

9/29/14

Roadside Vegetation Management

Traffic Safety

Grasses and other low growing vegetation are desirable along roadways to maintain sight distances. If nothing is done to preserve/maintain low growing vegetation it would be replaced by tall weeds, non-native invasive plants, shrubs, and eventually larger trees.

The proper control of roadside vegetation translates into the following:

- Better visibility at curves, hills, and intersections
- Allowing free draining of surface water from the pavement during rainstorms
- Providing a reasonably safe set-back for obstructions to vehicles leaving the roadway
- Removing the hazard of any trees/limbs falling onto the highway
- Removes the shading from trees on the highway that can contribute to hazardous ice/snow and frost spots in winter
- Minimize the potential of wildlife road accidents
- Minimize the potential for fire starts

Environmental Protection/Preservation

- Promote naturally self-sustaining plant communities to the greatest extent possible
- Minimize all nuisance and invasive species and the spread to the greatest extent possible
- Maintain a neat and cared for appearance through mowing operations

Vegetation Control Methods

- Mowing and Brushing
- Herbicides



Jefferson County Highway Department

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Jefferson, WI 53549
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Russ Cooper
Superintendent

October 1, 2014

To: Highway Committee
From: Russ Cooper, Patrol Superintendent
Subject: Vegetation Management

The Jefferson County Highway Department is continuously striving to keep our highways in safe condition for the traveling public. This is not just specific to motorists, but also includes bicycles and pedestrian traffic.

Traffic volume continues to increase, and keeping those who travel our highways safe is a top priority for all involved. Motorists who use our highways may be county residents or travelers coming to visit or use some of our many amenities. The Traffic Safety Committee meets quarterly and for the second quarter of 2014, Jefferson County was rated the second safest county in the state by the Wisconsin Department of Transportation. There are many pieces to the puzzle that went into our being rated this high, and roadside mowing is one of those pieces to the puzzle.

The Wisconsin Department of Natural Resources Invasive Species Rule (Ch. NR 40, Wis. Adm. Code) went into effect on September 1, 2009. It includes a list of plants that are either prohibited or restricted, and terrestrial or aquatic, along with suggested ways of either controlling or eradicating them.

PROHIBITED SPECIES: Prohibited species that have not yet widely established in the state, and pose the greatest economic or environmental threat. Prohibited species may not be transported, transferred, possessed or introduced without a permit. Control of existing populations will be required.

RESTRICTED SPECIES: Restricted species pose great economic or environmental threat, but are already widely established in the state. Restricted species may be possessed, but may not be transported, transferred or introduced without a permit.

The Jefferson County Highway Department is doing our best to follow the Best Management Practices regarding invasive species from the Wisconsin Department of Natural Resources. In doing so, we have developed a roadside vegetation management program that consists of eliminating or controlling vegetation through a variety of strategies including mowing, brush cutting (mechanical and hand) and the use of herbicides.

We started monitoring the location of invasive vegetation on the highway right-of-ways five years ago, and over the last five years we are not seeing any significant spreading of invasive species based on our control methods. We currently use GIS mapping to help monitor the location and progression of various invasive species.

Even though it is important to control the spread of invasive species along the right-of-way, there are many other reasons to do vegetation management. The following is a list of other reasons we monitor and control vegetation on highway right-of-ways:

- *Keeping signs visible to drivers*
- *Keeping road users (vehicles, bicycles and pedestrians) visible to drivers*
- *Improving visibility of livestock and wildlife near the road*
- *Helping pedestrians and bicyclists see vehicles*
- *Keeping sidewalks and pedestrian paths clear and free from overhanging vegetation*
- *Removing small trees and brush before they are big enough to result in a severe crash if hit*
- *Improving winter road maintenance in snow and ice areas*
- *Helping drainage systems function as designed*
- *Preserving pavements through daylighting and root system control*
- *Controlling noxious weeds in accordance with both state and local laws and ordinances*
- *Keeping toxic plants from spreading into livestock areas*
- *Assist in controlling drifting in the winter months*
- *Allow water to run off the roadways and shoulders and into the ditches easily to reduce vehicle hydroplaning and icy spots in the winter*
- *Maintaining roadsides so headlights and taillights can be seen around the inside of horizontal curves to increase the horizontal sight distances*
- *Exposing fixed objects such as culvert end walls, drainage inlets, guardrail ends, object markers, and utility pedestals*
- *It provides a safe and efficient vehicle movement through an intersection by increasing visibility*

