USDA Forest Service

URBAN FOREST CONNECTIONS

webinar series

Seeing the Future Forest:
CanVis & CommunityVis scenario planning tools

Wednesday, December 10, 2014 | *1:00 – 2:00pm ET*

TRANSCRIPT

Margie Ewing: Welcome to the U.S. Forest Service's Urban Forest Connections. I'm Margie Ewing, Urban & Community Forestry Program Manager for the Northern & Intermountain Regions of the U.S. Forest Service. I will be moderating the webinar today. Before we get started, our technology expert, Emilio, will share tips on how to use the webinar tools. Emilio?

Emilio Garza: Thank you. If you're having difficulty connecting, you can contact 800-422-3623, again 800-422-3623. Each of the boxes are called pods. I will provide you with a quick orientation of the different features and pods. At the top of the window you will see a feedback and status button. You can click this button to raise your hand if you're having difficulty or need help. You can also select from the other feedback options by clicking the area to the right of the raised hand. When you raise your hand for assistance I will start a one-on-one chat with you. This will open a new tab, which you will see at the bottom of the chat pod. Click on that tab and type to get help. Click on the *Everyone* tab to return to the group chat. In the group chat, we welcome any comments made on the topic today.

Live captioning from Caption Colorado is streaming in the lower corner. You can adjust the font size at the top and then click to the right to see more of the captioning. You can listen to the session through the computer, for example with a headset or headphones, or through the phone. Please only connect to audio one way, either phone or computer, to avoid an echo. Click *Connect my audio* and *Listen only*.

If you're in a wireless connection, this window may pop up: *This meeting lost internet connection*. In most cases you don't need to click anything, Adobe will reconnect on its own. If this keeps happening, move to a hardwire connection.

If you are on a mobile device, it looks different. You can view each pod on its own by tapping on it, such as the slides, video, or chat. Tap the top one to return to the normal layout where you will see all the pods at once. Please note the captioning will not stream on mobile devices.

All participants are in listen only mode. The question-and-answer session after the presentation will be conducted via Adobe Connect only. This meeting is being recorded. Now back over to Margie.

Margie Ewing: Thank you, Emilio. Information about the Urban Forest Connections webinar series can be found on our website. This page includes a place to contact us with questions about the series, suggestions for future topics, any feedback you want to give, and a list of upcoming webinars and an archive.

Before we dive in, we would like to learn about who is participating in our webinar. To do that, we'll post three questions on the screen and ask that you respond to each one fairly quickly. The first question is: Where do you work? I'll give you a couple of seconds to fill it out.

That looks good. I'll close the poll in three…two…one. The next question is: What is your profession?

All right. We're going to close the poll in three…two…one. And: Where are you from?

All right, that's all looking good. Looks like we have a good distribution of people throughout the United States. I'll close the poll in three…two…one. Great, thank you everybody for answering the polls.

Just one other bit of information before we proceed with the webinar. As many of you are aware the National Urban and Community Forestry Advisory Council is preparing to finalize the 2016 UCF Challenge Cost Share Grant Program and they're looking for your input. Please consider filling out the brief four question poll at the website you see here when you're done with this webinar. I know they would really appreciate it. They're looking to get as much information from everyone out there as possible.

Now onto today's topic: *Seeing the Future Forest: CanVis & CommunityVis scenario planning tools*. We'll hear from two speakers, Gretchen Riley, Partnership Coordinator for the Texas A&M Forest Service and Lance Davisson, Coordinator of the Treasure Valley Canopy Network.

Our first speaker, Gretchen, provides coordination and assistance for various urban forestry programs across Texas and holds a Master's degree from the Texas A&M University, is a certified forester and arborist. She spent 9 years as a consultant in

Florida focusing on natural resources. She also is an author. I'll turn it over to Gretchen.

Gretchen Riley: Well, thank you. Good day to all. As many of you know, getting support for urban forestry is often challenging. And we certainly experience this issue in Texas. In part, it's due to our booming economy and consequent high velocity growth. But in part, it's because trees are rare in much of our state and it's often hard for people to imagine how trees fit into the landscape. You know it's said that a picture is worth a thousand words. Well, this picture certainly tells you something. As does this one. Today I'm going to introduce you to a simple software package that will help share your vision of the urban forest quickly, easily and perhaps without any words at all.

