

# **RESIDENTIAL TREE PLANTING PROGRAMS**

## **A REVIEW OF BEST PRACTICES**

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# 1 EXECUTIVE SUMMARY

## 1.1 BACKGROUND

In January 2011, Vancouver City Council adopted 14 targets under the Greenest City 2020 Action Plan (GCAP) that outlined Vancouver's endeavour to become the greenest city in the world by 2020. Targets were set to facilitate a number of urban sustainability goals, including one that aims to offer residents "incomparable access to green spaces, including the world's most spectacular urban forest." To achieve this, the Vancouver Board of Parks and Recreation (the "Park Board") is tasked with the planting 150,000 new trees, of which 54,000 (36%) is to be planted on private property.

To facilitate increased tree planting on residential properties throughout the city, the Park Board has initiated research to support local efforts. Through the Greenest City Scholars program, a partnership between the City of Vancouver (the "City") and the University of British Columbia (UBC) that sees graduate students conduct research to support the implementation of the GCAP, this report was compiled to identify some of the best practices from recent resurgence of urban forestry efforts in municipalities across North America.

This report is intended to inform the development of a local community-based program aimed at encouraging higher numbers of residential tree planting throughout Vancouver. While a number of non-profit organisations have developed programming that mobilises community participation on issues of environmental stewardship and urban forestry, there has been no sustained and systematic campaign that engages residents to enhance the city's urban forest through planting on private property. This report identifies pertinent best practices that have emerged from efforts happening within four North American cities striving to enhance their own urban forests: New York City, NY; Toronto, ON; Portland, OR; and Los Angeles, CA, detailing unique approaches taken by an organisation in each of the cities that has been central to urban tree planting efforts there in order to inform the development of Vancouver's strategy and program. More specifically, this report outlines outreach efforts, education, volunteer

involvement, procurement practices, and planting support offered by these organisations to increase residential tree planting.

## **1.2 ABOUT THE STUDY**

Examining four case studies, this research aims to provide a detailed comparison of programs in their design, outreach, staffing, program costs, critical factors leading to their success, as well as key lessons and future opportunities that the subject organisations have identified. To gain insight into critical program elements, context-specific challenges, budgetary and staffing information, and potential program developments, telephone interviews and e-mail correspondences were conducted with staff of subject organisations.

To offer an effective basis of comparison, the research scope is limited to examples that present approaches compatible with the mandate of the Vancouver Park Board, the supervising organisation that will work with partners to achieve residential tree planting targets. The review was limited to case studies that provided three (3) components: i) meaningful community engagement and involvement; ii) a distribution component that makes trees available to residents; and iii) centralised coordination in the delivery of the program.

## **1.3 CASE STUDIES**

### **1.31 NEW YORK RESTORATION PROJECT (NYRP); NEW YORK CITY, NY**

NYRP partners with NYC Parks Department to coordinate the MillionTreesNYC initiative, an ambitious and highly successful initiative that has seen over 600,000 trees planted throughout the city. The vast majority of trees for residential plantings are distributed through semi-annual tree giveaways, with considerable numbers planted in NYC Housing Authority developments.

- 2 tree giveaways seasons (spring and fall) that distribute 10,000 trees to NYC residents annually
- Working with local community groups and organisations to host 60+ events (2012) across NYC's five boroughs

- One full-time coordinator, one Americorp intern, seasonal staff hours (384 hours)
- Program costs: \$170,000 (excluding staff time) per season; \$34 average per tree & delivery (~\$50 per tree with labour)
- On-site demonstrations & translated outreach and educational materials provided, as well as a contractor-run Citizen Pruner program
- Partnership with NYC Parks and US Forestry Service to develop surveys and analyse data to evaluate contributions to urban forest

### **1.32 FRIENDS OF TREES; PORTLAND, OR**

Friends of Trees organised Portland's first major tree planting campaign in recent decades, and has steadily built up its profile since then. The organisation focuses on developing grassroots' capacity that enables the city's tree stewardship and planting efforts, and incorporates community organising in their operations in more meaningful ways than any other residential tree planting program.

- 4,562 trees (winter 2011-12) planted on residential property over the course of 30 events
- Approximately 200-300 trees planted at each event, which volunteers and program participants are organised to run registration, help plant trees, provide meals and beverages – and numerous other parts of the operations
- 2-3 staff coordinators work with approximately 200 volunteers to hold each event. Training sessions are offered for key volunteer positions
- Participants pay \$35-75 per tree, and are encouraged to participate in the planting event as volunteers
- Seven (7) dedicated tree specialists and staff who coordinate and attend events
- "Neighborhood Trees" budget: \$1,281,868 (2011 figures); resulted in 4562 plantings (\$280 per tree)
- Volunteer summer inspectors establish tree condition within a year of planting, and conduct inspections on a sample of trees from previous years

### **1.33 LOCAL ENHANCEMENT AND APPRECIATION OF FORESTS (LEAF); TORONTO, ON**

LEAF's efforts to promote urban forestry are among the most visible in any city across Canada. While the organisation's roots well established in tree advocacy and education, LEAF offers a comprehensive Backyard Trees Planting (BTP) program that addresses many of the common barriers to residential tree planting. Its model offers residents a staff-run, hassle-free and convenient option for residents interested in obtaining trees for their yards.

- Full service subsidised tree planting for residents in the City of Toronto and parts of the York region, supported through the "You Could Use A Tree" campaign with Ontario Power Generation
- BTP clients pay \$150-220 per tree; \$70 for site consultation with arborist, with money going towards tree purchase. Option to have shrubs delivered and planted at additional charge
- Estimated 1000 trees and 1000 shrubs planted in 2012 through the BTP program, with roughly 60% of the organisation's total budget of allocated to its operation (\$643,082 in 2010; ~\$300 per tree)
- BTP program employs a full-time program manager, a full-time field supervisor, two (2) half-time field personnel, an administrative assistant, and two (2) seasonal planters (two months of the year). Additional support is provided by its marketing and communications manager and volunteer interns
- Operates "Cool Communities" rebate program and "Do-It-Yourself" planting program in municipalities outside the BTP program areas, which facilitate subsidised tree purchases
- Active engagement through volunteer training, social media and blogging community to support urban forestry in the region, by bringing interest to issues (ie. the recent spread of Emerald Ash Borer) and sharing of personal stories and experiences of volunteers and staff

### **1.34 TREEPEOPLE; LOS ANGELES, CA**

TreePeople is among the most recognisable urban forestry organisations in North America, responsible for Los Angeles' first million trees campaign in the early 1980s. As one of six community partners working towards LA's newest million tree planting goal, TreePeople focuses largely on education and

watershed management. The Fruit Tree Program operates as a small, but strategic, aspect of its overall operation; re-envisioned as an initial point of contact between TreePeople and communities in neighbourhoods that are underrepresented in urban forestry efforts.

- Fruit tree giveaways that saw 3,500 bare-root fruit trees distributed in large, festive, coordinated events with community groups
- Exceptional job of aligning tree planting activities in mandate of participating organisation – ie. a social justice advocacy organisation for young black men; Latino Community Networking events; targeted farmers markets
- High attendance rate (90%) among participants for both workshops offered on planting and tree care
- Translated materials made available for Spanish-speaking populations
- One coordinator that splits time as nursery manager for the organisation; 10 other community forestry staff that work during January giveaways
- Tree procurement budget of \$25,000; \$8 per tree

## **1.4 LESSONS LEARNED**

This report compiles lessons learned, innovative practices, successes, challenges, and future opportunities in regards to program design, tree procurement, educational/skill-building support, monitoring, evaluation, funding and staffing, and discusses how these lessons may be applied to the development and operation of residential tree programs in Vancouver. Lessons were drawn and grouped into seven (7) categories:

- I.** Response to local conditions and barriers that exist among area residents
- II.** Opportunities for community groups and residents to support the program
- III.** Development and distribution of educational materials
- IV.** Effective communication and outreach strategies
- V.** Staff and funding sources need for program delivery
- VI.** Logistical issues of tree planting, including procurement and distribution
- VII.** Monitoring and evaluation procedures to assess contributions to urban forests, track tree plantings

The following list summarises the major findings gathered from the four case studies under these categories:

- **Pricing and distribution/delivery** methods should take into consideration socio-economic and infrastructural conditions at neighbourhood levels. Level of transit service, demographic composition, income levels, and housing types (and access to yard space) may affect how much resident uptake the program model will generate.
- **Community partnerships** can greatly extend the reach of a residential tree program in its first years. Linking the tree planting mandate to the partner organisation's mission can help bring in new volunteer capacity and access to local networks.
- **Developing the volunteer capacities** to fill specific roles in the program can be important to extending capacity, as well as be a mode for greater community participation. Incorporating the training of volunteers into the program design assigning responsibilities and making a meaningful contribution can go a long way to retaining and developing
- **Visually engaging, clear, and accessible instructional tree planting/care guides** should be developed to assist residents to care for trees on their residential property. Instructions on digging tree pits, siting, mulching, solutions to questions, as well as a resource list for tree care services will be especially handy for inexperienced planters. Consider making online and translated versions available, as well. Streaming video tutorials are becoming more commonplace, and should be considered to compliment educational materials and programming.
- **Community outreach strategy** should incorporate a number of methods to increase visibility of urban forestry efforts and generate close contact with residents to understand perceptions and gain feedback. Door-to-door canvassing, connecting with elected officials, organising tree-plantings, and presenting at community events can be opportunities to develop rapport with potential participants and organisations.
- **Utilising online media** can create more opportunities to connect with broader audiences, and keep them tied in the loop. Facebook, Twitter, and blogs are standard, and each can play different roles in disseminating information, facilitating interaction, and promoting education.
- **Consider partnering with public utilities** corporations, who often support residential tree programs as an effective means of reducing household energy use. Partnerships often include substantial funding for a shade-tree planting component and accompanying advertising budget.

