

U.S. EPA – Using Smart Growth Strategies to Reduce Greenhouse Gas Emissions

Slide 1: Title Slide

Neelam Patel: Megan is going to provide an overview of Smart Growth and its connection to climate mitigation. She'll also provide some information about the DOT-EPA Hyde partnership for sustainable communities. Many of you might have heard that this is a federal initiative towards improving building level energy efficiency, cutting greenhouse gas emissions through transit-oriented development, and taking advantage of other locational efficiencies.

This partnership brings together many of the concepts that you'll hear about in today's presentations. But it brings it together at the federal level so we can help to promote what you're doing at the local level. One upcoming opportunity through this initiative includes a \$100-million grant for sustainable community planning. And this will be available to state, regional, and municipal entities that are doing planning. So Megan will provide you with more information on that. And I'd like to turn it over to her.

Megan Susman: Thanks, Neelam. As Neelam said, my name is Megan Susman. I'm with the EPA Smart Growth Program here at the headquarters office. And I will be talking about \$100 million that will be available to communities to help plan. But I'm going to wait 'til the end to talk about that just to keep you all interested.

Neelam Patel: This is Neelam. Just to make sure, is everyone able to see Megan's slides?

Nikhil Nadkarni: This is Nikhil. Yeah, we're able to see them here.

Neelam Patel: Thank you.

Slide 2: What is Smart Growth?

Megan Susman: I'm hoping that most of you on the call are going to already know what Smart Growth is. But I always like to start out with a quick definition just to make sure that we're all on the same page and we all know what I'm talking about throughout the rest of this presentation.

Essentially, Smart Growth strategies make how and where we build more sustainable. And they benefit the entire community, protect the environment, protect public health, and generate economic development. And, as Neelam mentioned, they'll look different in different places because the principles that guide Smart Growth are meant to be flexible. So a development in Phoenix is going to look different from a development in a small town in Kansas.

Slide 3: Principles Slide

Megan Susman: And I'll run through the principles just very quickly here: Mixing land uses – as you see there, there is housing above the stores and restaurants, creating a range of housing choices; You can see the single-family homes behind the townhouses here; Creating walkable neighborhoods; Creating distinctive communities that have a strong sense of place; Taking advantage of compact design, not just in communities but also in buildings...

Slide 4: Principles Slide (cont.)

Megan Susman: ...And part of that is directing development to existing communities, which can help you to preserve open space in other critical environmental areas; Involving stakeholders in making development decisions; Creating a range of transportation options; And creating a framework to allow predictable, fair development decisions, which is a little bit hard to illustrate in a photo.

Slide 5: U.S. Greenhouse Gas Emissions

Megan Susman: Now, again, probably most of you have some idea of the contribution that transportation and buildings make to greenhouse gas emissions. But I just want to show this again so that we're all on the same page.

Basically, transportation is about 28 percent. Personal vehicles alone are about 21 percent of total greenhouse gas emissions. Buildings are a little bit over a third. And so when you add transportation and buildings together – in other words, where we live and how we get around those places- it comes out to just under two-thirds of total U.S. greenhouse gas emissions. So, clearly, we're not going to be able to tackle our greenhouse gas emissions reduction goals until we deal with transportation and buildings.

Slide 6: Smart Growth and GHG Emissions

Megan Susman: So Smart Growth affects greenhouse gas emissions mainly in two ways, and that's where we live and how we get around those places.

In the transportation sector, Smart Growth strategies create more choices like allowing people to take transit to bike, walk, or do car sharing. And they can do that in part because of the mix of uses that create shorter distances between your home and your daily destinations.

And that's part of the land use side of it, the compact development patterns that create smaller mixed-use communities that people can easily walk around. These places need less energy to build, operate, and maintain. And it can help with the urban heat island effect by using green infrastructure and other strategies to help reduce the heat that generates.

Slide 7: Benefits of Smart Growth Approaches to Reducing GHGs

Megan Susman: So, of some of the benefits of using Smart Growth approaches, the first is mainly that it allows what you spend on greenhouse gas reduction to meet multiple goals.

If you replace all of the light bulbs in your municipal building, then that's great; you're saving energy. But the goals that you're accomplishing are basically saving energy and maybe providing lighting. Whereas if you, say, add a transit stop, then you're creating not just the greenhouse gas reduction and the energy conservation but you're also creating new activity around the transit stop, which generates business; you're encouraging people to walk or bike to the transit stop, which gives them daily physical activity that helps to keep them healthier; and you're probably generating a new market for housing around the transit stop. So you're creating multiple benefits out of this one expenditure.

