

Using Smart Growth Strategies to Reduce Greenhouse Gas Emissions

Webcast Transcript

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Webcast Agenda and Meeting Logistics

Slide 1: Introduction Slide

Operator: Good afternoon. My name is Chanel, and I will be your Conference Operator today. At this time, I would like to welcome everyone to the Smart Growth Conference Call.

All lines have been placed on mute to prevent any background noise. If you should need assistance during the call, press star, zero, and an operator will come online to assist you.

Thank you, Miss Patel. You may begin your conference.

Slide 2: Clean Energy Workforce Title Slide

Neelam Patel: Thank you. I'd like to begin by welcoming everyone to today's Local Climate and Energy Webcast.

Our topic today is "Using Smart Growth Strategies to Reduce Greenhouse Gas Emissions." We're bringing you today's Webcast because there is a great interest at the local level to improve community design. And many local governments are tying economic development to other community initiatives such as preserving open space and critical habitats, also protecting water/air quality, and reducing greenhouse gas emissions.

So what we've learned is these communities have found that following Smart Growth principles can help to meet these goals and also lead to significant energy savings. And as we hear more about Smart Growth, you'll also see that Smart Growth can reduce cost for transportation infrastructure and services, and, in some cases, assist in attaining air quality standards. So I'd like to quickly go through today's agenda with you.

Slide 3: Webcast Agenda

Neelam Patel: My name is Neelam Patel, and I'm with the EPA Local Climate and Energy Program. Some of my colleagues – Andrea Denny and Emma Zinsmeister – also work on this program and are here. I'll provide an overview of that program.

Megan Susman from our EPA Smart Growth Office will be providing an overview on how Smart Growth relates to climate, and will be providing some information on tools and resources. Following...

Lauren Pederson: Sorry to interrupt. But could you make your presentation full-screen? And the slides aren't advancing.

Neelam Patel: Oh, thank you for that.

Lauren Pederson: You're welcome.

Neelam Patel: Thank you for informing me.

Lauren Pederson: There you go.

Neelam Patel: Sorry about that. So do you see the Agenda in front of you? I've already gone over the first two bullet points. Our first case study today will be by Elaine Clegg. She is from Boise, Idaho. She will be talking about infill. And then following Elaine's presentation, Chris Zimmerman from Arlington, Virginia will be giving us another perspective on Smart Growth.

Just to point out, Smart Growth is situation-specific and can look different from community to community. In today's case studies, you will see that you can apply in a way where you could focus on infill development or on developing transit corridors. Again, these are just two ways in which you can apply Smart Growth. There are many different ways to do this. We just provide you with these two examples.

After the presentations, we'll have a question-and-answer session. That will be for about 15 minutes. You'll shortly hear how you can submit questions from Nikhil. And so I will go ahead and turn over the presentation to Nikhil, who will walk through some of the logistics for you.

Slide 4: GoTo Webinar Software Logistics

Nikhil Nadkarni: OK, thanks. Just a few quick logistics – You will be muted throughout the Webcast to keep the background noise to a minimum. The session will be recorded and will be made available for download at the URL shown on your screen. And, throughout the Webcast, if you do have any questions related to GoToWebinar, then feel free to e-mail Lauren Pederson at lpederson@icfi.com. Next slide, please.

Slide 5: Attendees Slide

Nikhil Nadkarni: You will be able to see who else is participating by using the "Attendee" pane on the right side of your screen. Next slide, please.

Slide 6: Questions Slide

Nikhil Nadkarni: And if you have a question, we'll be compiling all of the questions together and asking them at the end of the Webcast to our presenters today. But to submit a question, just use the "Question" pane on the right side of your screen. Just type it in and send, and we'll be collecting those and asking them. Please be sure to indicate whom the question is intended for. So, for example, you could just type in, "Question for Neelam," and then type in your question. Next slide, please.

Slide 7: Optional Feedback Slide

Nikhil Nadkarni: And, at the end, a popup window will appear for you to provide some feedback. And please take a moment to do so, as your feedback would be very useful. And that should do it for Logistics.

Neelam Patel: OK, great. Thank you, Nikhil.

Introduction to EPA's Local Climate and Energy Program

Slide 8: Local Climate and Energy Program

Neelam Patel: So what I'd like to start off by doing for today's Webcast is just to provide a little bit of information about EPA's Local Climate and Energy Program. This program is intended to be an information and peer exchange network for local governments. And we support local governments to advance their comprehensive climate and energy approaches by pointing out the linkages and opportunities for reducing greenhouse gas emissions.

One of our main messages includes providing best practices that are cost-effective and have worked. And, today, you'll be hearing about some of those examples in our later presentations. We also provide access to existing resources. And through some of our program resources, you'll learn a little bit more about this – we have Tools Guidance, a Website – and through all of our materials, we showcase local government success stories. For more information about our program, you can visit this link below.

Slide 9: Local Climate and Energy Program Goals

Neelam Patel: Some of our overarching goals are to assist multiple different types of local governments to help to reduce their greenhouse gases while achieving their sustainability goals. We understand and have learned from many of you that sustainability covers the greenhouse gas mitigation. And these things are very interconnected, so we try to provide resources that can support you in both of those efforts.

We also work with expert partners and programs and bring that information to you. Today, you have some wonderful Smart Growth experts that are doing the work in the field and also our federal program that helps to support those local entities.

And the other main message that we provide through our program is any type of initiative that you decide to pursue – not only can it help you to mitigate greenhouse gases, but it can also help you achieve other benefits such as energy savings, helping protect public health, supporting economic growth in your communities. So as you plan and work in your communities, please keep in mind that you can maximize multiple benefits through many of the programs that help to reduce greenhouse gases emissions.

Slide 10: EPA Local Climate and Energy Program Approach

Neelam Patel: And here is a framework of some of those multiple benefits of how climate mitigation relates to clean energy and also helps to improve air quality so you can meet these multiple goals that I have mentioned.

Slide 11: Local Climate and Energy Program Resources

Neelam Patel: I'm going to quickly run through some of the resources that we offer through the local program. There is quite a list, so I thought it would be helpful to point out that. I'm going to talk about a Website, Webcast, economic recovery resources, a grant program that we have here – the Climate Showcase Communities Grant Program – and also other EPA programs that can support your efforts to reduce greenhouse gases, and, lastly, our keystone document – a series of guides that go through different climate strategies to help support climate mitigation.