But first, let's talk about why we even need to share our vision. I mean, trees are great, right? They are aesthetically pleasing and they provide so many benefits. We often say, “If only officials would truly understand all the benefits that trees provide, then we would see more money allocated towards trees.” We say, “If I could just get one more meeting with the city manager, with that big donor, with certain representatives, well, then they would understand what we are trying to accomplish. They would understand how great trees are for our community.” The truth is they often do understand, but they are focused on specific problems. Problems such as crime-ridden neighborhoods, unsafe roadways, the loss of retail and development to neighboring cities, or too much development, low-ranking schools, absence of a sense of place, and so on. In urban forestry, one of the ways to accomplish our vision in the face of dwindling budgets, especially, is find out what are the specific problems that the community is concerned with and recommend trees as part of the solution.

CanVis, visualization software developed jointly by the USDA Agroforestry Center and the NOAA Coastal Services Center, is a simple tool that allows you to use your own photographs to create simulations of how the solution could look. It is your extra thousand words that keep on speaking after you've made your pitch. CanVis allows you to share your vision with stakeholders and let them pass it on. Today we're going to look at several simulations that we produced in Texas to address specific community problems and then I'm going to give you a short video tour of how to use the software.

In 2008, Galveston, Texas was severely hit by Hurricane Ike and lost nearly 50% of its total canopy. An estimated 45,000 trees were destroyed due to wind and salt water storm surges. Some areas suffered complete tree loss, including all the lovely large live oaks that span the main boulevards and gave a sense of place to the community. Broadway is the end of the highway from Houston, the main drive into town, and the loss of the stately live oaks that used to line the median was devastating to residents. So what's the community problem here? Well, it's major canopy loss and community

trauma. And our solution? Plant trees. One thing we know in urban forestry is that planting trees gives people hope and a sense of connectedness.

Galveston seemed to understand this, but with such a large geographical area, the city was at a loss where to begin. So following clean up and tree removal, TFS partnered with the city to select several highly visible areas, like this main boulevard, and created simulations to help the city select which recovery planting on which they wanted to focus – high traffic, high use areas that would tell the community recovery was possible. This scene is the same intersection as the previous scene. You can see the statue, but it's on the right-hand side in this photo now. There was some discussion with the Historical Commission about not replanting Broadway at all since the thought was the lost live oaks were planted by early residents and not natural to the area. And the sentiment was that this beloved tree-lined boulevard would never be as it was anyway, so why bother. This particular simulation was the deciding factor to put trees back along Broadway. When TFS forester Matt Weaver, who created this simulation, met with the Historical Commission on site and the Commission stood directly in front of the bare esplanade with a blown up poster of this simulation, they approved the planting in just about 3 seconds.

Galveston Island Tree Conservancy came on the scene in June of 2009 through a grant from TFS and really dove into this tree recovery process. They obtained a large grant from Apache Corporation specifically to replant the Broadway esplanade. This post-planting photo was taken shortly after planting in May of 2010, nearly two years after Hurricane Ike.

Working together with the city, TFS and the Tree Conservancy developed a tree planting plan for the city using simulations representative of nearly all planting sites, such as this median on Market Street. All main boulevards, including this one, have been replanted. And in 2013, Galveston was selected for the Blue Trees Project, whch is a unique art installation that uses biologically safe, vivid blue mineral pigment applied to the trunks and branches of trees in order to bring them out of the background and call attention to the importance of trees in our lives.

This is Gus Allen Senior Park, and many of the homes in this neighborhood were completely destroyed. As you can see, that one house in the background, you can completely look all the way through it. Galveston Island Tree Conservancy and TFS used CanVis to help encourage a partnership with the Episcopal Women’s Group that resulted in planting this hard-hit area in the spring of 2011. Gus Allen Senior Park is now the most planted park per square foot on the island.

McCoy's Lumber Company was founded in Galveston and it has a flagship store there. They wanted to restore this particular park, Adoue Park is its name, as all the trees in this park were lost. McCoy’s had no clue the species or design, so we prepared several different simulations to assist them in their replanting efforts. CanVis was a valuable tool across Galveston, both in species selection and layout. Here, in Adoue

Park, it was decided to use a different species in a row on all four streets that surround the park, but in each corner have a signature tree.

