

Society To Prevent Dutch Elm Disease
(Incorporated 1993)



2012/2013 Annual Report

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1. Integrated DED Prevention Program 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 has been kept out of Alberta. This program cannot be maintained without adequate funding.

- a. 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.
- b. Surveillance of elm trees for DED symptoms is done where vectors have been found.
- c. Sampling of suspicious elm trees.
- d. Public awareness on the disease identification and prevention is essential since DED detection and prevention depends on the public scrutiny.
- e. Train the trainer to insure enforcement officers such as the Agricultural Fieldmen and Custom Officials.
- f. Provincial elm inventory supplies the basic information necessary for an effective prevention program and identifies areas where intensive surveillance is necessary.
- g. Provincial and inter-provincial network to maintain a liaison with all program partners and co-operators.
- h. Response plan
- i. DED prevention/control measures used to enforce under the act is in place.
- j. Elm firewood collection and disposal is essential to insure DED vector infested elm firewood is not stored or transported within or into Alberta.
- 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.

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2. Program Background

- a. 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.**
- b. The exotic 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*)
- c. Human vector - domestic firewood movement
- d. 1999, an elm inventory was completed in all the cities, towns, villages and hamlets in the province of Alberta (AB) by STOPDED.
- e. By completing the inventory it was found that up to 50% of the overall tree plantings in municipal landscapes are elms.
- f. Alberta has an estimated 750,000 mature elm trees. It is one of the few jurisdictions left in the world that is Dutch Elm Disease free. 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.
- g. 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 such as:
 - i. growing fast on a wide variety of soils
 - ii. easily transplantable
 - iii. long lived (300+ years)
 - iv. with the exception of DED, it is more disease resistant than other varieties of trees grown in Alberta
 - v. tolerant to drought conditions
 - vi. high salt tolerance in urban boulevard plantings
 - vii. One of the few species that can thrive in the extreme climactic conditions that are present in Alberta
- h. Since the introduction of the disease from Europe in 1930, it has destroyed millions of American elm (*Ulmus americana*) trees across North America.
- i. In 1975, DED was found in Winnipeg, Manitoba
- j. In 1976, Alberta plant pathologists and entomologists formed a DED Action Committee. Dr. Ieuan Evans, plant pathologist with AB Agriculture at that time, cited the threat of a possible outbreak of this disease in AB as the reason for AB Agriculture's amendment to the AB Agricultural Pests Act to include both the pathogen and its beetle vectors.
- k. In 1981, DED found in Regina, Saskatchewan.
- l. Since 1994, the smaller European elm bark beetles (SEEBB) or the banded elm bark beetle (BEBB) have been found in the following AB municipalities: Calgary, Edmonton, Vauxhall, High River, Medicine Hat, Consort, Coutts, Balzac, Dunmore, Hays, Irvine, Red Deer, Kiliam, Lloydminster, Lethbridge, Taber, Sylvan Lake, Wetaskiwin, Beiseker, Springbank, Coaldale, Barnwell, Milk River, Warner, Brooks, Raymond, Forestburg, Provost, St. Albert, Drumheller, Wainwright, Walsh, Wildhorse and Fort Saskatchewan, Kipp, Strathmore .

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- m. In 1998, an isolated case of DED was found in Wainwright by STOPDED. This tree was removed and properly disposed of immediately.
- n. From 1976 to 2004, Alberta Agriculture administrated and operated the *Provincial Dutch Elm Disease Prevention Program*.
- o. Since 2005, after the province cut the program, STOPDED received a Government of Alberta funding grant to operate and administrate the *Provincial Dutch Elm Disease Prevention Program*. Agriculture and Rural Development, Sustainable Resource Development, Tourism, Parks and Recreation, and Municipal Affairs have been the four government ministries that have contributed to STOPDED's grant.
- p. The 2012 Municipal Affairs and Tourism, Parks and Recreation termination of support for the *Provincial Dutch Elm Disease Prevention Program*, as operated and administered by STOPDED has placed the Society and the success of this program in a critical and near fatal stance.

