

Prevention is the only way to avoid the establishment of Dutch Elm Disease & other invasive tree pests in Alberta

2013 Annual Report

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Society To Prevent Dutch Elm Disease

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1. STOPDED and the Societies Mandate and Objects

The Society to Prevent Dutch Elm Disease (STOPDED) and its extensive network of partners across the province take an active role in the *Provincial Dutch Elm Disease Prevention Program*. Since the program was terminated by the government in 2005, the society has been administering and operating this successful prevention program. They work hard to avoid the economic, environmental and social impacts from Dutch elm disease (DED) and other invasive alien tree pest species.

The Society is committed to developing partnerships and working relationships. These have been developed with the Olds College, University of Alberta, Canadian Food Inspection Agency (CFIA), Agriculture Fieldmen, Landscape Alberta Nursery Trades Association (LANTA), and International Society of Arboriculture (ISA).

STOPDED communicates regularly to all their members which includes AB Municipalities, Ag Fieldman, Custom Officials, nursery industry through Landscape Alberta Nursery Trades Association (LANTA) and to International Society of Arboriculture certified AB Arborist. Updated information on DED in other Provinces and on other invasive alien tree pest species is sent out by email.

Members include federal, provincial and municipal government representatives, nurserymen, landscapers, commercial and municipal arborists, horticultural and arboricultural students, research scientists and other interested Albertans.

Mandate: To foster and promote the survival of the American elm (*Ulmus americana*) in Alberta and the desire to protect Alberta's landscape trees threatened by pests with emphasis on invasive alien species.

Objects or Constitution of STOPDED:

- To primarily foster and promote the survival of the American elm (*Ulmus Americana*) in Alberta by preventing the establishment of Dutch elm disease and its insect vectors.
- To protect other Alberta landscape trees threatened by pests with emphasis on invasive alien species.
- To advocate for the restriction of movement of pest carrying wood or firewood into and within Alberta.
- To increase the awareness in the horticultural industry, in the general public, and in our governments of the immense value of our landscape trees, the value of our urban forests and of the possible insect and disease threats to them.
- To assist and fund research on highly destructive landscape insect and disease pests.
- To facilitate, for the public and for government agencies, the early detection of and rapid response to destructive invasive alien species that imperil landscape trees.

2. Rational for Government Ministries Funding Support

The *Provincial Dutch Elm Disease Prevention Program* was established in 1975 and administered by ARD until 2005 at which time it was terminated. Thereafter, a partnership was developed between various government ministries that would be the most affected by DED, to fund STOPDED to administer and operate the program. Since that time, STOPDED has administered and operated this successful program with a minimum funding grant. After 38 years, Alberta is still DED free.

Elm trees help make our communities world-class tourism destinations while significantly reducing the costs to our “hard” infrastructure and the effects of climate change. If AB was to get DED it would affect all Albertans.

a. Agriculture and Rural Development (ARD)

This Ministry contributes to the government opportunities “Making Alberta the Best Place to Live, Work and Visit”.

- i. Approximately 500,000 elms trees are growing in rural AB in shelterbelts and farm yards. Another 250,000 grow in AB Urban and Rural Municipalities.
- ii. DED and its vectors are listed under the Agricultural Pests Act as declared pests. This act is administered by ARD.
- iii. If DED gets established in AB the tree nursery industry would no longer be able to ship elms to BC or SK east. Under the Federal act regulates the movement of DED.

b. Environment and Sustainable Resource Development (ESRD)

This Ministry protects air, land, water and biodiversity to achieve desired environmental outcomes and ensure sustainable resource development.

- i. AB has the largest stand of DED free American elms in the world, which is an important aesthetic resource for Albertans.
- ii. Besides running a DED Prevention Program, STOPDED also monitors for other invasive alien wood-boring tree pest species.
- iii. STOPDED owns all the confiscation firewood bins at the AB/Montana borders. The society works with the custom officials to confiscate all wood with included bark. Mainly pine, spruce along with birch and elm wood are collected and disposed of.

c. Municipal Affairs (MA)

This Ministry supports a strong, safe and sustainable communities.

- i. A total of 250,000 elms grow in AB’s municipalities. They are valued at approximately \$4,800 to \$6,000 dollars each. Up to 50% of tree stands in many municipalities are elms.
- ii. If DED became established in Alberta, it would cost its municipalities millions of dollars just to remove the diseased, dying, and dead trees.
- iii. City of Winnipeg spends 3.68 million for their DED prevention/management program since they did not have a prevention program in place before DED hit them.

d. Tourism, Parks and Recreation (TPR)

This ministry supports the development and marketing of the province as a world-class tourism destination; manages a network of provincial parks to care for important ecological areas and provide opportunities to enjoy and learn about Alberta’s natural heritage.