Conroe is the county seat of Montgomery County and located about 45 minutes north of Houston on I-495. Originally a sawmill town, Conroe saw a brief period of wealth, thanks primarily to oil profits. When the local oil-based economy collapsed, though, more or less so did the city. But like most communities in Texas these days, it is growing. Population is now over 60,000. Conroe has a central business district, but it wasn't very attractive. This is significant because just one mile from Conroe's southern border is The Woodlands, a high-end, unincorporated, master plan community with a population of over 120,000. The Woodlands has an average household income double that of Conroe and lots of upscale shopping. But because The Woodlands is actually a giant subdivision begun in the late '70s it doesn't really have a quaint, main street-type, walkable shopping district. Root for Conroe, a non-profit group dedicated to tree planting and educate wanted to beautify downtown Conroe and make it a quaint, main street-type shopping district in order to pull some of the retail traffic from The Woodlands and North Houston. So this community problem is an unattractive retail center. Solution? Plant trees. This simulation along Pacific Street helped convince Union Pacific Railroad to allow them to use 20 feet of the railroad right-of-way for planting. Planting has begun. And the stimulation sparked additional plantings and revitalization nearby.

Magnolia is a small community on the other side of The Woodlands. The city itself is tiny, about 1,500 in population and only covers 2 square miles geographically. But it serves a much larger area. In fact, the school district covers 147 square miles, an area that includes more than 65,000 people. The community has lacked an identity. With sprawling growth there's been Old Town Magnolia, New Magnolia, East Magnolia, West Magnolia, and Proper Magnolia. City leaders have been trying to figure out a way to brand the community. So, community problem? Absence of identity. Solution? Plant trees. Ask a forester to help a community named Magnolia brand itself and he or she will capitalize on the community's name, incorporating magnolias as anchors across the landscape. Here are saucer magnolias at the new Magnolia's town center, City Hall.

What often happens in cities experiencing rapid growth is that subdivisions spring up on the perimeter that have no personality or associative identity with the community or the area. The city of Beaumont is no exception. Beaumont Parks Administrator contacted our foresters about a recommended tree list for a new road they were going to build. It was still in the design phase, but the Administrator wanted trees to be included in the planning process and not as an afterthought. He showed our forester this photo of a generic streetscape in another park of the city as an example of what he didn't want. Community problem? Bland, generic subdivision. Solution? Plant trees. We put together a couple of conceptuals of how the streetscape would look with trees. Different options were given to the Parks Administrator and Planning Department to help them with their species selection. Beaumont is east of Houston at the south end of the Piney Woods. So loblolly pines figured prominently in the simulation.

Port Arthur is an industrial town dependent on the oil and gas industry. Unlike most of the rest of Texas, it is not seeing an upward growth trend. Over the years it has experienced periodic boom and bust cycles typical of that industry and the associated transient population. It also has a significant air pollution problem related to the large industrial complexes located in the area. Community problem? Air pollution. Solution? Plant trees. Funding was available for road improvements and one of our foresters saw this as an opportunity to get trees planted. In a matter of minutes, he created this visual to put into the hands of decision makers.

This is downtown Port Arthur, and it has more problems than just air pollution, as you can see. For decades, it's been virtually vacant, boarded up, and unsafe. Revitalization discussions are periodically on the table. The Economic Development Council approached TFS about possible species for the area, which is often our chance to get involved in the conversation. And our forester saw this as a chance to show the vision. So, community problem? Economic decline. Solution? You know that by now, plant trees. How do we get from the broken down town to a happy, healthy community?

I'm going to use this photo simulation to give you a quick demonstration of the software. If you can create a PowerPoint presentation, you can use CanVis. But something to keep in mind: before you load your photo into the software, make sure the photo is a great scene with clear blue skies. It helps makes the simulation look attractive. Now, Emilio, let's play the demonstration video.

So from the *Library* menu on the toolbar, select *Trees* and choose whatever species grows well in your location. The tree pops up on the screen and you can shrink it or stretch it using the corner just like any image in Word or PowerPoint. You can drag it to where you want it. You can repeat it until you've got the trees you want. Since crime is a problem, I took out the boarded up windows, graffiti, and unattractive streetlights earlier through Photoshop. But now I want to add some quaint street lamps to give it the distinction of a historic district. Again, I just shrink or stretch them to the appropriate size and drag them to where I want them.

