

Society To Prevent Dutch Elm Disease Quick Facts



- The Society to Prevent Dutch Elm Disease (STOPDED) was incorporated in 1993 and since 2005 STOPDED has taken a leadership role in the development and delivery of the **Alberta Provincial Dutch Elm Disease Prevention Program**, in partnership with the Government of Alberta (GOA), most specifically with Agriculture and Forestry (AF). From 1976 to 2004 AF delivered this program on behalf of Albertans to safeguard Alberta's elm trees from the Dutch elm disease (DED) pathogen and the beetles that vector the disease.
- The DED pathogen and beetle vectors are named pests in the Pest and Nuisance Control Regulation under the authority of the *Alberta Agricultural Pests Act*.
- In Saskatchewan (SK), DED is regulated under the authority of the *Forest Resources Management Act* and *Dutch Elm Disease Regulations*. In Manitoba (MB), invasive forest pests which includes DED, are regulated by *The Forest Health Protection Act* and the associated *Forest Health Protection Regulation*.
- Alberta (AB) has the largest stand of DED-free elms in North America. This accomplishment is on par with the success of the AB rat control program and AB's healthy honey bee population.
- Agriculture and Forestry's pest control legislation has been successfully applied to safeguard AB's rural and urban elms from the most devastating disease of elms, DED. Cost of this program has been \$110K per year since 2005. A low-cost, high impact program. The City of Edmonton spends another \$135K per year on prevention. Edmonton's elms are valued at \$250 million.
- In comparison, MB has DED and is involved in control and prevention. The City of Winnipeg alone spends \$4.2 million annually which includes \$1 million from the province on removal of dead elms and replanting. The Province also supports 38 communities through a cost share program to remove trees and employees 2 full time staff for DED management.
- SK spends \$150K annually on DED surveys and diseased tree removals and employs 2 fulltime ministry staff to work on DED control. The City of Regina's DED prevention and control budget is \$516 K per year.
- STOPDED has strong network of partners including rural and urban municipalities, Canadian Border Services, Canadian Food Inspection Agency and Industry Associations and private businesses, (Urban Foresters and Arborists) that support the aims of the program and follow the accepted best management practices for preventing DED. This level of participation in a province-wide control program is practically unprecedented.
- AB has a very strong nursery industry. Farm gate value is about \$125 million dollars per year. Elm would be estimated at nearly \$40 million of that per year (approx. 1/3). Equal figures to ash. With no suitable replacements for street trees on a massive scale, the introduction of DED to AB could cause massive crop loss in the short term and eliminate the market completely. The Canadian Food Inspection Agency administers the *Plant Protection Act* which regulates the movement of disease from DED infected provinces to DED free provinces. Once a province is infected with DED, CFIA prohibits industry from selling or moving elms out of the province.

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- AB grown street trees are important as they need to be the hardiest to survive the adverse conditions in our cities. Without them we severely reduce the urban forests ability to help us reduce the impacts of climate change (urban heat island effect, flooding, erosion, etc).
- In 2017 the provincial American elm inventory was updated, and demonstrated that there are at least 600,000 elms growing in Alberta municipalities, rural properties, shelterbelts and provincial parks. These elms are valued at over \$2 Billion dollars. Valuations are made according to the standards developed by the Council of Tree and Landscapes (CTLA) and is used by the International Society of Arboriculture (ISA).
- Removing and replacing DED infected trees pushes the costs associated with losing valuable trees even higher as it can cost over \$500 dollars to remove a tree (an estimated \$300 million for tree removal alone in Alberta) with the additional cost of replacing the tree.
- Up to 50% of the trees planted in municipal landscapes are elms, the other 50% are ash. American elm and green ash are the only two large shade trees that are adapted to surviving the Alberta climate and this is why they dominate the planted tree scape across rural and urban Alberta.
- STOPDED has also taken the lead in supporting AB's rural and urban municipalities to avoid the negative economic, environmental and social impacts from other invasive alien tree pest species including emerald ash borer, which has the potential to destroy all ash trees in the AB tree scape.
- There are considerable documented human health and societal benefits associated with trees in peer reviewed scientific journals. In June of 2018, Dr. Kathleen Wolf, Research Social Scientist at the University of Washington (Seattle), presented on this topic to the Canadian Institute of Forestry National Electronic Lecture Series.
 - o A lack of trees in the urban environment has been associated with significantly higher deaths from cardiovascular disease and lower respiratory disease. Higher birth weights have been associated with increased tree canopy cover within urban neighborhoods.
 - o It has also been found that 11 more trees in a city block resulted in decreased cardio-metabolic conditions.
 - o Adults suffering from major depression demonstrated cognitive and affective improvements after walking in the presence of trees in a park setting compared with an urban setting. When dementia patients were provided the opportunity to access wander gardens and horticultural therapy there was a 10.5% reduction in the amount of medications used at the dementia facility and 30% few falls, accompanied by a reduction in fall severity.
- Dr. Wolf reports that in the last 40 years there has been over 5,000 peer reviewed publications documenting the benefits of "nearby nature" including trees on human health. Trees have demonstrated positive effects on human health, reduced crime, community economics and active living.
- The evidence of the positive health and social impact of trees has been driving Policy and planning changes integrating greening science with community change.
- STOPDED's work in-partnership with Agriculture and Forestry represents a significant component of the impact that the Department has on making life better for Albertans.