The removal of small trees before they become a traffic hazard is a major safety issue. One of the most common causes of fatal and serious injury crashes on rural roads involves vehicles leaving the road and striking a tree. We try to maintain a "clear zone" to help reduce the potential of someone hitting a tree. The concept of a clear zone, an area adjacent to the traveled way in which slope, surface and an absence of fixed objects can permit recovery of a vehicle that leaves the roadway, and is an important element in providing a safe roadside. Trees can become potential hazards because of their size and their location with respect to vehicle traffic. Trees larger than 4 inches in diameter can be a hazard to a vehicle. The closer trees are to the travel lane, the more likely a vehicle is to strike them. We do however recognize the sensitivity of removing individual trees and adjacent property owners are at times against their removal. By mowing when they are small it helps remove potential future problems and mowing provides us with an economical way of keeping trees and brush along our highways from becoming a hazard.

Suggested mowing times to prevent spreading of new ROW invasive plants^o in Southern Wisconsin (those to contain if found)

Emergence, flowering and seeding time will vary from year to year for most species. This chart just gives an average time. These times become later as you move north or for areas near the Great Lakes. Observe the plants in your area and, where possible, time mowing just before the target invasives are to flower. Avoid mowing if seeds have already developed."

Species	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>Herbaceous Plants</i>												
Black swallowwort				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Chinese Isericea lespedeza				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Cypress spurge				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
European marsh thistle				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Japanese hedgeparsley				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Japanese hops				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Japanese stilt grass				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Giant hogweed				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Hill mustard				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Hound's tongue				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Poison hemlock				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Spreading hedgeparsley				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Wild chervil				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++
Yellow star thistle				+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++	+++++++ MOW ++++++

*For all species-mow just prior to flowering or earlier. Do not mow at late flowering or when in seed.

**Note that timing should be later in Northern Counties and near Lake Michigan

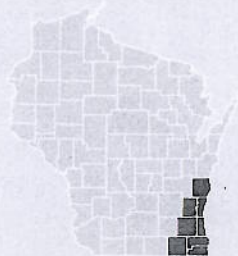
^o These are invasive plants not yet common in Wisconsin and that need to be contained if found.

HELP STOP THE INVASION of Southeastern Wisconsin

Southeastern Wisconsin is threatened by invasive plants and animals, but YOU can help to stop them from spreading by following these guidelines:

- Plant only non-invasive species in your yard or garden; replace invasive plants with non-invasive alternatives.
- Drain all water from your boat, bilge, live wells and bait containers and all equipment before leaving the water.
- Clean your boat thoroughly before transporting it.
- Clean your boots to eliminate the transportation of weed seeds and pathogens.
- Don't move firewood. Obtain it from a local source.
- Don't release aquarium fish and plants, live bait or other exotic animals. Check the state's website for proper methods of disposal.
- Volunteer to help control invasive species from the environment and educate others about the threat.

The Southeastern Wisconsin Invasive Species Consortium, Inc. (SEWISC) provides opportunities for partners to share and leverage limited resources, collaboratively reduce the impact of invasives on both public and private lands, and raise public awareness about the impacts of invasive species. For more information visit www.sewisc.org.



Common
Reed Grass

COMMON REED GRASS (*Phragmites australis*)

This perennial reed grass is found most often in large colonies, ranging in height from 6 to 13 feet. Leaves are gray-green and the large light-brown to purple flower spikes appear between July and September. Common reed grass threatens open wetlands, riverbanks and lakeshores.

WILD PARSNIP (*Pastinaca sativa*)

Caution! Chemicals in this plant can cause severe skin burns when exposed to the sun. Plants bloom after 2 or 3 years as a rosette and then die after flowering. Flower stalks grow up to 4 feet tall and have flat-topped clusters of yellow flowers that form large flat seeds. The plant typically blooms from late June to August and threatens prairies, oak openings and fens; it is abundant and spreading along many roadways.



Wild Parsnip



Emerald
Ash
Borer

EMERALD ASH BORER (*Agrilus planipennis*)

This bark-boring beetle threatens the state's entire ash population. Larvae and pupae live under the bark of ash trees where they feed on the inner tissues causing death of the tree in 1 to 3 years.

Emerging metallic green adults leave a "D" shaped hole in the bark and are 1/4 to 1/2 inch long. The beetles have been spread easily within firewood so obtain wood locally; DO NOT haul firewood!