- i. Elms are an important component to the landscape, have been planted in many Provincial Parks.
- ii. Many tourists transport elm wood since most parks charge for firewood. Firewood with bark included can carry invasive alien species that could kill trees.
- iii. STOPDED monitors for beetles vectors of DED in Provincial and Municipal parks.
- iv. STOPDED supplies information brochures to all Travel AB Information Centres and Border Crossings.
- v. STOPDED includes ads in the AB Campground Guide alerting travelers about firewood.

3. Integrated DED Prevention Program Essential Components

A successful prevention program integrates all the following components, as listed below. If any these are reduced or eliminated, the overall program effectiveness is significantly decreased. STOPDED uses all these components for the *Provincial Dutch Elm Disease Prevention Program*. In this way, Dutch Elm Disease (DED) has been kept out of Alberta (AB). **This program cannot be maintained without adequate funding.**

- a. Response plan
- b. DED prevention/control measures used to enforce under the act.
- c. Elm firewood collection and disposal is essential to insure DED vector infested elm firewood is not stored or transported within or into AB.
- d. Monitoring for DED vectors include the smaller European elm bark beetle (*SEEBB*), native elm bark beetle (*NEBB*) and the banded elm bark beetle (*BEBB*)
 - Provides vital information for DED detection.
 - Monitoring of the three exotic insect vectors done each year throughout the province to determine if the beetles are present.
 - Pheromone baited sticky traps are used to monitor for the DED vectors.
 - Monitor these three beetle species since they can carry the spores of DED. As they move from breeding sites, such as DED-infected trees or firewood, to feed on healthy elm trees, DED can be spread.
 - If one of these species are found, surveillance of the disease and beetle monitoring locations is increased in the area.
 - Number of traps placed in each municipality depends on location of the municipality, number of elms and if any insect vectors have been trapped in previous years. Approximately one trap for every 500 trees. However, some municipalities with less than 500 trees have traps because of their location.
 - Beetle populations must be monitored with pheromone traps in locations that include municipalities, recreational/campgrounds, Travel Alberta Information Centres, Alberta-Montana border crossings, and nurseries that sell elms.
- e. Surveillance of elm trees for DED symptoms is done where vectors have been found.
- f. Sampling of suspicious elm trees.
- g. Public awareness on the disease identification and prevention is essential since DED detection and prevention depends on the public scrutiny.
- h. Train the trainer to insure enforcement officers such as the Agricultural Fieldmen and Custom Officials.
- i. Provincial elm inventory supplies the basic information necessary for an effective prevention program and identifies areas where intensive surveillance is necessary.
- j. Provincial and inter-provincial network to maintain a liaison with all program partners and co-operators.
- k. Research is supported to find resistant varieties of elm trees, new control techniques until there is a cure for DED.
- l. Partnerships are needed with like-minded organizations in order to make good use of all resources.