Now this is starting to look good, but I want to make it look cared for and lived in. So let's add some flowers. Go to the *Library* menu on the toolbar and select *Flowers*. I can use the *Rotate* button to change from a sidewalk planter to a hanging basket. Shrink it down to the correct size and drag it to where I want it. I can change the color of these particular flowers through the *Color* tool. Or, I can add a few different colors and shapes from the library. To make it more realistic, though, I need to add some shadows. To add shadows, I add a tree or a lamp post or flowers, whatever object I want shadows of, and then change it to black and white. I rotate it to the correct angle of the sun and then change the transparency to make the shadow the same intensity as those already on the ground. Then I use the *Warp* tool to make it look like shadows look. And when I'm happy with it, I can duplicate it and all shadows will have the same effect.

Let's take it a step further and show people enjoying the place. I'll add a walker, and a family on bicycles. I can flip the direction the cyclists are heading, shrink them down to the right size, add shadows and I'm done. So Emilio, as we return to the slides, please, let's think about how Port Arthur has a neglected, abandoned city center and is very concerned about economic decline. Trees are part of the answer. With a little vision and some financial support, Port Arthur can have a nice, walkable, shoppable downtown.

I started this presentation with the cliché that a picture is worth a thousand words. Well, it's also said that every picture tells a story. What's the story that you are trying to tell? Is it that shoppers pay more for goods and services on tree-lined shopping districts and that they're willing to travel further to shop there? Or is it that residents prefer walking and living on tree-lined roads and that there are less incidents of crime. Is it that children concentrate and have better test scores after being around trees? Well, all that information without the visual may convince people that trees can be part of the solution to their community problem. But by creating the simulation, you can now put the vision into the hands of stakeholders and it can be passed along without you, as a leave behind print product or email, posted on Facebook, pinned or tweeted. It can go far more places and remain longer than your spoken words. And by putting the vision into a picture, you and your partners will tell the same story, not letting it get diluted or altered in the retelling of it like when you play a game of telephone. So picture it your way and tell your story using CanVis visualization software. As I mentioned in the beginning, it's a product of the USDA Agroforestry Center and the NOAA Coastal Services Center. It's free and you can get it from the website on this slide.

Thank you.

Margie Ewing: Thank you, Gretchen. That's a really good example of what a fascinating tool it is and the many uses for it. Many good examples.

Our next speaker is Lance Davisson. Lance has worked as a natural resource professional in the private and public sector for over 14 years, including as Urban & Community Forestry Coordinator for the state of New Mexico. About 3 years ago he moved to Boise, Idaho, where he began working with the Idaho Department of Lands and other partners throughout Idaho's Treasure Valley. This past June, Lance, together with these partners, established the Treasure Valley Canopy Network, which he will be discussing today. In addition to his work in Boise, Lance is also President Elect on the Board of Directors for the Pacific Northwest Chapter ISA and served on the National Urban and Community Advisory Council. I'll turn it over to you, Lance.

Lance Davisson: Thank you very much, Margie. I get a chance to talk to you today about the Treasure Valley Canopy Network and how we built from an urban tree canopy assessment and canopy visualization tools this innovative regional network, really under good leadership of the Idaho Department of Lands.

So to talk a little bit about where the Treasure Valley is and what it's like here, we are a semi-arid climate, about 9-12 inches of precipitation, mostly in the spring and winter months. We're the third largest metro area in the northwest with a population of about 600,000. We're the economic center and we deal with air quality issues, which was the main driver behind this project originally. And if you're looking from this location, it's in our foothills at the northern most part of the Treasure Valley looking down and through the city of Boise, which is our capital city. This foreground is about 35% tree canopy. If you look at all the Treasure Valley as a whole, it's about 10% tree canopy. So it's really important when we're looking at planting strategies to focus on being strategic about planting because we will need to irrigate the trees that we do plant.

So, here we're looking at the whole country. We're up there in the northwest with Washington, Oregon, and Montana. Zooming down into the state of Idaho, we're in the southwest corner of the state. And then our study area is located within two different counties, encompasses nine municipalities along the Interstate 84 corridor within the Treasure Valley.