Slide 12: State and Local Climate and Energy Website

Neelam Patel: So our first resource – in February, we released a new Website that provides information on multiple climate topics and local government activities. And this information can be used to help develop comprehensive climate strategies. We have multiple tools and resources on different topics and processes that local governments conduct at the local level. So you can access that information through this Website. And, of course, as I mentioned before, there are multiple case studies and examples available through the Website.

Slide 13: Webcasts and Training

Neelam Patel: In addition to the Local Climate and Energy Webcast Series that you're sitting in on today, EPA does offer other training Webcast opportunities through our Energy Star Program, through our state technical forum, and through other clean energy programs at EPA.

I'd just like to point out that our next Webcast through the Local Climate and Energy Program will be held on April 29 and will cover the topic of Smart Grid. If you are not already a member of our Listserv, you can sign up to get more information about that and continue to check our Website as we update it. So after the Smart Grid Webcast, we'll be doing other topics – transportation control measures, heat island reduction. And if you would like to view our past Webcasts, there are two links here.

Slide 14: EPA ARRA Resources for Energy Efficiency and Renewable Energy Projects

Neelam Patel: The next resources that I'd like to mention to you, or suite of resources, relate to the Economic Recovery Act. We have multiple documents available to help support local and state governments on understanding opportunities and also planning for how to spend the Recovery Act money. So please check that out on our Website.

Slide 15: Climate Showcase Communities Grant

Neelam Patel: We have an exciting grant program that we are now administering. We've already had the first cycle of this grant. And our first 20 showcase communities were announced on February 25 of this year. And while that opportunity has passed, there is great news because a second round of funding is available for the Climate Showcase Communities Grant Program. This is \$10 million that will be awarded to 20 to 30 projects that focus on implementing climate mitigation strategies in their communities. The funding opportunity is expected to open in May of 2010.

If you're interested, if the money has intrigued your interest, then what we're looking for is how to showcase documentable, replicable greenhouse gas mitigation strategies that not only build capacity in your community but work across the community. What we try to do is build networks so that these communities can exchange their lessons learned and help others to implement similar programs.

We do have a Website that profiles each one of these communities. And as part of being a grantee, you will have regular opportunities for a peer exchange with the other grantees, and also participate in an annual conference. So that's a great opportunity. And, again, if you're not part of our listserv, then please sign up.

Slide 16: EPA Partnerships and Technical Support Opportunities for Locals

Neelam Patel: In addition to providing financial support for the Climate Showcase Communities Grant Program, we also provide information to other programs at EPA that help to mitigate greenhouse gases.

Slide 17: Resource Guide: State & Local Guide to U.S. EPA Climate and Energy Program Resources

Neelam Patel: And there is a guide that outlines many of these programs. So if you're interested in learning more about how to get technical support, then please visit this Website at the bottom and take a look at this guide that can help to direct you based on your interest area.

Slide 18: Local Climate and Energy Strategy Guides

Neelam Patel: So, with that, I'd like to talk about our last resource that we have. And this is really a great resource. We have a series of Local Climate and Energy strategies guides. There are nine guides available. And of those nine, there are two that I would like to go through today. Energy efficiency and affordable housing, I'd like to bring to light, because they relate to many of the things that you'll hear today. And then the featured guide today that we just released is our Smart Growth Guide.

Slide 19: Featured Local Climate and Energy Guide – Smart Growth

Neelam Patel: The Smart Growth Guide provides information on how communities can use Smart Growth to mitigate greenhouse gases and also reduce criteria air pollutants through the local or regional land use in transportation planning process. It points out opportunities. It talks about the benefits related to Smart Growth. And, lastly, it provides information on the foundations for developing a Smart Growth Program.

So as you hear the case studies today, as we hear Megan Susman talk about Smart Growth, all of this information on how to get started and the background you need to know is available through this guide. So I encourage you to look to this guide for additional support to pursue these types of projects in your communities.

Slide 20: Featured Local Climate and Energy Guide – Smart Growth (cont.)

Neelam Patel: We have a case study that I have highlighted – High Point, Washington. I won't spend time going through this because we have two excellent case studies that you'll be hearing on the call today. But if you are interested, you can go to the Smart Growth guidance available there.

Slide 21: Local Climate and Energy Contacts

Neelam Patel: So if you have any questions about anything, any of the resources that I have mentioned, feel free to contact me or any of my colleagues that also work on this program. And what I'd like to do now is pass over the presentation to Megan Susman from the Smart Growth Office.

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.

Boise, Idaho – Quality Infill Can Help the Environment

Slide 1: Title Slide

Neelam Patel: I'd like to now introduce our first local government implementation program speaker Elaine Clegg. She is an expert well known in the Smart Growth world. So I'd like to go ahead and pass over the presentation to her so that she can tell you a little bit about herself, her program, and what she has accomplished.

Elaine Clegg: Thank you. Can everyone hear me?

Neelam Patel: We sure can.

Elaine Clegg: OK, and my screen is up OK?

Lauren Pederson: Yes.

Elaine Clegg: OK, great. Well, it's a real pleasure to be here today. I'm really glad to have the opportunity to share this work that we have just recently completed in Idaho. We have been working for a few years on trying to develop best practices around Smart Growth issues. And infill was one of the issues that kept coming up over and over. So, recently, we partnered with ULI Idaho – Idaho Smart Growth did – to complete a literature review and committee process on infill, to develop some best practices for our area.

I'm going to set the stage by talking a little bit – Megan covered some of this – about why we think this is such a big issue, particularly in the West, particularly in regions that are growing fast like our region is.

Hopefully, this is going to move forward. It's being a little bit slow. Sorry about that. I tried to reduce the file size, but it looks like it's still having a little bit of trouble. Well, while that's loading, I'll continue to talk.

Slide 2: Growth Creates Potential Role for Infill to Improve the Environment

Elaine Clegg: So growth has been a big issue in the West, particularly in our region. There was a study done at the University of Utah that predicts that the Snake River Plane, which Boise is a part of, will add 1.1 million people by 2050, which, we are in a state that has only 1.3 million people altogether, today. So that's an awfully big factor of growth.

And as you can see, the U.S. is growing very fast, as well. So our region is growing at an even faster rate than the rest of the U.S. And, particularly here, we're growing faster.