- **Offer potential donors a variety of means** for donors to contribute funds to their effort. Developing the online means to dedicate trees, establish legacy funding, or purchase trees for schools can offer easy ways for individuals to make donations. Larger corporate donations can also be sought after – this would require more complex strategies and establishment of a program that may include publicised tree planting events.
- **Developing procurement procedures** that align with the program needs is important. Depending on the offering of trees, the volume of purchase, and distribution model, procurement can affect product consistency, availabilities, and pricing. Formal contracts can ensure higher quality, consistency, and availabilities when large purchases with an accurate estimate of quantity are made. Arranging informal agreements that offer wholesale discounts on smaller purchases helps maintain flexibility in purchasing and allows for greater variety for residents to choose from.
- **Preference for tree offerings** should include native trees species that are easily suited to the environment, as well as fruit trees which are becoming popular for residents who wish to grow their own food. Sizes should also be considered: while large trees offer greater ecological benefits where property lots are greater in size, smaller trees may be better suited for smaller yards.
- **Protocols to monitor and evaluate** program success are often necessary to ensure consistent data collection and develop successive iterations that improve on residential tree planting targets. Partnerships with agencies that have greater expertise and the proper training of volunteers can both help address some of the challenges associated with evaluative procedures.

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## 2 INTRODUCTION

### 2.1 URBAN FORESTRY IN NORTH AMERICA

Non-profit and community-based groups have been instrumental to the resurgence of urban forestry efforts across North America, often increasing public awareness of the value of trees in the environmental and social functions of cities, promoting tree planting and stewardship as solutions to improving public health and reducing energy use, and mobilising city residents in tree planting efforts across the city. In ever more instances, municipalities are partnering with these organisations to implement initiatives that are often tied to ambitious tree-planting and canopy-coverage targets as part of city-wide urban sustainability campaigns.

Improving the state of urban forests is a formidable task – trees planted at the turn of the twentieth century are in decline; outdated policies prevent adequate protection for trees on private property; invasive pests and changing climate are testing the adaptability of trees; and increasing demands on municipal budgets limit the allocation of resources for management and maintenance of existing trees, as well as new environmental interventions and green infrastructure – these examples represent only some of the challenges faced by local governments. Cities have found partners in tree advocacy organisations that have the ability to leverage the resources from a range of stakeholders and operate initiatives that effectively encourage community participation that enhances the ability of residents to contribute to urban forestry goals.

Across North America, non-profit and community groups continue to develop their capacities to address some of these challenges. Staffed with marketing and communications specialists, certified arborists, experienced fundraisers, volunteer coordinators, the organisations constitute a revitalised urban forestry movement that delivers innovative programming that makes effective use of social marketing principles, grassroots' outreach strategies, volunteer coordination, and modern social media tools. Even though the essential mission of these organisations is to expand the urban forests through planting and

stewardship, it does so by embedding mechanisms that enlists the support of residents and other organisations to commit to that goal.

## 2.2 BACKGROUND

In January 2011, Vancouver City Council adopted 14 targets under the Greenest City 2020 Action Plan (GCAP) that outlined Vancouver's endeavour to become the greenest city in the world by 2020. Targets were set to facilitate a number of urban sustainability goals, including one that aims to offer residents "incomparable access to green spaces, including the world's most spectacular urban forest." To achieve this, the Vancouver Board of Parks and Recreation (the "Park Board") is tasked with the planting 150,000 new trees, of which 54,000 (36%) is to be planted on private property.

To facilitate increased tree planting on residential properties throughout the city, the Park Board has initiated research to support local efforts. Through the Greenest City Scholars program, a partnership between the City of Vancouver (the "City") and the University of British Columbia (UBC) that sees graduate students conduct research to support the implementation of the GCAP, this report was compiled to identify some of the best practices from recent resurgence of urban forestry efforts in municipalities across North America.

This report is intended to inform the development of a local community-based program aimed at encouraging higher numbers of residential tree planting throughout Vancouver. While a number of non-profit organisations have developed programming that mobilises community participation on issues of environmental stewardship and urban forestry, there has been no sustained and systematic campaign that engages residents to enhance the city's urban forest through planting on private property.

This report outlines some of the best practices that have emerged from four (4) non-profit-based urban forestry efforts in North America that have demonstrated success and innovative practices implementing residential tree programs: New York Restoration Project (New York, NY); Friends of Trees (Portland-Vancouver region, OR-WA); Local Enhancement and Appreciation of Forests (Toronto, ON); TreePeople (Los Angeles, CA). More specifically, innovative approaches, successes, challenges, and opportunities are summarised for each of the four organisations. Program design, tree procurement practices, educational and skill development, monitoring and evaluation procedures, program funding

and staffing are considered. The concluding section identifies potential directions for the development of a residential tree program in Vancouver, with recommendations categorised according to seven (7) capacities:

- I. Responding to local conditions and barriers that exist among area residents
- II. Fostering opportunities for community groups and residents to support the program
- III. Developing and distributing educational materials
- IV. Developing effective communication and outreach strategies
- V. Assembling staff and funding sources need for program delivery
- VI. Addressing logistical issues of tree planting, including procurement and distribution
- VII. Monitoring and evaluating contributions to urban forests, tracking tree plantings, replacement, and environment

## **2.3 ABOUT THE STUDY**

This report was researched and compiled for the Vancouver Board of Parks and Recreation through the Greenest City Scholars program, a partnership with the University of British Columbia through which graduate students conduct research that contribute to the implementation of the Greenest City 2020 Action Plan (GCAP). This review builds on a preliminary study completed by undergraduate students from the CityStudio program that focused on residential tree planting programs in Canada and the United States. This research provides a comparison of programs in their design, outreach, staffing, program costs, critical factors leading to their success, as well as key lessons and future opportunities that the subject organisations have identified.

To gain insight into critical program elements, context-specific challenges, budgetary and staffing information, and potential program developments, telephone interviews and e-mail correspondences were conducted with staff of subject organisations.

It is important to note that there are numerous efforts across North America promoting tree planting, with a rich diversity of approaches taken. For the purposes of this report, the research scope is limited to examples that present approaches compatible with the mandate of the Vancouver Park Board, the

supervising organisation that will work with partners to achieve residential tree planting targets. Case studies included in this review were chosen based the following criteria:

- i) **Meaningful community engagement and involvement**, including a focus on building community capacity to support and steward urban forests through local action that encourages voluntary tree planting on private property.
- ii) **A distribution component** in the program that addresses some barriers to residential tree planting. Residents often cite a lack of knowledge, physical, or financial capacity to plant trees in their yards as major barriers. Tree giveaways, discounted rates, bundled packages, delivery and planting service provision can help overcome some of these barriers that prevent trees from being planted where they are needed most.
- iii) **Centralised coordination** in the delivery of the program. Many residential tree programs are designed to supplement existing services offered by city departments or public utilities. While there are numerous examples of these models that have proven to be successful, the scope of the study is limited to non-profit and community organisations to offer an effective base of comparison.

Lessons from can be derived from residential tree programs that do not fit the criteria. Programs that are run on these alternative models are outlined in the CityStudio Report, *Sharing ResponsibiliTrees*.<sup>1</sup>

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<sup>1</sup> **Examples of Public Utilities Programs + Partnerships:** Seattle ReLeaf, Seattle WA; Sacramento Shade Tree Program, Sacramento CA; **City-Department Partnerships:** Eco-Yard Smart Program, Coquitlam BC; Leslieville-Riverdale Tree Project, Toronto ON; Million Trees Challenge, London ON; NeighbourWoods Program, Kelowna BC; Coupons, Surrey BC; Tree Coupons, Kamloops BC;

## 3 NEW YORK RESTORATION PROJECT

### *NEW YORK CITY, NY*

#### 3.1 BACKGROUND

New York's urban reforestation efforts have been among the most publicised of recent years, largely due to a partnership between the Mayor's Office and the New York Restoration Project (NYRP) to achieve ambitious tree-planting targets set under PlaNYC, a campaign that identifies strategies to achieve urban sustainability for New York City. Under the MillionTreesNYC (MTNYC) initiative established between the City's Department of Parks and Recreation and the NYRP, trees have been planted at a rate of 100,000 per year, and they are well on their way toward achieving their target.

