2013-2018

Canadian Urban Forest Strategy

Canadian Urban Forest Network
Réseau canadien de la forêt urbaine

TreeCanada

Canadian Urban Forest Strategy
2013-2018

As a charitable, professional organization committed to creating greener, healthier communities, Tree Canada is the Secretariat of the Canadian Urban Forest Strategy, Network and Conference. For over 20 years, Tree Canada has offered technical expertise, education, funding, and resources to individuals, groups, governments, and corporations. Tree Canada has planted 80 million trees, greened more than 550 schoolyards, assisted over 350 communities' urban forest programs and 10 Canadian urban forest conferences. For more information about Tree Canada, visit: www.treecanada.ca

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1.0   Background

The Canadian Urban Forest Strategy (CUFS) was first articulated in 2006 as a strategic initiative of Canada's urban forest practitioners including: foresters, managers, arborists, planners, community workers and politicians. It coincided with Canada's National Forest Strategy (1988-2008) a government, NGO and private sector coalition whose aim was to move Canada towards forest sustainability. The final iteration (2003-2008) of the National Forest Strategy included a section on urban forests.

According to the 2011 census, 81.1% of Canadians live in urban areas[1]. The urban forest in and around these towns and cities provide many benefits including: sequestering of gaseous air pollutants and particulates; energy conservation; storm-water attenuation; noise buffering; provision of wildlife habitat; increased property value; improved aesthetics; psychological well being; and recreational and educational opportunities. These benefits accrue not only to the owners of the trees and forest but to the entire community. While the same can be said for the wildland forests of Canada, the connection in the urban forest is much more dramatic because the beneficiaries live within the urban forest.

2.0   Urban Forestry Defined

Jorgensen[2] defined the term urban forestry in 1974 as "… a specialized branch of forestry and has as its objectives the cultivation and management of trees for their present and potential contribution to the physiological, sociological and economic well-being of urban society. These contributions include the over-all ameliorating effect of trees on their environment, as well as their recreational and general amenity value."

Deneke[3] expanded on the term:

"Urban forestry is the sustained planning, planting, protection, maintenance, and care of trees, forests, greenspace and related resources in and around cities and communities for economic, environmental, social, and public health benefits for people. The definition includes retaining trees and forest cover as urban populations expand into surrounding rural areas and restoring critical parts of the urban environment after construction. Expansion at the urban/rural interface raises environmental and public health and safety concerns, as well as opportunities to create educational and environmental links between urban people and nature. In addition, urban community forestry

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[1] According to Statistics Canada "An urban area (UA) has a minimum population concentration of 1,000 persons and a population density of at least 400 persons per square kilometer, based on the current census population count. All territory outside urban areas is classified as rural. Taken together, urban and rural areas cover all of Canada."

[2] Jorgensen, E. 1974. Towards an urban forestry concept. Proceedings of the 10th Commonwealth Forestry Conference. Ottawa, Canada; Forestry Service.

[3] Deneke, F. 1993. Urban Forestry in North America: Towards a Global Ecosystem Perspective. pp 4-8. IN Blouin, G. and Comeau, R. [eds.] Proceedings of the First Canadian Urban Forests Conference May 30- June 2, 1993. Winnipeg MB. 151 pp.

includes the development of citizen involvement and support for investments in long-term on-going tree planting, protection, and care programs."

The latter definition, while consistent with Jorgensen's original, serves to highlight many of the broader aspects of the field that are fundamental to this strategy.

From this definition, this document considers the urban forest to be: trees, forests, greenspace and related abiotic, biotic and cultural components in areas extending from the urban core to the urban-rural fringe.

3.0   The Resource Under Pressure

Urban trees exist in an inherently difficult environment. The lack of growing space above and below ground, contaminated and compacted soils, de-icing salt, and the physical damage caused by trenching, mowers, snow removal activities and cars, are but a few of the factors that prevent most urban trees from reaching their genetic potential. In addition to contributing directly to the decline of trees, these factors can predispose them to attack by insects and diseases.