Slide 3: Growth Drives Future Building Need

Elaine Clegg: Because of that, we're going to need a lot of building space. There is already existing on the ground today for the total U.S. 332 billion square feet of built area building space. And 155 billion of that will be rebuilt in the next some years. And we will need 132 billion more. So, by 2040, we're going to need 287 billion more square feet of building space, which we think is something that we need to pay attention to – to how we're building that new space so that we can make sure that it's built in a way that reduces greenhouse gas emissions to the extent possible.

Slide 4: Demands Created in Idaho

Elaine Clegg: What that means, particularly in Idaho, is a lot of growth in units. As you can see, a lot of growth in non-residential space for total square footage of over a billion square feet of new development in commercial and 570 new units of residential. So all of this means that we can, in fact, make a huge difference on greenhouse gas emissions if we build this new stuff right.

Slide 5: Households are Changing

Elaine Clegg: And as most of you know, as that's happening, the U.S. is changing composition demographically – many fewer households with children and many more households without children. Idaho lags just a little bit. We still have a few more households with children. But, even so, by 2040, our region is going to have – over two-thirds of the households will be households without children.

Slide 6: Share of Growth 2000-2040

Elaine Clegg: So the share of the growth – because the growth is those households without children, primarily, the share of growth is higher in the households without children. Particularly, you can see in Idaho, then, that catches up a little bit.

Slide 7: Future Housing Needs

Elaine Clegg: At the same time, we have this looming oversupply of single-family, large-lot, detached housing development. We already have, by this estimation, on the ground 23 million more units of single-family detached, large-lot housing than we will need. And this is only until 2030. Given the Recession and such, this may stretch out a little bit. But, even so, we have many more large-lot single-family housing than we need.

We don't have as much small-lot single-family, detached housing or as much attached housing as we'll need. So what that all translates into is a change in demand.

Slide 8: Emerging Urbanity Preferences

Elaine Clegg: At the same time – again, Megan touched on this – there is an emerging urbanity preference in people's choices. This is a study done by the National Association of Realtors, so not exactly a green group. And they're finding lots of people very interested in the kinds of

mixed-use, mixed-housing, mixed-income, transit-accessible, walkable neighborhoods that we're all talking about in the Smart Growth world.

Slide 9: US Homes lost \$2 trillion value in 2008

Elaine Clegg: Of course, we've had this terrible Recession. As a result, particularly what has changed in that is the way that we're going to be able to finance new development in the future. And, as a result, according to these writers, the demand will shift even more to smaller homes, smaller lots, and more renters because it will be easier to finance those things.

Slide 10: Translating Demand in 2050 - Idaho

Elaine Clegg: In Idaho, we're translating that demand into the fact that two-thirds of all new development by 2050 will be demand Smart Growth or compact centers. Of that, 20,000 people will be added to downtown Boise. Right now, we have less than 5,000 people living in downtown, so that's a big change; 40,000 people in secondary centers, other cities, a few other big regional centers; 100,000 people in center-accessible; and – I think this is an interesting one – 500,000 people in mixed-use, mixed-housing walkable suburban.

So even with the suburban development that we'll be doing in the future, there will be much more of a demand for walkable neighborhoods than the kind of neighborhoods that we've been building for the last 50 years.

Slide 11: How can this be used to Help the Environment

Elaine Clegg: So this gets us to the study that we did. We did a white paper based on a literature review. And in that study, we found that there are many ways that infill particularly can help the environment. We're talking about infill here – I'll show it in just a minute – because of the kinds of planning that we're doing.

Slide 12: Introduction

Elaine Clegg: So as an introduction, we put together a committee that we very broad-based and included developers, neighborhood leaders, city leaders, and planners, transportation folks. And we found that there were really three factors that affect infill. There are many reasons to support infill in the literature that we reviewed. There are many benefits that accrue from infill, as well as some negative impacts. And we found that it's much harder to build infill in most places because the regulatory climate today supports not building infill but building greenfield.

As a result, we came up with 10 recommendations to reap maximum benefit from infill. And we based those first on developing some guiding principles to provide a policy basis for the infill incentives and regulations that you might develop.

We believe that environmental benefits that I'm going to show you in a few minutes can really provide the foundation of that policy basis. For those of you who are policymakers – in my other life, by the way, I am a City Council member for the City of Boise, so for those of you who do

have a decision-making capacity on policy, oftentimes, those policies, if they are without some good foundational basis, are very difficult to implement. So we think the environmental benefits can provide that.

Slide 13: Why Infill

Elaine Clegg: On why infill is an important strategy, the fourth most recognized factor that we found in the literature was that it protects the environment. That environmental protection, as I'll show in just a few minutes, takes a variety of forms.

Slide 14: Consequences of Infill

Elaine Clegg: There are also consequences of infill. And although most people talk about the negative impacts, a lot of NIMBY opposition – fear about increased traffic, fear about “those people,” fear about parking issues, etcetera – the study that we've done shows that, really, those fears are generally unfounded. And, generally, from infill, you find positive consequences; and one of those is improvement to the environment.

Slide 15: Infill Provides Environmental Benefits

Elaine Clegg: So how does infill improve – provide those environmental benefits? Well, we've found these factors on how that happens. And I'll go through them one by one.

Slide 16: Environmental Benefits of Infill: Recycle used land, save fringe land

Elaine Clegg: Infill can recycle land that has already been used once. And if you do this, the other benefit to that is that you can save new development on fringe land. What that does is reduce the demand to extend new infrastructure and environmental consequences of extending that.

Also, by reclaiming this existing developed land, it makes the region more compact. Rather than this being a space that you have to drive through in order to get from where you live to where your job is, it's a place where you can live and is much closer to your job, otherwise, or other daily services.

Slide 17: Environmental Benefits of Infill: Avoid Extending New Infrastructure

Elaine Clegg: The other piece of that is that you avoid extending new infrastructure out into the fringe. This is a map of the Boise region. We did a study in 2000 that showed that the planning that was going on at that time was not working. Everything in pink in this map, which is inside for the most part developed area – the lines on the map show what we call our area of city impact, which, in this region, functions to some degree like an urban growth boundary – everything inside those areas in the pink was being developed in 2000 at a lower density than what was being planned for. And everything in blue – which, as you can see, is mostly outside those areas – was being developed at a much higher density than what was being planned for.

We didn't think this was a very good pattern. And we worked hard to change it. So we did a scenario planning process to produce a new regional plan.

Slide 18: Environmental Benefits of Infill: Avoid Extending New Infrastructure (cont.)