American performer Bette Midler founded the NYRP in 1995 to revitalise neglected neighbourhood parks in NYC. In 1997, the NYRP came to support community gardens in New York, creating a land trust that protected community gardens from development pressures. Since then, the organisation has expanded their reach and capacity to include urban forestry, urban agriculture, and environmental education initiatives and programming.

The NYRP works with organisations under the MTNYC banner to organise tree planting on private property through tree giveaways, in housing projects, and through volunteer coordination. While it does conduct a fair amount of planting on its own, the group focuses on supporting and facilitating tree planting efforts with smaller local organisations embedded in neighbourhoods.

#### 3.2 RESIDENTIAL TREE PLANTING PROGRAMS

##### **"PUT DOWN ROOTS" TREE GIVEAWAYS**

In the spring of 2012, the NYRP gave away 5,000 trees in 30 events to New York residents through its tree giveaway program. These events are hosted by partner organisations selected through a vetting

process<sup>2</sup> that assessed their organisational capacity, community reach, and enthusiasm. A guide is provided to the host organisations that delineate responsibilities – including the hosts' obligations to conducting outreach, and providing volunteers to handle preparations and event day support. The NYRP provides 100-300 trees and delivers them to the event site, as well designs promotional materials, educational pamphlets<sup>3</sup>, and provides 2 staff on the event day to conduct planting demonstrations and handle inquiries. Events are held on Saturday afternoons, and distribution occurs over a 2 hour period.

### **TREE PLANTING IN HOUSING DEVELOPMENTS**

The NYRP has also collaborated with the New York City Housing Authority (NYCHA) to have trees planted at their developments across the City. Since 2008, the NYRP has held numerous large-scale planting events at NYCHA developments, planting over 10,000 trees by 2010. More recently, NYCHA's recently-formed Resident Green Committees have played a significant role in expanding the NYRP's effort by helping identify potential sites, establish maintenance plans, address water access issues, and plant trees on sites. The NYRP provides workshops and training for maintenance staff at these sites to ensure proper care is administered.

The NYRP has helped plant numerous sites with developers, co-ops, and non-profit housing organisations to have trees planted on housing sites. While there is no formal process, the NYRP offers workshops at these housing sites to community groups and identifies possible avenues for larger plantings.<sup>4</sup> Through an online application<sup>5</sup>, housing co-ops (and other institutions with access to land) can complete an application to secure up to 100 trees that would be delivered on site. In certain cases, the NYRP will also provide volunteers to help plant the trees, but the receiving group are expected to care and tend to them.

MTNYC also contracts out another group, TreesNY, which runs a Citizen Pruner program for NYC Parks that certifies residents through a 12-hour course to prune city trees. They also created guides for children and taught maintenance strategies to residents to support MTNYC plantings.<sup>6</sup>

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<sup>2</sup> <http://www.milliontreesnyc.org/downloads/pdf/GiveawayConsiderations.pdf>

<sup>3</sup> English, Korean, and Spanish translations available:

[http://www.nyrp.org/Greening\\_Sustainability/MillionTreesNYC/Tree\\_Care\\_and\\_Maintenance](http://www.nyrp.org/Greening_Sustainability/MillionTreesNYC/Tree_Care_and_Maintenance)

<sup>4</sup> <http://shnny.org/images/uploads/Session-4-Tree-Summary-Deb-Marton-12-12-04.pdf>

<sup>5</sup> [http://www.milliontreesnyc.org/downloads/word/fy12\\_fillable\\_tree\\_delivery\\_application.doc](http://www.milliontreesnyc.org/downloads/word/fy12_fillable_tree_delivery_application.doc)

<sup>6</sup> <http://www.treesny.org/citizenpruner>

**MONITORING & EVALUATION** | The NYRP maintains an electronic database that keeps track of all the trees it has helped plant, as well as trees given away through the outlined programs above. Staff and volunteers compile data from both electronic records from registrants and hand-written forms completed by unregistered participants of tree giveaways. Because the NYRP has a limited capacity to process the data, it receives research support from the Urban Field Station, which is run jointly by the US Forestry Service and NYC Parks Department to conduct statistical and geographic analyses that inform where tree giveaways and strategic plantings will take place. Residents are reminded once via e-mail, and regularly via Facebook and Twitter, to complete an online survey form used to track the progress of their tree, garner feedback to Tree Giveaway events, and collect data on motives of participants.

One major evaluation was conducted in spring 2011, where interns conducted site visits of addresses provided through giveaway registration. From trees that could be accessed from the street, 90% were found to be alive, three years after the giveaway event. The NYRP has planned another evaluation for spring 2013 that will utilise an improved methodology to assess the health of the trees.

**TREE PROCUREMENT** | Trees for Giveaways are currently obtained as part of informal contract agreements made with nurseries, many of whom are sought out through internal contacts, nursery trade shows, and word of mouth. While the NYRP obtains trees for its other initiatives through long-term contracts with nurseries that require trees grown to particular specifications, uncertainty of the demand for particular tree species make it difficult to establish typical long-term contractor growing agreements. However, changes are being considered to the procurement process to improve consistency in quality and availability while maintaining the ability to be flexible to the requests of residents.

**STAFFING & FUNDING** | The tree giveaways are run through the MTNYC program, which employ 8 full-time staff to help coordinate and run initiatives relating to the city-wide tree planting campaign. One full-time coordinator works with a full-time Americorp intern to direct preparation efforts leading up to the events, which includes making presentations, writing reports, attending nursery tours and trade shows, and assessing applications from host organisations. Additional support is provided during the tree giveaway seasons: 8 staff provide 48 full-time days (384 hours) to support the tree giveaways, which requires 2 staff in attendance.

Based on the most recent 5,000 Spring Giveaway in 2012, program costs for supply and delivery of trees total to \$170,000, (\$34 per tree). Another round of giveaways is scheduled for Fall 2012.

According to its 2009 budget, the NYRP's overall expenditures for all its programs exceed \$10.8 million, with nearly 50 full-time employees across the organisation. The organisation's revenue (\$10 million) is generated through corporate donations (50%), fundraising galas (26%), individual contributions (12%), foundational support (6%), and government (5%).

### **3.3 CRITICAL SUCCESS FACTORS**

**LOCAL PARTNERSHIPS** | Developing partnerships with local organisations is key to the NYRP's extensive reach across the city. While the NYRP has developed strong connections in neighbourhoods where its community gardens are located, new partnerships forged for the tree giveaway program with host organisations mobilise networks and resources where the NYRP's presence is limited.

By delegating some of the responsibility for outreach and distribution to these partners for the tree giveaways, the NYRP focuses its efforts on logistical aspects – tree procurement, participant registration, data collection, and development of tree care resources. By completing all the front-end planning and much of the technical preparations, the NYRP is able to carry out numerous events within a relatively short period of time.

**STRATEGIC OUTREACH** | In the past decade, the NYRP has made significant headway in securing the support of influential individuals and grassroots' community groups alike. Its current tree giveaway campaign employs the same strategies as it has in the past for its park restoration efforts. The organisation's high profile attracts elected officials to its cause, but the group also conducts outreach at community sporting and cultural events, and provides easy opportunities for those interested to volunteer and participate. City-wide volunteer Park Planting days, its numerous educational workshops, and its tree giveaways represent some of the broad array of activities residents can engage in to achieve MillionTreesNYC goals.

**STRONG COMMUNICATIONS** | What stands the NYRP's urban forestry efforts apart from other organisations' is its successful integration of online and social marketing tools in its outreach campaign.

Arguably the most visible tree planting campaign in the country, MillionTreesNYC draws on the capacity of the NYRP's communications staff to draw in media coverage and corporate sponsorship to fund its initiatives. For instance, "Do One Thing That's Green," an annual volunteer day sponsored by JetBlue Airways, demonstrates the value of the NYRP's Corporate Volunteer Program, which drew public awareness of its Tree Giveaway program through corporate publicity campaign. Campaigns and projects are well-marketed through its partners, and the attractive website makes for refined message delivery on the organisation's goals and objectives.

