Canopy

INDIANA URBAN FOREST COUNCIL

WINTER 2014

Indiana Urban Forest Council | PO Box 409 | Carmel | Indiana | 46082

STATE OF THE URBAN FOREST: FALL CONFERENCE IN INDY

The annual IUFC Fall Conference took place at KIB and was a well-attended event.

The IUFC Fall Conference for 2013 was held at the Keep Indianapolis Beautiful (KIB) headquarters in Indianapolis on October 15th. In summarizing the past year, IUFC President Paul Pinco said that the annual grant from the Community and Urban Forestry Program of IDNR will diminish and may disappear in the near future. Therefore, the IUFC Board has been looking at other sources of funding to sustain the organization. To facilitate these efforts, the Board needs volunteers with fund raising and marketing experience. Because so few people registered for TreeCycle scheduled for fall 2013, the event has been postponed until May of 2014.

KIB President David Forsell welcomed the group and gave a brief history

See FALL CONFERENCE, page 4.

URBAN FORESTRY NEWS TWIGS

IUFC Winter Conference
Join us February 20th for the IUFC Winter Conference at the Wright Conference Center in West Lafayette. Registration materials will be available soon.

INCA Conservation Alliance
IUFC is a member of Indiana Conservation Alliance (INCA). We are 30,000 Hoosiers who are advocating for conservation throughout the state. Our legislators are often unaware that their constituents feel strongly about urban forests and other conservation issues. In order to make an impact, INCA is requesting its members to participate in Conservation Day 2014 on Tuesday, January 28th at the State House in Indianapolis. Participants can mail in a letter, call in comments, or contact Holly Jones at (317) 517-9180 to find out where to meet up with IUFC's group. Come and let your voice be heard! This event is FREE to all registrants. Register and view the schedule here: https://conservationday.eventbrite.com.

Arbor Day Tree Poster Contest
Arbor Day Tree Poster Contest for 5th graders will be available for download from the IUFC Website's Education page. The deadline for final submissions will be Friday, April 11, 2014. IUFC's Facebook page will be used to run a contest for the three runner-ups again.

OUR MISSION

The Indiana Urban Forest Council promotes public understanding of the need for trees and other natural resources in and along parks, green space areas, streets, and urban woodlands, and assists Indiana communities in protecting, expanding, and improving their urban forests.

OUR GOALS

The Indiana Urban Forest Council strives to promote ideal community forest practices to public and private organizations and seeks to establish sustainable urban forests in all communities while assisting all municipalities educationally to plant and maintain trees properly. The Indiana Urban Forest Council also collaborates with the Indiana Department of Natural Resources, Community and Urban Forestry (IDNR, CUF), to widen the public's understanding and appreciation for the value of urban trees and forests in our Indiana communities and to preserve and renew Indiana's community forests.

CONGRATULATIONS TO ALL AWARD WINNERS AT THE 2013 FALL CONFERENCE!

Outstanding Civic Organization:
King Park Emerald Ash Borer

Outstanding Urban Forestry Committee:
Tree Lafayette

Outstanding Government Entity:
River City Tree Committee, Evansville, IN

Outstanding Project:
Dana Urban Forest Project

Outstanding Tree Steward of the Year:
Jim Beversdorf

A LETTER FROM THE IUFC PRESIDENT

I am so glad you are taking time to read this newsletter! It is my pleasure to tell you that 2013 was a great year for IUFC. Here are some of the highlights:

• We held a well-attended winter conference in Bloomington, Indiana on the theme of "Reclaiming the Urban Forest." Attendees visited the Bloomington Community Orchard, learned about urban forestry research at Indiana University, and heard about urban wood reclamation in the Chicago area, about the complete streets initiative, and about urban woodlot management.

• We held a great summer conference in Evansville, IN that included a tour of some of the state's largest trees. Speakers presented on urban forestry in Evansville, native plants for urban areas, and tree service licensing in Indiana.

• We held our annual fall conference in Indianapolis, complete with tree planting demonstrations and a fundraiser at a local brewery. The theme of this conference was "The State of the Urban Forest." Speakers addressed the topics of the Indianapolis urban forest, the Indiana urban forest, the nation's urban forests, planting native plants on the Interstate 70 corridor, and a collaboration between three neighborhoods and their city government to address the emerald ash borer infestation.

• We've added monthly casual urban canopy chats over pints. We're finding the new range of IUFC events and activities helps keep our volunteers engaged and in the loop.