A little bit of an outline into our presentation, I first want to talk about the urban tree canopy assessment that really catalyzed this effort. And then how we built a network out of this assessment. And follow up with details about the tools and partnerships that are really having an impact in our communities and some of the lessons that we're learning as we build the network.

Our regional urban tree canopy assessment really started with a vision back in 2009 of half a dozen partners led by the Idaho Department of Lands. And they wanted to learn more about the urban tree canopy in our Treasure Valley, the ecosystem services it provided, and then find out how we can inform strategic management moving to the future.

So in 2011, we received funding from the U.S. Forest Service, delineated our study area, about 260 square miles – you can see the nine municipalities there – and really focused on the most urbanized area of those municipalities. And then over the course of the next three years, we completed an i-Tree Eco analysis and followed up with an urban tree canopy assessment completed by consultant Plan-it GEO. And that assessment, as you'll see here, really brought together the ecosystem services data and combined it with the urban tree canopy data. So we had quite an extensive analysis at the end of May of 2013 when we came out with this study. And we had it not only at the regional level, which is really important as you well know for air quality, but also broken down to the municipal level for each of the municipalities to use, and at the land use parcel and right-of-way level.

I also wanted to mention a few different breakdowns that I think will be important for us moving forward. We focused on census blocks, which really will connect us to that demographic information and how that overlays with urban tree canopy and when we start looking hopefully at correlations between human health and also on the social and environment justice topic.

And another break down that we looked at was neighborhood association. Our partner in the city of Boise already had this data. So now our city forester can take a look at developing strategies to increase urban tree canopy in those neighborhood associations where it is lower. And we also go into land cover. In this graphic you can see the impervious surface – it's important to know and understand potential planting location and that for dealing with storm water issues and also with urban heat island, which is a big concern during the summer months here.

Potential planting locations breakdown – not only to know and understand what UTC we currently have but also the potential locations. And like I said, irrigation is also important so it's important to know what truly is the potential for planting into the future. And also, again, the ecosystems services data. So now we have tabular data that's built into the tools that were developed.

So within our assessment we had the CommunityViz Scenario Planning tools created and the ecosystem services outlays, which were built by Plan-it GEO, bringing together the i-Tree Eco data into an ArcGIS extension called CommunityVis. So I'll show you a few of those examples. For air quality and energy conservation we have the scenario planning tools at the regional level. So here you look at air quality, for example. At the upper right hand corner those are slider bars where you can adjust the different attributes to create your what if scenario. Of this example for air quality, what if we planted for maximizing benefits for air quality? So you look at that map you can see the dark green areas are where you would really focus planting trees for air quality. And then the output at a 50-year grow-out of how many trees would be planted, the increased urban tree canopy percentage, and then the output in terms of those cumulative ecosystem service benefits. So that's realized over time. And then also provide an example here for energy conservation. So here, the differences in this scenario that you can see, are we have the bar graphs that will show you when you change a scenario, the changes that you see as far as planting more or less trees focused on energy efficiency and how that effects the changes as far as the energy benefits. And then again the cumulative tree canopy outcomes and benefits and the ecosystem services delivered. So these are very useful regional level scenario planning tools that we now have available.

And then for stormwater, we focused on the site level. And the unique part about this extension is that you can track the cost of planting, the cost of labor and maintenance for planting several different species of trees, and then you can grow this out over time and show not only the benefits as far as ecosystem services delivered, the value that means for mitigated stormwater runoff, but also a cost and benefit ratio.

And so, with all this different data that was produced and this assessment, at the conclusion, Plan-it GEO and Idaho Department of Lands did a training for all of our partners. And I think that what was unique about this training was it wasn't only for our partners, which were typically the managers and planners, but they brought along their GIS professionals so they could start understanding a little more about how they can work together as a team to use these ArcGIS tools to inform their strategic management of the urban forest.

