 2) provide a point of contact within the county for noxious weeds
 - ◆ *The county board can specify other duties in an annual work plan.*
- ◆ A local weed inspector SHALL
 - ◆ 1) examine all land, including highways, roads, alleys, and public ground in the territory over which their jurisdiction extends to ascertain if section 18.78 and related rules have been complied with,
 - ◆ 2) see that the control or eradication of noxious weeds is carried out, and
 - ◆ 3) issue permits for the transportation of materials or equipment infested with noxious weed propagating parts when appropriate



6/7/2011 Eagle View Twp Tour
Spotted Knapweed Seedhead Weevils

photo by Marsha Wetland BSWCD



7/26/2011 CAI Shortcourse Training
Weed Inspection on Grass Test Plots

photo by Marsha Wetland BSWCD

Ag Inspector Responsibilities



3/17/2011
Becker County Annual
Township Weed Training



7/26/2011 Seed Inspection
Lake of the Woods CAI Tour

photo by Marsha Wetland BSWCD

6/9/2011
Weed Complaint



Prohibited Noxious Weeds

Eradicate List	Control List
Yellow Starthistle	Purple Loosestrife
Oriental Bittersweet	Garlic Mustard
Grecian Foxglove	Leafy Spurge
	Canada Thistle
	Musk Thistle
	Plumeless Thistle
	Wild Parsnip
	Common Tansy
	Spotted Knapweed

Restricted Noxious Weeds

- Common or European Buckthorn
- Glossy Buckthorn (& all cultivars)

Specially Regulated Plants

Poison Ivy

Non-Regulated Species of Concern

Wild Carrot

Becker County Noxious Weeds

Absinthe Wormwood

Hoary Alyssum

Houndstongue

Prohibited - Eradicate Noxious Weeds

Yellow Starthistle – *Centaurea solstitialis*



Annual – 1 – 3 ft tall

Many branched stems, leaves are covered with a cottony wool giving the plant a blue-green color appearance

Basal leaves are 2-6 inches long and deeply lobed upper leaves are shorter and narrow with few lobes

Yellow flowers with distinct sharp spines on the bracts

Highly Invasive! Contact MDA if Found

Reproduces by seed

Prohibited - Eradicate Noxious Weeds

Grecian Foxglove – *Digitalis lanata*



Perennial – 2 - 5 ft tall – rosette first year, bolts 2nd and subsequent years

Flowers form in elongated clusters at the top of reddish colored stems

Flowers are tubular in appearance, white to pale yellow with brownish venation inside

Flowering stems are covered with woolly hairs

Leaves are simple, alternate, oblong, with pointed tips

Reproduces by seed

Even the ingestion of small amounts by humans can be fatal particularly for children. Symptoms of digitalis poisoning include nausea, vomiting, severe headache, dilated pupils, problems with eyesight, and convulsions at the worst level of toxicity. The plant is also harmful to animals as well, not just humans.



Prohibited - Eradicate Noxious Weeds

Oriental Bittersweet – *Celastrus orbiculatus*



- Perennial – Woody vine that grows up to 70 ft
- Leaves are alternate, oblong to almost round, 2- 5 in. long by 1.5 – 4 inches wide, edges with rounded teeth
- Separate male and female plants
- Flowers occur in clusters of 2-7 in the leaf axils
- Flowers produce green fruits that turn bright red with distinctive yellow capsules in the fall
- Reproduces by seeds and roots

State Prohibited Noxious Weeds

Control List

- ◆ Purple Loosestrife *Lythrum salicaria* (L.)
- ◆ Garlic Mustard *Alliaria petiolata* (Bieb.)
- ◆ Spotted Knapweed *Centaurea stoebe* L.
- ◆ Leafy Spurge *Euphorbia esula* (L.)
- ◆ Wild Parsnip *Pastinaca sativa* L.
- ◆ Common Tansy *Tanacetum vulgare* L.
- ◆ Canada Thistle *Cirsium arvense* (L.) Scop.
- ◆ Musk Thistle *Carduus nutans* (L.)
- ◆ Plumeless Thistle *Carduus acanthoides* (L.)

Prohibited - Control Noxious Weeds

Purple Loosestrife – *Lythrum salicaria*



Perennial – 3 to 7 feet tall

Lance-shaped leaves with large showy purple flower spikes

Found primarily along river/streams, lake shores, wet roadsides, and wetlands

Reproduces by seed and fragments of roots or stems

Prohibited - Control Noxious Weeds

Garlic Mustard - *Alliaria petiolata*



Biennial – 12 to 36 inches tall

Only plant of this height in wooded landscapes during May with 4-petal white blooms

Crushed heart-shaped leaves/stems have strong garlic odor

Reproduces by seed

Prohibited - Control Noxious Weeds

Designated Invasive Weeds of Becker County

Spotted Knapweed – *Centaurea stoebe*



Biennial (or short-term perennial)– 3 to 5 feet Tall

Erect/stout/branched stems

Upper leaves alternate, are linear and not lobed.
basal leaves are deeply lobed

Purple flowers develop at the end of branched
stems from June – August.

Stiff bracts on flowers are tipped with black fringes
giving the flower a spotted appearance