Lack of genetic diversity and monoculture practices in our urban forests are also limiting factors in achieving their maximum benefits. Many urban forests have an over-representation of relatively few species, most of which are grown from genetically identical trees in landscape nurseries. Many regions in Canada, including the northern areas of most provinces, the Prairie provinces and the territories experience harsh climatic conditions that place further limitations on the variety of tree species able to grow and thrive in urban environments. This narrow genetic base leaves our urban forests vulnerable to insect and disease infestations, particularly invasive pests. Dutch elm disease is a classic example.

Dutch elm disease was discovered in Eastern Canada in the 1940's and killed 80% of the elms in Toronto and 90% of the elms in Montreal[4]. As the disease continues to move west, the impact on the cities and towns in the prairie provinces is even greater than that experienced in communities in the east due to the prevalence of elms in these communities. It could be argued that the loss of elms in many North American cities starting in the 1960's was the crisis that first raised public awareness of the urban forest.

Throughout the 1980s, municipalities sought to replace the elm with other trees resistant to the urban condition, including ash and to a much lesser extent, hackberry. However, more recently the Emerald Ash Borer has crossed the Michigan border into Ontario gaining a foothold in many Ontario and Quebec communities. This proved once again the need for a national approach to urban forest stewardship.

Cities tend to be the "port of entry" for most introduced pests including Dutch elm disease, Asian

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[4] 4 Rioux, D. 2003. Dutch elm disease in Canada: Distribution, impact on urban areas and research. Natural Resources Canada, Canadian Forest Service.

Long-horned Beetle, Brown Spruce Long-horn Beetle, Emerald Ash Borer, etc, mainly due to human activity. Invasive plant species that threaten many forest ecosystems also find their way to "wild" forests through the urban parts of the country. Consequently, an effective program to educate the public, monitor for and control invasive pests in our urban forests will reduce their impact locally but will also help protect wildland forests. It is beneficial to develop partnerships with all levels of government, non-profit and community groups to increase the effectiveness of these programs, and to share the costs where provincial and federal programs often suffer from funding and staffing constraints.

Urban sprawl is common on the fringes of virtually all Canadian communities, large or small. As disposable income increases, many people choose to move to more "rural" settings. This exodus often erodes the very aspects that drew people there in the first place. While the impacts of many natural and anthropogenic disturbances to forests in the wildlands dissipate in a relatively short period of time, most aspects of urbanization are permanent, or will persist at least as long as humans occupy the landscape. Population densities are such that even recreation poses a threat to urban forests be they in a typical urban park, ravine, or in "natural areas" in the peri-urban landscape.

In recent years, forest fires in the urban/peri-urban interface of some communities have taken their toll. The impacts of these fires on the forests and communities have likely been a result of a combination of changing climate, fuel conditions and the movement of urban development into the wildlands.

Climate change is having an impact on urban forests, perhaps to a greater extent than on wildlands. Warmer temperatures, drier conditions and, perhaps most importantly, extreme weather events such as violent wind, heavy snow, and ice storms are taking a heavy toll on urban forests.

On the other hand, the urban forest has been seen by many as a possible vehicle through which to reduce some of the impacts of climate change. The impact of the urban heat island on human health is currently receiving considerable attention in larger Canadian centres. Night time mortality rates in humans have been shown to climb during extremely warm periods. The role of urban forests in reducing the effects of the urban heat island is well recognized. In its Climate Change Action Plan, the Québec Ministry of Health and Social Services recognized this role and announced a program of grants to help communities counter the heat island effect through re-vegetation.   Furthermore, other illnesses, notably respiratory illness is more widespread than in the past. The Ontario Medical Association (2000) estimates that over 1,900 premature deaths, 9,800 hospital admissions and 13,000 emergency room visits per year can be directly attributable to air pollution. Trees are widely seen as a way to mitigate this pollution.

