

Surveillance of elm trees for Dutch elm disease and Dutch elm disease public awareness in municipalities along the Alberta/Saskatchewan border and Alberta/Montana border

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As part of the agreement between the Alberta Agriculture and Rural Development and Society to Prevent Dutch Elm Disease (STOPDED), surveillance of elm trees must be done in municipalities where the DED vectors have been found. In 2010, an elm survey was completed in all municipalities in 9 Counties, Special Areas and Municipal Districts along the AB/SK and AB/Montana border. The goal for 2011 is to complete an elm tree survey in all the municipalities in the Counties of Newell, Vulcan and Lethbridge and the Municipal Districts of Pincher Creek and Willow Creek. This survey will be done while the elm trees are leafed out. Dutch Elm Disease (DED) detection is dependent on the public, therefore public awareness of disease identification and prevention are essential. A public awareness campaign will be conducted in each surveyed municipality by distributing brochures and posters, speaking to municipal personal and Agriculture Fieldmen.

Project Objectives

1. To determine if Dutch Elm Disease (DED) is suspected in the municipalities surveyed.
2. To take samples from elms showing suspect symptoms and sent into the STOPDED approved lab for diagnosis.
3. To increase public awareness activities on DED and how to prevent the disease conducted in all surveyed municipalities. When possible, key municipal personal and Agriculture Fieldmen are to be contacted and pamphlets, posters and business cards of the STOPDED executive director were to be distributed.

Materials Methods and Discussion

1. "To determine if Dutch Elm Disease (DED) is suspected in the municipalities surveyed."

The surveillance was carried out in municipalities in the following Alberta Municipality Districts and Counties during the month of August of 2011. Elm totals are included and taken from the STOPDED inventory taken in 1998-1999 found on www.stoppeded.org.

- Municipal District of Pincher Creek (370 elm)
 - Cowley, Pincher Creek
- Municipal District of Willow Creek (1,811 elm)
 - Claresholm, Fort Macleod, Granum, Nanton, Orton, Stavelly
- County of Newell (3,838 elm)
 - Brooks, Bassano, Duchess, Millicent, Patricia, Rainier, Rolling Hills, Rosemary & Gem, Scandia, Tilley, Pheasant Farm, CDC South, Kinbrook Park, Tillebrook Park

Municipal District of Pincher Creek

The municipal District of Pincher Creek has only two towns, Cowley and Pincher Creek with an appreciable amount of elm. In Cowley elms were mostly Manchurian with some American. The trees were in generally in good shape however large poplars were being heavily topped at the time of the survey. Pincher Creek is a well treed town with many American and Manchurian Elm. Elms in general were healthy.

Municipal District of Willow Creek

Fort Macleod, Nanton and Claresholm have both species present - mostly American elm. Trees in these towns were generally in very good shape. The smaller municipalities, Stavely, Granum, Orton and Parkland have a higher percentage on Manchurian Elm and dieback is present on some specimens in each town. Trees were otherwise healthy. Dominant species of street trees in the MD of Willow Creek is Green Ash.

County Of Newell

In the city of Brooks, the elms are in very good shape for the most part with exceptions on a very difficult street where two individual American elms are suffering from street salts and environmental factors though with no DED symptoms. Farmsteads throughout the county were observed and both species are present and for the most part in very good shape, though some Manchurian elm did show some dieback. Rosemary, Rolling Hills, Tilley, Patricia and Millicent all have both species and all generally in good shape. Scandia and Duchess both have mostly American elm in very good shape. Bassano has both species also in very good shape but a few Manchurian on the golf course and in town with dieback. Tilleybrook Park, Kinbrook Park and the pheasant farm have well maintained elm and CDC South had elm with broken limbs from heavy wind storms which have been removed and burned.

County of Lethbridge

In the small communities of Barons, Chin and Shaughnessy, elms were generally in fair shape. Both species were found in these communities with dieback occurring on many specimens. In Coalhurst, Diamond City, Monarch and Picture Butte the elms were in good health generally though some dieback was spotted on some of the Manchurian elm trees at each community. Generally the elms were very good in Coaldale and Nobleford, though in Nobleford low hanging canopy over the avenue may be a concern with large trucks or fifth-wheel trailers breaking branches. At the Lethbridge Research Centre, very mature American elm dominate the landscape along with secondary road 912 (Jail Road) leading to the Centre and the Lethbridge Jail from the east and the west. These elm are well maintained and closely monitored. In all communities surveyed except Barons, American elm outnumbered Manchurian. The dominant street tree in Lethbridge County appears to be Green Ash.