**CHARISMATIC LEADERSHIP** | The two most high-profile backers of the NYRP's initiatives, founder Bette Midler and New York Mayor Michael Bloomberg, have contributed to the organisation's progress on tree planting targets by the publicity they have been able to draw, which contributes to the public awareness of urban forests. Midler's warm personality and passionate advocacy, backed with the authority of the municipality and allocated resources, demonstrates committed leadership to reaching those goals. Through their highly visible partnership, achieving the tree planting targets became a matter of civic pride and responsibility that resonated with a large number of residents.

### **3.4 OPPORTUNITIES & CHALLENGES**

**BROADENING OUTREACH** | While the group's high visibility gives it broader reach than most organisations, its staff recognises the need to include New York's higher-barrier populations – those with cultural and language barriers that limit broader participation. This past spring, the NYRP successfully engaged with some of the City's Korean population when an organisation embedded in the community, the Environmental Action Association, applied to host a tree giveaway. The value of that partnership has sparked interest in engaging other ethnic groups in the City, including the Orthodox Jewish community.

The NYRP also found that their tree giveaways were attended more frequently by renters and those who recently-moved than established homeowners, deviating from the trend across North America. Because the program outreach model relies on community service groups, giveaways seem to draw populations that access community amenities regularly – renters, newcomers, and low-income residents. Many established homeowners bypass the NYRP outreach because their daily routines required less interaction with the broader community. Staff and volunteers are working with host organisations to see how to make homeowners aware of tree giveaways.

**SOURCING CONSISTENT NURSERY STOCK** | Quality and availability of nursery stock has been a constant issue since the tree giveaways began. Sourcing thousands of trees at a time presents its own challenges – trees are being purchased from multiple nurseries to meet the demand, and so inconsistencies with quality, pruning, and availability of species have become apparent over the years, attributable to several underperforming nurseries. As a result, substitutions and inappropriate species recommendations often disappointed residents and organisations receiving the trees. Staff are looking to address these issues by establishing contractual relationships with nurseries, which will establish more specific growing standards. Long-term contracts require a more complicated process to establish, but seeing as the NYRP are seeking to expand the program, a standardised procurement system will ensure more consistency in quality and supply in the long term, and hold underperforming nurseries accountable.

**OFFERING OF TREE SIZES & VARIETIES** | The NYRP have been sourcing larger, more mature trees for its giveaway program, as they are more likely to thrive in urban settings. However, there are drawbacks: at \$34 / tree (in a 7 gallon pot), they are considerably more expensive (compared to \$15 / tree in a 2-3 gallon pot). Furthermore, larger trees are significantly heavier and require transportation arrangements that may discourage some populations from participating. Staff are considering switching over to the smaller tree sizes for future giveaways, but this may limit their selection of trees, as most nurseries grow more species and varieties in 7 gallon pots. This issue may be resolved if the NYRP enters into contract agreements with growers, through which trees can be grown to the program specifications.

Rare trees, trees extinct in the wild, and fruit and nut trees have been increasing in popularity at giveaways. Staff are considering expanding the selection and share of these trees to be offered, although they recognise some of the limited environmental benefits that smaller and relatively short-lived fruit trees offer. However, the decreased benefits might be countered by the increased participation from a broader range of residents.

**TRACKING AND COLLECTING DATA** | Staff and volunteers contribute a significant amount of time during the three-month tree giveaway season to inputting participant data into their electronic database. In fact, the dedicated team puts in most of their hours between weekend giveaways to keep up with the amount of information received weekly. Staff are working with the US Forestry Service to streamline data collection and analysis. The NYRP is also working with a psychologist at the Department

of Parks and Recreation to develop a new survey that better understands the motives and attitudes of participants, so to inform future outreach efforts.

**EVENT DAY TROUBLESHOOTING** | Tree giveaway events are more formalised than when they first began. Changes have been made to increase the flow of people and mitigate issues that have arisen during events, such as:

- a) New registrants are signed-up with the help of a volunteer, who fills out the form for the participant to avoid legibility issues
- b) Participants can only receive the tree they signed up for: people are not allowed to browse the tree selection. This is to decrease the likelihood that participants might change their minds and leave with a tree that is registered to another household
- c) Online registration is heavily encouraged. 75% of trees are reserved for online registration, and the remainder on a first-come-first-serve basis. Online registration means less information needs to be collected at the event, which frees up volunteers to help with other tasks and helps with subsequent data entry

**COMMUNICATIONS OPPORTUNITIES** | While the largest and tallest trees are often the ones that contribute the greatest environmental benefits, they are also difficult to promote to hesitant residents. Staff are considering listing a trees' projected height after 20 years, alongside their height fully grown, to offer more perspective to residents who may be less enthused about large trees in their backyard. Furthermore, the NYRP is considering providing quality educational videos on platforms like YouTube to promote tree planting and offer visual guidance for less confident tree planters.

## 4 FRIENDS OF TREES

### *PORTLAND, OR; VANCOUVER, WA; EUGENE, OR*

#### 4.1 BACKGROUND

Well-known for its progressive land-use policies and livability, Portland has an extensive network of well-treed streets, parks and natural areas that constitute much of its green infrastructure. The municipality initialised more formal urban forestry efforts in the 1990s, recognising the need to maintain the city's green character as development pressures emerged. The City's most recent Urban Forest Management Plan calls for a moderate increase in canopy coverage of 5-10%.

Friends of Trees (FoT) is one of the most recognisable organisations in the Pacific Northwest, recently expanding its operations from Portland into nearby Vancouver, WA and Eugene, OR. Since its founding in 1989, FoT has planted 450,000 trees and native plants through green space and wildlife habitat restorations, on public and institutional land, and through its residential planting program. Its first city-wide campaign in the 1990s, 'Seed the Future' saw 157,000 trees planted along streets, in schoolyards and public spaces. Grassroots' participation is incorporated into the FoT's tree planting operations perhaps in more meaningful ways than the other case studies noted. Today, FoT works with the City of Portland on a number of initiatives, from watershed-based plantings to the Mayor's 'Grey to Green' initiative, through which the agencies work closely together to collaboratively design environmental programs.

#### 4.2 RESIDENTIAL TREE PLANTING PROGRAM

##### **"NEIGHBORHOOD TREES"**

In 2011-12, FoT facilitated 4,562 tree plantings in residential areas during 30 planting events across the Portland-Vancouver region through their Neighborhood Trees Program, first initiated 5-6 years ago. Staff help conduct outreach work in neighbourhoods by organising door-to-door canvassing efforts and planting events are then held once annually in each neighbourhood. Up to 250 trees are planted each

weekend, predominantly in yards, but also on city allowances, schools, and boulevards. The program costs users \$35-75 per tree to help recover program costs. FoT also offers products on their website: watering bags, root barriers, and concrete removal for tree wells, as well as watering service as options to participants. Each event is attended by 2-3 FoT staff to provide onsite support to the nearly 200 volunteers that attend. Volunteers are involved in practically all aspects of the event – from canvassing and outreach, to tree pickup and delivery from nurseries, to pre-planting breakfast and sign-ins, to planting operations.

**MONITORING & EVALUATION** | Trained volunteer Summer Inspectors also go house-to-house through the planted neighbourhoods to check on the health and status of trees planted through the program, and offer tips for tree care and maintenance if needed. The monitoring protocol<sup>7</sup> requires inspectors to assess and rate conditions on trees for: 100% of trees planted year-of; 10% of trees planted 2 years prior; 10% of trees planted 3 years prior.

**TREE PROCUREMENT** | FoT purchases trees at wholesale rates<sup>8</sup> from various local nurseries that it has developed relationships with over the years. They offer 10-15 varieties available through suppliers for yard plantings, and 10-15 varieties approved by the municipality to be planted on right-of-ways and city allowances. Larger caliper trees are chosen for those planted on street allowances, while fruit-bearing varieties are particularly popular in yards.

**COMMUNICATIONS & OUTREACH** | While many residents hear about FoT's programs through word of mouth, the group also advertises on billboards, most recently in the "Score a Goal, Plant a Tree" campaign sponsored through a three-year agreement by the Portland Timbers, a local Major League Soccer team. Staff work with volunteers to canvas door to door in neighbourhoods to broaden their reach, engaging in conversation and leaving behind informational door hangers. Yard signs are posted at interested households to help make the program more visible to neighbours. FoT also has a series of YouTube videos as part of the educational resources they offer, which help along its outreach by demonstrating how the Neighbourhood Trees program works and how people can get involved. They also are very active on Facebook and Twitter, with daily postings on events, articles of interest, and reminders.

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<sup>7</sup> 5.1: Summer Inspector monitoring protocols

<sup>8</sup> Prices range: 1" caliper, bare-root: \$25; 1.5" caliper: \$65; 2" caliper, B&B: \$120 - As Oregon is the top grower in US for shade trees, prices are low and contract growing was not deemed necessary

**STAFFING & FUNDING** | FoT has 19 full-time employees, with 7 dedicated specialists and staff who work to coordinate the event plantings. Additional support for outreach, communications, and online resources for the program is provided by other staff. Its tree planting efforts are partially funded by the City of Portland, which has been a major supporter of the group's efforts over the years. FoT also generates considerable amount of its funding through small individual donations.