4.0   Canadian Urban Forest Network (CUFN)

The Canadian Urban Forest Network is a pan-Canadian action group who speaks for Canada's urban forests. The Network is composed of municipal foresters, provincial and federal environmental and natural resource agencies, professional organizations, business associations, educational institutions, non-governmental organizations, and community groups. The Network seeks to: build value by helping and empowering those who practice urban forestry; bring together those who are interested

in urban forestry; facilitate the exchange of information about urban forestry in Canada; and increase awareness about the urgent issues facing Canada's urban forests. Tree Canada is the Secretariat for the Canadian Urban Forest Network, Strategy and Conference (for more information visit www.treecanada.ca).

The CUFN is guided by a National Steering Committee that reports to its members through a meeting held at the Canadian Urban Forest Conference (CUFC) as well as updates through the CUFN listserv and website. The National Steering Committee is comprised of representatives from each of the following regions: British Columbia, Prairies, Ontario, Quebec, and Atlantic Canada. It is the Network that guides the creation and revision of this document and it is through this process that the Vision, Mission and Steering Committee are reviewed.

4.1   A Working Vision

Our vision for Canadian towns and cities is a canopy of trees, sheltering and protecting our communities; part of a green infrastructure that promotes healthy air, clean water, habitat, quality of life and economic prosperity.

4.2   A Working Mission

Our mission is to increase awareness of the urgent issues facing Canada's urban forests and to mobilize a comprehensive urban forest network of individuals and organizations across Canada to stimulate action to address those issues.

4.3   The Canadian Urban Forest Network Steering Committee

At present, the Committee members are:

Atlantic Region: Heather Fraser; Moncton, New Brunswick. Natural Resource Program Coordinator, City of Moncton. Heather Fraser has worked for the City of Moncton since the early 1990's and has had over 30 years experience in forest management watershed protection. Heather studied at Sault College in Ontario and has a Forest Technician and Fish and Wildlife Technologist degree along with several years of Environmental Management courses at Mount A in Sackville, New Brunswick. Heather has used this knowledge to specifically design outdoor educational courses/programs for Kindergarten to grade 12, linked directly to science curriculum outcomes in class. Heather sits on many local committees and on the Board of Directors for the Fundy Biosphere Reserve and the SENB forest working group. Heather runs the only municipal sugar bush operation in Canada and delivers an educational program on the value of maple to Moncton and the rest of New Brunswick.

Québec Region: Pierre Jutras; Montréal, Québec. Research Scientist, Ville de Montréal and is an Adjunct Professor at McGill University. Pierre is conducting extensive research on urban trees. Pierre is a founding member of the CUFN.

Ontario Region: Peter Wynnyczuk; Richmond Hill, Ontario. Executive Director, Ontario Urban Forest

Council. Peter has been involved in urban forestry for over 35 years in many capacities, from Arborist to Urban Forestry Supervisor in both the private and municipal fields. He has helped foster local tree awareness and enhancement through various programs. Peter participates in improving safety and awareness in the urban tree profession through various urban forestry committees. Recently, Peter has been honoured to accept the position of Executive Director of the Ontario Urban Forest Council, helping to continue the aims and goals of the organization founded in 1963. This year, Peter founded P & A Urban Forestry Consulting Ltd., and looks forward to expanding the support of trees in our communities.

Prairies/North Region: Martha Barwinsky, M.Sc., ISA Certified Arborist; Winnipeg, Manitoba. City Forester. Martha began working with the City of Winnipeg in 2004 as Supervisor of Urban Forestry and Dutch Elm Disease Operations. Throughout her career in arboriculture and urban forestry, Martha has also been a researcher and instructor in Plant Science at the University of Manitoba, a practicing arborist, and executive director of Coalition to Save the Elms (now Trees Winnipeg), a non-profit community urban forestry organization based in Winnipeg.