Elaine Clegg: And in that new regional plan, we predicted that we could, in fact, change that pattern and begin growing at the higher densities within those identified areas on the map. And we predicted that we could add 75,000 new residents just within the City of Boise, which is the community on the far right of the screen, the bigger one, within the existing boundaries. And since most of Boise – the white parts on the upper part are foothills land, which will never be developed, and the gray is already developed. So, as you can see, most of Boise already is developed. If we are going to add those 75,000 new residents, then it will be through infill; it won't be through Greenfield development.

The implications, region-wide, of this are that we can save 83,000 acres of land from new development and the corresponding extension of new infrastructure to them. And we can save 1.1 million vehicle miles traveled daily. Not just once, but every day there will be 1 million fewer vehicle miles traveled.

Slide 19: Environmental Benefits of Infill: Reduce Vehicle Miles Traveled

Elaine Clegg: Of course, that has tremendous impact and gets to our next benefit – improving transportation choices by increasing density and mix of use. This has been shown to reduce those vehicle miles traveled. That's one of the things that 1.1 million is based on. One of the ways that we're going to increase density and improve mix of use is through infill, at least in this region.

Slide 20: Environmental Benefits of Infill: Reduce Vehicle Miles Traveled (cont.)

Elaine Clegg: Higher density in the urban core is one of the primary things that we have been recently pursuing. These five projects have all been completed within the last five years. They are all within the urban core of Boise or within blocks of it and have added 1,500 residential units to that urban core, which I mentioned had only 5,000 to begin with. So this was a big change, and it's now providing the kind of density to help support other changes like improved transit.

Slide 21: Environmental Benefits of Infill: Improve Air Quality

Elaine Clegg: We know that infill can improve air quality, as well. This region does have an air quality problem. We're on the edge of non-attainment for both ozone and PM2.5. With infill, we can reduce the number of miles traveled, which will also reduce the related emissions of those miles traveled.

We have a corresponding study to the other one that shows that if we can reduce those miles traveled by the million, that it will have a tremendous effect on our ability to stay out of non-attainment on air quality.

Slide 22: Environmental Benefits of Infill: Reduce Improve Air Quality (cont.)

Elaine Clegg: But don't take my word for it. The EPA did a study of how the lower vehicle miles traveled does relate to CO₂ emissions, and particularly how it relates to those with using infill. And in these three regions – Denver, Charlotte, and Boston – as you can see, as vehicle miles traveled went down because of infill, the resulting changes in both travel resulted in changes in emissions as well as congestion. So there is a side benefit that is not environmental, but, certainly, people enjoy not sitting in congestion. But the VOCs and the CO and the NO_x that will be reduced if we can do these infill projects is significant.

Slide 23: Environmental Benefits of Infill: Improve Water Quality

Elaine Clegg: Infill can improve water quality. In the studies that we looked at, the literature review that we did showed many instances of infill happening on land that had previously been developed. You saw those slides in the beginning of the skipped-over land in Boise. Most of those were developed at a time when storm water runoff was not factored into site design, and so sites were just paved over with nothing except dumping the storm drainage right into the storm drain system.

When you infill, you can go back to those sites, introduce bio swells, introduce green roofs, and other kinds of things that really can have a dramatic impact on water quality. We have a particular project in Boise that I didn't show it in the other infill. This is an office infill project in downtown. It's a platinum LEED building. You can see some of the other environmental impacts such as 65 percent less electricity use, 80 percent less water use.

But the big thing that I wanted to talk about here is that this building recycles storm drain runoff from a five-block area in downtown. So it takes all of the storm drain runoff from the block it sits on as well as the blocks around it, runs it through a gray water system that runs into the building, and then uses that gray water to flush all of the toilets and do the kinds of things that you can do with gray water inside of a building. It then takes its own gray water afterward and cycles it through a biofilter before putting it back into the storm drain system. So this particular building has had a tremendous impact on water quality in downtown Boise.

One other mention is that Boise has one of the largest geothermal heating system utilities in the Country. This building uses not the first run of the geothermal heating. So we take geothermal water out of the ground, we run it through buildings, and they heat it with it. The Banner Bank Building actually uses the second run. So one building has already used this water. It comes out of that building and goes into the Banner Bank Building; and the Banner Bank takes some of the rest of the heat out of it before it puts it back into the reinjection system. So there are lots of environmental benefits that can accrue.

Slide 24: Environmental Benefits of Infill: Uses Less Energy

Elaine Clegg: This is an interesting thing – We found only a few studies that have been completed, but all of them that we have seen so far really point to the fact that more dense

development uses less energy. Shared walls and smaller spaces are easier to heat and use much less energy to heat. So when you do – these are three infill projects in Idaho, two of them in Boise, one in the Wood River Valley. When you live in these units, not only are you helping the environment but you're helping your pocketbook, as well, because you'll be using less energy. Individually, in your own life, it will cost you less, and your housing costs, overall, will go down.

Slide 25: Environmental Benefits of Infill: Clean-up contaminated properties

Elaine Clegg: And then, finally, on this part, infill can be used to clean up contaminated properties. This was a warehouse that had sat empty in downtown Boise for nearly 10 years. It did have some contamination problems in it. There was a dry cleaner in it at one point, as well as an oil tank somewhere on the site from a long-ago use.

So when this building was redeveloped, they went in and cleaned up that contamination. They got a silver LEED certification for it. And they also did a really innovative storm water management system to take the storm drainage that had previously simply gone into the storm drain system and filter it onsite. So that's another environmental benefit that can accrue.

Slide 26: Barriers to Infill

Elaine Clegg: There are a lot of barriers, however, to doing infill. There are high costs. There is opposition. The one thing that local governments can perhaps change the most quickly and easily is local regulations and the approval process. If you can change local regulations to support infill rather than discourage it, and make your approval process for infill more efficient, quicker, and easier to get through than it is for greenfield development, then you can provide an incentive for it.

Slide 27: Recommendations to Encourage Quality Infill

Elaine Clegg: So, based on those factors, we made recommendations for how to encourage infill. All of these are online on the Idaho Smart Growth site that was on the front page. The first thing that we said was that we need to develop guiding principles as policy basis. I already talked about how the environmental goals can really provide that foundational basis.

Slide 28: Develop Guiding Principles

Elaine Clegg: Those guiding principles – we've found other regions that have worked very hard to develop those. We are working hard here to do the same. These are two examples that we found.