4. Background Information

- a. Since the introduction of Dutch Elm Disease (DED) in 1930, the disease has destroyed millions of American elm trees across North America, because no prevention was in place.
- b. DED is now well established in Manitoba (MB) and Saskatchewan (SK).
 - i. These provinces are now forced to spend millions of dollars annually in control
 - ii. Government employees annually survey and remove the once majestic dead elm trees.
 - iii. Since 1975, Winnipeg has spent \$69 million to protect their elm population.
- c. Dutch elm disease (DED) is an invasive alien fungus known as *Ophiostoma ulmi* or *Ophiostoma nova ulmi* that can affect any elm (*Ulmus* spp.) tree. Once infected, the elm tree dies. **There is no cure, only prevention.**
- d. The invasive alien insect vectors for DED are:
 - i. Smaller European Beetles (SEEBB) (*Scolytus multistriatus*, Marsh)
 - ii. Native elm bark beetle (NEBB) (*Hylurgopinus rufipes*, Eichh)
 - iii. Banded elm bark beetle (BEBB) (*Scolytus schevyrewi*)
 - The BEBB has an ability to locate and colonize drought stressed trees and is able to produce up to three generations per year.
 - BEBB hosts includes American, Siberian and Japanese elms, willows, Russian olive and some fruit trees.
 - Elms have been killed through feeding activity and gallery construction.
- e. The DED carriers SEEBB and NEBB and the DED pathogens are declared pests under the Agricultural Pests Act, administered by ARD.
- f. The Canadian Food Inspection Agency administers the Plant Protection Act which regulates the movement of disease from DED infested to DED free provinces.
- g. Human vector - domestic firewood movement
- h. An elm inventory was completed in all the municipalities in the province of AB by STOPDED. Up to 50% of the overall tree plantings in municipal landscapes are elms.
- i. Alberta has an estimated 750,000 mature elm trees. A total of 250,000 elms, valued at \$700 million dollars, grow in Alberta's urban areas. The remaining 500,000 elms grow in provincial parks, farm shelterbelts and rural homesteads.
- j. Edmonton has 100,000 elms and Calgary 50,000 elms.
- k. Elms are valued at approximately \$4,800 to \$6,000 dollars each.
- l. The elm has been the preferred tree to plant, not only for its stately beauty, but also for the tree's impressive list of useful properties.
 - i. growing fast on a wide variety of soils
 - ii. tolerant to drought conditions
 - iii. high salt tolerance in urban boulevard plantings
 - iv. One of the few species that can thrive in the AB extreme climactic conditions
- m. In 1975, DED was found in Winnipeg, Manitoba
- n. In 1976, AB Agriculture's amendment to the AB Agricultural Pests Act to include both the pathogen and its beetle vectors.
- o. In 1981, DED found in Regina, Saskatchewan.
- p. DED is also found in Missoula, Billings, Great Falls and Sidney.

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- q. Since 1994, SEEBB and BEBB have been found in AB municipalities across the province.
- r. In 1998, an isolated case of DED was found in Wainwright by STOPDED. This tree was removed and properly disposed of immediately.
- s. As a result of vectors being found in Alberta, trapping locations and elm surveillance has been increased in all positive locations.
- t. From 1976 to 2004, Alberta Agriculture administrated and operated the *Provincial Dutch Elm Disease Prevention Program*.
- u. Since 2005, STOPDED received a Government of AB funding grant to operate and administrate the *Provincial Dutch Elm Disease Prevention Program*.
- v. STOPDED has been successful keeping AB Dutch elm disease free.
- w. Alberta is one of the last geographic areas in North America still DED free.

5. Current DED Situation in BC, AB, SK, MB and Montana

Annual Budgets for DED Prevention & Management Program in SK and MB

- City of Winnipeg 2013 DED program annual budget is 3.68 million, this includes 1 million from the province
- Province of Manitoba is \$1.5 million plus one full time person
- Province of Saskatchewan is \$100,000.00 plus one full time person

a. **British Columbia**

- i. SEEBB are found in high numbers in the southern part of the province.
- ii. DED has not been found.

b. **Alberta**

- i. SEEBB has been found in municipalities throughout Alberta since 1994.
- ii. One BEBB was found in City of Medicine Hat in 1996. Since then the numbers of BEBB have increased substantially. A total of 4067 BEBB were found on the 2013 Medicine Hat traps which were placed throughout the City.
- iii. BEBB also now being found in lower numbers in south eastern part of province in Dunmore, Irvine, Coutts and Wildhorse.
- iv. DED has not been found.

c. **Saskatchewan**

- i. Survey conducted by SK Ministry of Environment in 2013 showed DED remains well established in its traditional southeastern part of the province. DED has affected high numbers of elm along the Fort Qu'Appelle River all the way to Buffalo Pound Park just north of Moose Jaw.
- ii. Although the numbers of DED trees is up from 2012, the increase is attributed to more communities surveyed.
- iii. BEBB found in high numbers along the south western part of the province.
- iv. In 2012, one DED infected elm tree in Maple Creek was found, promptly removed and properly disposed off. Monitoring and surveys was increased in 2013 and no DED was found. This is only 100 km east of Medicine Hat.

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d. Manitoba

- i. DED is well established in the southern area of the province. It now extends throughout the entire natural range of elms in MB.
- ii. With an effective DED Prevention/Management Program in place, the **City of Winnipeg's** elm losses averaged approx. 1.2%-2% annually or 2,900 trees per year since 1975. Even though there has been a loss of 60,000 trees in the last 35 years, the city's elm population is still 160,000.

e. Montana

DED and SEEBB are found throughout the state.