3. Current DED and DED Vector Situation

- a. **Dutch Elm Disease (DED) vectors** (Smaller European elm bark beetle, native elm bark beetle) and the **DED pathogens are declared pests** under the Provincial Agricultural Pest Act, administered by AARD. The Canadian Food Inspection Agency (CFIA) administers the Plant Protection Act (Canada) which regulates the movement of disease from DED infested to DED - free areas and between provinces.
- b. An “**Alberta DED Response Plan**” is in place.
- c. “**Alberta DED Prevention/Control Measures**” are in place.
- d. Alberta has a “**Provincial Elm Pruning Ban**” from April 1st to September 30th in place.
- e. **DED Public Awareness Week** recognized annually province wide from June 24th - 30th.
- f. **Manitoba** - DED is well established in the southern area of the province. It now extends throughout the entire natural range of elms in MB.
- g. **Saskatchewan** - DED is well established in the eastern area of the province. DED has affected high numbers of DED along the Fort Qu'Appelle River all the way to Buffalo Pound Park just north of Moose Jaw.
- h. Most municipalities in areas fighting the disease have a “**Prevention/Management Program**” in place.
- i. In 1961, DED was discovered in **The City of Fredericton**. With a Prevention/Management Program put in place immediately, they have been able to sustain many of their elm trees. In 50 years they lost 20% of their elms, while communities that did nothing lost 95%.
- j. 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 with a loss of 60,000 trees in the last 35 years, the city's elm population is still 140,000.
- k. **DED Prevention and Management Program Annual Budget** in other municipalities/provinces:
 - i. City of Winnipeg 2012 DED program annual budget is 3.68 million, this includes 1 million from the province.
 - ii. Province of Manitoba is \$1.5 million plus one full time person
 - iii. Province of Saskatchewan is \$100,000.00 plus one full time person

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- l. DED is also found in Missoula, Billings, Great Falls and Sidney.
- m. SEEBB are found in high numbers in British Columbia; however, no DED has been found.
- n. SEEBB has been found in municipalities throughout Alberta.
- o. The **banded elm bark beetle (BEBB)** is a new DED vector, and has been found in recent years in large numbers in Medicine Hat and in small numbers in Irvine, Hays, Dunmore, Coutts and Wildhorse. Approx 2000 BEBB have been trapped throughout the City of Medicine Hat this last season.
- p. The BEBB has an ability to locate and colonize drought stressed trees and is able to produce up to three generations per year.
- q. BEBB hosts includes American, Siberian and Japanese elms, willows, Russian olive and some fruit trees.
- r. Elms have been killed through feeding activity and gallery construction.
- s. As a result of vectors being found in Alberta, trapping locations and elm surveillance has been increased in all positive locations.
- t. Alberta is one of the last geographic areas in North America still DED free.

4. STOPDED Mandate and Goals

Members include federal, provincial and municipal government representatives, nurserymen, landscapers, commercial and municipal arborists, horticultural and arboricultural students, research scientists and other interested Albertans. STOPDED members across the province take an active role in the prevention of DED.

2012 membership total - 29 individual and 60 corporate, 5 student and 173 associate.

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 the Society registered August 17, 2010 with Alberta Corporate Registry:

- 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.

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5. STOPDED Organization Accomplishments

The Dutch Elm Disease program was terminated, by AARD in 2005. Thereafter, a partnership was developed between various government departments that would be the most effected by Dutch Elm Disease and STOPDED. Since that time, STOPDED has administered and operated the *Provincial Dutch Elm Disease Prevention Program*.

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

- a. Established a **new STOPDED Hotline** 1-877-837-ELMS.
- b. Has established a reliable system and infrastructure to survey for DED and monitor for DED vectors in Alberta.
- c. **Memorandum of Understanding (MOU) between Olds College and STOPDED was signed at the April 2010 AGM at Olds College.** This close working relationship has enhanced both STOPDED and Olds College.
- d. **Invasive Alien Species (IAS) Partnership** - STOPDED's insect collection from the 2007 - 2009 IAS Partnership Program funded by Environment Canada, is now housed at Olds College. The large collection is properly maintained to ensure the long-term sustainability and storage. Dr. Ken Fry, Olds College, Entomology Instructor 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 for this IAS project annually.
- e. STOPDED engaged the SVS Group Accountants to **audit and review STOPDED's books and examine its accounting practices since 2009.** Their recommendations improve STOPDED's accountability and transparency has been incorporated.
- f. STOPDED is now registered with the Federal Government for GST status as a non-profit organization.
- g. Bookkeeper has been hired to implement the SVS Group Accountants recommendation. STOPDED has moved to a "Project Based Accounting System" to allocate expenditures, based on project needs using a standard accounting program.
- h. STOPDED Board adopted and instituted a "**Travel Policy**" and created an "**Expense Form**". This has improved decision making and provides a paper trail for enhanced accountability.
- i. Revised **STOPDED Bylaws** are registered with Alberta Corporate Registry on August 2010.
- j. Volunteers are secured for a casino fund raising event. These funds are being used for research and additional public awareness such as municipal DED signs and educational workshops.
- k. **STOPDED's minutes** have taken on a new look, making the issue of decision making and responsibilities transparent and obvious.