And Smart Growth is an actual outgrowth of market demand. People want to live in these places. We've seen research consistently that says that about a third of homebuyers want to live in a compact, walkable neighborhood with access to transit and to a mix of uses. And there is nothing near like a third of the existing housing market that could be considered Smart Growth. So there is much more demand than supply. And, for renters, the numbers are even higher. We've seen numbers that say that as much as 75 percent of the millennial generation, which is the people just entering the workforce, intend to live in urban areas for at least the next three years. This is also something that a lot of communities will have to do anyway. Many communities have to revise their comprehensive plans or their zoning ordinances every five or 10 years. And that gives you a great opportunity to implement Smart Growth measures.

Neelam mentioned some of these other benefits – Reducing air and water pollution by providing transportation choices. It encourages using vacant properties, brownfields, other infill opportunities which I think Elaine will touch on. Saving money for households in how much they spend to heat and cool their houses, and to get around. Enhancing public health by creating these opportunities for active living, walking and biking. Creating these other choices in a range of housing and transportation options. And all of that comes together to really strengthen communities and create attractive places where people want to live.

Slide 8: Estimates of CO₂ Reductions in 2050 from Compact Development

Megan Susman: So what kind of reductions can you get from Smart Growth when you're talking about greenhouse gases? There have been three major studies. And the takeaway point from this is basically that they all ended up in about the same ballpark. And what they were looking at here, with the exception of the Moving Cooler Study, was compact development – that's looking just at the land use pattern, the kinds of neighborhoods that Elaine Clegg and Chris Zimmerman will be talking about.

The Moving Cooler Study also took into account improved travel options, which means more transit, more walking and biking facilities, also. But you can see that they're all coming in around anywhere from seven to 15 percent or so depending on the different scenarios that you use. And these are the reductions that you would get in the year 2050, reductions from the baseline of what you would get otherwise if you continued business as usual. These estimates don't include advances in energy efficiency, cleaner cars or fuels, things like that that would just add to those reductions.

And I think that it's worth pointing out that the reductions take longer because of the development timeline. If you replace light bulbs, then you get those reductions instantly. It's going to take a lot longer to get the reductions from compact development. But the building will be there for 40, 50, 60 or more years, whereas if you move out of your house after changing the light bulbs, then the next person can come in and just change them back to incandescent bulbs. So these reductions are essentially permanent.

Slide 9: Where We Build

Megan Susman: The Strategy Guide that Neelam talked about essentially divides the strategies into where we build and how we build. Where we build is really about thinking where it makes sense to develop and where it makes sense to preserve land, taking advantage of existing investments in existing communities, and building these strong, attractive places that attract businesses, residents, and visitors.

You can see the picture there. This is actually a Smart Growth Award winner of ours in Boston. The top picture is what it looked like before the project. You can see this was an area that had seen pretty severe disinvestment. And an affordable housing group came in and renovated it. And you can see below that it's really added a new amenity to the neighborhood.

Slide 10: How We Build

Megan Susman: And how we build is basically the idea of the compact design creating a mix of uses like you see here. This is, I think, in Rockville, Maryland. You can see that there are homes, offices, and shops. There is a park there. It creates a thriving, vibrant community that people can easily walk around. And when you add green building techniques to that, it just increases the energy conservation and the CO₂ reductions.

Slide 11: Tools and Resources

Megan Susman: I wanted to run quickly through a few tools. The first is one that our office developed. We were seeing a lot of communities that had these great visions for growth, for more sustainable growth, for more livable communities. But the regulations that they had on the books just didn't allow them to get there. And they didn't always understand why or what kind of changes they needed to make.

So we developed this essential Smart Growth Fixes Tool that breaks down changes to zoning codes into the categories of modest adjustments, major modifications, and wholesale changes so that you can look through this and see, for instance, if you want to get more walkable communities but don't really have the political will to do a wholesale change, then here is a couple of minor tweaks that you can do that will help to get you started on that path. And that's available at our Website. I'll show the URL for that later.

Slide 12: Tools to Assess GHG Emissions from Land Use and Transportation

Megan Susman: There is a very interesting study that just came out of the Washington State Department of Commerce that looked at tools to assess greenhouse gas emissions from land use and transportation. We didn't actually have anything to do with this study. But it's such a good resource, and there are so many communities out there that are trying to figure out what tools to use that I wanted to share this.

They were assessing tools for communities in the State of Washington. So they looked at a whole range of factors and judged about 62 tools against those factors that you can see here – you know, whether they're applicable to communities in Washington, if public agencies have the data and hardware to run them, if they are sensitive to land use and transportation changes, and that type of thing.

Slide 13: Tools to Assess GHG Emissions from Land Use and Transportation (cont.)

Megan Susman: And they narrowed down these 62 tools to eight of them that they felt would be most useful for the communities in Washington. And these start out with spreadsheets that are generally easier to use but perhaps less accurate. They go through a travel demand forecasting models that are a bit more complex, and wind up with GIS-based tools that your community might need a consultant to use but that are going to be the most accurate and give you the best picture of from where you're getting your greenhouse gas emissions in land use and transportation.

