

EPA Urban Heat Islands Webcast

November 12, 2008

Slide 27: Sustainable Skylines—National Initiative Launch Strategy

Neelam Patel: So, if there are no questions I'd like to introduce Yvonne Johnson, who is going to discuss EPA's Sustainable Skylines Program initiative. Yvonne presently works in EPA's Office of Air Quality, Planning and Standards, in the Communities and Tribal Programs Group. Yvonne has over 22 years of experience with EPA. She is an environmental protection specialist in OAQPS, the Office of Air Quality, Planning and Standards, and is the lead for the EPA Sustainable Skylines Initiative. This program helps areas promote effective collaboration among community partners to implement projects and planning to improve sustainability, air quality, and quality of life. So Yvonne, we'll let you tell us more about that program.

Yvonne Johnson: Okay, great, thank you Neelam. Like Neelam said, we are launching a strategy called Sustainable Skylines.

Slide 28: What is Sustainable Skylines?

Yvonne Johnson: You're probably asking, what is Sustainable Skylines? It is a program designed to help cities reduce their emissions and promote sustainability with the goal of cleaner and healthier air. When we say cities we are not always talking about, *per se*, a city: it could be an area that is comprised of more than one city, it might be maybe a city and a rural area. So we really do not define what "city" is, and in many cases refer to it more as a project location. But again, it's designed to help areas reduce their emissions to promote sustainability.

Slide 29: Program Goals

Yvonne Johnson: Participants work in cooperation with EPA and its partners to increase community participation and to leverage resources. And we do this by essentially creating a framework to integrate transportation, energy, land use, and air quality planning. [From] the activities that are completed under the Sustainable Skylines Initiative, we like to see measurable air quality benefits within a three-year period. This doesn't mean that it has to be completed within that three-year period, but at least to be able to get the initial results within the first three years. We see this as an innovative program that is replicable to other areas. So there's different aspects—again, this is a framework—so what we see is that the different aspects of the framework can be used anywhere in the United States. It doesn't really matter whether you're on the East Coast, West Coast, it's going to be replicable. And, last of all, it provides the flexibility to meet the needs and priorities of individual areas. And this right here is really the most important part of the Sustainable Skylines Initiative. We want there to be as much flexibility as possible to meet the needs of a community, not only from an environmental standpoint but also from an economic and a social standpoint as well.

Slide 30: Program Objectives

Yvonne Johnson: The program objective is that it be place-based and locally driven. EPA's role is more like a coach, who comes to the table with a playbook, in that we work very closely with the project area to help them develop this locally driven initiative. We see it as a collaboration between multiple stakeholders both from a public and a private standpoint. And I'll talk in just a minute about our pilot city, but just to give you an example of what I'm talking about here: in Dallas, which was our very first pilot city, what has happened here is that we basically have helped them to initiate the Sustainable Skylines Initiative, and we provided them very little seed money to get started. The City of Dallas—their COG [the North Central Texas Council of Governments], their organizational committee, their EPA regional office, the EPA headquarters office, and many stakeholders from the community including private industry, have come to the table with resources to leverage this program. And it is gone from a very small project to an over \$4 million project. And when we say leverage from cities and partners, we're looking at not only monetary dollars here, but also in-kind. Stakeholders and partners can come to the table and bring materials, technology, expertise, etc. Again, it's a very flexible initiative. And the most important part also is that it is a consensus-based project selection approach. So as the city moves forward with looking at the areas—and from the time to decide the activities to be put in place—it's all basically a consensus-based process. And the main thing is that there is community involvement, because for there to be real change, there has to be personal change in that, if you don't have the community involved, if they don't feel like they're involved, then they're not going to change.

Slide 31: National Project Categories

Yvonne Johnson: For any area that joins the Sustainable Skylines Initiative, we ask that they select at least one project in five of the following seven categories. Again, these are very broad categories. We help to provide information on various activities which could fall under these categories, but by no means do we ever come to the project location and say, “these are the activities you need to do.” And I will touch on the various project activities very quickly. Central city livability—this is essentially where the heat island effect would fall. And actually there is a fine line between some of these categories and activities, because some of these activities fall under more than one. For instance, you might be doing something that would fall under central city livability as well as energy/climate. But just to give you a couple of examples: central city livability could be your cooler surfaces, your roofs as well as your road surfaces, your more permeable surfaces; stationary area sources could be waste prevention or energy efficiency audits, particularly for the smaller businesses. We've done a lot of work with the auto body shops, and again that might be an area in one of your cities or communities—there seem to be a large number of auto body refinishing shops. Energy and climate—this could include everything from the management of the turf to watering. It could be a lot. Land use transportation strategies: this could be a decrease in vehicle miles traveled, an increase in public transportation, even something like a conversion of parking lots to parks. Diesel engines: examples could be anti-idling programs or equipment retrofits. Green buildings and developments: the city could be purchasing green materials or incorporating green building techniques into affordable housing. Again, going back to Dallas, they have an initiative where they are working very closely with Habitat for Humanity, and they're building green houses, and they have education programs for residents that will move into the energy-efficient homes. Off-road sources: this primarily deals with your small equipment, such as your lawn mowers, your lawn equipment, but really any off-

road source. And examples could be some type of equipment replacement program for those types of sources.