British Columbia Region: Lanny Englund, M.Sc., RPBio, ISA Cert. Arborist. City of Coquitlam, BC. Lanny Englund is the Urban Forestry Manager for the City of Coquitlam. He is a Registered Professional Biologist and a Certified Arborist with 15 years' experience in the field of Urban Forestry. Lanny's career in Urban Forestry began with the City of Surrey in 2000. His experience includes comprehensive single tree management, forest management, habitat restoration, and environmental education. Lanny has been involved in the development and implementation of award winning initiatives including the City of Coquitlam's Invasive Plant Management Strategy and the City of Surrey's Natural Area Management Plan.   Lanny holds undergraduate degrees in Biology and Environmental Science, as well as a M.Sc. in Environment and Management.

Co-Chair: Michael Rosen; Ottawa, Ontario. President, Tree Canada. Michael is the President of Tree Canada and brings more than 20 years of experience to the position. As Stewardship Coordinator and Forester for the Ontario Ministry of Natural Resources, Michael received the Amethyst Award for his work especially during the 1998 ice storm. He also helped author the document Sustainable Forests in Urban Ontario, and managed the York Regional and Simcoe County Forests. He helped York Region pass its first tree cutting bylaw in the early 90's and has written articles on urban forestry, trees and private land forest management. Michael is a Registered Professional Forester in Ontario and a Certified Arborist. Michael is a founding member of the CUFN.

Co-Chair: W. Andy Kenney, PhD, R.P.F. Toronto, Ontario. Senior Lecturer Emeritus, University of Toronto. Andy has a B.Sc.F from Lakehead University, a M.Sc. in Agroforestry from the University of Guelph, and a PhD from the Faculty of Forestry, University of Toronto. He is a Registered Professional Forester with the Ontario Professional Foresters Association (OPFA). Prior to his retirement in July 2012, Andy was a Senior Lecturer at the Faculty of Forestry for more than 20 years, where he taught courses in urban and community forestry, agroforestry, and other topics. Andy has been active in the development of the Canadian Urban Forest Strategy and the Canadian Urban Forest Network, and is a member of the Board of Directors of Tree Canada. Andy is a founding member of the CUFN.

Program Manager: Adrina Bardekjian, MFC, PhD, Faculty of Environmental Studies, York University, and Program Manager, Urban Forestry, Tree Canada; Ottawa, Ontario. Using a political ecology lens,

Adrina's doctorate research examines under-represented narratives in urban forestry by way of critical reflection to influence praxis towards more sustainable, ethical and transdisciplinary directions. Since 2005, Adrina has been active with the Canadian Urban Forest Strategy and Network, and she has worked with a diversity of organizations on a variety of urban forestry initiatives.

4.4   Primary tasks of the Steering Committee

- To review and update the Canadian Urban Forest Strategy;
- To facilitate the implementation of the tasks outlined in the Strategy;
- To help guide the implementation of an incentive program in conjunction with Tree Canada to award those municipalities who exhibit best management practices in urban forestry;
- To improve dialogue with the larger municipal community including the Federation of Canadian Municipalities;
- To actively communicate with regional urban forestry groups.

5.0   Towards a Canadian Urban Forest Strategy

This present version of the Canadian Urban Forest Strategy is for the period 2013-2018.
Five working groups have been established to facilitate the implementation of tasks that have been identified (see Appendices):

Working Group 1:   National Urban Forestry Infrastructure
Working Group 2:   Communications and Public Education
Working Group 3:   Research
Working Group 4:   Techniques and Technology for Urban Forest Planning and Management
Working Group 5:   Professional Development

Each working group will have a leader who will provide direction to the broader team and will communicate with the Canadian Urban Forest Network steering committee. Additional working groups will be considered in the future if it is determined that the five presented here fail to address certain critical issues facing Canada's urban forests.

Each task has specific, measurable, and realistic objectives with clearly identified timelines. Performance indicators of success that will be used to measure the progress or successful completion of the task have been identified.

Working Groups will be responsible for raising the funds needed to accomplish their specific tasks. Communication among working groups will be essential to the success of this strategy.