The budget for the Neighbourhood Trees Program for 2011 was \$1,281,868, resulting in 4,562 tree plantings, about 56% of the organisation's expenses for the year. FoT recovers roughly 15% of the costs through the fees paid by its users.

### **4.3 CRITICAL SUCCESS FACTORS**

**BROAD RANGE OF OPPORTUNITIES FOR INVOLVEMENT** | Because its planting program relies heavily on volunteer effort, FoT works hard to provide volunteers with an exceptional experience to ensure continued support. Staff members heavily encourage participants to volunteer by letting them know that the subsidised pricing offered can only be achieved through collective efforts of neighbourhood residents. Potential volunteers can choose from a number of positions, from picking up and delivering trees to event sites, setting up event day breakfast, planting trees in neighbourhood crews, to inspecting trees planted several months after. The number and variety of positions that suits people's ability and availabilities helps increase the likelihood of participation.

**STRONG VOLUNTEER CAPACITY** | FoT offers volunteers opportunities to take part in more substantive planning and planting operations through its volunteer training programs. Many positions are given training and orientations: Neighbourhood Coordinators have annual meetings and training to share experiences and ideas; Summer inspectors are also given training on inspecting trees and offering advice; Crew leaders that help coordinate event day planting operations are given 5 hour training sessions, and are expected to attend 4 events in exchange. Repeat volunteers that build up experience are indispensable to ensuring smooth planting operations. Furthermore, volunteers can take advantage of an online forum to access resources and information, and self-organise more independently.

## 4.4 OPPORTUNITIES & CHALLENGES

**BEYOND THE “LOW HANGING FRUIT”** | FoT has made inroads into neighbourhoods across Portland and Vancouver, finding volunteers who are enthusiastic to take part in a wider community forestry effort. At the moment, FoT is seeking ways to expand their programming to engage residents from communities that are less engaged. Barriers of language and socio-economic status are challenging to overcome, but engaging these residents is a logical step to broadening the reach of the program to where it can make the most impact.

**TRANSPORTATION** | To keep its program overhead costs down, FoT relies on volunteer drivers and vehicles to transport trees from nurseries, to staging grounds, and finally to homes. Each event day requires several trucks to ensure that plantings go smoothly. However, FoT organisers noted that they are often short on pick-up trucks, even as volunteers call on favours from friends and family, search online forums for do-gooders to avoid rental costs.

**EXPANDING INTO NEARBY AREAS** | As municipalities begin to take a more proactive approach to managing their urban forests, FoT foresees more opportunities to expand its programs into nearby cities. In the past several years, the group has expanded its operations considerably in Vancouver, WA, where its efforts have resulted in a 5-year \$337,500 contract with the City to plant 2,250 trees. FoT also recently opened a new office in Eugene, OR, where it leveraged funding to merge with the Eugene Tree Foundation and begin a Neighbourhood Trees program there as well.

## 5 LOCAL ENHANCEMENT & APPRECIATION OF FORESTS

***CITY OF TORONTO; SOUTHERN & CENTRAL YORK; NORTHERN YORK  
GUELPH-KITCHENER-WATERLOO REGION***

### 5.1 BACKGROUND

Toronto is the first of Canada's largest cities to coordinate their urban forestry management, aligning policies and practices among city departments to double its urban tree canopy, as set out in its 2005 Urban Forest Management Plan. There is a significant range of organisations that are supporting the City's efforts – from groups that address public health, food security, and air quality issues, to invasive insects and disease, to energy conservation and climate change – and this represents an engaged local movement that promotes forest stewardship through a number of causes.

Local Enhancement and Appreciation of Forests (LEAF), a non-profit formed in 1996, has been planting trees on Toronto's private residential properties for over a decade through its Backyard Tree Planting (BTP) program. LEAF is leveraging the resources from municipalities and public utilities to realise existing potential of private lots to expand the region's urban forest. The group has also actively mobilises community members to address the recent Emerald Ash Borer infestations that threaten a significant proportion of Toronto's urban forests, and offers tree-care volunteer training, tree walking tours and care workshops on top of the subsidised tree purchases and planting services.

### 5.2 CURRENT PROGRAMS

#### **BACKYARD TREE PLANTING PROGRAM ("You Could Use A Tree")**

LEAF offers subsidised full-service tree planting for residents of Toronto and the Southern and Central York region. Residents pay a subsidised price of \$150-220 and receive an on-site consultation with a LEAF arborist, a tree appropriate for the property (from 27 species), full delivery and planting service, and post-planting support. By offering a comprehensive package of services aimed at attracting clients who do not have the knowledge, time, or capacity to plant trees themselves, the BTP provides a step-by-

step process that is flexible to the needs of its clients that, at the same time, emphasises ease and simplicity. The program consists of a five points of contact:

- i) Online questionnaire<sup>9</sup> – Before any service is rendered, a questionnaire is completed to ensure that the property has the physical attributes and space needed for growing a tree
- ii) On-site consultation – A scheduled consultation is carried out with a LEAF arborist, who helps find an appropriate location and suitable species of tree to be planted (\$75 non-refundable that goes towards the purchase of a tree)
- iii) Planting – A scheduled planting is arranged upon purchase, and planted by LEAF staff on their pre-established daily route
- iv) Tree care resources<sup>10</sup> – Guides and pamphlets developed by LEAF are provided to the owner, including any site-specific instructions
- v) Follow-up survey – Participants are requested to complete a survey to generate feedback on quality of service provided

To obtain data to evaluate the BTP program's effectiveness, in-person visits are conducted for 20% of the households that have had trees planted through the program, through which tree health and condition are assessed. In 2012, staff are projecting 1,000 trees and 1,000 shrubs will be planted through the BTP program.

LEAF also offers the BTP to multiunit dwellings by providing a checklist of requirements<sup>11</sup>, such as utility clearances, strata approval, and minimal site requirements.

### **COOL COMMUNITIES REBATES**

The *Cool Communities* Rebate Program is a relatively recent program that extends LEAF's reach to the Guelph, Kitchener, and Waterloo region. Participants visit one of several participating local nurseries, and choose an appropriate tree species with the help of a tree selection tool. Upon filling out a short survey, participants receive rebates of up to \$100 for trees and shrubs – \$20 off \$100+; \$5 off \$20+; \$2 off shrubs under \$20. Educational materials about tree selection and energy conservation are offered along planting and care instructions.

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<sup>9</sup> <http://www.yourleaf.org/pre-visit-questionnaire>

<sup>10</sup> Online version can be found here: <http://www.yourleaf.org/tree-care-guide>

<sup>11</sup> <http://www.yourleaf.org/townhouses-co-ops-apartments>

**DO-IT-YOURSELF PLANTING PROGRAM**

The *Do-It-Yourself* Planting Program is offered to residents of the Northern York region every fall, which requires participants to complete an online workshop with discounted tree purchase pricing. The topics covered by the workshop are: “Your Tree is Part of an Urban Forest”; “Finding the Right Tree for the Right Place”; “Planting Your New Tree”; “Caring for Your Tree for Years to Come”. Orders placed by participating residents are picked up from a designated site, while residents who order \$100 or more worth of trees qualify for free delivery.

**TREE PROCUREMENT** | Most trees planted through the BTP Program were purchased at wholesale rates through major regional nurseries in Ontario that have a higher capacity and selection than smaller growers. Because LEAF purchases a relatively small number of trees and shrubs in comparison to municipalities, they are not a high priority customer for many of the nurseries. LEAF is looking into expanding relationships with smaller local growers that can attend to LEAF’s needs more readily.

**COMMUNICATIONS** | LEAF runs ads for its BTP Program, most recently through a visually engaging and humorous advertising campaign with Ontario Power: “You Could Really Use A Tree” ads went up along transit lines earlier this year. The campaign is featured on the Ontario Power Generation website, as well as Toronto Hydro. Links to the program are hosted on the Urban Forest Services, as well as other community groups supporting urban forestry, such as the Leslieville-Riverdale Tree Project.

Online and print outreach materials are completed in-house by the organisation’s Marketing and Communications Coordinator. A brand guide was established several years ago with the help of an outside contractor to provide consistency to communications materials and clear messaging.

LEAF also operates a blog to post volunteer experiences, storytelling, and educational material, and regular updates and objects of interest on Facebook and Twitter.

**STAFFING & FUNDING** | The BTP Program employs a full-time program manager, field supervisor (full-time), field personnel (2 positions, part-time), administrative assistant (3/4 time), and 2 seasonal planters (two months of the year). Additional support is provided by its marketing and communications manager and volunteer interns.