• Our annual Arbor Day Poster Contest was a great event, bringing more external exposure than any other IUFC event.

• It was the first full year for our Executive Director, Holly Jones.

• Holly expanded the advocacy efforts of IUFC by strengthening our relationships in the Indiana Conservation Alliance (INCA).

• We increased our annual revenue and kept our expenses within budget.

I look forward to this coming year. We will be experimenting with a new workshop format for our summer conference. We also have plans to expand our membership, hone the model for our fundraising events, and develop new partnerships and sponsors.

We face the challenge of declining funding from the US Forest Service (passed through to IUFC by the Community and Urban Forestry program of the Indiana Department of Natural Resources). If you have thoughts on how IUFC can best adapt and thrive in this new set of circumstances, please don't hesitate to contact me.

I look forward to seeing you at our events this year!

Sincerely,

Nate Faris
President, Indiana Urban Forest Council

NOTES FROM THE EXECUTIVE DIRECTOR

IUFC rings in the New Year with exciting news!

In 2013, we held three high quality educational conferences and offered half day tours and workshops to accompany them. We saw a huge increase in community support and made new partnerships. We have casual canopy chats over pints taking place each month in Northern Indiana and Indianapolis. What an exciting time for us! We are growing and have even more great things on the horizon. ….which way are you planning to participate this year?

Exciting news---$15,000 IUFC Challenge Grant!

IUFC has been working to expand the urban canopy for 22 years. We support many neighborhood groups and towns by finding the resources they need to build stronger tree friendly communities. While recent reductions in state funding impacted our budget, we at IUFC have seen an increase in demand and volunteerism. In order to keep that momentum throughout the state, IUFC has increased our budget for fiscal year 2014. For the first time in our 22 years, we have received a large challenge grant from private donors for 2014. For every dollar you donate, the challenge grant will contribute a dollar. Your tax-deductible donations will bring us TWICE the value and you can be a key player in greening our state. Please write "challenge grant" on any donations you contribute.

Contributed by Holly Jones, IUFC Executive Director.

FALL CONFERENCE
Continued from page 1.

of KIB. KIB has planted 40,000 trees so far in Indianapolis, with a 90% survival rate. KIB has found that there is a relationship between tree tending and willingness for people to act collectively for community good.

Bill Kincius discussed the status of the urban forest in Indianapolis and expanded on how the Department of Public Works (DPW)and KIB work together on Indianapolis's urban forest. In effect, KIB is the tree-planting arm of Indianapolis's DPW. KIB provides development opportunities for young people, and its connection to neighborhoods promotes citizen engagement. A public tree inventory is underway in the city. The Indianapolis Power and Light Company (IPL) provides money each year for tree planting and works with the city to educate about planting near power lines. Bill is trying to improve interaction with construction people about forestry issues. Bill concluded with a list of challenges Indianapolis's urban forestry program faces: limited resources and staff, stresses to urban trees, inspection backlog, incomplete tree inventories, and handling wood waste.

Tiffany Arp, the director of CUF, reported on the state of urban forests throughout Indiana. It is estimated there are 52 million trees in urban forests throughout the state. Maples predominate, followed by ash. Non-natives account for 3 of the 11 most common species. Emerald ash borer, thousand cankers disease, Asian longhorned beetle, fragmentation of forests, and lack of species diversity imperil urban forests. Tree topping, other poor pruning practices, and planting trees in the wrong place continue to be problems. On the positive side there is a strong tree steward program, many conferences, workshops, and webinars that deal with urban forestry, accessibility to universities, and professional certifications (ISA). The benefits of Indiana's urban forests are valued at $79 million. IDNR-CUF, IUFC, and many non-profits and municipal programs are strong. Sixty-five cities have earned Tree City USA status (22% of people live in a Tree City USA community). The largest Tree City is Indianapolis; the smallest is Mount Ayr (130 people). Indiana has eight Tree Campus USA colleges and universities and four Tree Line USA utilities. CUF is designed to be a resource to communities. Tiffany and Carrie are working to raise awareness of CUF among other organizations concerned with urban areas. She said the Best Management Practices project has not been dropped.

Carrie Tauscher assists with loading mulch for the trees that were planted as part of the pre-conference workshop.


Nate Faris talks about the trees to be planted as part of the pre-conference workshop.