Slide 29: Recommendations for Quality Infill

Elaine Clegg: And then, finally, there are a lot of other things that you can do – specific things that you can do – to encourage infill in your area. And these are the 10 recommendations that we came up with. We think that they don't really stand alone. You really have to look at all of them

and hopefully pick the ones that are highest priority in your region, but don't ignore the others. And, with that, I can turn it back over to our host. Thank you.

Slide 30: Questions?

Neelam Patel: Thank you, Elaine. That was a great presentation.

I'd like to now turn it over to Chris Zimmerman from Arlington County. But before I do, I would just like to remind people to submit their questions as they come up. Include the presenter that they are directed to. Chris, if you're on the line, take it away.

Arlington, Virginia – Smart Growth in Arlington – A Brief Overview

Slide 1: Title Slide

Chris Zimmerman: All right, let's see – I clicked the button that said, “Show my screen.” Can you see it?

Neelam Patel: Yes, we can.

Chris Zimmerman: All right, very good. Thank you very much. I'm going to talk a little bit about how we practice Smart Growth here and the results that we've gotten.

Slide 2: David Owen Quote

Chris Zimmerman: The point has perhaps been made already in the previous presentations, but just to kind of make it at the outset, some people may have seen quotes from David Owen, who argued that the most green place in America, in environmental terms, is the City of New York. That might be a little counterintuitive for some folks, but it basically makes the point that living more compactly greatly reduces the generation of greenhouse gases far more than living in the countryside and doing other things that you might do.

Slide 3: Reid Ewing Quote

Similarly, Reid Ewing from the University of Maryland pointed out that reducing driving is a key part of lowering emissions, and that the best way to do that, really, is to build the kind of places where it's possible.

Slide 4: Arlington – Map 1

So my community is one of those places, and that's what I'll say a little bit about. I'm going to go fairly quickly through some of these slides. But in case you don't know where we are, we're the other side of the river from Washington, D.C., part of the original District of Columbia, a geographically small place. And although it is a country by styling, it is 26 square miles and in many ways more of a city.

Slide 5: Arlington – Map 2

Chris Zimmerman: The size of the county, in people terms, is over 200,000 in population and a like number of jobs. So that's an important thing. We have a very large and active economic center here, partly as a result – actually, largely because of a result of the things that we did that I'm going to be talking about. We have about a little over 100,000 housing units, more than half of which are multi-family housing.

The daytime population, because of people coming to work here, is actually even higher, more like 280,000. But in this county, there are about 40 million square feet of private office space, which makes it a very big downtown, indeed bigger than many significant cities around the Country, most of which has occurred since we implemented transit-oriented development and basically implemented the transit system.

The transit really revolves around these two corridors on which the metro line runs, that were opened beginning in the late seventies, but really from about 1980 on. In these two corridors that you can see on that map, the orange line corridor up here in the north, with five stations, is the Rosslyn-Ballston corridor, and the blue-yellow line corridor – Jefferson Davis corridor with Pentagon City and Crystal City in between National Airport and the Pentagon.

They constitute a gray area, as you see, marked on our land use plan, constitutes about 10 percent of the county's land area. But they are really where most of the action occurs. In fact, about 90 percent or so of our development is in those spaces.

Slide 6: The R-B Corridor (Orange line)

Chris Zimmerman: The R-B Corridor – the Rosslyn-Ballston Corridor – is the one for which we won that award that was referred to earlier – the EPA award – which constitutes five stations and has about 22 million square feet of office space just in those gray areas that you see, about three-quarters of which has been added since the orange line opened in 1980. And the housing units are approaching 30,000; about four times as many existed before the subway.

Slide 7: The J-D Corridor (Blue and Yellow lines)

Chris Zimmerman: The other corridor – the Jefferson-Davis Corridor – with basically two stations has around 12.5 million square feet of office space and about 12,500 housing units.

Slide 8: “Smart Growth”

Chris Zimmerman: And the reason that it's Smart Growth is because the density is confined, basically, to those corridors around transit. I mentioned that we have 40 million square feet of office space. The key part is that over 90 percent of that occurs in those two corridors. Outside the corridors, as you will see, we've basically maintained the kind of land use pattern that existed before, which is single-family houses, garden apartments, parks, that kind of thing, and a fair amount of green space.

Slide 9: “Bull's Eye” Concept

Chris Zimmerman: This started in the 1970s. This is a planning document that goes back to 1972, in which they laid out the idea for the Rosslyn-Ballston Corridor with its five stations planned. And, as you can see, it had the Bulls-eye Concept. The term “Smart Growth” didn't exist, but their idea was can we concentrate the development on the bulls-eye that is the metro station, and then put that on the land use plan, which is what they did.

Slide 10: Arlington County Land Use Plan

Chris Zimmerman: And this is a quick snapshot of the land use plan. But what you see that is important is those ends are metro stations, the subway stops. And the areas on the map, as you can see, that are in the dark, heavy line there – are the actual sectors defined on the land use plan that drive a lot of the development planning and for which there are specific plans for each sector.

Slide 11: Aerial View

Chris Zimmerman: Now, here is an aerial view. You are west of that point in Ballston on the West End, and you're looking east. So if you look up at the top of the picture, just to orient yourself, this is the Potomac River up here in blue, this is the Lincoln Memorial, the Washington Monument, the Capitol. So Arlington is on this side. And up here, at the top, is Rosslyn, and then Courthouse, Clarendon, and Virginia Square, and Ballston in the foreground.

This aerial is actually a few years old now, and there is a whole lot more development even than shows up in this picture. But there are only so many times that you can get an aerial taken. But the key thing here is to understand that the metro line is running under this. And that's the spine. And you can see how the density hugs that line. If you look around it, you will see an awful lot more green and lower density to the outside, north and south; and those are the parts that have basically stayed pretty much the way they were 40 years ago.

Slide 12: Benefits of TOD – Transit Use

Chris Zimmerman: Let me talk about some of the benefits. Some of this data is actually few years old now. But this is from the last Census, so it can be interesting to see what's happened in 10 years. But the national average is less than five percent of people go to work on transit or did in 2000.

In neighboring Fairfax, which is a big suburban county of 400 square miles and over 1 million people, right next to us, that number is about seven percent. In Arlington, in 2000, it was 23.3. It's likely to look higher when we get new data, but you can see the difference already. And, frankly, a lot more people who walk to work – double the national average and five times that found in suburban Fairfax. But the numbers get even more dramatic when you look at the corridors themselves.