6. Provincial DED Prevention Program Update

a. Monitoring for DED vectors (SEEBB, NEBB and BEBB) April 1st to Sept. 30th.

- A total of 1708 traps and lures and set by STOPDED and the larger cities province wide. The number of locations monitored is: (See appendix II)
 - 116 Municipalities (cities, towns, villages, hamlets),
 - 31 - Nurseries
 - 30 - Parks (Provincial and Municipal)
 - 5 - US/Canada Port of Entry
- The City of Edmonton, Calgary, Red Deer and Lethbridge are also responsible for distribution and scanning of traps in their buffer zone municipalities.
- 2006 - BEBB found for the first time in City of Medicine Hat.
- 2009 - BEBB found in Irvine, Coutts, Wildhorse and again in Medicine Hat.
- 2010 – 54 BEBB found in Medicine Hat.
- 2011 – Over 600 BEBB found throughout Medicine Hat
- 2012 – 2000 BEBB found throughout Medicine Hat and small numbers in Irvine, Dunmore and Walsh
- 2013– 4067 BEBB found throughout Medicine Hat and small numbers in Irvine, Dunmore.

2013 total targets captured provincially is over 4000.

| | |
|---------------|------------------|
| Medicine Hat | 4067 BEBB |
| Dunmore | 43 BEBB |
| Irvine | 2 BEBB |
| Brooks | 5 SEEBB |
| Acadia Valley | 2 BEBB |
| Bow Island | 5 BEBB |
| Coutts | 2 BEBB |
| Impress | 1 BEBB |
| Walsh | 5 BEBB |
| Edmonton | 28 SEEBB, 1 BEBB |
| St Albert | 5 SEEBB |
| Coalhurst | 1 SEEBB |

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- b. **Surveillance of elm trees:** Survey for the DED was completed in municipalities where the vectors have been found.
- c. **DED suspect sampling:** Arrangements were made to have samples taken from all suspect DED elm trees samples by STOPDED. These were sent to Dr. Stephen J.P. Strelkov with University of Alberta for diagnosis.

A total of 3 samples were cultured. All tested negative for DED.
- d. **Public awareness:** STOPDED undertakes many initiatives to promote DED prevention among Alberta citizens and to visitors to Alberta. **(See appendix III)**
- e. **Train the trainer:**
 - i. Contact was made with Custom Officials to insure that they understood the importance of collecting firewood.
 - ii. e-Bulletins were sent out to Custom Officials, Agriculture Fieldman regularly on DED prevention and other IAS tree pests.
- f. **Provincial elm inventory** was done in all AB municipalities in 1999. Some Cities are updating this inventory.
- g. **Provincial and inter-provincial network**
 - E-bulletins sent to British Columbia, Saskatchewan and Manitoba contacts.
 - Communication is made via email and phone for regular pests updates.
- h. **Elm firewood collection and disposal**
 - i. Travellers are requested to leave firewood in the bins in order to reduce the risk of importing insect vectors or disease through highway signage.
 - ii. The Society owns and maintains firewood collection bins and a collection trailer.
 - iii. Bins are placed at all US/AB ports of entry and at all Travel Alberta Information Centres. Collection trailer is parked at Chief Mountain Port of Entry.
 - iv. All firewood is confiscated at the US/AB ports whereas the bins at the information centres are volunteer bins. All bins were emptied and firewood disposed by volunteers.
 - v. A variety of wood is confiscated from travellers but mainly spruce, pine and some elm.
- i. **Research**

Using casino funds, STOPDED funds research projects that support the objectives of the Society. All projects funded are reviewed and recommended by the Research Committee and approved by the Board. 2013 projects approve are:

 - i. Surveillance of elm trees for DED and DED public awareness in municipalities along AB/SK border.
 - ii. Monitoring for Invasive Alien Wood Boring Species in Alberta
 - iii. Inspection of DED vector traps
- j. **Alberta DED Response Plan** is in place.
- k. **Alberta DED Prevention/Control Measures** are in place.
- l. Alberta has a “**Provincial Elm Pruning Ban**” from April 1st to September 30th in place.

7. Monitoring Invasive Alien Wood Boring Insects in AB Project

The establishment and expansion of the global marketplace has resulted in an increased risk of introduction of alien invasive insect species into Alberta. These invasive species threaten our urban and rural trees and provincial forests. Early detection of alien invasive species of wood boring insects is essential to protect our trees and to avoid negative economic, environmental and social impacts.