Reproduces by seed



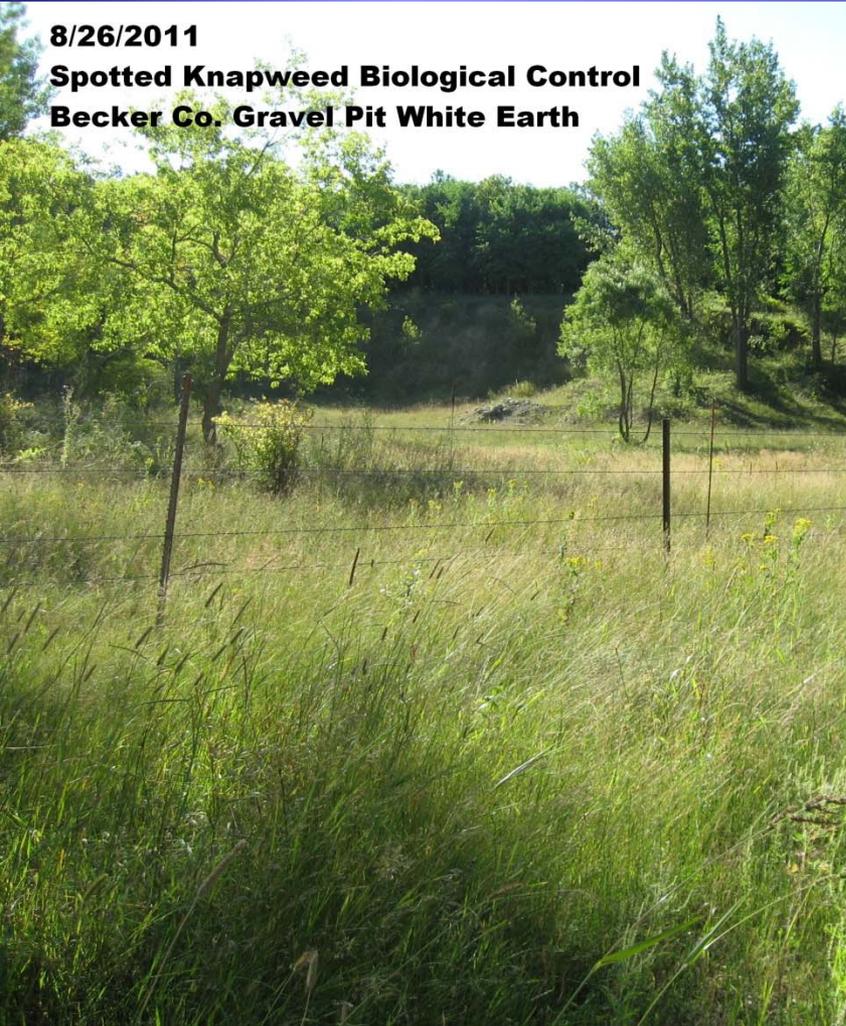


Spotted Knapweed Rosette
11/1/2007

Spotted Knapweed White Earth Twp Gravel Pit

8/26/2011

**Spotted Knapweed Biological Control
Becker Co. Gravel Pit White Earth**



8/25/2009
White Earth Gravel Pit
Weevils 2008

8/6/2008
Ford Gravel Pit

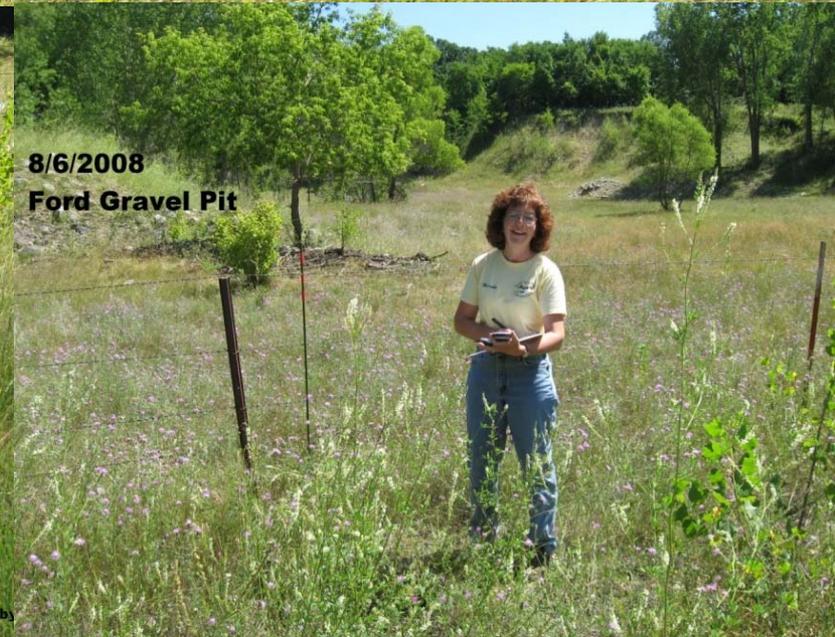


photo by

7/20/2011
Spotted Knapweed Biological Control
Both Seedhead and Root Weevil



Photo By Marsha Watland BSWCD

7/20/2011
Spotted Knapweed Biologic



photo by Marsha Watland BSWCD

**8/31/2011 Spotted
Knapweed Biocontrol along
State Highway 34**



9/30/2008



Spotted Knapweed
Test Site 9
7/24/2007



Spotted Knapweed
Test Site 9



10/26/2007 Spotted Knapweed Herbicide Damage
Control Assessment 10/15/07 at 1:00pm
Temp: 55 F
Wind: 3 to 4 p.h.



Spotted Knapweed
9/18/2007

9/1/2009
Osage TWp
Treated Ditches





9/1/2009
HWY 34 East of Osage

by Marsha Watland

by Marsha Watland

**11/3/2008 Nelson Seed Treatment Site
Treated for Spotted Knapweed 9/12/08 with Overdrive**

**11/20/2009
Nelson Site/Spotted Knapweed Treatment
Native Grasse Planting**



Becker Co. Ag. Inspector



**Photo by Marsha Watland
BSWCD**



**9/22/2010 3:07
Nelson Reclamation Site
Cool Season Native Grass Planting**

**Photo by Marsha Watland
BSWCD**



**9/2/2011
Nelson Native Planting**

photo by Marsha Watland

11/4/2009
CWMA Site
Spotted Knapweed



11/4/2009



11/20/2009



**BSWCD
M J Watland**

**BSWCD
M J Watland**

3/30/2010

Spotted Knapweed CWMA Site Burlington



**3/30/2010 Spotted Knapweed Test Site
Burlington Township
Native Grass Seed Planting**



photo by Marsha Watland BSWCD

5/17/2011
Spotted Knapweed Site
Native Grass Planting



photo by Marsha Watland BSWCD

Prohibited - Control Noxious Weeds

Designated Invasive Weeds of Becker County

Leafy Spurge – *Euphorbia esula*



Perennial – 2 to 3 feet tall

Injured leaves and stems exude white sap

Yellow-green flowers surrounded by paired, heart-shaped bracts

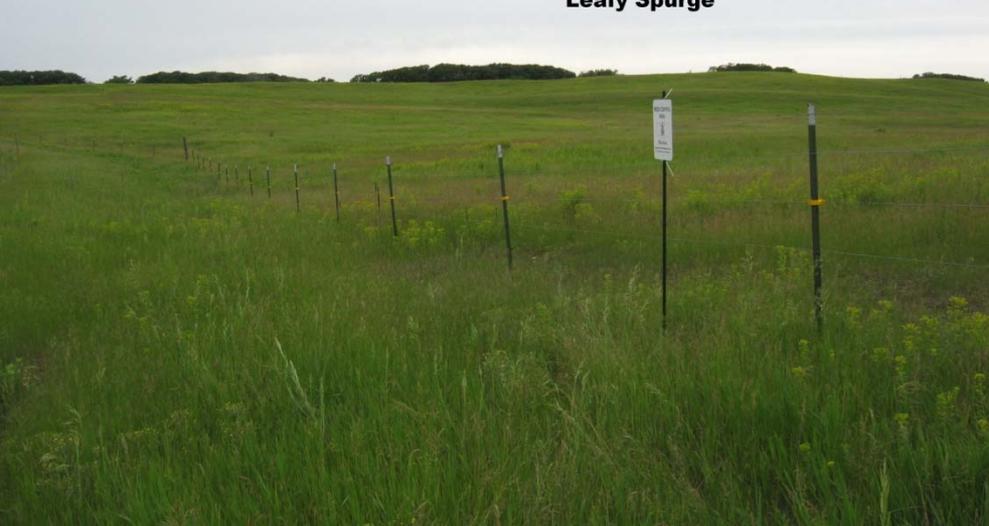
Reproduces by seed, lateral roots, and root fragments

Leafy Spurge Biological Control

7/10/2008 4:16:14 AM



6/24/2009
Cormorant Twp
Leafy Spurge



7/8/2009
Leafy Spurge Beetle Collection
Cormorant Twp

Prohibited - Control Noxious Weeds

Designated Invasive Weeds of Becker County

Wild Parsnip – *Pastinaca sativa*



Biennial – 3 - 5 feet tall

Erect, stout, hollow stems with alternate compound leaves

Yellow flowers in a distinctive terminal umbel

Compounds in plant can cause severe skin burns

Reproduces by seed

Wild Parsnip



Wild Parsnip





Wild Parsnip
Audubon Twp
8/21/2007

Designated Invasive Weeds of Becker County

Wild Parsnip





9/15/2011 11:50am
Wild Parsnip
Seedlings

photo by Marsha Watland

**10/3/2007 Wild Parsnip
Fall Rosestte**



8/22/2007
Highway 10
August 1
Treatment



Wild Parsnip
7/19/2007



Wild Parsnip
July 19, 2007
Highway 10 Becker Co.

