

Jess Sanders - Reaching Up: New Techniques for Reaching Tree Canopy Goals

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Tinitia Price: [00:00:00] [00:00:00] Welcome to the ISA Conference Rewind Series. I am Tinitia Price, instructional designer at the International Society of Arboriculture today. ISA is happy to bring you "Reaching Up: New Techniques for Reaching Tree Canopy Goals", featuring Jessica Sanders. This presentation was originally given at the 2020 ISA Virtual Conference and the views and information expressed are those of the presenter.

Now sit back and enjoy the video.

Jess Sanders: [00:00:38] Hi everyone, I'm Jess Sanders. I'm the director of Science and Policy at Casey Trees. And I wanted to share some new strategies and programs that we created to branch out of our usual tree connections and enhance our canopy. The examples that you'll see today involve participation in work of many different people who worked at Casey trees from 2010 to this year in 2020.

So thanks for watching today. Feel free to grab a coffee or anything else to drink, maybe some popcorn or snack and join us. We'd all love to be in person, but for now, at least you can enjoy us from the comfort of your own couch. So we'll be talking about reaching out new techniques for reaching tree canopy goals.

So first, I want to give you some context on DC. Much of our infrastructure was built in about 1790. You can see here, this is an image of that time and we have trees, specifically Elms, leading up to the Capitol. It has very wide sidewalks. We have a street car at that time. And really just thinking about what the city looked like, right. So how did it end up this way?

President George Washington chose a plot at the confluence of two rivers to be the capital of our new nation. Alexandria and Georgetown were already booming port towns. They didn't actually, they weren't actually included in the original boundaries of the district.

But the idea was that [00:02:00] DC needed a federal center for government buildings. So Washington chose a very famous French architect at the time named Pierre L'Enfant to design the city. Pulling from his intimate knowledge of great capital cities in Europe, L'Enfant designed DC in a very similar fashion with broad avenues radiating from the central capital here.

So you can see the broad avenues going out. Right? Both George Washington and L'Enfant appreciated the need to incorporate trees in the cityscape. Therefore, the L'Enfant plan drafted in 1791 reserve space in the public right of way, exclusively for true trees. Also with the creation of these wide avenues.

You'll see that when they intersect with other areas, you end up with little pocket parks. And that was part of the plan as well. Our history, our city has had a history of planning for trees. There are many other great planners that have influenced this: Banneker, Macmillan, Olmstead, and modern day Harriet Tregoning.

This is great cause we don't have to retrofit our cities to make room for trees. Like some other cities do. We can start to incorporate them in our public space now. But just like other cities our urban forests faced some serious challenges. Looking at this picture, you can notice the big difference between 1973 with all of its green in 1977 1997 with all of its dark black. The dark black is representing areas that lost tree canopy.

So this article was published in the Washington post in 1999, and it showed some areas of the city had lost more than 60% of tree canopy. I want you to keep in mind that the technology used in these images were taken is not the same as it is today.

So the actual amount of tree canopy lost is definitely not as black and white, but overall, the takeaway is pretty clear. The number of trees within the districts was decreasing. One woman, Mrs. Petty Brown Casey, who is so troubled by this article that she decided to do something about it.

[00:04:00] Mrs. Casey, wasn't an inherent tree lover. But she said, "my husband, Eugene loved trees and I love Eugene". So to the transitive property, she loved trees, right? So the garden club of America, Mrs. Casey decides to start a nonprofit in response to that. And the nonprofit is why I'm here today. It's Casey Trees. So Casey trees has a clear mission dedicated to restoring enhancing and protecting the tree canopy of the nation's capital.

These trees in the capital don't appear overnight. We are stewards not only of from the past to today, but for the next generation, many of our streets are lined with beautiful, mature trees. Trees that have taken 30 or more years to reach full potential of making our city both livable and lovable.

Case in point, is this the street right here. You can see outlined in a heart of tree canopy is the national cathedral. You can see these beautiful, mature Oaks lying in the street. Despite their beauty and countless benefits, our trees still faced a number of challenges. This is where our volunteers come in.