Slide 32: Target Areas

Yvonne Johnson: And then what we also do is we provide tools to the user to help them determine what are the activities which would fit best with the project category. We work very closely with ICLEI, the Local Governments for Sustainability, in building a tool called “Climate Pollution Planning Assistance.” It’s not completely finished yet, but hopefully will be out very soon, within the next few weeks or maybe month. But again, it’s a situation where you can plug in some information, some criteria, where your focus lies; for example, energy employment, the size of your area, resource constraints. And then the database will provide you with some information on various activities and how well these activities have gone, what their costs have been, etc. Target areas, the areas we’re looking at—like I said before, it’s not necessarily a city, it can be multiple cities or multiple areas. But we’re looking at areas with a focus on local air quality concerns, particularly that have an opportunity for multi-media co-benefits; areas with air toxic concerns; areas which focus on climate change. The area does not necessarily have to be a non-attainment or near-non-attainment in regards to the EPA national air quality ambient rules. But we do ask that the city or areas be medium- to large-size communities. And the main reason here is so that you can tap into the corporate presence—again, going back to what I said earlier about bringing various stakeholders to the table, and then trying to leverage the initiative.

Slide 33: Lessons Learned

Yvonne Johnson: As I mentioned, we have two pilot projects underway. The first is Dallas, Texas, which was launched officially in March 2007. Our second pilot is in Kansas City in Kansas and Missouri, and again, this is a good example of where you have essentially more than one city. So you have two cities, you have multiple county governments, multiple state representatives involved, so again like I said, this has been a good learning project for us. But it was officially launched January 2008, and they’re in the process now of finalizing all of the activities that they want to initiate. We are now in the process of expanding our national effort. And that is one of the reasons I come to you today— is to talk to you, to help you better understand what Sustainable Skylines is, but also to let you know that we are seeking applications for additional areas that might be interested in joining this initiative. Our very first national expansion project is in Philadelphia—it’s just now getting off the ground, very early in the project. And like I said, we are now seeking applications from other interested parties.

Slide 34: Urban Heat Island/Stormwater Mitigation

Yvonne Johnson: What I’d like to do is just touch really briefly on what Dallas is doing with regard to trying to reduce the urban heat island effect. When Dallas went out and did a study, they determined that 23% of Dallas is covered with either asphalt or parking lots. So they knew that, combined with the climate in that area, they felt that they really needed to take an initiative to try to cool the surfaces. What they’re doing is they are looking not only at cool surfaces for the roadways, but also for the roofs. The City of Dallas has also incorporated into some of their building codes information regarding the cooler roofs. They are looking at ways to reduce the

stormwater runoff by using more permeable surfaces. They are also increasing the tree canopy for the area. And what they are doing is working closely with the USDA Forestry Service and their i-Tree model to try to determine: (1) what is the baseline, (2) what kind of trees can they plant. You don't want to create a problem by trying to correct a problem, so you don't want to plant trees that are going to need a lot of watering or maintenance throughout the year. So again, this is an example of where the Sustainable Skylines Initiative provides a framework of help, and a network of tools and expertise to help the community with those types of decision-making.

Slide 35: Parking Lots to Parks

Yvonne Johnson: In Kansas City, one of their projects is turning parking lots to parks to try to reduce the heat island effect. What they would like to do is, for any parking lots that are not really being used, to just convert them to parks in general. But particularly if they cannot do that, they are trying to resurface them with a more permeable surface or trying to put more vegetation around those areas, so that you can reduce the amount of asphalt or concrete surface with the vegetation. But again, like I said, this is their plan, they're just now moving into this area.

Slide 36: Future Direction

Yvonne Johnson: In addition to this, Dallas and Kansas City have many other projects underway; I just wanted to highlight the ones which were specific to the heat island effect. But all of them work together—and just as an example, in Dallas they are trying to convert over 2,000 taxis to hybrid taxis; in Kansas City they are looking at an anti-idling program around all of their schools and hospitals, as well as working very closely with their builders and homeowner associations for the type of turf that is planted, again so it is the type that doesn't have to be watered a lot; and also the types of underground watering irrigation systems—so that, if it is raining outside, your irrigation system is not coming on, etc. So, again, the Sustainable Skylines Initiative is trying to look at the whole community. As I mentioned, the request for applications, the request for additional participants is posted at grants.gov. It closes December 17th of this year. We have a really quick turnaround where we will do a rating review process, and will have awards made by February 2009. One of the reasons is because we are also developing a Sustainable Skylines Workshop in Dallas, in March of 2009. And actually the dates will be March 9-11 at the Sheraton Dallas Hotel. This is a three-day workshop which is going to discuss the lessons learned from Dallas as well as highlighting the activities that they have underway; highlighting the tools that are available not only within EPA, but also other federal agencies and other areas; and then provide demonstrations. One of the demonstrations they are talking about is actually a company that is going to take a parking lot in Dallas and try to recycle the pavement there, and then resurface it with a more permeable surface. Again, this is all in the early planning, but it is just to give you an idea of what we're looking at for that workshop.