County of Vulcan

In the Town of Vulcan the elm are mostly American and are generally in good health. There is some dieback on some of the Manchurian elm and four American elm street trees had been topped for some time. Both species were spotted on several of the farmsteads in the county generally in good health. Brant and Milo had more Manchurian elm, some with dieback, though generally the elm were in good shape there. In Champion there are some Manchurian elm with severe dieback, though the remainder were good. Carmangay and Lomond both have mostly American elm. There was some dieback on some Manchurian elm in Carmangay but none was spotted in Lomond. The dominant street tree in Vulcan is Green Ash.

Park Lake Provincial Park, Little Bow Provincial Recreation Area and St. Mary Provincial Recreation Area

There is only American elm at Park Lake and at St. Mary Reservoir and are generally in good shape. Little Bow has Manchurian elm with one (only) American elm spotted. On several Manchurian dieback had occurred. Green Ash is prevalent at all these parks.

Town of Taber

Both elm species are found in the Town of Taber. Some specimens with lots of dieback, some excellent specimens and generally elm are in good health. Other tree species have varying degrees of health as well. At Taber Municipal Park located near town, the elms are in good shape.

Elm Tree Health Rating

County, MD, Special Area	Location	# elm trees	elm health rating
Newell County	Brooks	2268	very good
	Bassano	254	very good
	Dutchess	73	Very Good
	Millicent	30	very good
	Patricia	66	good
	Rainer	41	good
	Rolling Hill	220	good
	Rosemary & Gem	55	very good
	Scandia	278	very good
	Tilley	70	good
	Pheasant Farm	25	very good
	CDC South	54	good
	Kinbrook Park	77	good
	Tillebrook Park	327	very good
Vulcan County	Brant	32	good
	Carmangay	103	good
	Champion	209	fair to good
	Lomond	62	good
	Milo	56	good
	Vulcan	592	good
Lethbridge County	Barons	254	fair
	Chin	118	fair
	Coaldale	522	very good
	Coalhurst	97	good
	Diamond City	140	good
	Lethbridge Research	739	very good
	Monarch	167	good
	Nobleford	312	very good
	Picture Butte	293	good
	Shaughnessy	67	fair-good
Pincher Creek, MD of	Cowley	41	good
	Pincher Creek	329	very good
Willow Creek, MD of	Claresholm	766	all good
	Fort Macleod	396	very good

	Granum	79	fair - good
	Nanton	267	very good
	Orton	101	fair
	Stavely	202	good
	Parkland		good
	St Mary Reservoir PP	62	good
	Little Bow PP	175	fair
	Park Lake PP	72	most good
MD of Taber	Taber	2055	good

2. “To take samples from elms showing suspect symptoms and sent into the STOPDED approved lab for diagnosis.”

This was to be done by surveying or observing the elm population of identified municipalities and rural areas looking for DED symptoms. If symptoms were observed, samples were to be taken and sent using the procedures and forms on the STOPDED web site at www.stopped.org. Throughout the survey, no symptoms of DED had been observed and therefore no sampling was necessary.

3. “To increase public awareness activities on DED and how to prevent the disease conducted in all surveyed municipalities. When possible, municipal personal and Agriculture Fieldmen are to be contacted and pamphlets, posters and business cards of the STOPDED executive director were to be distributed.”

Agriculture Fieldmen and town officials were contacted if possible. Town offices were visited when officials were unavailable and information was left for distribution. One Agriculture Fieldmen was not reached, but a message had been left on his voice mail.

- Met with the Lindsay Bell, City of Lethbridge Urban Forester to get his County contacts in the municipalities that he places traps in as part of the satellite program.
- Met with the Mike Booth, Lethbridge Research Centre Grounds Man to observe the trees and learn about the monitoring he has undertaken.
- Met with Grant Calling, Town of Coaldale Arborist who was also a great help and toured me around Coaldale showing his concerns and his good work.
- Met with or called nearly 20 Ag Fieldmen, town officials, parks officials, grounds man and urban foresters. Most offices accepted information distributed except those in Lethbridge County where Lindsay had taken care of that previously.

Conclusions

Fortunately, DED symptoms were not seen in any of the municipalities surveyed in 2011. I found a number of Manchurian elm with dieback again this year, but to a lesser degree as those surveyed in 2010. In town and county offices, officials as well as receptionist are aware of the firewood concern. Town officials were generally impressed with the surveillance. Notes were taken and more specific elm tree concerns were given to Janet Feddes-Calpas, STOPDED Executive Director.

Note:

Green ash seems to be the dominant street tree species in most of the municipalities surveyed. This may become a concern if Emerald Ash beetles were to appear.