7/22/2009
Hwy 10

Alaska

Water Sports
CENTRAL!
South on Hwy 59 • Then 5 Miles

8/22/2007
Highway 10
August 1
Treatment

Antique
Mall
70%
OFF
5.5 MILES AHEAD ON RIGHT

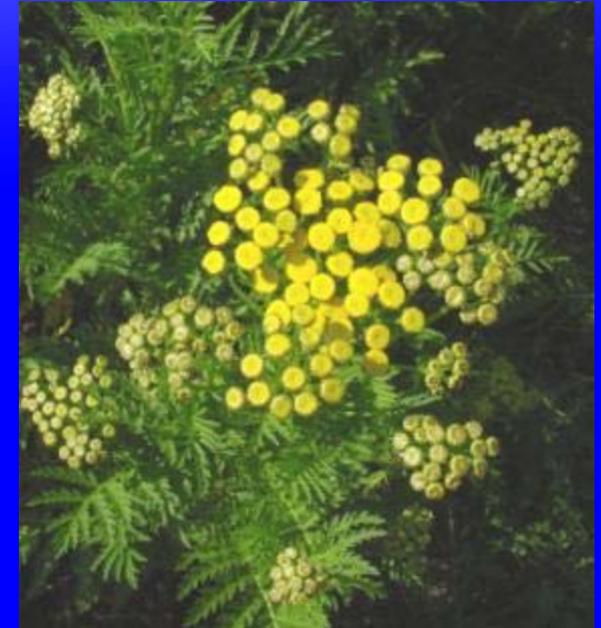
Two Great Stores One Location
Sally Krieger
ART GALLERY
PREMIER LOCAL ARTISTS

Wild Parsnip Treatment

Prohibited - Control Noxious Weeds

Designated Invasive Weeds of Becker County

Common Tansy - *Tanacetum vulgare*



Perennial – 2 - 5 feet tall

Alternate leaves that are divided into numerous narrow – toothed segments (fern like)

Yellow button-like flowers in flat-topped clusters

Reproduces by seed and rootstalks

Tansy Site Round Lake Township



Prohibited - Control Noxious Weeds

Canada Thistle – *Cirsium arvense*



Perennial – 2 to 5 feet tall

New plants emerge as rosettes

Numerous small pinkish flowers on upper stems

Flower buds are small, tear drop-shaped, and lack spines

Smooth stems lack spines

Leaf edges are wavy/lobed with many spines

Reproduces by seeds and roots

Prohibited - Control Noxious Weeds

Musk Thistle – *Carduus nutans*



Biennial (rosette year 1, bolted year 2) – 2 to 7 feet tall

Leaves are dark green with light green midrib and are deeply lobed with spiny edges

Stems are branched and covered with spiny winged leaflets

Flowers are large (3 inch dia.), deep pink to rose in color, and surrounded by stout/pointed leaf-like bracts

Flowers are borne on long-smooth solitary stalks and tend to nod or droop (sometimes called nodding thistle)

Reproduces by seed

Prohibited - Control Noxious Weeds

Plumeless Thistle – *Carduus acanthoides*



Biennial (rosette year 1, bolted year 2) – 2 to 7 feet tall

Stems are branched and heavily covered with spiny winged leaflets

Leaves are wavy, deeply lobed, and edges are covered with yellow spines

Flowers are small (1 – 2 inches dia.), pink/rose in color, and surrounded by many spiny bracts

Reproduces by seed



Restricted Noxious Weeds

Designated Invasive Weeds of Becker County

European or Common Buckthorn

Rhamnus cathartica



Perennial shrub/tree – up to 25 feet tall

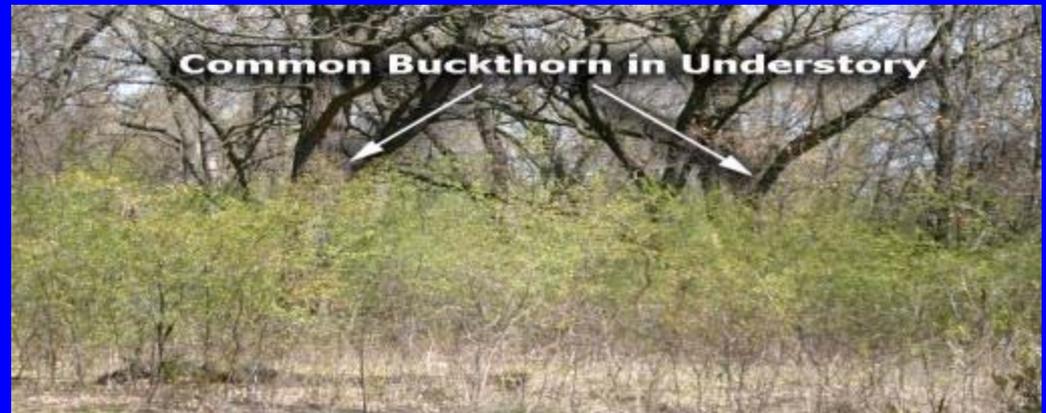
Leaves dark glossy green, smooth, oval, and finely toothed (stay green late into fall)

Leaf veins curve toward tip of leaf

Produces many small dark blue/black berries

Twigs grey with pale lenticels, spine tipped

Reproduces by seed, cut stumps will resprout



Restricted Noxious Weeds

Designated Invasive Weeds of Becker County

Glossy or Alder Buckthorn

Frangula alnus, Rhamnus Frangula, and all cultivars



(similar to common buckthorn in appearance)

Perennial shrub/tree – up to 20 feet tall

Leaves glossy green on upper surface and may be fuzzy underneath, mostly oval; edges are untoothed and slightly wavy (stay green late into fall)

Twigs hairy, with pale lenticels, not spine tipped

Produces many small red to dark purple berries

Reproduces by seed, cut stumps can resprout



Specially Regulated Plants

Poison Ivy – *Toxicodendron radicans*



Perennial – 1- 3 ft tall, woody vine

Compound leaves with 3 distinct shiny-pointed leaflets (2-4 inches long)

Produces small clusters of white berries in leaf axils

Reproduces by seeds and roots

Must be eradicated for public safety along rights-of-ways, trails, public accesses, business properties open to the public or on any lands where public access for business or commerce is granted.