Lindsey Purcell discussed the new Tree Risk Assessment Qualification created by the International Society of Arboriculture. The purpose of this internationally recognized program is to enhance and validate tree assessors' qualifications. The new ANSI standards and best management practices concentrate on the target as much as the tree, which helps to balance risks and benefits; create a partnership between assessor and client; and use risk rating matrices. There

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The Fall Conference provided many opportunities to network and catch up with fellow urban forest colleagues and associates.

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is always some risk associated with tree ownership and it is important to understand and ascertain the client's acceptable level of risk. In tree risk determination it is critical to realize with increased population density and availability of resources, the tree owner may be held to a greater standard of care. Assessment involves identification, analysis, and evaluation of risk. New risk assessment standards place a lot of emphasis on the client and the value of the target. In the determination of risk the assessor must determine consequences of failure and likelihood or failure. Can the target be removed or relocated? Can the tree be made less of a risk? Tree risk assessment is important to the overall urban forestry management plan to safely manage the important asset of trees.

Nick Marson, Co-Chair of the King Park Area Emerald Ash Borer Team, spoke about a city-neighborhood collaboration (ABATe) for dealing with emerald ash borer in some Indianapolis neighborhoods (Old Northside, Herron Morton, and Fall Creek Place). Volunteers inventoried ash trees in these neighborhoods and then considered which should be removed, treated,or replaced (the DPW requires the tree lawn be at least 5 feet wide to plant a tree). A Neighborwoods grant with KIB allowed planting more than 200 trees on public and private land. So far, these neighborhoods have gained about 107 new trees. Adjacent residents or the neighborhood association must commit to taking care of trees, including watering for three years. For ash trees treated in the three neighborhoods, treatment has been better than 80% successful.

Eileen Luke, Director of the Center for Environmental and Regulatory Information Systems, which is housed in Purdue's Department of Entomology, described the Urban Forest Health Information Center (UFORHIC). New pest introductions often go undetected for some time, and local inventories are often not reviewed across communities. UFORHIC was designed to take local information to the national level. Tree inventory data from communities can be uploaded to a website, which provides map and tabular displays of inventory information. Data from inventories can be summarized by state. Trees can be tallied by condition and cross-referenced by other criteria, such as size. There are discussions now about who may have access to UFORHIC data.

Mark Adler of KIB and MJ Meneley and Randy Royer of Blue Marble Design, LLC described the Lilly Day of Service program for 2010: A Greener Welcome—a large planting project on Interstate 70 in Indianapolis. Planners looked at the I-70 corridor from the airport to the downtown area. The goal was to reduce the "placelessness" of the highway. To get INDOT on board, they wanted to reduce maintenance (mowing), increase tree canopy, identify public art opportunities, and identify native plants suitable for the site. This project was intended to serve as a template for other projects. For the day of service they concentrated on the Sam Jones expressway, Harding St, and the West/Illinois/ Meridian Street area.

Volunteers planted 1658 trees, and 73,200 shrubs, grasses, and perennials. More than 9,000 cubic yards of planting medium were added, based on recommendation from a soil scientist. Designers used large beds of single species, multiple rows of trees, and layering of plant material. Ornamental grasses rather than mowed turf were used around tree plantings to eliminate mowing between trees. On the day of planting, the freeway was closed. This allowed INDOT to inspect bridges and overpasses while planting was being done. An assessment in 2013 revealed that terminal buds of many sweetgums had snapped off. Shumard oak performed poorly. Eastern red cedar, honeylocust, and some other hardwoods are doing well. Staghorn sumac is filling in. Half of project was paid for by transportation enhancement funds; other half by Lilly. Forty percent of the $2 million cost for the project was for soil enhancement.

At the conclusion of the meeting, Holly Jones introduced new IUFC board members: Paul Pinco, Nate Faris, Andrea Nichols, Mike Baldwin, Bill Kincius, Ann Brugos, Matt Lake, Katherine Boyles Ogawa, Jeff Hagfors, and Tim Detzner. The new Board held its first meeting immediately following the conference. Board Officers were elected as follows: Nate Faris, President; Bill Kincius, Vice-president; Greg Shaner, Secretary; Open seat for Treasurer (Nate Mathews filling in temporarily).

Contributed by Greg Shaner, IUFC Secretary, Tree Lafayette Volunteer, and Professor Emeritus - Purdue University.