According to staff, roughly 60% of the organisation's \$643,082 budget (2010 figures) is for the BTP Program, which resulted in 1,654 tree and shrub plantings – roughly \$300-350 per tree. Its initiatives receive funding through public utilities: Ontario Power Generation and Toronto Hydro, as well as foundations: Canadian Tree Fund, Ontario Trillium Foundation, and several others. It also receives some funding through a municipal fund, Live Green Toronto. Individual donors make up a small proportion of support.

### 5.3 CRITICAL SUCCESS FACTORS

**RESPONSIVE TO BARRIERS** | As a comprehensive package of consulting, delivery, and planting services, the BTP Program effectively addresses key physical and educational barriers to residential backyard tree planting. This model offers several advantages over tree giveaways:

- i) The entire process is done by trained staff, ensuring that each tree is properly planted immediately upon delivery
- ii) Clients are more invested in trees survival due to the incurred cost of the tree and service
- iii) In-person consultations offer custom advice to residents based on specific site considerations

**SERVICE-ORIENTED FOCUS** | The BTP Program is designed to present multiple points of contact with participants to ensure that plantings will become successful – extensive online questionnaire aims to establish a good fit between homeowner and organisation goals; arborists that offer on-site expertise and help find appropriate planting location and tree; tree care advice offered through resource pamphlets and additional advice offered by staff; follow-up e-mail survey seeks to ensure client satisfaction – feedback is incorporated as changes into the program. This service-oriented focus reduces the number of uncertainties as much as possible, and ensures that trees are properly established for success.

**CASTING A WIDER NET** | LEAF's broad set of programs and initiatives offer more opportunities to connect with local residents and expand its client base, which helps to broaden its reach by addressing

different motivations that residents may have. For instance, it works with local organisations to host arbor days, workshops and walking tours that promote urban forest stewardship. The group is also taking a leadership role in controlling the effects of the invasive Emerald Ash Borer and promoting community food security by supporting fruit tree planting projects in vulnerable neighbourhoods. LEAF's "You Could Really Use A Tree" campaign resonates with residents motivated by energy bill savings or conservation.

## **5.4 CHALLENGES & OPPORTUNITIES**

**FUNDING & SUPPORT** | In years past, LEAF endured periods marked by unstable funding and support – urban forestry issues were not prioritised, and lack of government funds available reflected this. As a result, many tree stewardship organisations competed for grants to fund their operations, which compromised LEAF's ability to staff and execute programs. Recent years has seen a turnaround of sorts: recent funding sources have been stable, and essential to LEAF's success to date.

As neighbouring municipalities are seeking effective responses to the Emerald Ash Borer crisis urban forests issues, LEAF is well-positioned to support future initiatives across the region. Its profile, experience and capacity in executing residential planting programs make for an attractive partner in any new urban forestry campaigns.

**EXPANDING OPERATIONS** | Staff are looking to adapt the Backyard Tree Planting Program to neighbouring cities and regions to expand the organisation's reach. Because the current model requires significant time and resource allocation, more participants may be reached through a less intensive approach that properly equips residents with the knowledge, skills, and guidance to plant trees on their own. This adapted program could utilise LEAF's relationships with nurseries, which could help distribute trees to participants, and be supported with digital technology, through which LEAF tree arborists could provide online consultations using site photos and e-mail.

**CAPTURING PERSONAL STORIES** | To complement their newsletters, LEAF staff initiated a blog several years ago to share their experiences on the field and offer insights and information to build readership and generate interest. Staff will continue to develop this medium that will support its work around tree

stewardship so that clients, volunteers, and staff can stay connected. LEAF also uses its Facebook and Twitter accounts regularly to notify its network of blog postings.

## 6 TREEPEOPLE

### *LOS ANGELES, CALIFORNIA*

#### 6.1 BACKGROUND

Los Angeles' urban forestry efforts rely on a number of agencies and organisations to implement its Million Trees program, an initiative from Mayor Villaraigosa's office as part of a broader strategy to make the LA greener and more sustainable. The capacities of its six participating non-profit organisations are critical to the project's implementation, not only in carrying out planting operations but substantively defining the program's social and environmental goals. While some organisations are relatively new, organisations like TreePeople have been promoting tree stewardship through community education and planting projects in Los Angeles since the 1980s.

TreePeople has been at the forefront of environmental stewardship efforts in Los Angeles for the past several decades, including its successful campaign in the early 1980s to plant a million trees as a legacy to the city's 1984 Olympic Games. Since then, the group has shifted its focus towards educational programming, developing the knowledge and capacity of LA residents to steward the city's urban forests and watersheds through planting projects.

#### 6.2 RESIDENTIAL TREE PLANTING PROGRAMS

##### FRUIT TREE PROGRAM

Among TreePeople's urban forestry programs is a 'Citizen Forester' initiative that engages Angelinos to plant and care for street trees across the city. To improve participation in underserved neighbourhoods where urban forestry efforts are facing a number of barriers to higher community involvement, TreePeople recently revamped their Fruit Tree Program (FTP), which now functions as a key outreach strategy in areas it has limited reach. At one point, it was a fruit-tree recovery program that distributed trees 9,000 fruit trees to 90 organisations that were otherwise going to be discarded by nurseries. In

2012, 3,500 fruit trees were purchased from a partnering nursery and distributed over six (6) fruit tree giveaway events hosted by community partners in its priority neighbourhoods – South Los Angeles and Northeast San Fernando Valley, both areas with low-canopy areas and higher socio-economic barriers.

Its largest event is run as part of the “100 Seeds of Change” campaign by the Social Justice Learning to empower disenfranchised young black men in the neighbourhood through training, capacity building, and food security. Giveaways are large festive events that where the 1,000 recipients of the trees were required to stay for an initial planting workshop provided by TreePeople staff, a hands-on session demonstrating planting techniques. About 90% of the group also stayed for the supplementary tree care workshop, a more informal Q&A session that covers the basics of tree maintenance, as well as more specific inquiries. Other activities, like composting workshops, healthy cooking demonstrations, blood pressure screenings and bicycle care training, are also featured at the event, and the SJLI found sponsors to provide tree care supplies for recipients as well. Training is supplemented with additional monthly workshops that are offered throughout the year.

**STAFFING & FUNDING** | The Fruit Tree Program is coordinated by a full-time employee who splits his time as nursery manager for TreePeople’s other initiatives. Prior to the distribution, he works with community partners to organise events, and prepares a purchasing order for their sponsoring nursery, Dave Wilson Nurseries who offer TreePeople a discounted rate on fruit trees. In January when all the distribution events are happening, he works full-time, with the support of 10 other F/T forestry staff redirected to support host organisations at distribution events for the month.

Based on the most recent January Giveaway, program costs for supply and delivery of trees (not including staff time) total to \$25,000, (\$8 per tree). According to its 2011 financial report, the TreePeople’s overall expenses totalled just under \$4.8 million. TreePeople’s revenue (just over \$4 million) generated mainly through individual contributions (37%), government support (23%), with foundations and corporations contributing 13% each.

**TREE PROCUREMENT** | While TreePeople operates its own nursery that supplies many of the trees used in its watershed management and greening initiatives, the bare root trees distributed through the FTP are purchased at a discounted rate from Dave Wilson Nurseries through a formal agreement.

Because bare root trees are relatively inexpensive and more portable, the program can be more easily scaled up if more resources were made available. Cost per tree is \$8 each from the supplier.

### 6.3 CRITICAL SUCCESS FACTORS

**ADDRESSING LOCAL ISSUES** | While the FTP is a relatively small aspect of TreePeople's overall programming, it helps to extend the organisational reach into areas where socio-economic barriers have become barriers to tree planting and care, resulting in the lowest canopy coverage of any neighbourhoods in the city. Through its partnership with the SJLI, employees of both organisations work to ensure that tree giveaways and planting/care workshops are properly integrated into the event festivities and workshops to promote healthy eating, food security, and youth empowerment, and educates participants on how tree planting and stewardship can support these goals.

**WORKSHOP DESIGN** | TreePeople is able to distribute 1,000 trees by splitting up the task into hourly time slot, so participants pick-up their tree and attend a planting workshop. A second tree care workshop offered afterwards receives high attendance – 90% of attendees of the first session stay around for the second. Combined with the festive atmosphere and composting and cooking demonstrations, these events encourage people to stay longer, linger, and take advantage of the resources available. This model marks a shift to a more hands-on approach, where TreePeople has taken a more significant role engaging fruit tree recipients.