Table 1 (appendix) summarizes each of the working groups, their associated tasks, performance indicators and term (short, medium, long). These Working Groups and their tasks are:

5.1　Working Group 1: National Urban Forestry Infrastructure

Lead: Michael Rosen, R.P.F., President, Tree Canada

With the exception of the emergency funding provided by the federal government and provincial agencies in response to specific crises in Canada's urban forests (such as Asian long-horned beetle), and a few minor provincial programs, all planning and operations for Canada's urban forests are implemented solely by municipalities. This working group will facilitate the development of an infrastructure that ensures urban forestry issues in Canada are addressed in a strategic and comprehensive manner at the national, provincial, municipal and community level.

Tasks

1.1　Implement the activities of the Canadian Urban Forest Network in support of the Canadian Urban Forest Strategy. The CUFN will continue to be based on a series of regional chapters, supported by local funding, with a national steering committee.

1.2　Help secure strong and lasting financial commitment to develop and maintain urban forests.

1.3　Identify stakeholders including community groups, municipal foresters, and allied professionals.

1.4　Continue to conduct a national survey of urban forestry programs at the municipal, county and regional levels of government.

1.5　Develop a common vision for urban forestry with related goals and objectives.

1.6　Increase the involvement of the federal and provincial governments and their agencies in urban forestry.

1.7　Encourage existing organizations (including community groups, forestry organizations, professional organizations, etc.) to include urban forestry on their agendas.

1.8　Engage the Federation of Canadian Municipalities to approach municipal, provincial and federal agencies to become involved in urban forestry.

5.2　Working Group 2: Communications and Public Education

Lead: Peter Wynnyczuk; Richmond Hill, Ontario. Executive Director, Ontario Urban Forest Council

The community has a 100% interest stake in the urban forest. This includes trees in individual backyards, on boulevards (owned by the taxpayers), on local business properties, etc. Benefits from the urban forest accrue to the community, not just the owner of the tree. Consequently, an informed and motivated community will be essential to any effective urban forestry program. This working group will facilitate the exchange of information among members of the urban forestry community as well as to the general public, allied professions, organizations and policy makers.

Tasks

2.1   Identify target audiences.

2.2   Develop a Communication Plan that establishes coordinated approaches to promoting the concepts of urban forestry to industry, government, educational institutions, and the public.

2.3   Develop communication "tools" to deliver the message.

2.4   Develop a funding strategy to support the public education program.

2.5   Produce educational kits for politicians, media, schools and community groups.

2.6   Create and maintain a Canadian Urban Forest Network website and the CANUFNET listserv.

5.3   Working Group 3: Research

Lead: Adrina Bardekjian, MFC, PhD – Program Manager, Urban Forestry, Tree Canada

A sustainable urban forestry program should be based on the best available science and sociological considerations. This includes biology, ecology, sociology, economics, policy and management. Urban forestry benefits from current research initiatives in these sciences. However, the unique nature of the urban forestry realm makes the transfer of some concepts difficult. For example, how applicable are the results derived from ecological studies in "wildland forests" to the true urban environment? How applicable is conventional business theory to a resource with an ownership fragmented into 10m urban lots? Research specifically directed to urban forestry issues is currently lacking. This working group will identify specific research needs and will facilitate the completion of this work. It will also address actions associated with the extension of research results to practitioners in all disciplines.

Tasks

3.1   Conduct a survey and develop an inventory of research capacity applicable to urban forestry including the identification of existing and required delivery mechanisms.

3.2   Assess short- and long-term urban forestry research needs and priorities.

3.3   Establish a network of people involved in urban forestry research and those who have a pool of expertise.

3.4   Establish national and regional depositories of urban forestry research knowledge and background studies with a mechanism in place to facilitate access by practitioners.

3.5   Establish a national centre for urban forestry research, development, technology transfer and international cooperation.

