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Eco-district planning process being fine-tuned

BY: Lindsey O'Brien

Steps are being taken to hone the process of transforming existing Portland neighborhoods into eco-districts.

The Portland Sustainability Institute, a nonprofit established by City Council in 2009, developed a method to help communities and professionals plan eco-districts. The intent is to broaden Portland's reputation for sustainable planning and design via creation of an eco-district approach that will be both scalable and replicable for use in other communities.

What is an eco-district?
Interest in district-scale projects stems from the belief that coordinating such efforts can increase efficiency in use of water, energy and other resources to significantly reduce overall environmental impacts.

"The hope for the eco-district methodology is that it will apply anywhere and everywhere. It was launched to great fanfare, but we have to test it first," said Matthew Arnold, an associate principal at SERA Architects and a member of a team hired by the Portland Development Commission to do just that.

The team recently completed an in-depth assessment of the PoSI methodology by applying it to the Gateway neighborhood, one of Portland's five pilot eco-districts. The group presented the findings from its work in Gateway at the second annual eco-district summit on Wednesday.

PoSI's method is based on nine "performance areas," including energy use and water quality, as well as "software" metrics such as social cohesion and place-making. When existing data in these areas is evaluated, intermediate and long-term sustainability strategies and reduction targets can be tailored.

Matthew Arnold, an associate principal at SERA Architects, is a member of a team hired by the Portland Development Commission to test the Portland Sustainability Institute's method for planning eco-districts. (Photo by Sam Tenney/DJC)

But sorting through the mountain of data was not straightforward. The team took note of factors such as the number of cul-de-sacs, the average distance from a resident's house to a community park and the amount of waste that could have been recycled. The group even felt as if it could have done more.

"It's like drinking water from a fire hydrant," said Arnold, who worked on the project with two other consultants – Nicole Isle, a senior sustainability adviser at Brightworks, and Tom Puttman, president of Puttman Infrastructure and technical director of PoSI.

The group met also with a steering committee of community members, who are now gauging the feasibility of various projects.

"Folks in Gateway will want to dive into this data even further as they start investing in projects," Arnold said. "Whether it's a series of pipes, solar panels, or whatever – they'll have to justify those expenditures and prove positive outcomes from the eco-district."

After working with the available data for four months, the team found some potential pitfalls in the methodology and made suggestions about how to tweak the process. Their findings were relatively technical and meant for planners, architects, and engineers – many whom were in the audience.

But the next big question, according to Arnold, is how to engage a larger cross section of the community in the entire process.

In the consultants' recommendations to PoSI, they described a strategy called "eco-district dashboard" that would show the community how its activities relate to the nine performance areas. It could be a desktop or mobile application or even a billboard – something to show actual data relating to traffic, energy use and water use in real time.

The PDC commissioned the study for about $100,000, according to PDC project manager Justin Douglas. The consultants recently started their second assessment, which is focused on the Foster Green pilot eco-district in Lents.

While Arnold wishes the study could have had greater depth, some summit attendees called for simpler – and cheaper – methods to analyze communities' efforts.

One graduate student bemoaned the fact that he has attempted to offer his time to eco-district projects, but has been brushed aside and shut out of the process. Another audience member suggested that instead of sorting through heaps of data, the consultants pin down "keystone indicators" – like keystone species – to measure an eco-district's progress.

The consultants welcomed the suggestions. They will analyze data from the Lents neighborhood until at least February, and their goal, after all, is to refine the ideas and data in order to help communities focus their eco-district strategies. "The goal is to make the best decision possible with the least amount of work," Puttman said.