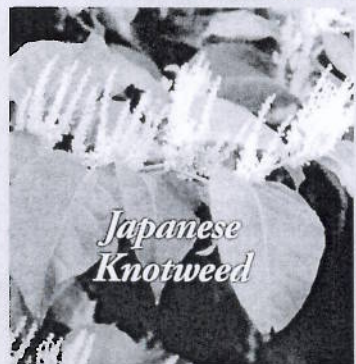
JAPANESE KNOTWEED (*Polygonum cuspidatum*)

Japanese knotweed is a perennial herb with a shrub-like form that grows 3 to 9 feet tall. The stem is hollow and bamboo-like with cross-partitions at the leaf joints. The white to pink flowers are densely crowded on erect stalks. This plant threatens riparian corridors, fens, springs, ravines, forests and streamsides. Stop small patches early; its roots and shoots can grow right through asphalt and concrete block walls!

COMMON AND CUT-LEAVED TEASEL

(*Dipsacus fullonum* and *D. laciniatus*)

As "biennial" herbs that flower once and die, first year teasel plants form low-growing rosettes, and second or third year plants produce sturdy 2 to 6 foot spiny stems which stand over the winter. The leaves of common teasel are not divided and the pink or purple thistle-like flowers bloom from June through October. The leaves of cut-leaved teasel are deeply lobed and the white flowers bloom from July through September. Both teasel species threaten prairies, sedge meadows and pastures.



Japanese
Knotweed



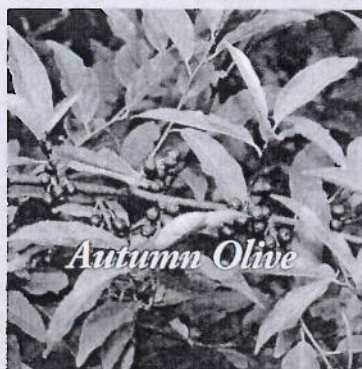
Teasel

AUTUMN OLIVE (*Elaeagnus umbellata*)

Autumn olive is a large shrub that can reach heights of 20 feet. The upper surface of the oval-shaped leaves is dark green to grayish-green in color, while the lower surface is covered with silvery white scales. Small pink to red fruits are produced late in the season. This shrub threatens open woods, prairies, pastures and sand dunes.

GARLIC MUSTARD (*Alliaria petiolata*)

Garlic mustard is a biennial herb that grows 12 to 40 inches tall, has triangular shaped leaves with toothed edges, and smells of garlic when crushed. First year plants are low rosettes with rounded leaves. Clusters of small flowers with 4 petals appear the second year in May. Garlic mustard threatens our native woodlands.



Autumn Olive



Garlic Mustard

RED SWAMP CRAYFISH (*Procambarus clarkii*)

Discovered in Wisconsin in 2009, this species has been the target of aggressive rapid response control efforts. The dark red crayfish grow 2 to 5 inches long and have bright red raised spots. Many individuals also show a "wedge" shaped stripe on their abdomen. These crayfish are prolific breeders that can reduce native amphibian populations and replace native crayfish.



Red Swamp Crayfish

Thanks to the U.S. Forest Service and Great Lakes Restoration Initiative funding for making this publication possible. Photos courtesy of Elizabeth Czaplata, Christopher Noll, Kate Redmond, U.S. Geological Survey, UW Madison-Entomology, and Melissa Warner. We are equal opportunity providers.

SEWISC
Southeastern Wisconsin Invasive Species Consortium, Inc.

9/29/2014

Jefferson County Highway Department Mowing Tractor Summary

Year	# of Mowing Tractors	Types of Tractors	Average Age of Fleet
2005	20	4	15 yrs
2006	14	3	11 yrs
2007	12	3	6 yrs
2008	8	1	5 yrs
2009	8	1	6 yrs
2010	8	1	2 yrs
2011	8	1	3 yrs
2012	8	1	4 yrs
2013	8	1	5 yrs

Notes

- Average age of fleet reduced significantly
- New mowing tractors larger, more efficient
- New mowing tractors closed cab for worker safety
- Mowing fleet standardized (More efficient for operation, repair, and parts)

Jefferson County Highway Department
Mowing Equipment Review (2003 - 2014)