So we build and engage the community using volunteers, and we use them in a multitude of ways. They show up rain, shine, sleet, snow, anyway, to plant trees at community tree planting. They take classes. They advocate the crew and the inventory trees. They engage in tree care. They just are true lover of trees. They are our bread and butter.

And if you are involved in nonprofit, you know, volunteers are what get you through the day and make sure we get our work done. And volunteers are wonderful, but you have to think about not everyone can volunteer. That isn't something that everyone has time for. It's not something that interests everyone.

So what we're left with is this problem of how do we increase our canopy spread? How do we increase tree knowledge and how do we cultivate a long lasting impact in our community? And that's what we're going to focus on [00:06:00] today. Is not the volunteer aspect, but that other aspect.

So the first question, I often pose to people when they ask, what I do is, "do you want to, do you want the district to be a grey city or a green city?".

And I try to show them examples and we talk it through. And the overwhelming response to this is that they want the green when they're showing the options. So DC you see residents want this city

to be green. But they have to think of competing priorities in their own lives and their own communities.

And they also, we also have to consider the government and how are they involved? Both the local and the federal government involved here. So the district is growing. It is currently growing and is expected to continue to grow. We're seeing this growth in new buildings, new cranes, constructions, and we're expected to close in on a million people by 2045.

So while our changing urban landscape means accommodating for development, it also means ensuring that there are green spaces for all residents. Our green spaces make our lives and city better. They provide numerous benefits, including refuge, relaxation, fostering connections, to nature and community cooling our homes and streets and cleaning water that flows into our two rivers.

Without these shared greenspaces DC loses the vibrancy that attracts these people to live and work within it. So all of this development and growth has potential consequences, right? On this map, the dark blue represents pieces of property covered 100% by impervious surfaces. So you can see on the left is 1984 and you can see on the right is 2010.

You can see the blue is darker and more intense. More of the city is in, is covered in sidewalks or asphalt. And you can also see the surrounding area has more asphalt and impervious surfaces in it. What that means is that you get other consequences, right? You have [00:08:00] storm water issues. Now we had a lot of storms this summer and we had a hundred year floods happen.

We had people whose homes who never were considered in a flood zone were actually underwater. So this is the concept of what are the consequences of growth and development.

If we're not really thinking about the natural aspect besides that we all talk about urban heat island effect, right? We know that these impervious surf surfaces make it hotter during the day our cities don't get as cool during the night. And if we're not thinking about trees and using them as buffers, we're not thinking about our residents. We have people that are under heat, stress and vulnerability, but are either old or young and maybe they don't have access to air conditioners. So how do we use nature's air condition or of trees to really help mitigate that?

So we know development and growth are going to happen. We know that there's a whole website that talks about how many cranes are over the district today. We need policies to ensure that we have green growth and smart development

And we need to think about the concept of do we fight for every individual tree? The development impacts like this tree and this tree pit right here, which it clearly was in a highly landscaped area. These are very expensive slate tiles. This is you know, very expensive development, but the trees in the pit, there's already crap inside that pit.

This tree is not going to survive. We're not thinking about this individual tree. But we also have to think about the canopy over time. How do we, how do we push forward so that we're not just fighting battles with developers on every individual tree, but we're thinking about these wars, these long lasting green scapes that have the potential to improve people's lives and create, you know, passive recreation among the trees.

So we really want to think about [00:10:00] this as forward-thinking, because we know it's so hard to get retrofits. So we want trees in the forefront of our minds to start. With all of this, we can think about how do we measure progress, right? So arborists measure progress by our canopy cover. So DC has a 40% canopy goal by 2032.

And we're currently at 38%. And it's a collective impact, right? Not only is it Casey Trees, but we also have our city. Our city arborists are the number one tree planters in our district, and we want to value them and get them awarded. You know, this is a great infographic for the general public, but really when we talk to arborists, we're really thinking about what does that look like?