5.4   Working Group 4: Techniques and Technology for Urban Forest Planning and Management

Lead: Danijela Puric-Mladenovic, PhD – Assistant Professor, Faculty of Forestry, University of Toronto

The impacts of urban sprawl on the environment and the quality of life of the 80% of Canadians who live in urban environments are slowly being recognized as unsustainable. New approaches to land-use planning such as "smart growth" are an attempt to address this issue. Some versions of these new approaches incorporate a much stronger recognition of the role of the natural environment and green-space as a vital component of healthy, sustainable communities. Any such renewed vision must incorporate urban forestry at all levels from backyards and boulevards, to parks and ravines, to peri-urban woodlands. The design, construction and use of most levels of infrastructure will have some impact on the ability of the urban forest to function as an ecosystem and to provide a sustainable supply of ecological and socio-economic services to society. New technologies are continually being developed that will make the planning and management of urban forests more effective. For example, new approaches to inventories, GIS, quantification of urban forest benefits, tree risk assessment and abatement, plant health care, planning, tree bylaws and modeling. This working group will facilitate the identification of these techniques and technologies and will assist municipalities, groups and individuals to adopt (and adapt) them to ensure the sustained supply of ecological, economic and social benefits from Canada's urban forests. The outcomes of this objective are intended to promote interdisciplinary planning based on a sound understanding of ecological attributes and functions in urban settings.

Tasks

4.1   Develop a standard set of criteria and indicators to track progress. These standards will be based on existing C&I from other jurisdictions and adapted to Canadian urban forestry conditions.

4.2   Develop a gap analysis of Best Urban Forest Management Practices.

4.3   Develop a complete collection of Best Management Practices for urban forestry appropriate to Canadian conditions.

4.4   Develop a process to involve community groups in urban forestry planning and management.

5.5   Working Group 5: Professional Development

Lead: Andy Kenney, PhD, R.P.F. Senior Lecturer Emeritus, University of Toronto

As urban forestry expands with respect to knowledge, people and places, many more appropriately trained personnel will be needed in the private and public sectors. Training will range from continuing education through college and university programs. Presently, opportunities for this type of formal training in Canada are limited (this is particularly true for the broader issues of urban forestry) and in some jurisdictions, they are shrinking. Training for others who are not directly involved in arboriculture or urban forestry (e.g. planners, engineers, etc.) would also advance urban forestry. This working group will facilitate the development and advancement of a highly trained urban forestry workforce as well as a cadre of informed allied professionals at the national, provincial and municipal

levels.

Tasks

5.1   Assess current levels of formal and informal urban forestry training across the country and promote the inclusion of urban forestry courses.

5.2   Develop a curriculum for post secondary programs and promote its adoption at educational institutions.

5.3   Encourage, promote, and link continuing education programs involved in urban forestry.

Appendices: Tables of Working Groups and tasks of the National Urban Forest Strategy

Appendix I: Table of tasks for Working Group 1: National Urban Forestry Infrastructure

Appendix II: Table of tasks for Working Group 2: Communications and Public Education

Appendix III: Table of tasks for Working Group 3: Research

Appendix IV: Table of tasks for Working Group 4: Techniques and Technology for Urban Forest Planning and Management

Appendix V: Table of tasks for Working Group 5: Professional Development

Appendix I: Table of tasks for Working Group 1: National Urban Forestry Infrastructure
Lead: Michael Rosen, R.P.F., President, Tree Canada