Provincial and Municipal departments with a mandate to protect and manage our urban landscapes are direct recipients of the results of this project. The public and private sector stakeholders in Alberta will benefit through timely notification of these invaders. This information will also benefit commercial tree nursery operations.

This project builds on a pilot project conducted by STOPDED from 2007-2009 (Invasive Alien Species Partnership Program Project #1294). Protocols and methodologies have been established for trap deployment and collection, trap residue processing, and reporting. A partnership was developed in 2011 between CFIA, Olds College and STOPDED that exploits the resources and capabilities of their respective organizations in pursuit of the protection of Alberta's trees. Cooperation between these organizations is integral to the project.

Fifteen trapping sites identified as highest risk introduction sites for alien invasive species are monitored. The project is coordinated by STOPDED, traps and lures supplied by CFIA and trap collections are processed by Olds College under the supervision of Dr. Ken Fry. Trap set up is coordinated by the following cooperators.

- City of Grande Prairie
- City of Lloydminster
- City of Edmonton
- City of Red Deer
- City of Calgary
- City of Lethbridge
- City of Medicine Hat
- City of Fort McMurray
- ARD Crop Diversification Centre, Brooks
- ESRD – (3 locations) landfill in Lawrence Lske, Conklin/Leisemer, and Bonnyville)

8. STOPDED Organization Accomplishments

- a. Reliable system & infrastructure to survey for DED and DED vectors monitoring is in place.
- b. Reliable system & infrastructure to survey for other IAS tree pest
- c. **STOPDED Hotline** 1-877-837-ELMS is in place.
- d. Memorandum of Understanding between Olds College and STOPDED was signed.
- e. **Invasive Alien Species (IAS) Partnership** - STOPDED's insect collection is housed at Olds College. Olds College has made a commitment to provide 25 hours per year of expert scientific entomological support to assist with curation of trapped insect material. CFIA has made a commitment to supply trapping supplies. Casino funds are used for insect curation.
- f. Volunteers are secured for a casino fund raising events. These funds are being used for research, additional public awareness and educational workshops.
- g. Agriculture Fieldmen and their Assistants are recognized as associate membership. This membership recognizes our ongoing working relationship/partnership to help prevent DED.
- h. **Research Committee established terms of reference**, mandate, composition and membership. Two key functions include:
 - i. make recommendations to the STOPDED Board of Directors regarding the merit and suitability research funding requests and project funding requests made to the Society
 - ii. provide oversight for research and science-related projects undertaken by the Society to ensure quality and that the Society's interests are maintained
- i. **STOPDED Research Work Plan:** the Society is directly delivering research projects. This plan establishes the accountability for clearly identifying objectives, desired outcomes and performance measures (measures of success) for each phase of the anticipated project. It also establishes clear expectations of the direction, focus, and accountability.
- j. **Scholarships:** four worthy Olds College horticultural and arboricultural students receive these annual scholarships using casino funds
- k. **STOPDED website (www.stopped.org)** is housed under AAFD "Ropin' the Web."

9. STOPDED Goals for the Future

- Continue to secure funding from Government agencies to operate the *Provincial Dutch Elm Disease Prevention Program*.
- Continue to form partnerships so program prevention program components and projects can be done more efficiently and effectively.
- BEBB is a new vector of DED and has been found in larger number in City of Medicine Hat. STOPDED needs to concentrate on working with those municipalities in the south eastern corner of AB and Agriculture Fieldman to minimize the threat of DED.
- Continue holding workshops on DED and other invasive tree pests.
- Continue research effective methods of advertising.
- Update DED Response Plan when needed
- Continue working with ARD Pest Surveillance Branch to include DED prevention/control measures as Agricultural Pests Act Regulations.
- Continue to encourage planting of elms throughout the province.
- Keep Alberta free of DED and other IAS tree pests.

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Appendix I

Provincial Monitored Locations

The following list indicates the number of trap sites in each location and the responsible party.