What does tree candidate B distribution look like throughout the city? Is it equitable? Where are places to plant more? So the thing to think about is how do we reach these canopy goals with the ever-changing landscape? Not only with development, but with population coming in as well.

So we want to think about trees and nature, essential aspects to plans and policy initiatives by incorporating these trees and embedding them in these plans and policies we can share.

The trees are thought of in terms of the holistic solution in terms of climate resiliency, vision zero, a sustainable DC initiative. Our state forest, Earl Eutsler to trees as the original green infrastructure. And I cannot agree with him more on this. Trees are doing so many things. They're the original multitaskers, right?

They're cleaning our air, they're cleaning our water. They're getting all of that storm water out of the system. And we need to make sure that others are aware of it. Not just our arborists.

So by engaging with city litter leaders about issues impacting DC trees, we can turn these targets into allies and we can ensure that trees are considered throughout the city, not just by your municipal foresters, but by your planners.

By your public works [00:12:00] department, by everyone. Right? But you're really thinking about trees throughout the city. Cause sustainable cities need trees. So we need to focus on how to retain trees. But the most, its important underlying principle remains that trees do in fact make up the forest. But the dominant species of our urban forest is humans.

So we can't forget the human aspect to our trees. So with this, we started to consider people in the trees and now we have a new problem. How do we weave in our current policies? How do we target non tree people? How do we create programs or products that engage to them to achieve and enhance our goals?

So, I'm going to talk today about three big programs to reach non-traditional audiences. The three that I'm going to talk about is "how we worked and cultivate developers". I know they're usually seen as the big, bad evil Wolf, but that's not how we're working with them. "How we conserve land through our land conservation program" and "how we think about trees unstructured".

So the first that we're going to talk about is working with developers to increase green. So as a background from 2005 to 2015, DC gained about 77,000 new residents, but only about 13,000 new housing units. If you look at the housing stock drag, do you see, especially the affordable housing stock it's unfairly distributed and it's concentrated in certain areas.

And the demand for housing has placed a lot of audio pressure on low-income families. And the mayor actually put this call out and she said, we're called on to think big and differently about how we deliver more units in our city.

So I want you to, I think back to our tree canopy goal, 40% by 2032. And then I want you to think about developments, [00:14:00] especially affordable housing developments, sometimes these pit against each other, because you want to maximize the number of units.

And maybe in order to maximize the number of units, you go lot line to lot line, and you have no space for green, no space for trees, no space for that beautiful amenity of nature that's provided. We actually saw this in the past year. With a development called Sursum Corda. They promised a number of units and that were in con conflict with the preservation of eight heritage trees, which in DC are legally protected, large trees you cannot remove these trees if they are healthy. However, the developer decided to just cut them down and pay the fine for this unlawful removal rather than look into the long-term preservation and moving where the trees are. So the thought was to the developer that it's easier to remove the existing landscape elements than incorporate anything into the plan.

So what happened with this is that you really raised and started to pit two things against each other, the tree people who say, you know, trees are a pivotal part to being in a city. You need these in an order to create a livable city, to have all of these plans and policies. And then you have this affordable housing mandate.

So you're putting these two things against each other, and it's really easy when you think about housing and you think about trees, trees will always lose. We will never win that battle because we have to think about the humans. So we need to think holistically about how to have trees and affordable housing.

We need to market to make sure that trees are considered as a part, as a critical part of affordable housing, not just put these two against each other. So we sat down and thought about it for a while, and we'd been working developed with developers, but we started to pitch three big ideas and wrap all of our asks around one thing.

The idea of biophilic design, bringing the outdoors in creating living walls and green terrace. EO Wilson is the term [00:16:00] who is the person who coined biophilia. It's this concept that humans possess an innate tendency to seek connections with nature and other forms of life, many developments and buildings, degrade nature, and alienate it from us.

So how do we get nature as part of it? The second concept is to limit disturbance with existing natural features. Shelter living spaces with canopy trees. Really work to preserve canopy that's there, and enhance it for the long-term future. And then the third point that we work with is planting trees on rooftops and terraces, shading the surrounding streets.