Must also be eradicated along property borders when neighboring landowners request.

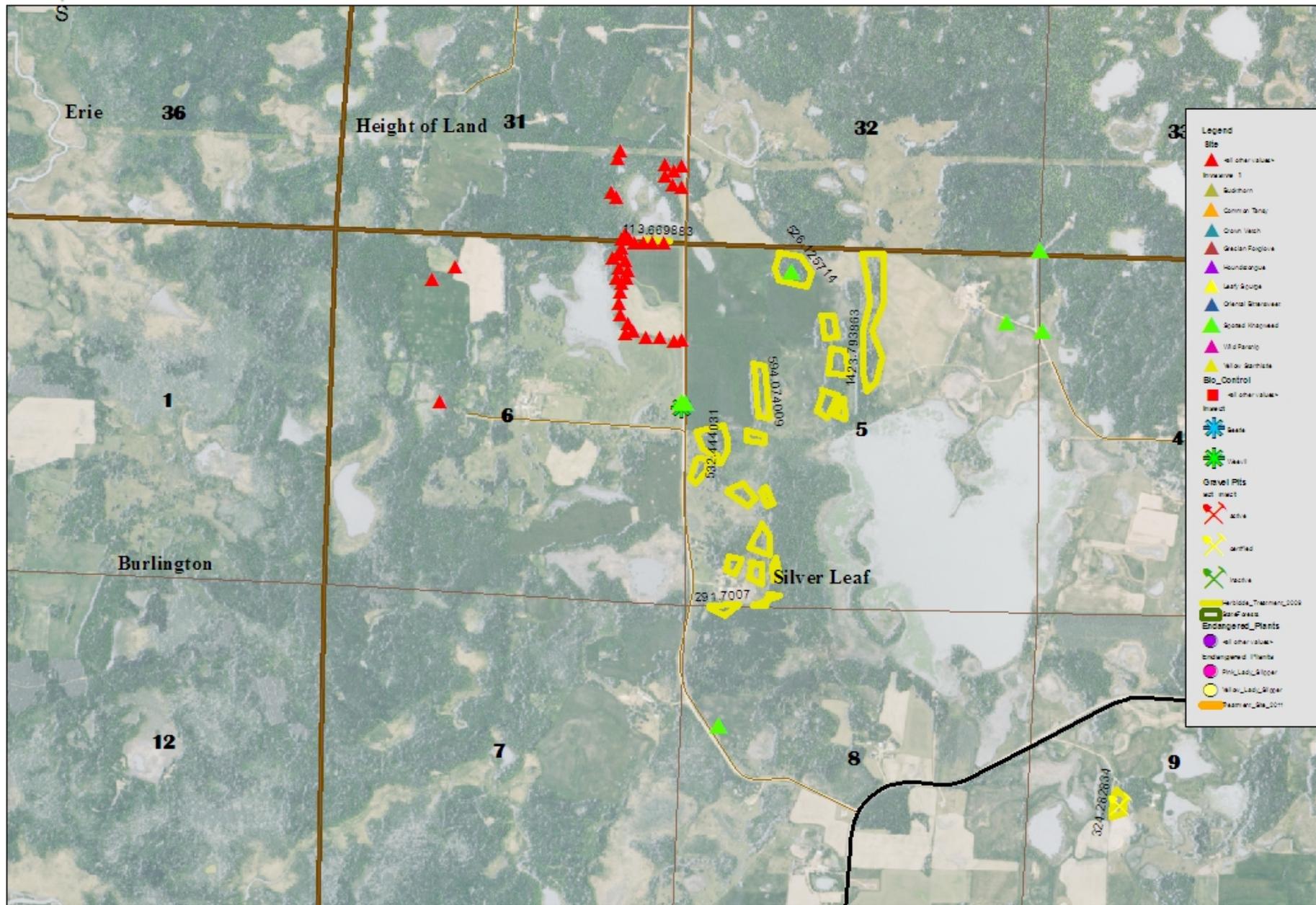
County Noxious Weeds

Houndstongue: *Cynoglossom officinale* L.





Houndstongue Site October 2011



Houndstongue Inventory & Seed Head Collection

8/5/2011 Houndstongue Rossette



photo by Marsha Watland BSWCD

**8/5/2011 Houndstongue
Silver Leaf Township**



photo by Marsha Watland BSWCD

**Houndstongue & Spotted Knapweed
9/28/2011**



photo by Marsha Watland BSWCD



Houndstongue Inventory 9/28/2011

Houndstongue Inventory 9/28/2011

photo by Marsha Watland BSWCD

photo by Marsha Watland BSWCD

Houndstongue Rosettes Inventory
9/28/2011



photo by Marsha Watland BSWCD



8/31/2009
Houndstongue
Becker County



photo by Marsha Watland BSWCD

Houndstongue & Similar Plants

Houndstongue Sites What to look for.

9/22/2011 Houndstongue
Seed Head Removal by Landowners



photo by Marsha Watland BSWCD

Houndstongue Seed Head Removal
Mott Site 9/22/2011



photo by Marsha Watland BSWCD

**Houndstongue in Alfalfa Field
9/28/2011**



Houndstongue Inventory 9/29/2011



photo by Marsha Watland BSWCD



photo by Marsha Watland BSWCD

County Noxious Weeds

Absinthe Wormwood – *Artemisia absinthium*

- Perennial
- Leaves and roots contain allopathic chemicals that may inhibit germination or shoot elongation in other plants.
- Roots: Stout taproot with lateral branches extending up to 6' in all directions.
- In non-cropland good perennial cover resists infestation
- Overtakes pastures and dry areas such as gravel pits.