	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
Working Group 1: National Urban Forestry Infrastructure	**1.1**	Develop a national urban forestry organization (Canadian Urban Forest Network - CUFN) that can support the implementation of this National Urban Forest Strategy. The organization will be based on a series of regional chapters, supported by local funding, with a national Steering committee.	Canadian Urban Forest Network established and actively implementing this Strategy (yes/no).	Short	W.A. Kenney & Tree Canada	Completed	CUFN established with representatives from 5 regions (Pacific, Prairie, Ontario, Quebec and Atlantic)
	1.2	Help secure strong and lasting financial commitment to develop and maintain urban forests.	Trend in urban forest expenditure in Canada is increasing	Long	CUFN Steering Committee	Ongoing	TD funding for Program Manager, Urban Forestry at Tree Canada (as of 2014)
	1.3	Identify stakeholders, including community groups, municipal foresters, and allied professionals.	Database of urban forestry stakeholder groups (with contact information) developed and populated (yes/no).	Short	A. Bardekjian & CUFN Steering Committee Regional reps.	To be completed by 2016	Participant lists from past CUFCs and CUFN regional UF workshops (Fall 2015)
	1.4	Continue to conduct a national survey of urban forestry programmes at the municipal level, *State of Canada's Municipal Urban Forests (SCMF).*	Report outlining the extent of urban forestry programmes in municipalities is complete (yes/no)	Short	A. Bardekjian & W.A. Kenney	Ongoing (every 3 years)	2014 survey initiated – to be completed by Fall 2015
	1.5	Develop a common vision for urban forestry with related goals and objectives.	Vision statement developed, debated and endorsed by stakeholders (yes/no).	Short	CUFN	Completed	Initiated at CUFN founding meeting in Winnipeg (2004). Needs endorsement by the broader CUFN (with a vote in Victoria in 2014).
	1.6	Increase the involvement of federal and provincial governments and their agencies in urban forestry.		Long	CUFN & Tree Canada	In Progress	- Conducted a Needs Assessment of Municipal UFs in Canada with CFS - Meeting with CFS and MPs - Meetings w/ CIHR - Meetings w/ Arbor

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	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
							Day Foundation
	1.7	Encourage existing organizations (including community groups, forestry organizations, professional organizations, etc.) to include urban forestry on their agendas.	Collection of examples of how this is being accomplished at the community level.	Long	A. Bardekjian with CUFN Steering Committee Regional representatives	Ongoing	- Five regional workshops (Fall 2015)
	1.8	Engage the Federation of Canadian Municipalities to approach municipal, provincial and federal agencies to become involved in urban forestry.	FCM has adopted a resolution in support of the CUFS	Short	M. Rosen	Ongoing	FCM has passed such a resolution. Follow-up needed.

Appendix II: Table of tasks for Working Group 2: Communications and Public Education
Lead: Peter Wynnyczuk; Richmond Hill, Ontario. Executive Director, Ontario Urban Forest Council

	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
Working Group 2: Communications and Public Education	2.1	Identify "target audiences"	A report outlining the location and characteristics of target audiences has been prepared (yes/no).	Medium	CUFN Steering Committee Regional reps.		
	2.2	Develop a Communications Plan that establishes coordinated approaches to promoting the concepts of urban forestry to industry, government, educational institutions, and the public.	A communications plan has been developed and endorsed by CUFN (yes/no).	Medium	A. Bardekjian	Ongoing (Started by Dorothy Dobbie)	- Developed a partnership matrix - Resource production proposal for Tree Canada. - Conference speaking schedule proposal.
	2.3	Develop communications "tools" to deliver the message.	The number of communications tools developed (the number)	Medium		In progress	- CANUFNET (listserv and website) - TC resources list
	2.4	Develop a funding strategy to support the public education program.	A report outlining a funding strategy to support the public education program is completed (yes/no).	Long	M. Rosen		
	2.5	Produce educational kits for politicians,	The number of (i.e.	Long			

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		media, schools and community groups.	how many) educational kits for politicians, media, schools and community groups produced (yes/no).				
	2.6	Create and maintain a Canadian Urban Forest Network website and the CANUFNET listserv.	Canadian Urban Forest Network web site is operational and regularly updated (at least monthly) (yes/no).	Short	A. Bardekjian	Completed	CUFN website (updated, Fall 2014)

Appendix III: Table of tasks for Working Group 3: Research
Lead: Adrina Bardekjian, MFC, PhD, York University – Program Manager, Urban Forestry, Tree Canada