So we work with developers to greenify their plans to meet goals and to inspire greater ones. We cannot, we use the carrot rather than the stick approach to be successful here. We call them, we establish a timeline of how can we work together? How do we look at their plans and incorporate these elements to make sure that not only are they greener, but they're more marketable because people want to live there.

So a great example of this and the district is the, 'so others may eat' building. It's the Conway Center on Benning road. It has 202 units of affordable housing. Trees are not only on the streets in this public right of way and near the building, but they're seen on the rooftop, right. There are aspects of nature throughout this entire development, and they're really thought of bringing trees and nature as a part of the development process.

So this, in order to get buildings like this, you really have to work and have communications and you can't shame people into doing this. That doesn't work. You have to have honest, transparent conversations and understand that you act to meet the people where they are. You have to align your goal with theirs.

So our next program There's not additional land in the district. We're not adding more land, but we add more trees. So we have to think strategically about [00:18:00] how to preserve what little land is left for the long-term benefit of the entire city. And that's where our next program come in, comes in. And it's, I really think that it's inspired by this quote by the executive director of Casey Trees, Mark Buscano.

He says "one of the best things we can do to preserve tree canopy is to preserve soil". And that's really the fundamental idea behind the next program, which is land conservation. So we work with landholders to create green spaces forever in perpetuity.

So this isn't a ten-year program. This is a forever program and we do that through four big buckets. Conservation easements. Actually going and purchasing tax sales. A straight out fee, simple purchase. And purchase development rights for a parcel so that someone else can't build on it. And the whole purpose of this is to think about the long-term aspect of a parcel.

So you'll notice these three parcels on your right are all currently, or sorry on your left are all currently in conservation easement. And this is great. You may notice that they're not a forested parcel. They're not a hundred percent canopy. We have a little park here. We have a parcel of land.

That's adjacent to a bus stop. And then this is a small fruit tree parcel. It's about 750 square feet. And what we're thinking about this is the long-term ability, right? The long-term ability of those parcels to have trees and to contribute canopy. So this was a great program that we actually partnered with the the department of DC department of housing and community development in their "vacant to vibrant" program. So they use that "vacant to vibrate" program to sell off district owned parcels for affordable and workforce development housing that developers bought in. And then they also said we have some parcels that aren't really developable. How could we make those vibrant?

They entered in long-term conservation easements with Casey Trees to make sure that those trees, [00:20:00] that area will be protected forever. So when we think about land conservation, we want to think about the prioritization of different areas. I think with land conservation, it's easy to say, oh, someone wants a conservation easement bill, just get one.

This chart up here is to show you that there's a very long process. It can sometimes take years from the time someone says I'm interested in a conservation easement, until we actually get that parcel protected. So we prioritize areas for conservation easement. If they're adjacent to a current green space. If there's nowhere in your space where this park would be so valued. The available soil

potential, can you plant trees on there for the long-term? Can that increase the canopy? How do we plant trees on there long-term? And then the ecological and conservation impact.

So we currently have five easements and one actual purchased land. And you can see that they're spread out to the district and they're not necessarily in the greenest areas of the district, right? These parcels are valuable because they can create community spaces for people to work in.

So that brings us to our last program that I'm going to talk about. And it's this concept of inspiring tree people and non tree people. And the concept is trees on structure. So I know some of you may be looking at these pictures and saying those, just look like trees on roofs and you would be right.

The problem with that concept is that when you think trees on roofs, you think to look up but a lot of in DC, a lot of the trees on structure are actually at grade, meaning that you wouldn't know that they were on a structure or on a roof, unless you knew what was underground. Much of the national mall is actually on top of a highway. So those are really important things to consider with terms and language, right. And treatment and structure isn't a new concept. You can think the hanging gardens of Babylon, you know, China has some. Japan has some. [00:22:00] Italy, Germany, right? We have all of these different areas that have them. And they're beautiful. They're inspirational. They help us to think about things in a different way.