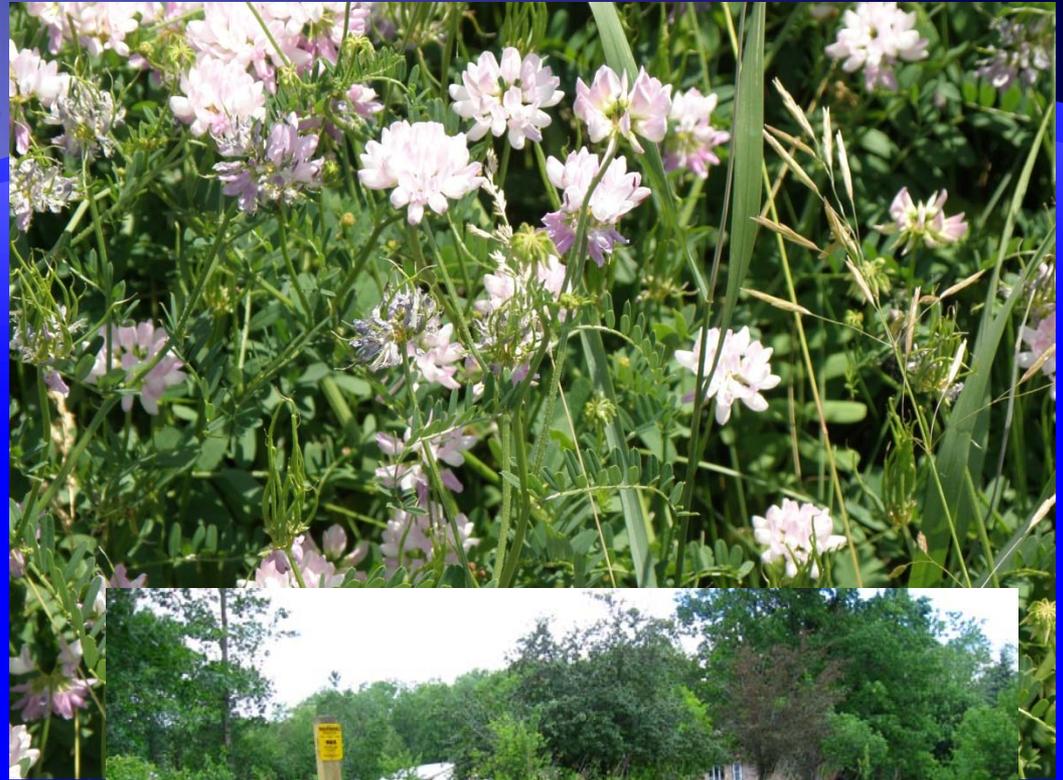


County Noxious Weeds

Designated Invasive Weeds of Becker County

Crown Vetch *Coronilla varia*

- ◆ Perennial—grows 2-6 foot long stems with a trailing growth pattern
- ◆ Flowers are umbels ranging from pink, lavender, white and bloom from May through August.
- ◆ Seeds live 15 years in soil
- ◆ Rhizomes grow up to 10 feet producing new plants
- ◆ Serious ecological threat and invades prairies & dunes
- ◆ Found along woodland edges, gravel bars along streams, roadsides and other right-of-ways



Integrated Pest Management

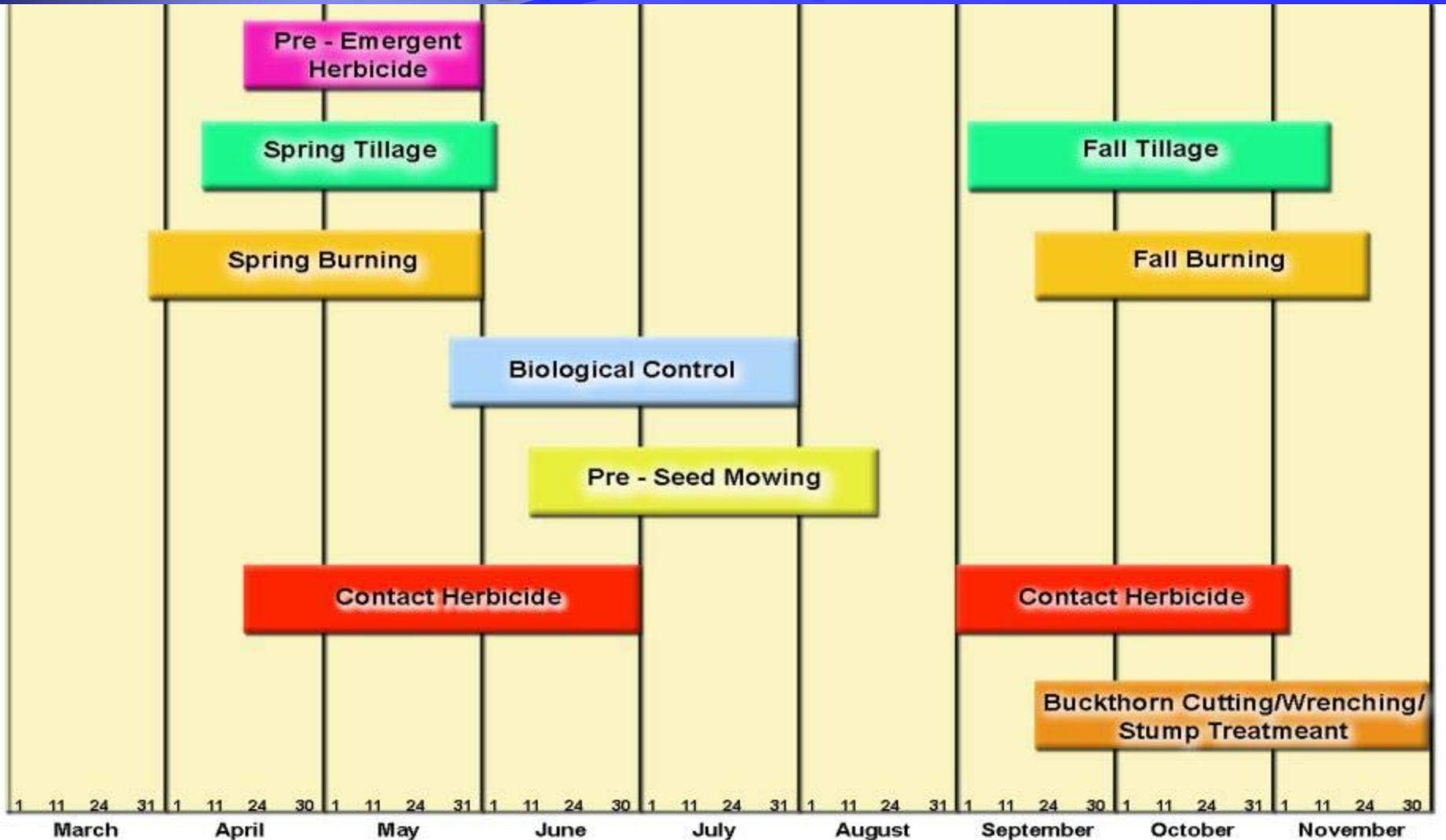
Methods of Management

- ◆ Herbicides
- ◆ Mechanical
- ◆ Fire/Burning
- ◆ Biological Control
- ◆ Management Practices

Deciding on the Best Method

- ◆ Inventory
- ◆ Knowledge of plant growth
- ◆ Methods available
- ◆ Working with Cooperative Weed Management Area Partners
- ◆ What method has the least impact on area with the best control.

Windows of Opportunity for Weed



Herbicide Treatment



**Becker Co. Hwy Depart
Audubone Twp
Wild Parsnip Spraying
9/25/2007**

Mechanical Treatment

8/31/2011

Clipping of road ditches before fall spraying.