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- l. STOPDED membership logo was designed and a “**Membership Logo Use Policy**” ratified by the STOPDED’s board.
- m. **Director Manuals** have been assembled to include board position responsibilities, contact information, business plan etc. This manual serves as a guide to help board members to understand their role in the provision of good governance.
- n. **STOPDED Board passed a motion granting an associate membership category** to include all Alberta Agriculture Fieldmen and their Assistants. The associate membership recognizes this ongoing working relationship that is necessary to strengthen the working relationship with “on-site” detection of DED.
- o. **STOPDED Board passed a motion granting students membership category.** Student membership is at a lower fee. This will encourage student involvement.
- p. **Research Committee established new terms of reference**, mandate, composition and membership. This STOPDED Board approved document outlines terms of office, frequency of meetings, reporting structure and specific functions. 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
- q. **Research Committee updated the STOPDED Research Funding Guidelines** that outlines eligibility, the application process, and specific requirements of those who are qualified to receive funding
- r. **Research Committee established a STOPDED Research Work Plan:** the Society is directly delivering research projects. The 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.
- s. **Scholarships:** four worthy Olds College horticultural and arboricultural students receive these annual scholarships.
- t. **STOPDED website (www.stopped.org)** is housed under AAFD “Ropin’ the Web.” Items included on the web site:
 - “Last Stand” education video which was funded by STOPDED and can be used to educate employers, employees, council members, students and the general public on DED and how it can be prevented.
 - Two You-Tube videos “Trap Instalment” and “ Trap Removal and Return”
 - STOPDED Bylaws
 - STOPDED Objects
 - STOPDED Membership Logo Use Policy
 - Research project final reports
 - STOPDED general and annual general meeting minutes

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6. Provincial DED Prevention Program Accomplishments

a. Monitoring for DED vectors (SEEBB, NEBB and BEBB)

- *Monitoring season runs from April 1st to September 30th.*
- A total of 1707 traps and lures are purchased by STOPDED and the larger cities to monitor for the DED vectors in municipalities, nurseries, parks and ports of entry province wide (See appendix II)
- 116 Municipalities(cities, towns, villages, hamlets),
- 31 - Nurseries
- 30 - Parks (Provincial and Municipal)
- 5 - US/Canada Port of Entry
- STOPDED distributed 252 traps to 50 municipalities, 5 ports of entry, and 30 provincial parks. These traps are purchased using the Government grant funding. Traps are changed twice per season and scanned by Olds College students, supervised by instructor Dr. Ken Fry.
- The City of Edmonton, Calgary, Red Deer, Medicine Hat and Lethbridge, manage a total of 1058 traps to monitor 203 sites within their city limits. Traps are purchased by each city, changed monthly and scanned by city staff.
- The City of Edmonton, Calgary, Red Deer and Lethbridge are also responsible for distribution and scanning of traps in their buffer zone municipalities. By doing this, it increases the municipalities in the province monitored by 66. Traps for buffer zones are supplied by STOPDED and changed twice per season.

To date:-Over 2000 EBB targets captured in 2012 traps provincial wide.

- 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 – BEBB again found throughout the City of Medicine Hat (1998 EBB)
 - i. BEBB found in Irvine (1), Dunmore (8), Hays (1) and Walsh (2)
 - ii. SEEBB found in Edmonton (31), Strathcona County (1), St. Albert (11), Fort Saskatchewan (2), Spruce Grove (1), Medicine Hat (2) Calgary (20), Brooks (3), Strathmore (1), Lethbridge (14), Coaldale (1), Kipp (1) Barnwell(1)
- b. **Surveillance of elm trees:** Survey for the DED has been done in municipalities where the vectors have been found. These surveys were cancelled this last season due to lack of funds.
- c. **DED suspect sampling:** Arrangements were made to have samples taken from all suspect DED elm trees samples by STOPDED. All samples were sent to the University of Alberta with Dr. Stephen J.P. Strelkov doing the diagnosis. A total of 4 samples were cultured from throughout Alberta and 22 were sent in from Edmonton. All tested negative for DED.
- d. **Public awareness:** STOPDED undertakes many initiatives to promote DED and other tree IAS prevention among Alberta citizens and to Alberta visitors. (See appendix III)