Slide 37: For More Information

Yvonne Johnson: If you have any questions, even at a later date, please feel free to contact me as well as visit our website, which is www.epa.gov/sustainable skylines. It will provide information on our pilot cities of Dallas and Kansas City as well.

Neelam Patel: Thank you Yvonne. Lauren, did we have any questions come in during Yvonne's talk?

Lauren Pederson: No, not for Yvonne.

Neelam Patel: Ok, great. Then I'd like to open it up: does anyone on the line have questions about the Sustainable Skylines Initiative or other questions that Yvonne would be able to answer?

Demetra McBride: Hi, this is Demetra McBride. Are there any particular approaches that Yvonne is finding effective in dealing with private landowners, particularly when you're talking about the downtown core, where the property you're talking about is already spoken for in getting them on board, and to make these types of policy, or modeling or design adjustments?

Yvonne Johnson: Like I said, this is a new initiative. Most of our work has been done in Dallas. I haven't heard much about there being either a problem or just addressing that area specifically. Neelam, I don't know if you are going to have a follow-up for questions, because that might be something I need to talk with the Dallas folks specifically about, and then get back with you.

Neelam Patel: Yeah, I was actually just going to write your question down, and if you want to submit it as well that's fine. Because that is an interesting question for people that already have tried to develop policies to try to reduce heat island effects, if they've had resistance from—you're saying private landowners in central business districts?

Demetra McBride: Yes, we're going through an initiative right now where there is a movement to take out what little vegetation there is in the downtown core, and make it more hardscape. So I was just wondering, it's a design paradigm that is new for them, so I wondered if there was a particularly compelling argument that worked.

Neelam Patel: Well, I do know that in some cities—like for example, in the District of Columbia—there are city ordinances that are being passed to increase the amount of permeable pavement that is on properties for both public and private buildings. I believe, but I don't know in detail. But that might be something to refer the developers in your community to. The purpose behind the ordinance in Washington, DC, is to reduce stormwater runoff; it's actually not directly related to urban heat islands, but there is a possibility for co-benefits depending on the type of pavements that are used. So that would be one example. Any other questions?

Jason Ching: This is Jason Ching. I have a question regarding your extension to the national level, the program for Philadelphia. Would you describe that a little more in detail?

Yvonne Johnson: Well essentially Philadelphia—like I said, we had our pilots of Dallas and Kansas City, and Region 3 decided that they wanted to initiate a project in their region, so they did an open solicitation for any city in Region 3 which was interested, and Philadelphia was the area which was selected. So they are very early in the planning process, but I know that they are starting to put together their stakeholder committee. They are trying to formalize their stakeholders with some type of memorandum of understanding signature meeting so that that

they can actually go ahead and begin to get pledges from stakeholders and move forward with the activity. They're not at the point where they have a list of specific activities ready to announce to the public yet, because again this isn't a set approach. So they have some ideas of what they want to work on, but they have to get that stakeholder group together and everybody needs to be able to buy into the activities. Does that answer your question?

Jason Ching: Yes, I'm just wondering if there will be a website of the activities—well, not just the activities, but the programs.

Yvonne Johnson: Yes there will be. If you go to the www.epa.gov/sustainable Skylines website in the “Where You Live” section, there will be a map of the United States, and as we bring more Sustainable Skylines project areas on board you will be able to click to those specific websites. Right now you'll be able to reach Kansas City and Dallas, and very soon, probably within the next few weeks we will have the link to the Philadelphia project ready.

Neelam Patel: And just to add on to what Yvonne said: the City of Dallas has a website on their Sustainable Skylines program that goes through all of their category process. So, any other questions for Yvonne on Sustainable Skylines?

Lauren Pederson: There is one question that came in online. What pollution reduction developments has Dallas implemented to mitigate its heat island, and how does that approach rank in terms of the effectiveness of different strategies to address heat islands?

Neelam Patel: So specifically asking what Dallas has done to reduce heat islands, and the co-benefits to pollution reduction? Yvonne has some information on the Dallas Central Livability program.

Yvonne Johnson: Like I said, one of the things that Dallas is specifically looking at is increasing their tree canopy and vegetation in the area. They have a multi-million dollar project where they are trying to add more trees in the area to help reduce the overall temperature. The other thing that they are working on is trying to reduce the amount of surface. And like I said, they did a study—over 23% of the Dallas area is covered in either asphalt or concrete—and so what they want to do is work with the public as well as the private owners of those parking lots and just the surfaces in general to resurface those with a cooler type of surface. As far as any benchmarks or any measurements that they have, at this point I don't have that specific information. That might be something we want to address. But like I said, the main areas they are looking at is the cooler road surfaces and the cooler roof surfaces, which like I said they have already incorporated that into their city-wide building codes, and then the increased vegetation.

Neelam Patel: Okay, thank you. What I'd like to do now is move on to our next presentation. If you have additional questions for Yvonne, we can always revisit Sustainable Skylines during the participant updates.