Slide 14: Tools to Assess GHG Emissions from Land Use and Transportation - example

Megan Susman: And it's really useful because they have tools like this decision tree that kind of moves through and helps you to figure out what tool to use if you have a complex project or if your project is more limited depending on what your staffing is, and all that kind of thing. So that's at www.commerce.wa.gov. And if you're looking for tools, I recommend that you check that out.

Slide 15: HUD-DOT-EPA Partnership for Sustainable Communities

Megan Susman: I'll also talk quickly about the HUD-DOT-EPA Partnership for Sustainable Communities, which I hope you all know about because we have been out there talking about it for close to a year now. This started in June 2009 among the three agencies, where we realized that the housing, transportation, and environmental protection goals were very similar. But we just weren't coordinating the way that we could be, and it was making things more difficult than they needed to be for communities that were trying to grow more sustainably.

And I also wanted to mention, and I didn't put this in the presentation, but hopefully, you all heard about DOT Secretary Ray LaHood's policy statement, I think just last week, where he said that every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling, and to integrate walking and bicycling into their transportation systems. And this is a huge policy statement coming out of DOT to say that walking and bicycling are essential parts of the Nation's transportation system.

And to that end, they had their first round of TIGER grants that were funded through the Federal Stimulus Package. These are grants that went to projects that create jobs, generate economic activity, and create more livable communities. That put out \$1.5 billion to more than 50 projects.

The notable thing about that is that more than half of the grants went to recipients other than state departments of transportation. So they went to local communities or to regional organizations. And that is also a big change. And about a quarter of the grants went to transit. Another 20 percent or so went to multimodal projects. Only 23 percent went to highway projects. And, again, that's such a huge change from what we've seen from DOT in the past.

There will be another round of TIGER grants coming. I don't know the timing on that, but I believe that \$600 million has been allocated for that. So you can keep an eye out for that, too.

The Federal Transit Administration worked with HUD to develop a guide to help local planners get more mixed-income transit-oriented development in their communities. It helps them to find tools and resources to implement that. And that's at www.mitod.org.

The \$100-million grants that Neelam mentioned are out of the HUD Sustainable Communities Planning Grant Program. That will be for about 30 recipients. And it's divided between places that have good plans but need some extra money to help implement them and places that need help in getting started with planning. So we're hoping to reach a whole range of regions with this. And it will support regional planning that addresses housing, economic development, transportation, and environmental quality in an integrated fashion. We're expecting that the notice of funding availability for that will be published the week of April 12. And the applications should be due sometime around early June. So keep an eye on www.HUD.gov or on our Website for more information about that.

Some of the programs that we're working on with HUD and DOT here at EPA include our new Urban Waters Initiative, which is looking at revitalizing urban waterfronts, particularly in distressed areas, to create new housing opportunities and to make sure that the people who have lived through the bad times there get to share in the revitalization and don't get pushed out.

And there are brownfield pilots that we're doing in five communities across the Country, where there is a convergence of land available near transit, and the need for affordable housing. And we're working on those projects, again, with HUD and DOT.

Slide 16: EPA Smart Growth Resources

Megan Susman: I wanted to talk quickly about the resources that my office offers. We have many publications. We've done a lot of research on everything from parking regulations to school citing, to storm water management. We have a technical assistance program that gives direct technical assistance to communities. That application period is open now until April 9.

We also have our National Award for Smart Growth Achievement, for which Arlington, Virginia was the winner of the first round back in 2002. The application for that award is open until April 5. I also want to call your attention a little bit early to the New Partners for Smart Growth

Conference. This will be the Tenth Annual one. And, in 2011, it will be held in Charlotte, in early February. You can find information about all of those at our Website – www.epa.gov/smartgrowth.

Slide 17: For More Information

Megan Susman: One other good resource is the Smart Growth Network – www.smartgrowth.org. That's a coalition of about 40 national groups that all work together on these issues. And they have great resources there, as well.

I'll turn it back over to Neelam.

Neelam Patel: Thank you, Megan. I hope our audience was able to get a good sense of the many background resources that are available to help you begin and implement Smart Growth programs in your neighborhood, and also get a sense of what the federal government is doing to help support that.

Now that you've heard about all of this going on at the federal level, what we'd really like to do is to focus in on these two great examples of communities that have implemented Smart Growth, and have them talk about the way they implemented Smart Growth and also how they succeeded in accomplishing their Smart Growth goals.

So before I introduce our next speaker, I would like to remind you that, if you have questions, please submit them throughout the Webcast using the "Question" feature in GoToMeeting. And as you put in your question, please also include the person who you would like to have answer your question. We're getting those as they come in. So, again, go ahead and put in questions.