LEGEND: CGY - Calgary
 EDM - Edmonton
 SC - Strathcona County
 StC - Sturgeon County
 STOPDED
 LB - Lethbridge
 MH - Medicine Hat
 RV- Rocky View MD#44

| <u>Municipality</u> | <u>Sites</u> | <u>Responsibility</u> | | | |
|----------------------------|--------------|-----------------------|--------------------------|----|---------|
| AcadiaValley, M.D. of | 1 | STOPDED | High Prairie, Town of | 2 | STOPDED |
| Airdrie, City of | 2 | CGY | High River, Town of | 2 | STOPDED |
| Ardrossan, Hamlet of | 1 | SC/EDM | Innisfail, Town of | 1 | RD |
| Balzac, Hamlet of | 1 | CGY | Irvine, Village of | 1 | MH |
| Barnwell, Village of | 1 | LB | Kathryn, Hamlet of | 1 | RV/CGY |
| Barrhead, Town of | 1 | STOPDED | Keoma, Hamlet of | 1 | RV/CGY |
| Barons, Village of | 1 | LB | Killam, Town of | 2 | STOPDED |
| Beaumont, Town of | 1 | EDM | Lacombe, Town of | 3 | RD |
| Beiseker, Village of | 1 | RV/CGY | Langdon, Hamlet of | 1 | RV/CGY |
| Bentley, Village of | 1 | RD | Leduc, City of | 3 | EDM |
| Bon Accord, Town of | 1 | EDM | Legal, Town of | 1 | SA/EDM |
| Bonnyville, Town of | 1 | STOPDED | Lethbridge, City of | 33 | LB |
| Bowden, Town of | 1 | RD | Leth Correctional Centre | 1 | LB |
| Bow Island, Town of | 1 | MH | Leth Research Centre | 1 | LB |
| Brooks, Town of | 7 | STOPDED | Leth. Wilson Siding | 1 | LB |
| Bruderheim , Town of | 1 | SC/EDM | Lloydminster, City of | 7 | STOPDED |
| Calgary, City of | 67 | CGY | Magrath, Town of | 1 | LB |
| Calmar | | 1 EDM | Medicine Hat, City of | 36 | MH |
| Camrose, City of | 3 | STOPDED | Milk River, Town of | 2 | STOPDED |
| Camrose, County of | | | Mirror, Village of | 1 | RD |
| Round Hill, Hamlet of | 1 | STOPDED | Monarch, Hamlet of | 1 | LB |
| New Norway, Hamlet of | 1 | STOPDED | Morinville, Town of | 1 | EDM |
| Cardston, Town of | 1 | STOPDED | Nanton, Town of | 1 | STOPDED |
| Castor, Town of | 1 | STOPDED | Nobleford, Village of | 1 | LB |
| Cereal, Village of | 1 | STOPDED | Okotoks, Town of | 2 | CGY |
| Chauvin, Village of | 1 | STOPDED | Olds, Town of | 1 | STOPDED |
| Chestermer, Town of | 1 | CGY | One Four, Hamlet of | 1 | MH |
| Claresholm, Town of | 2 | STOPDED | Oyen, Town of | 2 | STOPDED |
| Coaldale, Town of | 2 | LB | Picture Butte, Town of | 1 | LB |
| Coalhurst, Town of | 2 | LB | Pincher Creek, Town of | 1 | STOPDED |
| Conrich, Hamlet of | 1 | CGY | Ponoka, Town of | 2 | RD |
| Consort, Town of | 3 | STOPDED | Provost, Town of | 2 | STOPDED |
| Coronation, Town of | 2 | STOPDED | Raymond, Town of | 3 | LB |
| Coutts, Village of | 2 | STOPDED | Redcliff, Town of | 1 | MH |
| Dalroy, Hamlet of | 1 | RV/CGY | Red Deer, City of | 19 | RD |
| Daysland, Town of | 1 | STOPDED | Redwater, Town of | 2 | EDM |
| Delburne, Village of | 1 | RD | Rimbey, Town of | 1 | RD |
| Devon, Town of | 2 | EDM | Sherwood Park | 2 | SC/EDM |
| Diamond Valley | 1 | LB | Springbank, Hamlet of | 1 | RV/CGY |
| Drayton Valley, Town of | 1 | STOPDED | Springbrook, Hamlet of | 1 | RD |
| Drumheller, Town of | 3 | STOPDED | Spruce Grove, City of | 2 | EDM |
| East Coulee, Hamlet of | 1 | STOPDED | St. Albert, City of | 12 | SA/EDM |
| Nacmine, Hamlet of | 1 | STOPDED | Stettler, Town of | 2 | STOPDED |
| Rosedale, Hamlet of | 1 | STOPDED | Stirling, Village of | 1 | LB |
| Eckville, Town of | 1 | RD | Stony Plain, Town of | 3 | EDM |
| Edgerton, Village of | 1 | STOPDED | Strathcona County | 8 | EDM |
| Edmonton, City of | 48 | EDM | St. Paul, Town of | 2 | STOPDED |
| CDCN | 1 | STOPDED | Strathmore, Town of | 2 | CGY |
| Elnora, Village of | 1 | RD | Suffield, Hamlet of | 1 | MH |
| Empress, Village of | 2 | STOPDED | Sylvan Lake, Town of | 1 | RD |
| Enchant, Village of | 1 | STOPDED | Taber, Town of | 5 | LB |
| Forestburg, Village of | 5 | STOPDED | Three Hills, Town of | 1 | STOPDED |
| Fort Macleod, Town of | 1 | LB | Vauxhall, Town of | 2 | STOPDED |
| Fort Saskatchewan, City of | 6 | EDM | Vegreville, Town of | 2 | STOPDED |
| Gibbons, Town of | 1 | EDM | Vermilion, Town of | 1 | STOPDED |
| Grande Prairie, City of | 3 | STOPDED | Veteran, Village of | 1 | STOPDED |
| Grassy Lake, Hamlet of | 1 | MH | Viking, Town of | 1 | STOPDED |
| Hanna, Town of | 2 | STOPDED | Vulcan, Town of | 1 | STOPDED |