Biological

7/16/2009
Lymburner Site
Weevil Damage



8/10/2011 6:34 PM
Spotted Knapweed Biocontrol Site Since



Biological Control

8/3/2011 5:36 PM
Spotted Knapweed



6/7/2011 Eagle View Twp
Spotted Knapweed Biocontrol

photo by Marsha Watland
BSWCD

photo by Marsha Watland BSWCD

**Invasive Species Traveling Workshop
Spotted Knapweed Root Weevil**



photo by Marsha Watland BSWCD

Biological Control

8/2/2011 2:24

Spotted Knapweed Collection



Biological Control

8/10/2011 7:44 PM

Spotted Knapweed Weevil Placement 2011



Griffith Site
15,000 Leafy Spurge Beetles
7/1/2008 10:11:37 AM

Biological Control & Pasture Management



COMMUNICATION

STATE

COUNTY

TOWNSHIP

LANDOWNER OR MANAGER

8/2/2011

**Spotted Knapweed Weevil
Treatment Site**

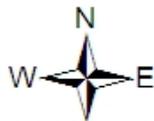


Haploa clymene: Clymene Moth

9/28/2011

Houndstongue Leaf





Becker County 2011 Highway 10 MNDOT Treatment

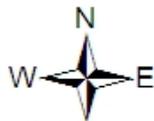


9/15/2011 State Hwy 10
Wild Parsnip Recreation Trail

Photo by Margie Hultberg

**9/15/2011 Wild Parsnip
State Hwy 10 Becker Co.**





Becker County 2011 Highway 10 MNDOT Treatment

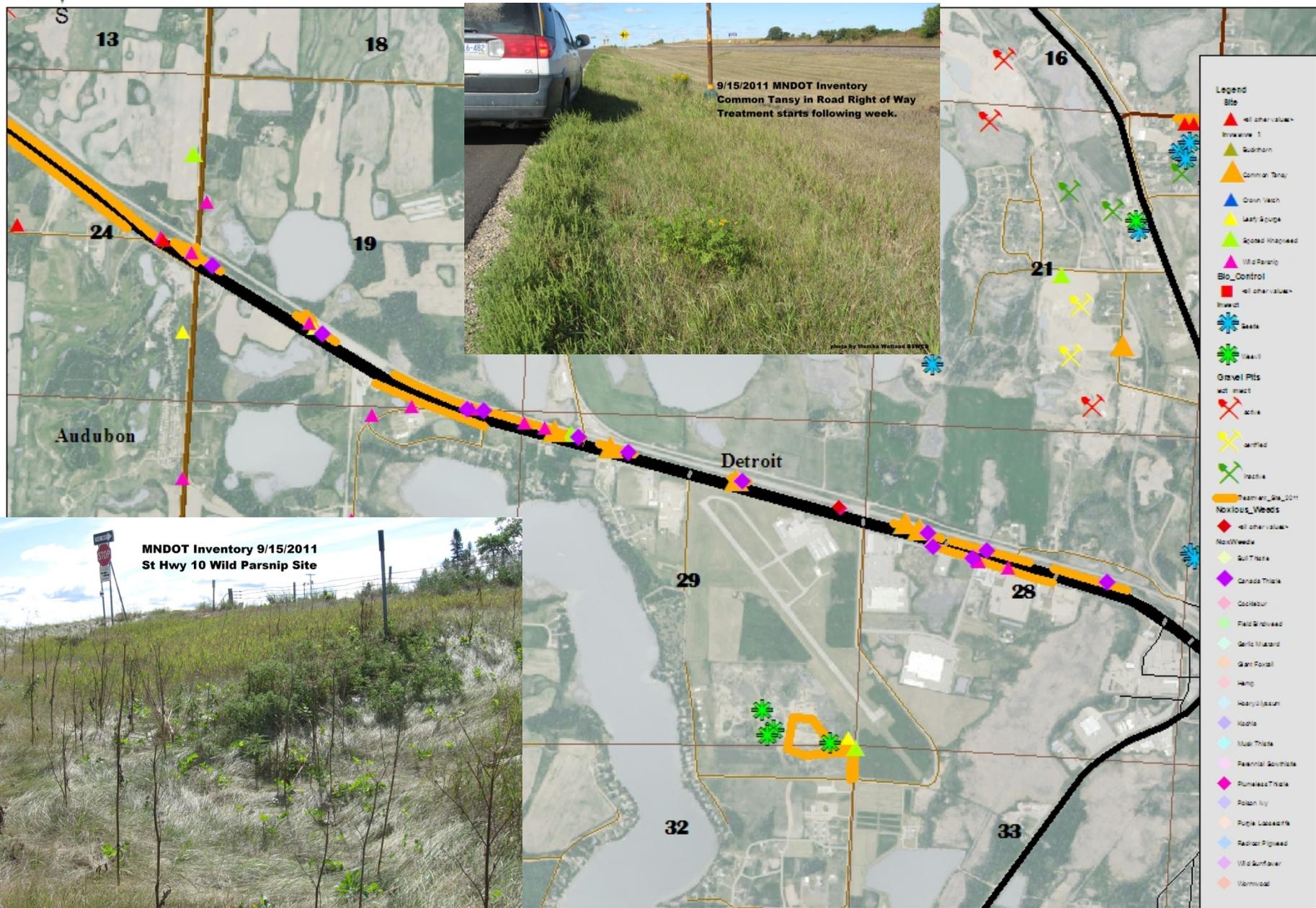
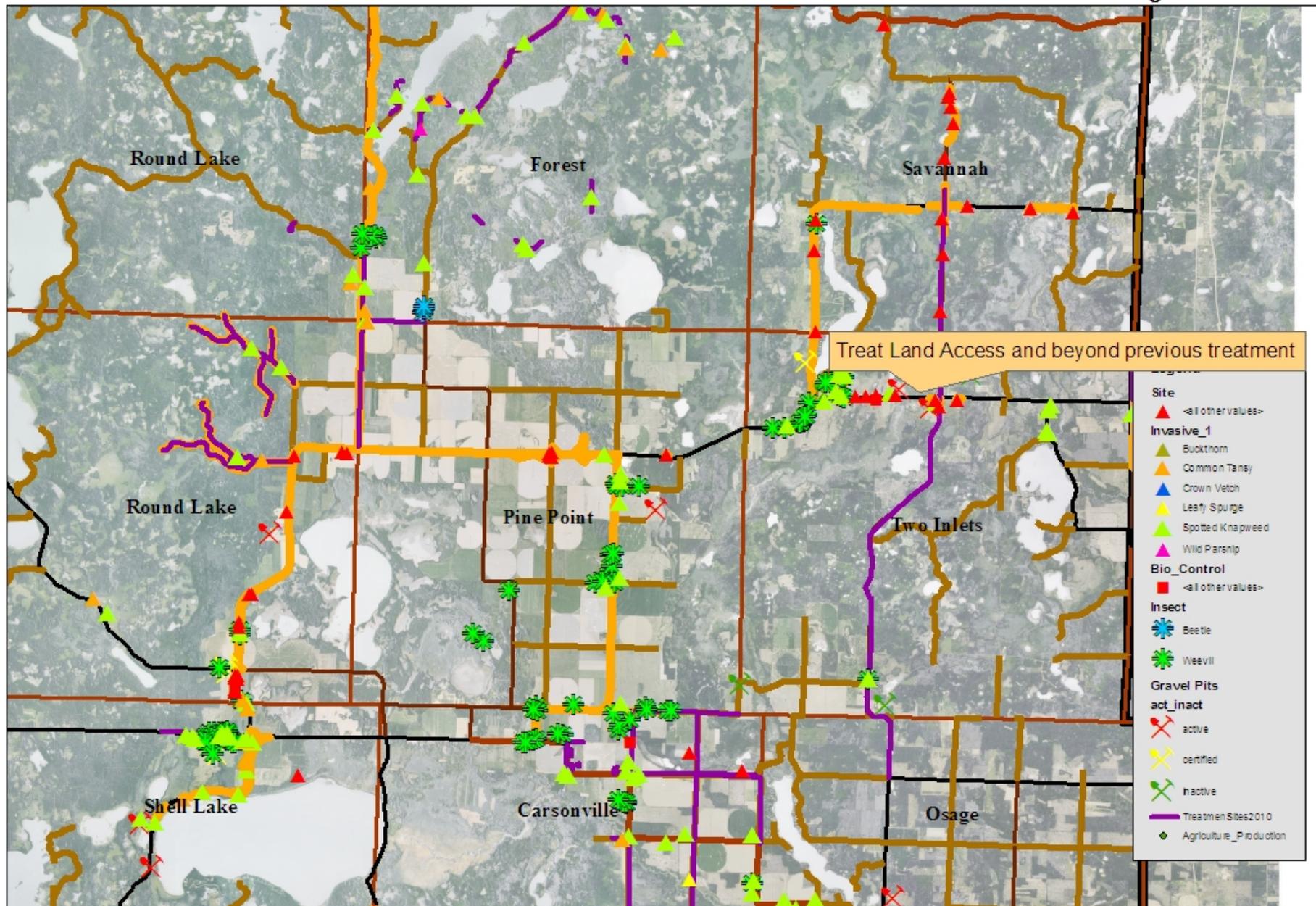
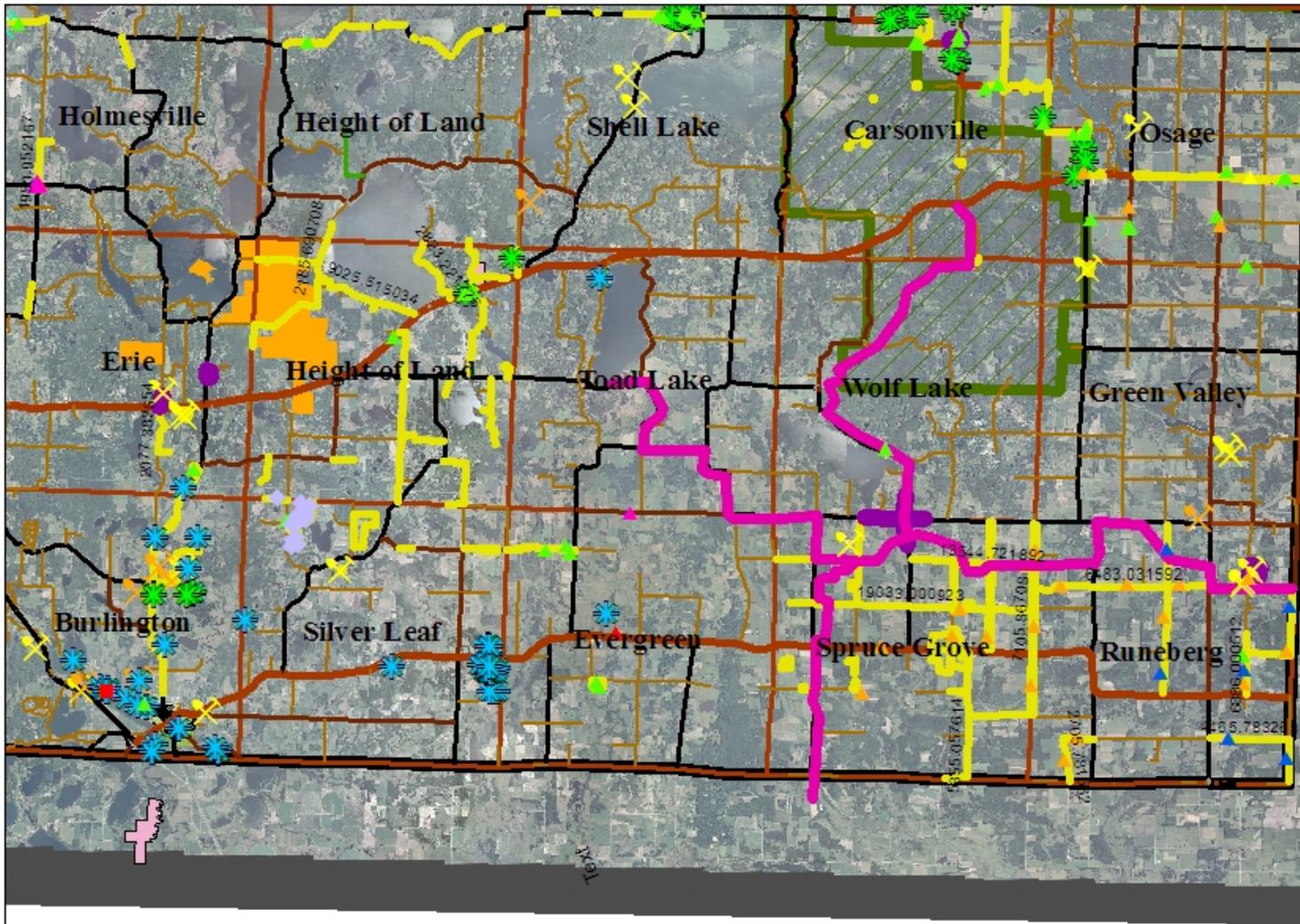