WHEN IT COMES TO SMARTPHONE TREE APPS, IT'S A GIVE AND TAKE

I love trees and that is why I became an International Society of Arboriculture (ISA) Certified Arborist! However, even after a decade in this industry, I am smart enough to know that I do not know everything there is to know about arboriculture. I have not encountered everything out there and so I look forward to encountering new learning experiences. I love books with pictures and have purchased many over the years and collected these in my reference library. The problem is that I can only lug around so many of these out in the field with me and there is always a risk of loss or damage to them. It would be quite expensive to replace most of these, too!

The solution? Well, three years ago I thought, thanks to modern "smart device" technology, surely now I can shelve these books and simply purchase digital versions of them or find similar research tools and guides for my smartphone! After all, PDF (portable document format) file versions or similar digital file formats of information are often readily available on Extension websites these days, right? What a wonderful, hassle-free, and inexpensive concept!

Fast-forward three years...

Almost monthly over that time period I have searched for THE PERFECT tree identification and plant health care (PHC) apps for my Android smartphone only to conclude that one does not exist. Mind you, there are a few decent apps out there, but I have often been disappointed at either the limited content, or the way the content was presented, or worse, having to trudge my way through a poorly implemented and highly NON-user-friendly interface.

You see, not everyone smart on the subject of trees is smart on how to create an easy-to-use smart device app and vice versa. That said, I do give MAJOR kudos to everyone who has honestly tried to put an app together because, regardless of their skill level, it takes A LOT of time, research, planning, and effort to create an app, even a bad app! Out of desperation for obtaining the "perfect" app, even I have considered becoming an app developer so that I can attempt to create the "Ultimate Uber Universal" tree ID/care app for myself (Wishful thinking...). But it is not totally hopeless out there. There are some tree-related reference apps that are worth considering, if you keep your expectations in check and you exercise diligence in your search.

I have an Android smartphone. Nothing against iPhones. I simply prefer Android. But here are some tips to keep in mind to help you with your search, regardless of the type of device you have.

BEFORE I purchase and download anything from Google Play or the Amazon.com Appstore, I take time to thoroughly read an app's description and then review most of the customer ratings and their comments, good and bad, to get an idea if it's worth my consideration. You'll find that what works fantastic for one user may inspire hate from dissatisfied user.

The most common complaints I read about are:

1. App is too difficult to navigate through, or search for species, or requires Wi-Fi access, etc.
2. App does not have enough trees/plants, or is limited in content/data, or region-specific information, etc.
3. App photos/thumbnails are too small to view, or cannot zoom in, or low quality, or too few.
4. App costs too much for what you get.

Here are some of my thoughts on the above:
1. I agree that navigating through an app's interface to enable you to EASILY FIND what you are looking for is very important. This boils down to the mind's eye of the developers and their logical (or illogical) thinking process on how a typical user would/should use their app. The more options the better, or... the more options, the more convoluted and confusing the app. The care taken in preparing understandable instructions (i.e., User Guide) can help or hinder in that effort. Some will have a dichotomous key feature, but although faster to use than books, the results may vary, like the leaves of a Mulberry tree (Morus sp.) [https://www.extension.purdue.edu/extmedia/FNR/FNR_237.pdf].

On the matter of Wi-Fi access, in order to keep the local file database on your phone smaller, some apps may have content that is only available for access online via an in-app link. This may not suit individuals who have a limited data plan or poor data reception out in the field.

2. Like some of you, I may not want every tree in the universe in an app, but I do expect the tree I'm looking to either ID and/or diagnose to be in there! Is that possible? Maybe. Is it realistic? Probably, but sometimes, no. How would a developer know which plants to include and which to omit, especially if users expect high-resolution images of bud, flower, fruit, bark, leaf, etc. in the app? Can you image how large that database would be? Staggering! No smart device, to my knowledge, even with a high storage capacity MicroSD card would be able to manage running it smoothly and without freezing up. That is assuming a database of that size would fit onto it at all! Maybe the government and some special research companies have devices like that, but I'm neither and I'm seeking apps for the typical arborist or other tree enthusiast. So, realistically, keep your expectations to hoping that at least MOST of the trees you are looking for are detailed in any app.

3. I am a "picture-person" and rely on good quality images sometimes to help me with matching similar looking tree disorders to find relevant solutions. I have taken digital photos and video almost everyday over the last 10 years of things I have encountered out in the field. I agree that an app should have decent, in-focus, photographs of key tree features or disorders, but from an app's standpoint the number of trees vs. the number of representative photos vs. the quality of each photo has a MAJOR impact on the overall database size (Refer to my second point above).