So as we wrap up the discussion about the UTC assessment, a few lessons learned. We completed a very comprehensive and innovative assessment that becomes our foundation moving forward. We really focused on partner need and partners were very involved, so it was all about ecosystem services and getting tools to inform strategic management. We have now a very extensive dataset, over 20 gigabytes of GIS data and tools that are evolving as we grow. And then that link to demographic data that one of our partners had the vision to say, when we're going to look at urban tree canopy, let's do it by census block in addition to all the other categories so we can have some link s and information about how urban tree canopy and our demographic data overlays. And then our partnerships and our partners were very invested. The whole assessment process was very collaborative in nature. And our communities are from large to small, so not only do we have the ArcGIS tools and CommunityViz tools, but also interactive PDFs and UTC calculators, which allow the folks with not a lot of GIS expertise to use the tools, as well. And then again that partnership. In most of our partners and agencies, we have that GIS staff on board and we just need to learn how to engage them better and get the tools in their hands so together we can do great things.

So in 2013, once we had completed the assessment, we recognized that if we didn't continue to drive this work and evolve our work, it wouldn't really grow and make a difference in our communities. So we were very fortunate to have a forward-thinking Idaho Department of Lands and U.S. Forest Service that decided to continue to fund the growth of this group. And so at that time we didn't really have an identity. This was in about February of 2014. So we started meeting and collaboratively developing our frame work and our name. We came up with the Treasure Valley Canopy Network. We really wanted to focus on the mission of being a collaborative group of professionals that were innovating and developing sustainable solution to growing our urban infrastructure. We're not a formalized 501(c)(3) non-profit, but we are a group of professionals that are really informing growth of our communities. And now that we have that identity and that logo, we also have a website that's at www.tvcanopy.net. I'd encourage you to take a look at that. We have some of the tools that can engage our community. We have a Facebook page that we can share information. And we also have a Map the Canopy tool that's a simple to use, online mapping interface of our data.

Our partnerships, again, started in 2009. It was a very diverse group of partnerships and what's important is they're still very active and involved today. In 2011 when we started the assessment, a lot of our municipal partners came on board and then also a

few consultants to help drive the work and we have that increased funding from the Forest Service. Throughout the course of going about our assessment, we brought on some really unique partners with Ecosystem Sciences Foundation which has ArcGIS expertise and watershed planning expertise, and also a regional planning association. The exciting part now that we have these tools and are engaging in urban infrastructure development is we have the downtown business associations, the building chapters, and our urban revitalization districts involved.

So I'd like to take a bit of a look at how we're weaving this network. To us, it's more about planting trees in urban forestry, it's about how developing that functional green space within our community infrastructure – and doing it strategically – can impact health, the economy, energy conservation, and clean air and clean water. And when people ask really what the Network does, it's a group that has that vision for how this infrastructure can be incorporated sustainably into our communities. So, we can provide project support by working together with our partners. We're able to align our programs to recognize those efficiencies and we make those connections to seek and secure funding with some of those partners and also have these tools, which you'll see are not only created to the UTC assessment, but they're evolving over time. And again, back to that collaborate, innovate, and sustain, we really focus on that in all that we do.

So, we're delivering impact and it starts by getting these tools into our partners' hands and potential new partners. It also includes showcasing to you how a few of our partners – these are just two of our several partners that are doing great things using the data and tools that are available. February of this year, this was after the assessment was complete, before the network was even formed, we were invited to speak to a regional GIS users group. The audience was very diverse, more than our typical natural resource, parks and rec, forestry folks we usually talk to. It included folks in law enforcement, fire, transportation, risk management. But these were the people that knew about GIS, they know and understand all the data that we have and the potential for it, and they even opened our eyes up to a few ideas. And we have the whole day to present different presentations from all our different partners focusing everywhere from planning in municipal forestry to stormwater, energy, and watershed management. It was a great opportunity. We developed kind of the beginning foundation of some of those relationships and we delivered all this data to these people that really knew how to use it. So that was a key part really starting out with our network.

Once the network was formed and we had all our identity, one of our real innovative partners, Ecosystem Sciences Foundation, said, "Hey, we have this great data, but it's hard to get people into using the data without a little bit of an easier online interface." So we created the Map the Canopy tool. So if you go to our website, click on *Map the Canopy*, it drills you down to a page that simply lays out how to use the tool. You'll bring up the tool and the first layer you'll see is land cover. So here you can see the tree canopy and again that irrigated versus non-irrigated vegetation and impervious/ pervious surfaces. Here we're drilling into the city of Boise and you can see that even more and you can even drill down to an individual neighborhood. This is a very useful,

impactful tool. Some of our partners that actually don't use ArcGIS a lot are able to use this to do some of their general analysis. And it's a really great, useful tool.