Slide 13: Benefits of TOD – Car Ownership

Chris Zimmerman: Let me look at another data point here – car ownership – just, again, another indicator. Ninety percent of U.S. households had a car in 2000, and 55 percent had two or more cars. In Fairfax, again, 96 percent had at least one, with two-thirds having two or more. In Arlington, 12 percent had zero cars, and less than 40 percent have two or more. Again, these are comparable places right next to one another, both fairly affluent, but you can see a much lower rate of car ownership.

But if you go into the corridors themselves in those metro areas, now 18 percent have zero cars while only 25 percent have two or more cars. So it's really striking, especially when you consider those are not low-income areas but high-income areas. So this is choice.

And 40 percent of the people living in those corridors are using transit. Ten and a half percent are walking or biking, with a couple percent working at home. This means that a majority of the people are not driving to work every day. It's a minority that drives to work every day, which is pretty amazing for an area outside of any major city.

Slide 14: Transportation System Performance

Chris Zimmerman: We found that, in terms of traffic, we've had a fairly modest growth. There was tremendous growth in the region, and we've had growth on our interstates with people passing through. But when we look at specific streets, it's been fairly stable to moderate increases less than those that you would have found corresponding to the growth in density. So, again, tremendous increase in density – commercial and residential. But traffic has not grown that much.

Slide 15: Transportation System Performance – Chart 1 – Five Major Intersections

Chris Zimmerman: And you can see this a little in this chart, which picks five major intersections. And each bar corresponds to a decade. So the counts that were made from 1970, 1980, 1990, and 2000 show that, at a few of them, you see a little bit of growth and then actual falling off. This is the most growth, and yet even that is not anywhere near proportionate to the growth in the density in the corridor. This an intersection right in the heart of Clarendon, in the middle of that corridor I showed you. And in a few of them, it has really been flat. So it's one indication.

Slide 16: Transportation System Performance – Chart – Average Weekday Auto Trips per Household

Chris Zimmerman: Here is more recent data from a regional household transportation survey that was just done in the Washington area, over the last couple of years. And if you look at households and say, "How many car trips do they take per day," these are suburban counties all around the region – Fairfax, which I mentioned, which is about five and a half; Prince William, a little farther out, is almost six; and, in Arlington, of course, it's lower than all of them at four. But if you look at these corridors in the R-B Corridor down below three, and in J-D Corridor just above two, you can see that it's a pretty striking difference from one place to the next.

Slide 17: Transportation System Performance – Chart – Vehicle Miles Traveled per household

Chris Zimmerman: Another way of looking at it is vehicle miles traveled. In suburban Fairfax, it's 35 miles a day that the average household is driving. In Loudoun and Prince William, it's up over 50. Over the Maryland side – Montgomery and Prince George – again, it's between 30 and 40. In Arlington, it's around 20. And if you look at the metro corridors, it's below 20, the

lowest being J-D Corridor at around 12 or 13 miles per day. So, again, it's a pretty striking impact.

Slide 18: Metrorail Access at 4 Suburban Orange Line Stations

Chris Zimmerman: If we look at things like how people use the transit that you build, there is a big difference, also. That orange line that I showed you – we have those five stations that are the Rosslyn-Ballston Corridor in Arlington. There are then four suburban stations. They are aboveground stations with essentially parking lots and parking garages around them.

They have pretty good ridership. In fact, the end-of-the-line Vienna in Fairfax has very high ridership. But how are people getting there? Well, they're getting there by driving, basically, as you can see in this pie chart, where 57.6 percent got there by driving and less than 15 percent got there by walking.

Slide 19: Metrorail Access at 5 R-B Corridor Stations

Chris Zimmerman: If you look at the Rosslyn-Ballston Corridor stations, almost three-quarters of the people got there by walking to the station. And those who drove are less than 13 percent. So that makes, obviously, a big difference as well because suburban trips all involve the cold start of a car, which, of course, generates emissions of every kind.

Slide 20: Outer Orange Line Stations: Ridership by Time Period

Chris Zimmerman: It's also interesting to see the usage of those stations. Again, if you go back to those outer stations, what you're seeing is that ridership is pretty good, but people are all going in one direction. In the morning, they're all coming in, which is what you're seeing over here, with very few people leaving. In the evening, they're basically all going out. That's because there is really nothing there but parking lots.

Slide 21: R-B Corridor Stations: Ridership by Time Period

Chris Zimmerman: If you look at the Rosslyn-Ballston Corridor stations, you have almost balanced A.M. and P.M. entry and exit. In these stations, people are going in and people are coming out; in the morning or in the evening, it's both directions, and that's really because of the mixed-use development that we have achieved.

Slide 22: Metro Sector Development – Key Features

Chris Zimmerman: So let me take a look at those sectors and how it was done. Here are some of the key features.

Slide 23: Dense development concentrated close to Metrorail stations

Chris Zimmerman: If you look in the air from Ballston – the picture I showed you before was looking kind of this way and back, but this is from the air – the Ballston-Virginia Square sectors.

And you can see all around a lot of development clustered, and then all around it, again, the lower-density, fairly green single-family houses, garden apartments, parks, schools, and things like that. But the density is concentrated in here, around two metro stations. They are roughly where those arrows are pointing to.

So the area around it goes out about a quarter to a third of a mile from the stations. And that gives you ideal walking distance and the best way to capture transit riders. This is because most of your ridership is going to come from that first quarter mile. Seventy-five percent of the ridership is going to come from within a quarter of a mile of the station, and our plan reflects that.

Slide 24: Mixed-use design

Chris Zimmerman: Another key part and the key to getting that in-and-out pattern – the usage of the stations with A.M. and P.M. being fairly balanced – is the mixed use. And if you look at a station – this happens to be Courthouse, where I’m speaking to you from, actually – if you look around it, what you will see is a mix of residential buildings, commercial office space, retail on the ground floor, some civic space. This over here is the building that I’m in right now; it’s the County government center. And then there are parks. And if you were to walk away from here, to the right just a little bit of this picture, you would be seeing single-family homes and parks because, again, you’re getting away from it. So that’s a key feature of the development.

Slide 25: Clarendon – From car-dominant...

Chris Zimmerman: We’ve also really moved from a car-dominant landscape. This is kind of what it looked like before the metro opened and even a few years after the Metro opened in the Clarendon area. And you can see backs of buildings, parking lots, that sort of thing.

Slide 26: Clarendon – ...to pedestrian-friendly

Chris Zimmerman: If you go to that same place now, this is what it looks like, with ground floor retail, sidewalks, on-street parking, and that kind of thing.