photo by Marsha Watland BSWCD

2011 Becker County Hwy Treatment



2009 Treatment & Inventory



Legend

Site

- ▲ <all other values>

Invasive_1

- ▲ Buckthorn
- ▲ Common Tansy
- ▲ Crown Vetch
- ▲ Leafy Spurge
- ▲ Spotted Knapweed
- ▲ Wild Parsnip

Bio_Control

- <all other values>

Insect

- ✦ Beetle
- ✦ Weevil

Gravel Pits

- ✦ <all other values>

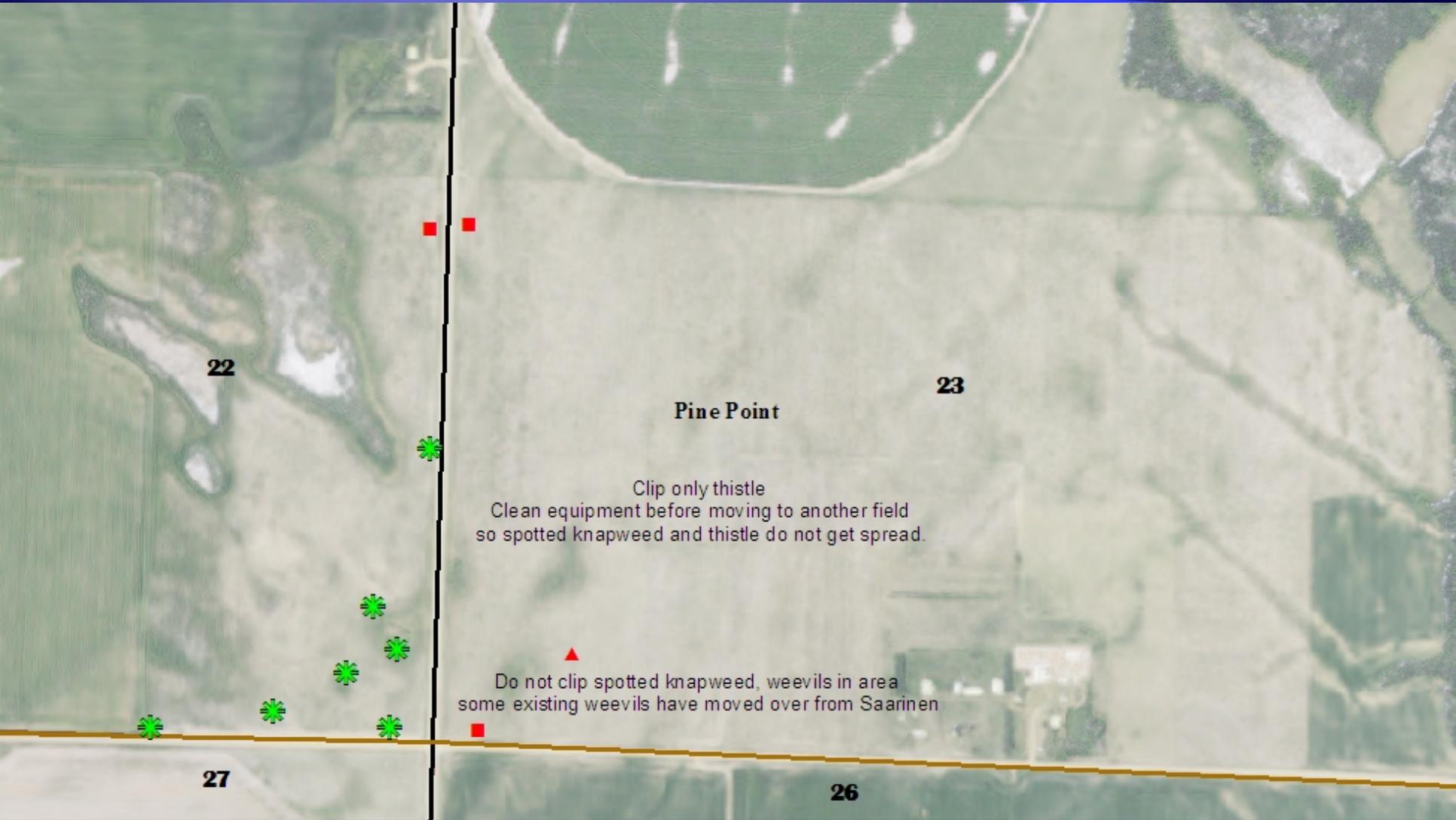
act_inact

- ✦ active
- ✦ inactive

- Recreation_Trails
- TreatmentSites2010
- Herbicide_Treatment_2009
- Treatment_Location
- USFWS
- ManagementAreas
- ScientificNaturalAreas
- ▨ StateForests

Burlington Township 2011 Weed Tour





22

23

Pine Point

Clip only thistle
Clean equipment before moving to another field
so spotted knapweed and thistle do not get spread.

Do not clip spotted knapweed, weevils in area
some existing weevils have moved over from Saarinen

27

26

GRAVEL PIT INSPECTION

Started in 2009

5/12/2011
Gravel Pit Inspection
Silver Leaf Twp



**5/20/2011 Maurer Pit
Spotted Knapweed Treatment Site
Milestone**



photo by Marsha Watland BSWCD

**8/25/2009
Gravel Pit
Treatment
Green Valley Twp**





TOURS

9/21/2011 DUPONT Plumeless Thistle Test Site





8/18/2011
Invasive Species Traveling
Workshop
Presenter Robert Koch (MDA)

photo by Marsha Watland BSWCD



8/18/2011 2:11 PM
Invasive Species Traveling Workshop
Spotted Knapweed Root Weevil Collection

photo by Marsha Watland BSWCD



7/14/2010
Wild Parsnip Hay Field Test Site Treatment
Audubon Township, Becker County
Switched future treatment sites to this practice

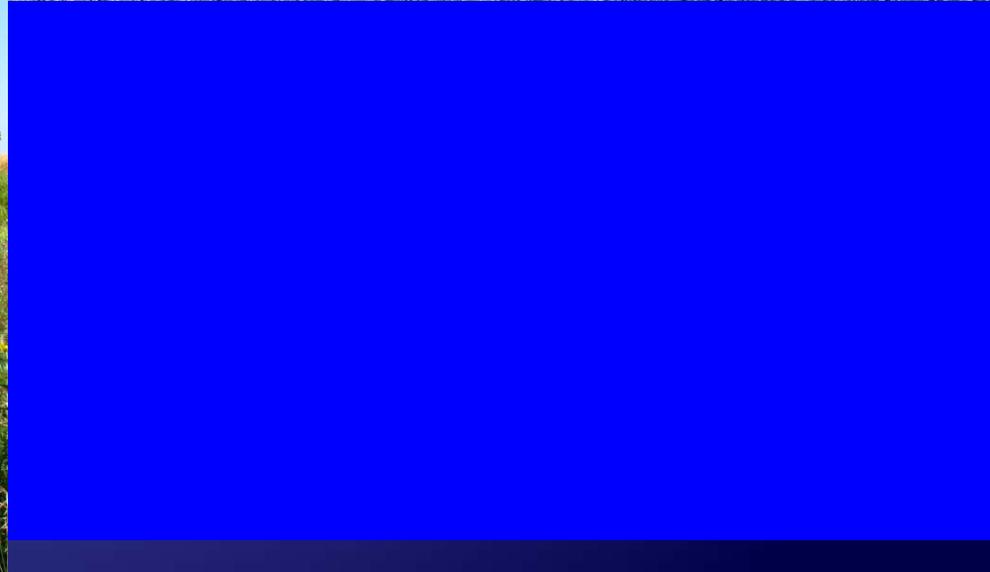
Photo by Marsha Watland



9/4/2009 12:04
Jacobson Hay Field
Wild Parsnip Site
Chapparal Treatment



9/4/2009 12:05
Jacobson Hayfield
Wild Parsnip Treatment Site



8/18/2011 1:16:50 PM
Wild Parsnip at Jacobson Site



8/18/2011 1:21
Wild Parsnip Test Site
Chapparal



Benefits of Tours

7/13/2010

**DNR Land Common Tansy Treatment
2009 Chapparral Treatment Tour**



7/12/2010

**Invasive Plant Management Tour
Common Tansy Herbicide Treatment Site**



**8/18/2011 Common Tansy Treatment
DNR Site at White Earth Twp.
Mark Palm & Greg Henderson**



Gravel Pit Certification Tour

Spotted Knapweed and Common Tansy

7/13/2010