One way to work around some MicroSD storage issues is for the app to use the same photo for related references. For example, if the subject were on opposite branching, you might look up a particular maple tree, but along with maple photos you also find an example photo of a dogwood in its description when describing the concept of opposite branching. You go to look at an ash tree and find the same dogwood photo among photos of ash trees. This is usually acceptable, if you already have some familiarity with opposite branching

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TREE APPS

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and the whole M-A-D-Horse thing, but if you are a novice to tree ID, this can be a bit confusing to see another tree species pictured within the same context of the one you are researching. Even if the photo is properly captioned, some users still may find fault with it.

On the other hand, we are back to the problems of the more photos, the larger the database. The lower the resolution of each photo, the less satisfaction with the photo. Bottom line, if your smart device does not have the capacity to host or run a large database, then it is not the fault of the developer. In this case, you cannot have your cake and eat it too. It is what it is.

4. App costs will vary from FREE to 'on up' but the true value lies in how well the app serves its purpose and how it is marketed in its description. Misleading or incomplete app descriptions often set the wrong expectations for the buyer. You would be amazed at how many people will still criticize and complain over a FREE app! On the other hand, if the buyer fails to read the description (and other customer ratings/comments) and then assumes an app will do something that it was not designed or intended to do, then leaving a bad review or rating is not fair (I could go long on that subject, but that is for another blog). Suffice it to say that if you purchase an app and run into difficulties with it, etiquette should cause you to contact the developer directly with their concerns FIRST, not posting a negative review. Negative reviews hurt an honest developer's ability to afford to devote even more resources to improving an app or expanding its use on more devices. The fact is that some apps work great for some and not at all for others. Smart devices are different. The apps each users have on their devices and how these may interact with other apps and operating systems (OS) are different, so cut developers a break and give them the benefit of the doubt. Work with them to help improve their app if it is that important to you. Keep in mind that before smart devices changed the app industry, applications (as we use to call them back in the day) use to average around $30 to $600 apiece paid to the publisher of the developer's work!

To help you out with your search for Tree ID and PHC apps, here is a list of some of the apps I have tried, read about, or was otherwise impressed with. I have purchased and installed the Android apps listed. If an iPhone version is available, it will also be listed. For those reading this article in digital format (i.e., PDF) you may be able to simply click on (i.e., touch) the weblink under the name of each app to take you directly to the Google Play store or iTunes site for more detailed information and/or to purchase and download, if you so desire.*

If you have a favorite app that you use which is not listed here, send me an email and tell me about it. I'm always in search for great apps!

T R E E

IDENTIFICATION:

Virginia Tech Tree ID (FREE): Fact sheets for 969 woody plants. Advisory: I HIGHLY recommend downloading this app over a Wi-Fi connection because, although the app itself lists at about 6 MB, you will also need to download all its factsheet data (about 650 MB) before you can use any portion of the app. Last updated July 15, 2013 (Android); Feb. 23, 2013 (iPhone).

Android: https://play.google.com/store/apps/details?id=org.pottssoftware.agps21
iPhone: https://itunes.apple.com/us/app/vtree/id576191197?mt=8

Audubon Trees (Android: $3.99, iPhone: $9.99): Contains details for over 720 species. Advisory: This app takes up about 800 MB of storage space for its database. The physical 700+ page field guide books average about $17 each on Amazon.com. Last update Oct. 24, 2013 (Android); Nov. 15, 2013 (iPhone).

Android: https://play.google.com/store/apps/details?id=com.audubon.trees.mobile.android
iPhone: https://itunes.apple.com/us/app/audubon-trees/id334843956?mt=8

Tree Identification ($1.77): Contains information on about 70 deciduous trees and 48 conifers, plus 23 fungi using about 74 MB of storage space for its database (Android version). Although this developer is in Germany and covers European trees, I felt it was at least worth mentioning here because it is put together fairly well (even without a dichotomous key feature) and, if anything, serves as a good model for future tree app developers. Last updated Dec. 15, 2013. The iPhone version is named Tree Trees (€1.79 or about $2.44 US) and is 248 MB. It has a familiar, but slightly different interface than the newer Android version. Released Sept. 23, 2011.