Slide 27: Clarendon – With good transitions...

Chris Zimmerman: And good transitions so that you go from dense – a tall building like you see – and then to townhouses, and then on to the single-family neighborhoods so that it’s a smooth transition and very comfortable.

Slide 28: Density taper

Chris Zimmerman: And as I pointed out, it tapers away. So, up here, where the building is where the government center is, we’re right on top of the metro station. And so you see big buildings. As you move out, the city tapers down to townhouse and ultimately to single-family.

Slide 29: Smart Growth outside the Corridors

Chris Zimmerman: Now, I want to say that we've tried to do similar things, not just inside the metro corridors but also outside the corridors because there are going to be places that are a long way from metro. And the same principles can apply, not necessarily at the same level of density though density does play a role. So we try to apply that in a couple of different places using compact development, although at lower density, again, than in these metro sectors, it is dense by comparison with what you see in a lot of suburbia. It's enough density to support a walkable environment, which is what we're really getting to. There's no reason not to have walkability anywhere. Whether you're in a small village, in a rural area, or a big city, the same principles really apply at a different scale. And a key, of course, is providing transit.

Slide 30: Shirlington – Title Slide

Chris Zimmerman: So I'll give you two examples. One is an area called Shirlington, where there was essentially a kind of strip shopping center that was one block that has in the last few years turned into a mixed-use development that is right next to a major highway.

Slide 31: Shirlington - Map

Chris Zimmerman: As you can see on this map, it's away from our metro corridors. Here is that orange line corridor that I was talking about, and here is the other one. This one is out here. It's adjacent to a major highway because I-395, a major interstate, runs right through here. And it has good bus access even though it doesn't have a metro station.

Slide 32: Shirlington - Aerial

Chris Zimmerman: This is an aerial again. That's the highway I was referring to. And over here is the area. As you see in this picture, this is a great, big parking lot. This was done midway through the course of the development. And you can see only part of it developed. But you'll see what we've done with it.

Essentially, we extended a street through the parking lot and created density on what was just acres and acres of asphalt before. It's a complete development with kind of everything you want in a community. And we also included a new transit center. It's about 25 acres.

Slide 33: Shirlington – Before Picture

Chris Zimmerman: This is what it looked like before when it was built in the 1940s. And it was just really one row of one-level stores, with parking lots around it and a big department store at the end.

Slide 34: Shirlington – Popular restaurants, movie theater

Chris Zimmerman: This had evolved into a place that was very popular for restaurants but not a lot else. There's a movie theater and restaurants but, a few years ago, that was kind of all they had because there was no other business, there was nothing else to bring people there.

Slide 35: Shirlington – 1989

Chris Zimmerman: This is an aerial that kind of gives you an idea. This is the highway here, and this is the area we're talking about. And this is what it looked like a few years ago with, again, just a few stores here, a big department store that went out of business and got torn down about 15 years ago, I'd say. And then all of this became parking lot. But as you can see, all of those areas that I've highlighted were basically surface parking. That's what we had all over – surface parking. And we planned to put a transit center in here, which we've since done, and essentially built out the rest of it.

Slide 36: Shirlington (cont.)

Chris Zimmerman: So on what used to be a parking lot, we created a new street here, put buildings all along it, put parking garages behind the buildings. And then where there was an existing movie theater, we used liner retail. So instead of a blank wall, you have retail along the street.

We put a civic function, as well. But at the end of the block here – this is one part that the county did – there is a local-branch library here and a theater above it. And then we had to do, basically, a land swap to make that work with the developer.

Slide 37: Active sidewalks

Chris Zimmerman: One of the keys is activating the sidewalk with, as you see, seating for restaurants, a very permeable façade. So you can see in and out, see people come in and out. It's very lively.

Slide 38: Residential units over retail

Chris Zimmerman: And then residential units are located over the retail.

Slides 39-41: "Liner" retail

Chris Zimmerman: So this gives you a feel of the environment that has been created.

Slide 42: Shirlington (cont.)

Chris Zimmerman: In one end here, we have – right by the library, you also have a grocery store on two levels and, over that, condominiums and rentals right next to it. The last phase of this whole development was just completed with a hotel that opened about three months ago, I'd say, now.

So now what you have is a community within a couple of blocks. It's got 1,000 residential units, 300,000 square feet of retail, almost 600,000 square feet of office space, a library, and a theater, and 100 hotel rooms. And all of that is in about two blocks that are right next to a highway in

the area about equivalent to a quarter of a cloverleaf, which is about what – one-quarter of a cloverleaf takes up about 25 acres. And we basically tried to take advantage of that to do something other than be just drainage.

Slide 43: Shirlington – Transit Center

Chris Zimmerman: Included next to the highway is the transit center, which is serving now about 400 buses, 2,000 passengers per day, which takes advantage of the highway location to get some transit in and out of here.

Slide 44: Columbia Pike – Title Slide

Chris Zimmerman: And then the final example I want to give is an area called Columbia Pike....

Slide 45: Columbia Pike – Before Picture

Chris Zimmerman: ...which is an old strip – it was becoming a strip, basically – that looks like many other places in America – this was a few years ago – that was off metro. It was originally to have had a metro line and didn't get the metro line, and it wound up looking pretty much like this, basically becoming very car-oriented.

Slide 46: Columbia Pike Initiative – Grocery Store Picture

Chris Zimmerman: As you can see from what we had, this was an old grocery store. It basically turned a blank wall to the street.

Slide 47: Columbia Pike Initiative (cont.)

Chris Zimmerman: Our goal was to make it into something that was a vibrant, walkable community, using new tools and a zoning concept called the form-based code, and to take advantage transit. Right now, we have good bus service. We tried to really exploit that. At the same time, we're planning for a streetcar, which you see depicted in the picture there.

Slide 48: A decade of planning

Chris Zimmerman: We did a lot of planning over about the last decade or so, concentrating on areas that were the key kind of commercial centers first. But we did a number of different things.

Slide 49: Columbia Pike

Chris Zimmerman: We came up with a plan for what we would describe as medium-density development. It might be high-density to many other people, with buildings going up to basically about six stories. In our metro sectors, we have buildings that are 20 stories and so on, but this is smaller – two to six stories, basically. But pedestrian- and transit-oriented, taking advantage of the bus corridor, using an overlay district with a form-based code approach.