### 6.4 CHALLENGES & OPPORTUNITIES

**DATA COLLECTION** | Being one of the pioneering tree planting and environmental stewardship organisations in Los Angeles, TreePeople enjoys an enviable reputation and visibility from its years of dedicated service and successful campaigns. With the competitive funding environment, data collection has become increasingly important in assessing the impact made by programming toward set goals. Previous iterations of the FTP focused entirely on distributing trees to organisations without collecting data on specific contribution to food security: amount of fruits produced, tree survival rates, households that are benefiting. Because of the organisation's limited capacity, any information collected is done

voluntarily by its community partners. However, the current distribution and workshop model ensures that resident capacity to care for and utilise the trees are enhanced.

**EXPANSION OF CURRENT MODEL** | With recent successes over the past several years piloting the current model, staff foresee a significant expansion in the next several years: an increase to 12,000 trees to be distributed in priority models through community fairs. In large part due to the organisation's increased capacity resulting from its expanded reach: more volunteers are being trained as part of the "Fruit Crew" supervisors, greater interest in local food security, and recognition of large expanses of food deserts have increased demand for fruit trees to be planted, both by individuals and organisations.

## 7 LESSONS FOR VANCOUVER

### 7.1 RESPONDING TO LOCAL CONDITIONS AND BARRIERS THAT EXIST AMONG AREA RESIDENTS

**PRICING** varies greatly among these four programs: TreePeople/LA and NYRP/NYC offer trees at no charge at their giveaway events to ensure that the populations they work with, who often reside in underserved neighbourhoods, are not discouraged from obtaining a tree. FoT/Portland and LEAF/TO offer subsidised rates (from \$35 and \$150 respectively) to their clients. The higher cost of LEAF/TO's program reflects the full-service offered, aimed at attracting clientele by providing a convenient option at relative savings. FoT/Portland's less costly arrangement heavily utilises collective volunteer efforts for the planting effort, which relies on a greater collective effort and coordinative capacity.

**TRANSPORTATION** is a major consideration in the design of these programs, especially when home delivery is not feasible. Participants of NYRP/NYC tree giveaways are able to utilise the city's extensive public transit infrastructure, so transportation does not appear to be a major problem. Bare-root fruit trees offered by TreePeople/LA are light and easily transportable. LEAF/TO's home delivery as part of its full planting service is particularly helpful in areas less served by public transit. FoT/Portland's creative solution relies on volunteers and available pickup trucks to overcome challenges of moving trees from staging areas to participating households, although shortages are common.

**DEMOGRAPHIC FACTORS** of target groups and in areas present organisations with distinct challenges and opportunities. The NYRP/NYC is focused on building more inroads into ethnic communities by connecting with cultural and religious organisations, and encouraging them to host giveaways. TreePeople/LA works with organisations with a higher degree of capacity and social networks to conduct its tree giveaways in underserved areas of South Los Angeles and Northeast San Fernando Valley with a large Black and Latino communities, areas where TreePeople's programming have not generated considerable uptake.

**MULTIFAMILY DWELLINGS** require a different approach to tree planting than single-family residences. LEAF/TO establishes guidelines and requirements for planting on housing developments, and offers a checklist for documentation required to begin the consult process: utility clearances, signed approval from the strata or board, and minimum site requirements. The NYRP/NYC and FoT/Portland both do not have formal processes, but accept proposals by owners of condominiums and apartments, providing approvals and site requirements are in place. Usually these trees are planted by contractors or residents at the expense of the owner.

## **7.2 FOSTERING OPPORTUNITIES FOR COMMUNITY GROUPS AND RESIDENTS TO SUPPORT THE PROGRAM**

**COMMUNITY PARTNERSHIPS** are often key to the local uptake of residential tree programs, especially in neighbourhoods where the organisation does not have the reach or capacity necessary to meet its program goals. The success of the NYRP/NYC's tree giveaways rely on the capacity of its 30 host partners, whom conduct outreach, provide volunteers, and make local venues available. TreePeople/LA works very closely with its community partners to host its large fruit-tree giveaway events, like the Social Justice Learning Institute in Inglewood who work to empower young black men. By accompanying giveaway/demonstrations with demonstrations and activities on healthy cooking, gardening, composting, bicycle care, and offering blood pressure screenings and free tree-care supplies, TreePeople/LA helps the SJLI address food insecurity while increasing its own visibility and presence in the communities.

**STRONG VOLUNTEER CAPACITIES** are most noticeable in FoT/Portland's engagement and distribution model. Residents can either take part in small ways on day-of planting operations or be involved in more substantive planning and planting operations. This is made possible by the strong volunteer training programs that are offered prior to the planting season and the willingness of residents to volunteer their time year after year.

## **7.3 DEVELOPING AND DISTRIBUTING EDUCATIONAL MATERIAL**

**INSTRUCTIONAL HANDOUTS** handed out to residents upon receiving a tree can help address common mistakes in siting and planting trees. Clear, step by step instructions for planting are especially

necessary at tree giveaways, where homeowners are likely to be planting without professional assistance. Further guidelines on watering frequency, pruning, mulching, staking, as well as preventing common problems are compiled, as well as contacts for other tree services are also helpful, as well as translated materials for neighbourhoods with large non-English speaking populations. LEAF/TO offers care handouts that are designed by their communications coordinator, which follows guidelines from a brand guide developed by an outside consultant. Tree care instructions should also easily located on organisation websites.

**STREAMING VIDEO TUTORIAL** are becoming increasingly popular – all four organisations broadcast streaming videos from their YouTube channels, with mostly communications material on the organisation and its recent work. TreePeople/LA and FoT/Portland have recently uploaded sleek and well-produced planting and care tutorials, while the NYRP/NYC is investigating the opportunity.

**ON-SITE DEMONSTRATIONS** are commonly given by organisations at tree giveaways and pick-up sites, since planting services are not provided. TreePeople/LA's structured approach is particularly effective at disseminating planting expertise: having giveaways and planting workshops as part of a larger community event encourages tree recipients to voluntarily stay for additional training.

## **7.4 DEVELOPING EFFECTIVE COMMUNICATION AND OUTREACH STRATEGIES**

**GRASSROOTS' COMMUNITY OUTREACH STRATEGIES** are typically tailored on the target areas and demographic. Acquiring support of elected officials and politicians is cited to be effective in helping increase the profile of organisations and bring awareness to the cause, in a broad manner.

Organisations also conduct quick presentations at local community sporting and cultural events to bring more awareness to campaigns and projects. LEAF/TO combine with other organisations to host a festive annual Arbor Day event, while all organisations mobilise their networks to host major volunteer plantings, an opportunity for residents and groups to join in on major plantings, usually at a large park. One major difference between the organisations' approaches: whereas TreePeople/LA and the NYRP/NYC models both focus on tapping into existing networks of partnering organisations, FoT/Portland has put in a great deal of effort into door-to-door outreach that, while time and labour intensive, gave staff an opportunity to understand local barriers and directly addressing questions where local organisations have not already established those relationships.

**CAMPAIGNS AND ADVERTISEMENT** are particularly useful for groups like LEAF/TO and FoT/Portland that offer subsidised planting services, instead operating tree giveaways. The campaigns run on billboards and transit ad space are not only slick and visually engaging, but often the result of strategic partnerships: LEAF/TO works with Ontario Power Generation to run a light-hearted and humorous campaign for its Backyard Tree Planting program that promotes energy conservation; FoT/Portland teamed up with their Major League Soccer (MLS) team, the Portland Timbers, that offers to plant a tree for every goal scored by the team – helping increase the profile of the organisation and its Neighbourhood Trees program. Its programs are also cross-promoted on partner and parks department websites. The NYRP/NYC's corporate sponsorships also help to promote tree planting throughout company volunteer days.

**ONLINE AND SOCIAL MEDIA** continue to be a vital part of advertising and outreach, increasingly visible dimension in the marketing and communications strategies of these case study organisations. To varying degrees, online tools are creating new opportunities to connect with broader audiences that complement more traditional methods of outreach, and strategies are constantly being reworked to match emerging trends – Facebook and Twitter serve to update followers on events, programs, and opportunities, while blogs have been mobilised to connect staff and volunteers to the broader public to engage potential participants and clients. LEAF/TO is looking to incorporate more storytelling in their blogs, for their volunteer network to share their passions, insights and experiences online, in hope of developing a vibrant community of internet users.

## **7.5 ASSEMBLING STAFF AND FUNDING SOURCES NEEDED FOR PROGRAM DELIVERY**

**THE EXPERTISE AND CAPACITIES OF STAFF** among the organisations are generally similar – tree specialists, volunteer coordinators, communications, administrators and project coordinators. Its arrangement varies greatly, depending on how residential tree programs are situated within its broader urban forestry mission. For paid planting services, a greater amount of human resources is dedicated to event coordination and field work: LEAF/TO invests a greater portion of its budget to field operations – arborist consultation and planting services; FoT/Portland staffing is oriented to provide the high level of volunteer coordination, training, and event planning needed for its Neighbourhood Trees program.