After Map the Canopy was created, Boise said, "Hey, why don't we load up our neighborhood percent urban tree canopy cover?" And now our City Forester in Boise can bring this up with a simple Internet connection, not having to use ArcGIS, and showcase to the neighborhood associations why we're doing what we're doing as far as urban forestry goes.

A potential tool that we're looking at, we've talked a bit with Plan-it GEO, is the Urban Tree Canopy Story Map. And it really lays out you how you can use all of our data to inform your work, all the way down to our potential tree planting locations there at the neighborhood and residential level.

A few example programs. The city of Boise has wanted to have a Neighborwoods program for quite some time, but now they that have the data to drive it. They implemented it a year and a half ago and they're focusing on planting trees on private property adjacent to public right-of-way. And they're again being strategic in an area where they, the tree planting can recognize public and private benefits and our tools are allowing them to bring in the potential planting location data, overlay it with the right-of-way, and strategically plant trees in neighborhoods where they're needed. They're also able to strategically market to these folks and help educate them on how to plant the right tree in the right place. So it's really building that vision that the City Forester likes to have of planting trees in a neighborhood and it's impactful as you watch that grow over time.

Another key partner is Idaho Power, our energy partner. They've worked together with the Arbor Day Foundation's Energy Saving Tree Program to develop the Strategic Tree Planting for Energy Conservation Program. It started about a year and a half ago. Our motto here really is less is best to plant those shade trees on the west side of the building. And as you can see in the diagram below, they downloaded our potential tree planting locations into their ArcGIS and are able to highlight those little blue dots, or the places where if you plant trees it's going to provide the maximum benefit for energy conservation. So the program's growing rapidly. We've gained additional funding from the U.S. Forest Service. In the next several years, not only will we be offering more trees and really impacting our energy conservation, but we'll also enhancing the Map the Canopy tool, and looking not only at trees for energy conservation, but also for multiple ecosystem service benefits. Lots of exciting opportunities there.

A few more looks to the future. The green stormwater infrastructure is really big here, as it is across the country. And our transportation partners just came out with a project partnering up with Ecosystem Sciences, who is again very involved in the network, and they're going to be doing some subwatershed planning in the most urbanized areas within the city of Boise and developing, building from all our urban tree canopy data, some more intensive local stormwater models. It's fun to watch this happen within our cities. We now have Silva cell installations, the first ones were put in this last summer.

We're focusing on strategically putting those in locations where we can maximize the stormwater benefit – again, grow that urban tree canopy over the time to have the maximum benefit and grow more functional green spaces instead of putting street trees within a box on the sidewalk.

Another key piece that we're really getting active and involved in is the urban revitalization. There's two districts that are really active within Boise – there's the West End and the Central Addition. The Central Addition has been developing over the last few years an ecodistrict concept that's a great public/private vision in the urban core and we're becoming a key partner in that. So it's very exciting. Here you can see in the West End, on the right side, is all the residential, which has a fair amount of urban tree canopy. But on the left, if we drill in, this is the area that we're going to be really rebuilding a vibrant part of our city. So by being a key partner in this, we're going to be able to inform that functional green space development that not only makes our streets more vibrant and healthy, but also processes stormwater and brings better air quality. A lot of opportunity really all across the city of Boise and building up the Treasure Valley.

So to wrap up, a few of the lessons that we're learning is that for us that investment beyond the assessment has been key. We completed the assessment in May 2013. Our group really started building in February. The network really didn't form until June of 2014 and we're just within the last 6 months we've seen very rapid growth. It's been very exciting to see. We continue to learn and evolve. We're, again, very innovative. We have that strong foundation of the data and tools from that innovative UTC assessment, and our partners are really committed. And as we grow, we continue to evolve, to serve the needs of our industry and community, and develop the key public-private-nonpublic partnerships to maximize impact. And back again to being strategic and solution-oriented. We're an important collaborator at the table. We're innovative in what we're inspiring folks to do and we're really focused on being sustainable in the strategies that we've built moving forward.