	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
Working Group 3: Research	3.1	Conduct a survey and develop an inventory of research capacity applicable to urban forestry, and identify existing and required delivery mechanisms.	A survey of research capacity applicable to urban forestry completed; existing and required delivery mechanisms identified (yes/no)	Short	J. Larouche, Laval University	In progress	Initiated as a Master's project/program through student at Laval University (J. Larouche) (to sent out Summer 2015)
	3.2	Assess short- and long-term urban forestry research needs and priorities.	A report outlining short and long-term research needs and priorities completed (yes/no)	Short	A. Bardekjian	To be completed in 2016	Will depend on results of the above project (J. Larouche)
	3.3	Establish a network of people involved in urban forestry research and those who have a pool of expertise.	A network of urban forestry researchers and expertise established (yes/no)	Long	A. Bardekjian	Ongoing	Will depend on results of the above project (J. Larouche)
	3.4	Establish national and regional depositories of urban forestry research knowledge and background studies.	A national depository of urban forestry research knowledge and background studies established with a mechanism in place to facilitate access by practitioners. (yes/no)	Long	A. Bardekjian	Ongoing	In collaboration with the Canadian Urban Forest Network
	3.5	Establish a national centre for urban forestry research, development, technology transfer and international cooperation.	A national urban forestry research centre is established	Long	A. Bardekjian	Ongoing	

Appendix IV: Table of tasks for Working Group 4: Techniques and Technology for Urban Forest Planning and Management
Lead: Danijela Puric-Mladenovic, PhD – Assistant Professor, Faculty of Forestry, University of Toronto

	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
Working Group 4: Technology for Urban Forest Planning and Management	4.1	Develop a standard set of criteria and indicators to track progress. These standards will be based on existing C&I from other jurisdictions and adapted to Canadian urban forestry conditions.	A report outlining Criteria and Indicators for sustainable urban forestry produced and endorsed by CUFN (yes/no).	Medium	W.A. Kenney	Completed	Kenney, W.A., van Wassenaer, P. and Satel, A. (2011). Criteria and Indicators for Strategic Urban Forest Planning and Management. Arboriculture & Urban Forestry. 37(3): 108–117.
	4.2	Develop a gap analysis of Best Urban Forest Management Practices.	A gap analysis of Best Urban Forest Management Practices completed (yes/no).	Short			
	4.3	Develop a complete collection of Best Management Practices for urban forestry appropriate to Canadian conditions.	The number of Best Urban Forest Management Practices developed to fill the gaps in 4.2 above.	Medium	A. Bardekjian	Complete - - Updates needed	Bardekjian, A. (2006). Compendium of Best Management Practices for Canadian Urban Forests. Commissioned to Tree Canada by Natural Resources Canada.
	4.4	Develop a process to involve community groups in urban forestry planning and management.	A strategy to involve community groups in urban forestry planning and management has been developed (yes/no)	Medium			

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Appendix V: Table of tasks for Working Group 5: Professional Development
Lead: Andy Kenney, PhD, R.P.F. – Senior Lecturer Emeritus, University of Toronto

	Task	Task Description	Performance Indicator	Term	Lead	Status	Progress
Working Group 5: Professional development	**5.1**	Assess current levels of formal and informal urban forestry training across the country and promote the inclusion of urban forestry courses.	A report outlining the level of formal and informal training in urban forestry is completed (yes/no)	Medium	W.A. Kenney & A. Bardekjian		
	5.2	Develop a curriculum for post secondary programs and promote its adoption at educational institutions.	Draft curriculum has been developed in consultation with stakeholders and educational institutions (yes/no)	Short	W.A. Kenney & Tree Canada	Ongoing	Draft curriculum developed for a Specialist and Major in Urban Forestry at University of Toronto. UNB & Arb program developed (2013) UBC launches UF program (September 25, 2015)
	5.3	Encourage, promote, and link continuing education programs involved in urban forestry.		Long	W.A. Kenney, A. Bardekjian, & Tree Canada	Ongoing	OPFA Urban Forestry Committee developing a proposed set of urban forestry competencies.

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