**ARBORISTS/TREE SPECIALISTS** – LEAF/TO and FoT/Portland both have several certified arborists on staff to help run residential planting operations, whose expertise are particularly valuable because of the planting services offered. NYRP/NYC and TreePeople/LA both have arborists that often work on a broader range of initiatives – but because the tree giveaways are significantly smaller, in proportion to the rest of their overall programming, arborists support the program seasonally when tree giveaways are in full swing.

**ADMINISTRATIVE SUPPORT** – Each program often receives in-house support for communications, administration, and fundraising, where FoT/Portland and LEAF/TO’s residential tree programs have greater dedicated support, because of the coordination required for their more extensive services.

**PARTNERSHIPS FORMED WITH CITY AGENCIES AND PUBLIC UTILITIES** can provide residential planting programs with an ongoing stream of funds. LEAF/TO teamed up with Ontario Power Generation to fund a recent advertising campaign, “You Could Really Use A Tree”, which highlighted the Backyard Tree Planting program’s potential to help homeowners contribute positively to energy conservation. FoT/Portland “Plant it! Portland” campaign received funding from the city’s parks department for each tree the group planted in residential areas. Both the NYRP/NYC and TreePeople/LA are taking part in initiatives from their respective Mayors’ Offices to plant a million trees, with the benefit of attached funding and greater media coverage.

**MONETISING THE BENEFITS OF GREEN INFRASTRUCTURE** is important to estimating the value of ecological services provided by trees. LEAF/TO has been using a recently developed app made by the US Forest Service, iTree, to calculate figures that demonstrate the scale and importance of its work to potential funders. This tool frames tree planting as an investment to the wellbeing of urban environments, instead of perceived costs.

**ENHANCING THE PROFILE** of the organisations goes a long way to advance funding opportunities. LEAF/TO hosts annual Arbor Days with other tree stewardship organisations to celebrate program achievements and recognise the contributions made by community partners, organisations, and volunteers. Live music, food, info-booths, tree plantings, educational and other stewardship activities generate greater public interest in urban forestry. Likewise, the NYRP/NYC hosts city-wide planting days in parks around the city, with public figures, corporate sponsors, and community partners in attendance.

**PRIVATE DONATIONS** are often key to sustaining program operations – the organisations facilitate these opportunities by suggesting to interested individuals to make tree dedications, legacy funding, and tree donations to schools through the websites.

**CORPORATE GIVING** contributes greatly to the NYRP's tree planting capacity, which derives half of its budget through corporate donations. By helping coordinate highly-successful and publicised events and volunteer days, the group offers an easy option for donors to fulfill their own corporate responsibility missions. While it is highly unlikely for this success to be replicated elsewhere, investigating ways that businesses can play visible roles in helping tree planting programs achieve urban forestry goals may be a worthwhile pursuit.

## 7.6 ADDRESSING LOGISTICAL ISSUES OF TREE PLANTING

**PROCUREMENT PRACTICES** among these groups vary greatly, as they are largely dependent on the variety of trees being offered and the number of trees required. With 10,000 trees to be given away through their tree giveaways and tens of thousands more planted through its other urban forestation initiatives, the NYRP/NYC forges relationships with numerous local larger scale nurseries that have the capacity to produce these quantities. In order to improve and standardise product consistency, the organisation is looking to offer formal contracts, rather than handshake deals, that is currently the situation. Because of the smaller number of trees being distributed through their annual giveaways, TreePeople/LA have a formal agreement with one nursery to acquire all the trees needed for its Fruit Tree Program, which has the advantage of offering consistent product and delivery arrangements. LEAF/TO and FoT/Portland have no such formal arrangements, but purchase trees at special price rates from several local nurseries. Contracts are infeasible in this case because of the variable choices that their clients make in selecting trees for their home.

**PREFERENCE FOR TREE OFFERINGS** is often given to native species, as they are well suited to local conditions and resilient to most pests and disease. Fruit trees are often considered because of an increasing demand, especially by first time planters whom may be less likely to plant a larger, long-lived tree. The range of tree sizes should also be considered – smaller trees could be made available for limited yard space, while also maintaining the option to receive larger trees that would provide the maximum ecological service. Residential plantings also allows for an opportunity to embed more

diversity in the local environment, which is rarely a consideration in street tree plantings. Offering rare and interesting trees for planting can increase the likelihood that interested planters will utilise the program. The NYRP/NYC and TreePeople/LA offer less variety in their tree giveaways, usually 4-6 species, while the subsidised planting programs, LEAF/TO and FoT/Portland offer greater selection at 27 and 35 respectively.

**PROVISION OF PLANTING SERVICES** – LEAF/TO provides a complete service performed by its staff and its clients are charged considerably more than FoT/Portland, whose staff provide coordination but the work done on planting day relies heavily on volunteers and participants. There are advantages of each model: LEAF/TO's model allows homeowners to take part in the program without the support of their neighbours; FoT/Portland's program requires a certain threshold of participation before these planting events can occur, but enhances participating communities' capacity to organise future plantings.

**UTILITY CLEARANCES AND SITE INSPECTIONS** are required prior to planting, if the service is provided. LEAF/TO offers residents a checklist of necessary documents needed to approve potential sites for planting, accompanied with links and contact numbers. Arborists then conduct a site visit to assess potential planting locations on the property, along with recommendations on the type of tree appropriate siting considerations. FoT/Portland helps prepare utility locates for gas and communication lines prior to planting, but irrigation pipes are the responsibility of the homeowner. Additionally, FoT/Portland allows residents to order a street tree in front of their property and will contact a city official to inspect and site the tree appropriately. However the service is only offered for trees to be planted on city allowances.

## **7.7 MONITORING AND EVALUATING PROGRAM SUCCESS**

**TRACING TREE CONDITION AND HEALTH** is often limited to small time frames because of the costs of updating records. Although organisations generally rely on voluntary rather than mandatory feedback from participants, FoT/Portland uses recruited volunteers to conduct yearly reports of trees planted through their Summer Inspectors program. Volunteers conduct a sample on trees planted in previous years to estimate how trees are doing. The NYRP conducts studies every few years on trees visible from public streets and laneways. Volunteer interns are able to establish a sample on tree condition and estimate of successful plantings.

**PARTNERSHIPS** with agencies that have expertise and resources to conduct data analysis can often enhance a tree program's capacity to evaluate progress towards planting targets, especially when funding and staffing is limited. The NYRP/NYC enlists the US Forestry Service to help analyse data collected for the MillionTreesNYC initiative; data on tree health are obtained through online surveys sent out to e-mails given upon tree giveaway registration.

**OFFERS TO REPLACE** poorly performing or dead trees can also be useful in determining whether trees are doing well, especially for paid planting services like FoT/Portland and LEAF/TO's programs. LEAF/TO's higher cost of purchase encourage residents to seek help or replacement should tree health issues arise. In-person visits are conducted at random for 20% of participating households, but the high success rate (90%+ are thriving) indicates that clients are invested in ensuring their trees' survival. FoT/Portland's policy allows for the replacement of dead trees within the first year of planting, providing that the summer inspection reports no signs of negligence.

**CUSTOMER FEEDBACK** is particularly important in LEAF/TO's model, which aims to maximise customer satisfaction through attentive and timely service. Internet surveys are sent out through client e-mails to gauge how the organisation performs, in terms of addressing client needs [SEEK CRITERIA] soon after the planting season is completed. The information collected has been useful in determining modifications to the program, and exploring future directions that would increase planting targets. The NYRP/NYC is currently working with a psychologist at the Department of Parks and Recreation to develop a new survey that better understands the motives and attitudes of participants, so to inform future outreach efforts.

## 7.8 CONCLUSIONS

The development of a residential tree program in Vancouver will be necessary to achieve the ambitious tree planting targets set out in the Greenest City 2020 Action Plan, which seeks to place 54,000 new trees on private properties across the city. While a number of planting initiatives have taken place across the city in recent decades, no coordinated city-wide campaign that has effectively engaged a broad cross-section of residents in tree planting has occurred. As other Greenest City initiatives are being planned and implemented, there is an opportunity to take advantage of the enthusiasm and momentum generated by the creative capacities of city departments and community members alike.

Challenges will certainly emerge from piloting the initial phases of a residential tree program, but the development of leadership capacities within communities, formation of partnerships with organisations, and leveraging of resources from stakeholders will certainly be part of any substantive effort.

The case studies outline some of the innovative practices and measures taken by urban forestry proponents that have effectively mobilised residents to plant and steward trees in their respective cities. With each of the four organisations having taken a different approach to residential tree planting, there is a considerable wealth of knowledge to draw on, and a range of possible avenues that can be taken, in considering how a local program might be designed and delivered. As other municipalities have proven in their efforts, effective residential tree programs do not only transform a city's forests into one of its greatest assets, but provides an effective, engaging, and inspiring project to empower residents in making their city more sustainable.