YEAR	MOWING TRACTORS			GAIN/ (LOSS)			FUNDS AVAILABLE			MOWING ATTACHMENTS			GAIN/ (LOSS)			FUNDS AVAILABLE			TOTAL FUNDS AVAILABLE
	REVENUE	COST			DEPR.					REVENUE	COST			DEPR.					
2014	101,878.07	58,333.67	43,544.40	16,091.83	59,636.23	1,953.50				50,497.49	25,842.99	24,654.50	7,149.08	31,803.58	3,454.00				\$ 91,439.81
2013	153,917.36	104,836.10	49,081.26	29,807.00	78,888.26	2,969.50				73,702.65	70,078.21	3,624.44	14,466.00	18,090.44	5,097.00				\$ 96,978.70
2012	155,181.37	96,059.62	59,121.75	29,807.00	88,928.75	2,954.25				72,979.20	40,586.33	32,392.87	14,466.00	46,858.87	5,040.00				\$ 135,787.62
2011	144,641.14	83,837.12	60,804.02	29,807.00	90,611.02	2,842.00				70,578.08	43,951.18	26,626.90	14,466.00	41,092.90	5,106.95				\$ 131,703.92
2010	114,323.33	65,464.64	48,858.69	22,454.04	71,312.73	2,559.00				68,421.34	8,485.83	59,935.51	(21,727.83)	38,207.68	5,239.00				\$ 109,520.41
2009	96,735.35	55,940.70	40,794.65	19,717.00	60,511.65	3,036.50				56,583.52	38,290.16	18,293.36	11,703.00	29,996.36	4,653.25				\$ 90,508.01
2008	110,200.77	81,539.65	28,661.12	23,636.00	52,297.12	2,958.00				72,881.01	44,178.83	28,702.18	14,392.00	43,094.18	5,546.50				\$ 95,391.30
2007	114,009.40	93,913.40	20,096.00	23,422.86	43,518.86	3,331.75				78,680.70	67,455.97	11,224.73	16,482.17	27,706.90	6,244.00				\$ 71,225.76
2006	110,870.52	75,516.94	35,353.58	3,103.39	38,456.97	3,575.75				79,840.74	54,302.77	25,537.97	4,802.37	30,340.34	6,664.50				\$ 68,797.31
2005	100,205.46	129,000.03	(28,794.57)	11,535.57	(17,259.00)	3,417.50				69,759.50	53,677.74	16,081.76	17,425.24	33,507.00	6,162.50				\$ 16,248.00
2004	93,828.63	117,437.75	(23,609.12)	19,236.00	(4,373.12)	4,019.50				68,490.56	64,899.19	3,591.37	15,111.68	18,703.05	6,292.00				\$ 14,329.93
2003	108,420.00	108,097.42	322.58	19,236.00	19,558.58	4,696.50				65,126.72	64,295.86	830.86	14,022.49	14,853.35	6,008.00				\$ 34,411.93

Notes

- 2005 20 Mowing Tractors, 2008 8 Mowing Tractors
- Mowing tractors average annual hours from 2001-2003 4,820 hours, 2010-2012 2,785 hours
- Average annual equipment purchase funds generated with mowing equipment 2003-2005 \$21,560, 2011-2013 \$121,500

DATE: Sept. 16, 2014

TO: Wm Kern, highway commissioner, Jefferson county

FROM: Carl Zentner, board member

SUBJECT: Understanding highway roadside mowing motivations

Remembering that I asked Mr. Jaeckle to add an item on the next highway committee meeting agenda, I make this request as a talking point relating to roadside mowing: If motivation for mowing (to the extent that has been done in Jefferson county in the past) is tied to the number of employees/trucks needed for snow removal (several comments have indicated this connection), in the name of basic frugality and fairness to taxpayers, what are the bare-bones needs for snow removal ??? To determine that basic floor of activities, I would appreciate it if you could attempt to fill in the enclosed chart relating to a scenario presented here ;

SCENARIO #1 -- Assume a 5 " moderately wet snow,, with moderately strong west wind beginning about 8:00pm and continuing until about midnight. Assume also that this new snow is coming in on top of 5 " of somewhat crusted old snow and that the air temperature is about 22 all night long.

CHART DEPICTING SEQUENCE OF ACTION NEEDED TO REMOVE SNOW TO ACCEPTABLE LEVELS
(please make efforts to separate activities related to (1) state/federal (2) county (3) township)

HOUR	TRUCKS # EMPLOYEES	NUMBER OF WORK DESTINATION	TIME EXPENDED FOR ACTIVITY	DOLLARS FOR THAT HOUR (MEN/MATERIAL)
11:00-12:00				
1200-1:00am				
1:00-2:00am				
2:00-3:00am				
3:00-4:00am				
4:00-5:00am				
5:00-6:00am				
6:00-7:00am				
7:00-8:00am				
8:00-9:00am				
9:00-10:00				
10:00-11:00				
11:00-12:00				

NOTE: Obviously, in reporting on location and length of work (on the previous page), it will be necessary to expand the chart (vertically) to accommodate each hourly entry account for all truck numbers, hours, location, function. Below is a sample of completed report:

HOUR	TRUCK #	NUMBER OF EMPLOYEES	WORK DESTINATION	TIME EXPENDED FOR ACTIVITY	DOLLARS FOR THAT HOUR(MEN/MATERIAL)
11:00-1200	#32	2	I-94	60 min.	\$ 123.00
	#6	1	County N	45 min.	\$ 96. 00
	#33	2	Hwy 12(Cam to F.A)	60 min.	\$123.00
	#3	1	Hwy 106 Dane co.to F.A.	55 min.	\$106.00
etc.,etc., etc.					