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| | | | | | |
|---------------------------|---|---------|------------------------|---|---------|
| Wainwright, Town of | 4 | STOPDED | Wetaskiwin, City of | 3 | |
| Walsh Travel Info. Centre | 1 | MH | STOPDED | | |
| Warner, Town of | 2 | STOPDED | Youngstown, Village of | 1 | STOPDED |

| <u>Nurseries</u> | <u>#Sites</u> | <u>Responsible</u> |
|---|---------------|--------------------|
| Alberta Tree Movers | 1 | CGY |
| Arrowhead Nurseries | 1 | EDM |
| Bluegrass Nurseries | 1 | CGY |
| Blue Grass Sod Farms | 1 | RD |
| Cheyenne Tree Nursery | 1 | EDM |
| Coaldale Nurseries Ltd | 1 | LB |
| Economy Landscaping | 1 | StC/EDM |
| Foothills Landscaping | 1 | CGY |
| Golden Acre Garden Centre | 1 | MH |
| Golden Acre Garden Sentres NE and Greengate | 2 | CGY |
| Green Haven Tree Farm | 1 | LB |
| Greenland Nursery | 1 | EDM |
| Heritage Nurseries | 1 | StC/ED |
| Heritage Tree Nurseries | 1 | CGY |
| Lacombe Tree Farms | 1 | RD |
| Millcreek Nursery | 1 | EDM |

| | | |
|-------------------------------|---|---------|
| Old Man Creek | 1 | EDM |
| Parkland Nurseries | 1 | RD |
| Pireira and Monez Landscaping | 1 | StC/EDM |
| Poplar Ridge Tree Farm | 1 | RD |
| Salisbury Greenhouses | 1 | SC/EDM |
| Simon Bos Nurseries Ltd. | 1 | LB |
| Spruce Lanes | 1 | CGY |
| Sunnyside Greenhouses Ltd. | 1 | CGY |
| Sunshine Tree Nursery | 1 | StC/EDM |
| Sunstar Nurseries | 1 | EDM |
| Tom's Tree Farm | 1 | EDM |
| Vollmin Tree Movers | 1 | CGY |
| West Edmonton Treeland | 1 | EDM |
| William Holt Nurseries | 1 | CGY |
| Windmill Garden Centre | 1 | MH |

| <u>Parks</u> | <u>#Sites</u> | <u>Responsible</u> |
|-----------------------------|---------------|--------------------|
| Aspen Beach PP | 3 | STOPDED |
| Big Knife PP | 1 | STOPDED |
| Buffalo Lake PP | 1 | STOPDED |
| Dillberry PP | 1 | STOPDED |
| Dinosaur PP | 1 | STOPDED |
| Dixon-Stevenson Rest Stop | 1 | RV/CGY |
| Elkwater Cabin Area | 1 | STOPDED |
| Gooseberry Lake PP | 1 | STOPDED |
| Half Moon Lake Resort | 1 | SC/EDM |
| Island Buffalo Jump PP | 1 | STOPDED |
| Jarvais Bay PP | 1 | RD |
| Kinbrook PP | 1 | STOPDED |
| Lac Ste. Anne County | | |
| Meyerthorpe Campground1 | STOPDED | |
| Little Bow PP | 1 | STOPDED |
| Little Fish PP | 1 | STOPDED |
| Midland PP | 1 | STOPDED |
| Pine Lake PP | 1 | RD |
| Parkland PP | 1 | RD |
| Reesor Lake PP | | STOPDED |
| Rochan Sands PP | 1 | STOPDED |
| Sherwood Forest Campground1 | | SC/EDM |
| St. Mary Reservoir | 1 | STOPDED |
| Strathcona Science PP | 1 | SC/EDM |
| Taber PP | 1 | LB |
| Tillibook PP | 1 | STOPDED |
| The Narrows PP | 1 | STOPDED |
| Tolman Bridge PRA | 1 | STOPDED |
| Vermillion PP | 1 | STOPDED |