Android: https://play.google.com/store/apps/details?id=de.baumportal.android&hl=en
iPhone: https://itunes.apple.com/de/app/treetrees/id465568881?mt=8

TREE ID for iPhone ONLY*(These are unavailable for Android devices, so have not tried them.):*

- **Arbor Day Tree Identification Guide: What Tree Is It? ($4.99):** 77 MB of 250 North American trees. Last updated on Nov. 14, 2013. https://itunes.apple.com/us/app/arbor-day-tree-identification/id420777783?mt=8

- **Fifty Trees of the Midwest ($3.99):** 83 MB. Last updated Oct. 30, 2013. https://itunes.apple.com/us/app/id678432654?mt=8

- **MyNature Tree Guide ($6.99):** 165 MB with over 190 North America trees. Last updated Oct. 2, 2012. https://itunes.apple.com/US/app/id377452068?mt=8

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TREE APPS

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- Treebook (FREE, was $1.99): 17 MB of 100 North America trees. No updates since its release on Nov. 24, 2009. https://itunes.apple.com/US/app/id340811192?mt=8

- Leafsnap (FREE): 54 MB This app supposedly uses visual recognition software to help identify tree species of the Northeast, but the middle-of-the-road user ratings suggest it may not work for everyone. But hey, it's free! Last updated May 15, 2011. https://itunes.apple.com/us/app/leafsnap/id430649829?mt=8

PLANT HEALTH CARE:

Purdue Tree Doctor ($1.99): Advisory: This app takes up about 250 MB of storage space for its database. If you are not already familiar with tree identification, you may want to consider using this app along with a Tree ID app, such as those mentioned above. This app is for diagnosing tree disorders AFTER you have identified the species and offers advice on 175 tree problems on over 60 kinds of trees. Released Dec. 12, 2013 (Android); Last updated June 6, 2013 (iPhone).

Android: https://play.google.com/store/apps/details?id=edu.purdue.ceris.doctor.tree
iPhone: https://itunes.apple.com/us/app/purdue-tree-doctor/id561944017?mt=8

**Please note that the apps listed are ones I have personally purchased/downloaded for my own use and does not necessarily reflect an endorsement as to their fitness to fulfilling your needs. I do not make any commission from any of these developers, nor was I solicited by them to reference their apps in this article. Conduct your own research. As they say, "your mileage may vary." If you decide to purchase any of the apps, like me, you assume all risks (and potential disappointments) associated with them. Communicate with the developer regarding any difficulties you have with an app.*

Contributed by Jeff Harris, CEO of Arbor Rangers, LLC and IUFC Board of Directors.

CITY OF INDIANAPOLIS INVENTORIES TREES

The public trees in Indianapolis are major components of the city's infrastructure providing more than the traditional values of aesthetics and shade. They also provide numerous environmental benefits, including temperature moderation and cooling, reduction of air pollutants, energy conservation, and overall increases in property values. Unlike many other components of the city's infrastructure, its tree population, with proper care, will actually continue to increase in value with each passing year.

Providing proper tree care is one of the duties of the City of Indianapolis' Department of Public Works, Urban Forestry Section. The Urban Forestry Manager, Bill Kincius,and City Arborist, Paul Pinco, know that the best approach to maintaining a community forest is to have an organized, proactive management program that includes an inventory of public trees and potential planting sites, and an understanding of the benefits trees bring to the community.

The City of Indianapolis received a grant from the Indiana Department of Natural Resources through its Community and Urban Forestry grant program to complete a tree inventory. The City hired Davey Resource Group, a division of The Davey Tree Expert Company, to work on the inventory of city-managed trees, stumps, potential planting sites, and brush segments along street rights-of-way. Aren Flint, a Davey Resource Group Project Manager and Business Developer, lead the inventory team and worked closely with the City on this project. The inventory began in June 2013 and, over the next two months, the Davey Resource Group team inventoried a total of 15,045 sites with the majority of the sites inventoried being trees (79%), followed by potential planting sites(16%), stumps (4 %), and finally brush segments (1%). After the inventory was completed, the collected data were uploaded into the United States Department of Agriculture

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Data points on an aerial photograph from the 2013 City of Indianapolis' tree inventory. Green dots indicate trees assessed in good condition by Davey Resource Group's ISA Certified Arborist; yellow dots are trees in fair condition; orange dots, poor condition; red dots represent dead trees; grey dots are potential planting sites; and a green line is a brush segment.