Such information will help to reveal the peak demand of men/vehicles. Extension of this analysis will aid in determining minimum manpower/vehicle needed in winter months and, from that, an attempt can be made to determine optimum summer mowing activities

Carl Zentrow

Winter Maintenance Example

Winter Storm

EXAMPLE: Assume a previous winter storm of 5" fell on one night (Tuesday) and into the next morning (Wednesday). There was a break but another snow storm was anticipated to start that evening (Wednesday at 8pm?)

ACTIONS:

A night crew of nine employees works overnight on Tuesday dealing with the first five inch snowfall, based on the description it crusted over (hard-packed) because of the cold temperatures overnight. The nine employees work overnight on all the State Class 1 Highways, all other state and county highways received no action overnight.

Regular plow drives are called in early 4am on Wednesday, to deal with the Tuesday snowfall and hard-packed snow. Based on the needs of the storm, 25 to 29 employees will fill plow trucks for the 4am dayshift, 1-2 operators will fill graders to deal with the hard-packed snow and 1 employee will be assigned to handle loading trucks at the main shop (also will handle snow removal in the parking lot and around the salt sheds/brine tanks). There will also be 2-4 employees needed for daily sign work/bridge work/highway maintenance issues.

The 25 to 29 employees on day shift will work through the day to clear highways of snow pack, and the grader operators will be called to spot locations if needed to remove snow pack/drifts. The hope is to have all highways clear before the end of the day, because of the forecast for another storm in that evening. Supervisors will be watching the forecast to determine if plow drivers need to stay in to be available for the next storm or to send them home at 4-6pm if the roads are clear. Because of the higher level of traffic during the work week, the county will typically keep plows out until 10pm before sending the drivers home for the night. If the Supervisor sends the plow drivers home at 5pm and the storm arrives early at 6:30pm and the roads get slippery immediately the Supervisor will be making calls to drivers who just got home for rest after a 13 hour shift, expecting them to come back in for another shift.

Field Employees Available

Highway Workers (29)

Equipment Operators (7)

The Highway Department has 36 employees available for day-to-day winter maintenance and general maintenance operations. During most days involving winter maintenance activities one employee is assigned to the main shop loader, 2 to 4 employees are assigned to signing and other general maintenance activities, and 0 to 2 employees are assigned to graders. There is also a vacancy rate of approximately three (3) employees (Vacation, Sick Leave, FMLA, Comp Time, Vacant Positions, etc).

Response to Carlton Zeentner Letter Dated September 16, 2014

Example: 5" snowfall with moderate winds

<u>Hour</u>	<u>Trucks</u>	<u>Other Equipment</u>	<u>Time for Activity</u>	<u>Cost for that hour</u> (Labor, Machinery, Salt)
12:00am to 1:00am	8 to 9 trucks	1 Loader	1 Hour	\$1,300
1:00am to 2:00am	8 to 9 trucks	1 Loader	1 Hour	\$1,300
2:00am to 3:00am	8 to 9 trucks	1 Loader	1 Hour	\$1,300
3:00am to 4:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
4:00am to 5:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
5:00am to 6:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
6:00am to 7:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
7:00am to 8:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
8:00am to 9:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
9:00am to 10:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
10:00am to 11:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200
11:00am to 12:00am	25 to 29 trucks	3 Loaders, 1 Grader	1 Hour	\$4,200

(10% Town, 50% State, 40% County)

Note:

- Only Class 1 - State Highway are 24 hour service
- State Plow Routes - 12 to 14
- County Plow Routes - 9 to 11
- Town Plow Routes - 4

Total Plow Routes - 25 to 29 routes based on conditions

Comments:

Based on the premise of the letter dated September 16, 2014, that mowing is related to snow removal operations, there is no connection between mowing operations at Highway Department and winter maintenance operations. The Highway Department follows best management practices for mowing operations during the summer and fall season and this is in no way connected to how we handle winter maintenance operations in the winter. In the winter season, are responsible for keeping the highways safe by timely snow removal operations. In the summer, we maintain right-of-ways for safety of the public and we strive to keep invasive and non-native species of vegetation to a minimum.