| <u>Port of Entry</u> | <u>#Sites</u> | <u>Responsible</u> |
|----------------------|---------------|--------------------|
| Chief Mountain | 1 | STOPDED |
| Carway | 1 | STOPDED |
| Coutts | 1 | STOPDED |
| Del Bonita | 1 | STOPDED |
| Wild Horse | 1 | STOPDED |

Appendix II

Public Awareness

- **Advertisements focus on Elm Firewood and Elm Pruning Recommendations**
 - 2013 Travel Alberta Campground Guide
 - 2013 Alberta Guide to Hunting Regulations
 - 2013 Alberta Sportfishing Regulations
 - Landscape Alberta Nursery Association (LANATA) LANDX (nursery resource listing)
 - The Alberta Association of Landscape Architects 2013 Membership Roster
- **DED Public Awareness Week** was recognized province wide from June 24th to June 30th
- **STOPDED E-Bulletin's**

As part of the ongoing efforts to keep members informed on DED and other related pest issues, an information E-Bulletin is regularly sent out.
- **STOPDED Display**

Displays are available for municipalities to borrow for their events.
- **Posters and brochures**
 - Brochures and posters were sent to Municipalities and Provincial contacts to be placed in Municipal/Provincial campgrounds, provincial ports of entry and Travel information centres.
 - Brochures and posters were sent to all Accredited Community and Regional Visitors Information Centres and **Travel Alberta Visitor Information Centres**. These Centres are located in Brooks, Brazeau, Camrose, Devon, Cochrane, Cold Lake, Fort McMurray, Grande Cache, Lac La Biche, Leduc, Millet, and Pincher Creek, Rocky Mountain House, Slave Lake, Falher, Stettler, High River, Vulcan, Westlock, Whitecourt. Canmore, Crowsnest Pass, Grande Prairie, Field, Hinton, Lloyminster, Milk River, Oyen, Walsh, and West Glacier. All were contacted several times through the summer to check their brochure supply.
- **Conferences/Tradeshows:**
 - Green Industry Conference/ Trade Show, manned STOPDED booth. Nov 14&15
 - International Society of Arboriculture (ISA) Prairie Chapter Conference/Tradeshow, manned booth, Oct 5&6
 - Industrial Vegetation Management Association (IVMAA) of Alberta Tradeshow, manned booth, March 5&7
 - Alberta Recreation & Parks Association (ARPA) tradeshow, manned booth, Oct 24-26
- **STOPDED Hotline – 1-877-837-ELMS (3567)**
 - 312 calls with concerns and questions ranging from information on the DED Response Plan, Agricultural Pests Act, Plant Protection Act of Canada, storm damage, pruning ban, proper disposal, proper tree care and DED symptoms.
- **STOPDED Website:** ARD Ropin the Web **DED website** updated when needed by AAFD. The ARD site is linked to www.stopded.org

Society To Prevent Dutch Elm Disease (Incorporated 1993)



Appendix III

STOPDED Board

| | |
|----------------------------|--|
| Chair: | Jacqueline Powell Red Deer Regional Hospital Certified Arborist & Utility Specialist Red Deer |
| Past Chair | Milton Davies Arbor-Pro Tree Consulting Ltd. Consultant Edmonton |
| Vice Chair | Michael Jenkins Biological Technician City of Edmonton |
| Treasurer/Secretary | Dr. Ieuan Evans Agri Trends Consultant Spruce Grove |
| Director North | Scott Stanley Tree Services Team Lead City of St. Albert |
| Director Central | Susan Katzel Urban Forestry Technician City of Red Deer |
| Director South | Gary Patzer Certified Arborist Medicine Hat |
| Research Committee | Elaine Johnson Mike Jenkins Lindsay Bell Jackie Powell |
| Executive Director | Janet Feddes-Calpas |