

# New Terrain - Debbie's Green Infrastructure Frames

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I've rarely included my opinion in this space, but since this is my last issue, here are just a few thoughts that frame my thinking on the future of green infrastructure.

I see an emergent way of developing landscape spaces that is in flux. Existing disciplines are competing for position, and new players are entering, seeking to define a new industry. Policy is pushing green infrastructure. Public projects are financed using public funding. Private projects are driven through regulation. While the evidence base is mounting for the benefits of plants to people and cities, we need more hard data that can inform real world modeling. And we need more data for projects that have been operational over time.

Below I've jotted down some of the ideas that I've formed about green infrastructure over the last three years.

## **Horticulture must become a major stakeholder in cities of the future.**

- Green infrastructure is all about functionality. It won't stick if it doesn't look good, and while that's primarily what today's horticulture industry is all about, many traditional horticultural practices will not deliver expected green infrastructure outcomes. Cities need more horticulture, but the discipline also has to evolve to meet the challenges of today's world.
- A number of ecological landscape practitioners have made this their life's work. The world needs an army of ecological landscape practitioners steeped in horticulture and ecological land stewardship. And, they need to be valued, demanded (or mandated) and supported in their work.
- Many landscapers and landscape contractors have deep experience in green infrastructure. But too often when I speak with them, they say they are brought in at the last minute on jobs and their opinions often don't count. Credentialed professionals like to deal with credentialed professionals. If green infrastructure is going to soar, the experience of ground level businesses and workers must be included.
- When it comes to maintenance of green infrastructure, a project or installation that begins with good intention can morph over time due to default/rote behaviors of a property/building manager or landscape crew. What happens on the ground in landscape maintenance has huge environmental impact, yet it's often overlooked. A maintenance manual is not the only answer. Staff changes and contracts move from one company to another.
- A functional planting may take five years to look good (or provide habitat) and one badly acting crew can destroy the functionality of the space for years in 10 minutes with a chainsaw. WEF's GI certification is an effort to help address the issue for GSI, but it's only a start for an effort that should be a movement. The guy working a landscape maintenance job with the weed eater often influences the ultimate performance of a space designed as green infrastructure.
- Whether or not it's GSI, pollinator plantings, urban forests, highway buffer zones or a green roof, if it doesn't look good, people don't want it. Horticulture is a lot about creating appealing spaces and plants. Green infrastructure is part of horticulture, only the discipline doesn't have a seat at the table.
- Cities need billions of plants. While it's nice that cities, counties and non-profits have started nurseries to grow plants for cities, the way to meet demand is through larger scale commercial production. The existing nursery industry needs to see a viable, stable market that can be served at a profit.

## **Native plants are vitally important for the future.**

- However, rigid rules that all plantings must be native in a world that is shaped by man is like trying to make bread without baking soda. I am hard-pressed to think of a native plant that has evolved to perform in a city. We need functional plants in cities. That will include non-native species too.
- That we need more native plants is a given. That we need a wide range of native species for landscapes is also a given. We need billions of native plants. To do that, we need to have a better

grasp of how to propagate, grow on and maintain them in an urbanized built environment. Not every plant will work in an urban space.

- For those that look down on natives as inferior, visit Mt. Cuba in Delaware. They demonstrate that native landscapes can and do look fabulous. Go to the High Line in New York and just open your eyes to nearly every major widely publicized public project.
- Natives are not going away.

### **Regulation will frame more plant choices in the future.**

- There are a number of areas that I see where regulation will shape future plant choice: Invasive plant species, water scarcity and green stormwater infrastructure are just three currently at the forefront.
- Invasive plants have caused significant and real harm. Rules about the plants that will be allowed to be planted and those that will be prohibited will only increase in the future. Public money is being engaged to clean up the problem and as a result, there is political and administrative will to pursue the issue.
- Water use in many parts of the country is also a regulatory driver of plant choice. If you want to see the future, follow MWELO and other water efficiency efforts in California (Texas and Florida are also interesting to follow in this regard).
- Low Impact Development (LID) is sweeping the nation as a way to more effectively handle stormwater. Vegetated practices like bioswales are an important part of LID. Stormwater management is mandated and the features are monitored for performance. The plants that are allowed to be used for LID are often specified in technical guidance.

### **Engineers can appreciate plants.**

- It's not always easy to capture the imagination of an engineer with plants, but if you make enough effort, your time will pay off.
- Likewise, every plant nerd interested in functional landscapes in urban spaces must learn about the kinds of things that engineers naturally gravitate towards. Things like utility infrastructure, soil hydraulics/infiltration rate and construction sequencing are just three areas that immediately come to mind.
- I've been present to witness "plant enlightenment" for a few engineers and I will attest to you that seeing someone light up with understanding and engagement at the natural world is a priceless joy.
- Help an engineer understand plants; you will make the world a better place in doing so.

### **Politicians drive green infrastructure.**

- People pay taxes, politicians spend the money and make laws. When your politicians step forward to support urban forestry, green roofs, pollinator habitat, community gardens, new parks, GSI, etc., help them by getting that word out.
- Have events that showcase their efforts—give them a platform that demonstrates it was a good move. One of the things I've learned in my day job is you've got to provide political support for the politicians who step out to support your cause(s).
- If politicians do not promote vegetated solutions in cities, I see that default solutions will be entirely engineered/hard solutions. Plants are much more difficult than sizing pipes and underground storage tanks.
- When politicians are on your side promoting green infrastructure, be there with them to make sure they know what a good idea it is.

### **The next generation(s) is all over green infrastructure.**

- There are thousands of professionals and working people in wide-ranging disciplines that see green infrastructure as a paradigm. Environmental issues are very important to younger generations across political, religious and racial lines. The paradigm for how we operate in the future is morphing.
- If you're older, reach out to mentor a young person; we can help them learn how to ask questions, judge facts and navigate politics. If you're a young person: Ask someone that you admire to lunch or coffee. Learn from them.