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- 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 Municipalities, Custom Officials and Agriculture Fieldman regularly on DED and other tree IAS prevention.
- f. **Provincial elm inventory** was completed in 1999 in all Alberta municipalities.
- g. **Provincial and inter-provincial network**
 - E-bulletins and updates sent to British Columbia, Saskatchewan and Manitoba contacts.
 - Communication is made via email and phone for regular pests updates.
- h. **Response plan, AB DED Prevention/Control Measures, Regulations**
 - i. Response plan was written 1996.
 - ii. AB DED Prevention/Control Measures have been reviewed 2012.
- i. **Elm firewood collection and disposal**
 - i. As part of the STOPDED's IAS tree prevention, the Society maintains firewood collection bins at all US/AB ports of entry and at all Travel Alberta Information Centres. 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.
 - ii. Travellers are requested to leave firewood in the bins in order to reduce the risk of importing insect vectors or disease through highway signage.
- j. **Research**
 - i. Using casino funds, STOPDED supports and 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.
 - ii. Project "**Bionomics of the Banded Elm Bark Beetle and Implications for Dutch Elm Management**" by Dr. Neil Holliday (University of Manitoba) completed.
 - iii. "**2011 Surveillance of elm trees for DED and DED public awareness in municipalities along AB/SK border**". Report found at www.stopded.org under "Research Projects Final Reports"
 - iv. The "**Invasive Alien Species Survey**" was organized by STOPDED and conducted in Calgary, Edmonton, Grande Prairie, Lethbridge, Medicine Hat and Red Deer by city staff. STOPDED coordinated the project and CFIA supplied the traps and lures. All insects collected were sent to Dr. Ken Fry, Olds College for curation.

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 to Canada of invasive alien species (IAS) threatening our urban forests. STOPDED formed a partnership between STOPDED, CFIA and Olds College. Each party seeks to exploit the resources and capabilities of their respective organizations in pursuit of the protection of Alberta's trees. Through this partnership, an IAS monitoring program has been established for the early detection of alien invasive species of wood boring insects in Alberta.

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This project builds on a pilot project conducted by STOPDED from 2007-2009 (Invasive Alien Species Partnership Program Project #1294) and contracted work by Olds College from 2010-2011. Protocols and methodologies have been established for trap deployment and collection, trap residue processing, and reporting. Cooperation between STOPDED, CFIA, and Olds College is integral to the project.

The results of this project will provide timely detection and notification of IAS in support of a comprehensive stewardship effort by public and private sector stakeholders in Alberta and Canada, train students and workers in the field of horticulture to serve as resource personnel in urban forest management, contribute to the urban forest insect collection housed at Olds College, and provide extension services to the horticulture industry.

Fifteen trapping sites have been identified as high risk introduction sites for IAS to be monitored. The project was coordinated by STOPDED, traps and lures were supplied by CFIA and trap collections processed by Olds College under the supervision of Dr. Ken Fry. 2012 trap set up and samples preparation was accomplished 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
- AARD Crop Diversification Centre, Brooks

8. STOPDED Goals for the Future

- Continue to secure core funding from Government agencies to operate the Provincial DED Prevention Program.
- Continue to source funding to support the tree IAS specifically the wood boring insect monitoring and prevention program.
- Continue to form partnerships so program prevention program components and projects can be done more efficiently and effectively.
- Improve monitoring program by visiting municipalities that express monitoring concerns.
- BEBB is a new vector of DED and has been found in larger number in Medicine Hat in 2010 and 2011 and again in 2012 in large numbers throughout the city. STOPDED will continue working with The City of Medicine and Agriculture Fieldman to develop a management plan and to increase awareness in that area.
- Have more DED surveillance done in municipalities due to the increase of EBB.
- Hold workshops on DED and other tree IAS.
- Continue research on effective methods of advertising.
- Update DED Response Plan.
- Continue working with AARD Pest Surveillance Branch to include DED prevention/control measures as Alberta Agricultural Pests Act Regulations.
- Continue to encourage planting of elms throughout the province.