INVENTORY
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(USDA) Forest Service's software, i-Tree Streets, to estimate the environmental and economic benefits street trees provide to the community.

The inventory was an ANSI A300 Level II assessment conducted by Davey Resource Group arborists certified by the International Society of Arboriculture (ISA). The ANSI A300 Level II assessment is a visual inspection of the crown, trunk, and exposed roots from all sides. For each tree inventoried, species, location, condition, site type, land use, maintenance need, risk assessment/risk rating, conflicts with overhead utilities, and hardscape damage were recorded. At the City's request, only large- and medium-sized potential planting sites were inventoried during the project. The City's focus for the identification of potential planting sites was to find opportunities to reforest neighborhoods. This led to the majority (88%) of potential planting sites collected being large-sized and located in open yards of single- or multifamily homes or planting strips with 8 feet or more between the sidewalk and curb. The inventory of shrub segments, like trees and stumps, was directed at enhancing public safety and identified clearance and safety concerns when found.

The tree inventory provides Indianapolis with valuable information about its urban forest that they now utilize for management and planning including strategizing for emerald ash borer. The following information is just a sample of what the City discovered about its tree population:

- Species distribution
- Overall condition
- Relative age class distribution
- Prioritized maintenance need including tree removal, pruning, and planting
- Ash tree locations, conditions, and sizes

Moreover, the City gained an understanding of the importance trees play in their community and learned that the almost 12,000 trees inventoried provide annual environmental and economic benefits to the community totaling $643,000 including:

- Stormwater reduction of 36,557,914 gallons valued at $227,000 per year
- Energy conservation of 719 megawatt-hours (MWh) and 17,046 British thermal units (therms) valued at $65,000 per year
- Air quality improvements of 9.5 net tons valued at $24,000 per year
- Sequestered and avoided carbon dioxide (CO_2) emissions of 726.0 net tons valued at $5,000 per year
- Aesthetic and other tangible benefits valued at $322,000 per year

The project area was primarily Warren Township. The City is continuing the inventory with funds from the Department of Public Works and a USDA Forest Service grant. They hope to complete the inventory in the remaining sections of Warren Township, as well as in Lawrence, Washington, and Pike Townships.

Contributed by Aren Flint, Davey Resource Group.

LIKE OUR NEWSLETTER? BECOME A MEMBER OF IUFC!

Membership in the IUFC is open to communities, tree boards, beautification committees, private organizations, corporations, non-profit organizations, students, individuals and anyone with an interest and appreciation of Indiana's urban forests.

WHY YOU SHOULD JOIN

Trees provide beauty and help define the aesthetic qualities of a community. Their role in the urban forest and the environment is very critical.

- The IUFC strives to promote ideal community forest practices to the public and private organizations.
- The IUFC seeks to establish sustainable urban forests in all communities, while assisting all municipalities educationally, to plant and maintain trees properly.
- The IUFC also collaborates with IDNR, Community and Urban Forestry to widen the public's understanding and appreciation for the value of urban trees and forests in our Indiana communities and to preserve and renew Indiana's community forests Membership Benefits.

MEMBERSHIP BENEFITS

- Networking opportunities through annual conferences, workshops and general meetings.
- Email notices of up-to-date information on the latest urban forestry trends.
- Discounted fees to our conferences and meetings.
- "Continuing Education Fund" scholarship assistance for all current members.
- Educational information and assistance.
- Your membership dues are tax deductible.

TYPES OF MEMBERSHIP

- Individual Member ($30.00).
- Non-Profit or Government Membership ($75.00) includes benefits and directory listings for any three people from the joining organization.
- Corporate Membership ($100.00 - $500.00 call for details) includes benefits and directory listings for any three people from the joining organization.
- Student memberships are also available for $20.00. Must be a full-time student.

A SPECIAL THANK YOU TO OUR ANNUAL SPONSORS AND DONORS:

SILVER LEAF SPONSORS
($1,000 - $2,499)

Duke Energy
Indiana Arborist Association
NIPSCO

ANNUAL CORPORATE SUPPORTER
($500)

Vectren Foundation
Davey Resource Group

TREE SUPPORTER
($101 - $500)

Linda Cromer
Trish and Bill Eccles
Dr. Burney Fischer
Amil Kleinert
Pam Louks
John Montgomery
Lindsey Purcell

FRIEND OF THE URBAN FOREST
(UP TO $100)

Nate Faris
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NEWSLETTER ASSISTANCE

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