And so at Casey Trees, we wanted to see if we could highlight these examples that exist in DC in a very creative way. We wanted to highlight them through rather than a book or a pamphlet to actually put them in a coffee table book.

And that may seem non-traditional to, you know, arborist or tree people. Why do we want a coffee table book? Because non tree people don't respond well to pamphlets. So the concept of marketing this was to how do we get, how do we increase our capacity, our knowledge base? How do we inspire other people?

Because at the end of the day, trees are doing amazing things all around us. We just need to notice. This is a pretty big highway that goes through the center of DC. And this is the US Tax Court. And here are these beautiful majestic trees that are growing above this disgusting highway with all of its pollution. Right?

But you would never notice it if you don't look up. So for a broader audience, we created these gorgeous layouts, easy to read descriptions that highlight all of these different projects that talk about why it's there. They're accessible to, and to anyone that's interested in DC. It's marketed to anyone who's interested in DC to just be a beautiful book that you can put out on your coffee table.

And when we were developing it, we were thinking about what developers, policymakers, and real estate agents, what all of those people have in their waiting rooms. We've wanted them to think about these topics and for a client to pick up this book while they're waiting and take a gander and be inspired.

We wanted to create an inspirational product and a demand for [00:24:00] someone to ask for their next product. "Well, why don't we have a tree on a roof? We can see all of these different examples. Why couldn't we do that?" We wanted to spark some awe and wonder when we created the. So we made an accessible for all audiences, right?

Besides the layouts of every single project, we also have what trees are there, and we have them highlighted here in a matrix to show what trees exist on what projects you can start to talk about them throughout. We collected all of this data with the help of the designers and the people who manage those projects.

The tax court goes back to 1951. So that project has been there awhile. We want to make sure that we're paying homage to everyone who worked on these and that the pictures, and then the inspiration are inspiring others to continue that. We took these beautiful pictures and layouts of the trees that exist there, both with what Casey Trees would recommend in terms of small, medium, and large trees.

And then also what other trees exist there. We also then knew that we would have a more technical audience that would read this. So we started to think about, well, how do we express what's going on? How do you support the trees on the structure? What's the irrigation, the wind, the soil, the support it is for this audience it is important to understand that DC is it's a very short city. Most of our buildings are 12 stories or under, so we are not dealing with the same amount of wind and whipping potential that perhaps a New York City would be determining with. So we started to incorporate, what do all of these projects have in common?

What are they thinking about with irrigation and soil space and support for these projects features interviews with all the designers and the maintenance people. And then also, why did people choose the different trees that they, that they chose? What was the inspiration for the plant palette?

[00:26:00] The biggest thing to consider with all of this is that trees are doing amazing things all around us. This is the Kennedy center looks out on the beautiful Potomac river and they're here are these gorgeous willows, right? And once again, people are driving under the Kennedy center and never really realizing they're driving under those trees as well. So it's really important to recognize these trees are doing amazing things. And how do we connect the people to the trees?

So in general the messaging is of the utmost importance for the general public. We need to recognize that there's a diverse amount of community within cities, and we need the people to meet the people where they are and listen to them, listen to what they want. Market to what they want.

The cherry trees are throughout DC, not only in the cherry blossom festival area, which is, you know, this tidal basin pink, but they're all over DC. So let's allow people to interact and engage with them in a different way. This park right here is actually fully on structure. How, how neat, how about we start advertising and talking to it.

And even right here, we call this the tree box rodeo, and this is just kids that were playing in their tree box. And you know, there's a tree back here, but they had decided that this was an extension of their home, right. They created this whole feature with army men and horses and [mumbling indistinguishable] wagons, and they are, it's just great, but you need to stop and look around as arborists, if we want to engage people in this message and in this long-term growth of canopy.

So thank you so much for participating today for sitting and listening. Feel free to reach out if you have any questions or if you want to engage more in learning about any of these programs. Have a wonderful day. [00:28:00] And thanks for joining.