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9. Appendix I Provincial Monitored Locations

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

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

<u>Municipality</u>	<u>Sites</u>	<u>Responsibility</u>			
Acadia Valley, 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	3	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			
Forestburg, Village of	5	STOPDED			
Fort Macleod, Town of	1	LB	Taber, Town of	5	LB
Fort Saskatchewan, City of	6	EDM	Three Hills, Town of	1	STOPDED
Gibbons, Town of	1	EDM			
Grande Prairie, City of	3	STOPDED			
Grassy Lake, Hamlet of	1	MH			
Hanna, Town of	2	STOPDED	Vauxhall, Town of	2	STOPDED

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Vegreville, Town of	2	STOPPED	Viking, Town of	1	STOPPED
Vermilion, Town of	1	STOPPED	Vulcan, Town of	1	STOPPED
Veteran, Village of	1	STOPPED	Wainwright, Town of	4	STOPPED
			Walsh Travel Info. Centre	1	MH
			Warner, Town of	2	STOPPED
			Wetaskiwin, City of	3	STOPPED
			Youngstown, Village of	1	STOPPED

Nurseries	#Sites	Responsible
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	2	CGY
NE and Greengate		
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

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

Port of Entry	#Sites	Responsible
Chief Mountain	1	STOPPED
Carway	1	STOPPED
Coutts	1	STOPPED
Del Bonita	1	STOPPED
Wild Horse	1	STOPPED

Prevention is our most effective way of controlling Dutch Elm Disease and other invasive tree insects & diseases

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10. Appendix II Public Awareness

- **Advertisements focus on Elm Firewood and Elm Pruning Recommendations**

Due to the decrease of funds, ads that were normally placed in a number of publications to increase DED prevention awareness have been cancelled.

- **STOPDED E-Bulletin's**

As part of the ongoing efforts to keep members informed on DED and other related pest issues and information E-Bulletin's are regularly sent out.

- **STOPDED Display**

Due to decrease of funds a scheduled update on the display was cancelled.

- **Posters and brochures**

- Due to the decrease of funds, new brochures were not ordered.
- 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:** Due budget cut back fewer conference tradeshows were attended:

- **Green Industry Trade Show & Conference**, Edmonton –manned STOPDED booth. Nov 15&16
- 2012 ISA Prairie Chapter Conference. October 15 to October 17, 2012. Canmore, Alberta “Keep Cool – Forests For The Future
- Invasive Alien Species National Forum attended by STOPDED Chair Milton Davies.

- **STOPDED Hotline – 1-877-837-ELMS (3567)**

- 297 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:** AARD Ropin the Web **DED website** updated when needed by AAFD.

- **Firewood Trailer used to dispose of wood collected at Alberta/Montana Ports of Entry**

A collection trailer is parked at Chief Mountain Port of Entry and used by Phil Merrill, AARD Inspector to empty and dispose of wood collected in the bins at Coutts, DeBonita, Carway Ports of Entry.

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11. Appendix III

STOPDED Board

Chair:	Milton Davies Arbor-Pro Tree Consulting Ltd. Consultant Edmonton
Vice Chair	Dr. Ieuan Evans Agri Trends Consultant Spruce Grove
Secretary	Jacqueline Powell Red Deer Regional Hospital Certified Arborist & Utility Specialist Red Deer
Treasurer	Elaine Johnson City of Red Deer Urban Forester Red Deer
Director North	Michael Jenkins City of Edmonton Biological Technician Edmonton
Director Central	Mimi Cole Arborist Rocky Mountain House
Director South	Gary Patzer City of Medicine Hat Urban Forester Medicine Hat
Research Committee	Dr. Jim Calpas, Chair Elaine Johnson Mike Jenkins Lindsay Bell
Executive Director	Janet Feddes-Calpas

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12. Acknowledgements

- Alberta Agriculture and Rural Development (AARD)
- Alberta Environment and Sustainable Resource Development (AESRD)
- Olds College
- Canadian Food Inspection Agency
- Canadian Forest Services
- Canadian Border Services
- Agricultural Fieldman and Assistant Fieldman
- Elm bark beetle trap collaborators
- Invasive Alien Species trap collaborators
- Phil Merrill for his support to dispose of the firewood collected in the bins at the USA borders and setting up traps at each border
- All the cities that oversee their satellite communities in the EBB monitoring program
- Shelley Barkley and Stacey Tames, AARD, for website support
- Lee Anne Bateman (AARD) for Agri News DED articles
- Dr. Ken Fry and Olds College students for their entomology support
- Dr. Stephen Strelkov, University of Alberta, for his pathology support
- Troy Kimota and Andrea Saunders, CFIA, for their IAS support
- STOPDED Research Committee
- STOPDED Board for their dedication
- Executive Director, Janet Feddes-Calpas

Very special thanks to all the STOPDED volunteers across the province.