So thanks again to the U.S. Forest Service for this opportunity and the Idaho Department of Lands for your leadership. I'd encourage you to take a look at our website, and also look forward to spending a little time answering questions with you all the rest of the session.

Margie Ewing: Thank you, Lance. That's an excellent example of CommunityViz, with all the partnerships that have been woven into the project with that amazing tool.

I'd like to remind everyone to type your questions in if you have any right at the bottom of the screen there under the Group Chat and Questions. One of the questions that came up while the presentations were going on is, somebody asked where they could get the free visualization software. There's a couple of people have typed in the link to it, so make a note of that, what you see that on the screen.

There's also a question about the response that the renters had to new plantings coming into their neighborhood. I think that one would go to either of you, maybe Lance.

Lance Davisson: Sure. That's a really fun thing about what the Network is doing is weaving into that fabric of the neighborhoods. So we haven't gotten down to being able to track exactly what the renters have to say about plantings coming into their neighborhood, but we're seeing a lot of kind of sustainability efforts going on. I know there's one neighborhood within the city of Boise, the Vista neighborhood, that is primarily homeowners, not a lot of renters, but they have a low level of urban tree canopy. And in addition to all the other sustainability functions in the city they're building, urban tree canopy is now a key part of that moving forward. That's a great question. It's important that we know and understand and develop that community connection before we just come in and start just, I guess, imposing trees on a neighborhood.

Margie Ewing: Okay, thank you, Lance. How about any other questions from the group? I think somebody also asked the demographics for owner versus renter and there's a response in the Chat Pod that says that census data does not include that information.

I'd like to make a note that Idaho Power is also doing an intensive cost/benefit analysis and is using potentially permanent energy sustainability dollars to fund the efforts going on in Treasure Valley.

Okay, I see that multiple attendees are typing, so I'm going to keep it open for a few minutes more in case there are any questions.

Margie Ewing: Another question, what is the website? Lance, you have really built a collaborative system. Can you speak to the cost of the implementation, especially for the cities?

Lance Davisson: The TVCN website is www.tvcanopy.net. And the collaborative…so what was key here, I think, was that there was a very strong vision from the beginning and the leadership of this state and the Forest Service to initially fund the assessment. And I think a lot of the success of the assessment is based on the people's vision and really wanting to be innovative and ask for a lot of new ideas in developing the assessment. Then, again, once the assessment was completed, that continued investment by the partners, and funding to bring in myself as the Coordinator to keep driving this. And as we're driving this, we're also finding ways to partner with our cities and bolster their programs, whether that's finding additional funding or campaigning internally or finding grant funding to help them out. The question will be 3 to 5 years

from now, will this network be something that it can be locally funded because if we're showing our value, then we'll be able to be locally funded and that seed money that the state and federals have put into it will really start to grow roots, so the speak. So the cities have not, besides a lot of their contributions of time, have not put money at this time into the network. But they're able to really focus their funding internally to their city and be strategic about what they do with the data we're providing.

Margie Ewing: Thank you, Lance. Any other questions? I think we have time for one more.

Where can this webinar be viewed later? It will be on the next slide here, the link to our webpage where it will be archived. That's a good question. I'll post that with the next slide.

With that we'll wrap up the webinar for today. I'd like to thank our presenters again for sharing their information and their time with us on this very hot topic. Thank you for participating.

Thank you for joining. If you're seeking ISA CEU credits, write down the code you see on the screen and send it into ISA using their form. You can also download it here from the pod or from our webpage. If you're interested in receiving a certificate of participation to submit to other continuing education programs, please type your full name and email address in the Group Chat and Questions pod. If you have any questions feel free to e-mail us using the link to our website. So, if you give us your name and e-mail we'll provide you with a certificate of participation that you can then hand over to your -- if it's not the ISA that you're looking for CEUs with.

Also on this slide you'll see at the bottom www.fs.fed.us/research/urban-webinars/. That's where you should be able to find information on the archive if you want to view it later.

Please join us next month for the next webinar, which is *Social Networks and Knowledge Systems for Urban Stewardship and Sustainability*. This is going to be a closer look at two decision-support tools and applications featuring Erika Svendsen and Tischa Muñoz-Erickson. It will be on January 14th at 1:00pm Eastern Time.

Thank you again and enjoy the rest of your day.

[Event concluded]