Slide 50: Columbia Pike Revitalization District

Chris Zimmerman: We planned out the specific areas. As I said, these were commercial nodes, and they were plotted on the land use plan, and then the overlay applies to them so the developers can take advantage of the form-based code.

Slide 51: Form-based Code

Chris Zimmerman: In that, we planned out things like where street trees go, where the buildings go, all that kind of thing, including some new streets and new parks.

Slide 52: Initial Projects Underway

Chris Zimmerman: This is just an example of a page from the form-based code just to give you an idea. It's a diagrammatic system that makes very clear how big buildings can be, where they go, requirements for windows, and that sort of thing.

Slide 53: Arlington Hardware Site ("The Halstead") – Before

Chris Zimmerman: These are some of the projects. This was a key corner, what it looked like a couple of years ago with some of the legacy buildings we wanted to keep. But, behind, it was just the backsides of the buildings, the power substation, a parking lot, essentially.

Slide 54: Arlington Hardware Site ("The Halstead") – After

Chris Zimmerman: If you go there today, we still have the frontage you see of the legacy buildings. But, now, we have street frontage all the way around with retail on the ground floor on the side as well as on the front, and 170 or so units of housing over this retail. Public parking is underground.

Slide 55: 5500 Columbia Pike (west end) – Before

Chris Zimmerman: Here is another site that was on the West End, where you can see that we had some taller buildings that were pre-existing. But then we had parking lots and this little strip shopping center with a parking lot in front of it.

Slide 56: "5500" – Residential with retail - Plan

Chris Zimmerman: And that was approved for development with an apartment building, with ground-floor retail.

Slide 56: "5500" – After

Chris Zimmerman: And that has been built. It's just recently opened. That's a picture from just a month or two ago.

Slide 57: Columbia Pike Safeway

Chris Zimmerman: And then I mentioned that site with a grocery store, where we had this blank wall, and then it went empty and the Safeway closed it.

Slide 58: “Siena Park”

Chris Zimmerman: And that is now this. That’s the very same corner. It’s just opened, so people are just moving in. This is a lot of retail. Being in the middle of a recession, it may take a while for it to fill up; but, ultimately, it will be filled up. And that’s a lot of storefronts and a much better sidewalk condition than we had before.

Slide 59: Penrose Square

Chris Zimmerman: And then we have a project that is under construction right now, that had a very large parking lot and a very small grocery store. It will become a big grocery store on two levels – one level for grocery and one level for other retail – with almost 300 apartments over it and a large public square. This is one of the key developments.

Slide 60: Penrose Square (financing)

Chris Zimmerman: It managed to get funding under adverse conditions in the middle of the Recession last February, and went under construction. That’s a picture of the construction site some weeks back. It’s actually a couple of stories out of the ground at this point, but it is going up.

Slide 61: Other projects recently approved

Chris Zimmerman: We’ve had a number of other projects approved for this corridor that also illustrate this, some of them smaller ones that will be coming, that are slowed down given the state of the economy. But they are ready to go as soon as the economy picks up again. And we think that once we’ve gotten some of these done and the streetcars implemented, this is going to be another good model of Smart Growth on a different scale that may be more applicable to more places in the Country than our metro sectors may be.

Slide 62: Thank you

Chris Zimmerman: With that, I’d like to thank you for listening. That’s my presentation. I’d be happy to answer any questions. I’ll turn it back to you.

Questions and Answers

Neelam Patel: Great. Thank you, Chris. We have about 10 minutes left for questions, so we'll move right into questions. Nikhil, could you go ahead and begin asking questions to our presenters?

Nikhil Nadkarni: Sure, so our first questions are for Megan. Is EPA working with the National Trust for Historic Preservation to connect Smart Growth with the reuse of existing buildings in a more high-profile way?

Megan Susman: Yes, we are. That's a great question. We've been working with the National Trust for many years now. And historic preservation is a key component of Smart Growth, of building those strong, attractive, distinctive communities where people want to live. And it also really helps with energy efficiency and conservation of resources because you're taking advantage of that existing investment.

Nikhil Nadkarni: OK, the next question – Does EPA have any grants or other support from non-profits that have programs that assist municipalities with Smart Growth planning and implementation tools?

Megan Susman: I know that some of you may have gotten your hopes up hearing me throw around big numbers like \$600 million and \$100 million. But those are coming from HUD and DOT. And our office at EPA is very small. We do not have a lot of grant programs. We do occasionally have some that can help non-profits. But we don't really have any on any kind of schedule. We do have a list on our Website of funding resources for communities and for non-profits. And I'd also urge you to check out www.smartgrowth.org, that also lists some funding resources.

Nikhil Nadkarni: Sort of related to the Department of Transportation grants, could you comment on how much of the TIGER Grant money went to bicycle or pedestrian projects?

Megan Susman: I actually don't know the numbers. The number I have is that I think it was 19 percent of the projects were multimodal. I don't know what dollar amount that translates into. But the DOT Website has a very comprehensive list of all the projects, and it should be pretty easy to find there.

Nikhil Nadkarni: OK, a question on a specific slide – There was a redevelopment in Boston that you assisted. One of the attendees wanted to know where that was, specifically.

Megan Susman: Yes, that's the Egleston Crossing redevelopment in Roxbury, which is near Boston. It's not actually part of it. I don't know that part of the world very well.

Nikhil Nadkarni: OK, and I guess the last question for Megan – Could you provide a reference as to where you can find the statistics on how many homebuyers want compact development, how many renters want compact development?

Megan Susman: The numbers on homebuyers – you can find that on our Website, in the series of white papers that we did. The URL is www.epa.gov/smartgrowth/sg_business.htm. Or you can go to our publications page on our Website and look for a publication called “The Business Opportunity for Smart Growth.” And there is a paper that talks about the market for Smart Growth that looks at all of these different studies.

The citation for the renters, that comes out of research that we’ve seen from the Robert Charles Lesser Company. I’m not sure if any of that has been published. I know that they are doing a presentation here in D.C. as part of our Smart Growth Speaker Series on April 5, I believe. And their presentation will be posted sometime after that. So I can see about getting that reference put up on the Website for this Webcast, once that has happened. And, in the meantime, I’ll look to see if that has been published anywhere else.

Nikhil Nadkarni: OK, moving on to questions for Elaine – Could you please define what infill comprises? Is it the same thing as a brownfield?

Elaine Clegg: We use a definition of infill that it is land that at least 80 percent of the land around it is developed. And it already has services – sewer, water, transportation, and other kinds of civic services – that you would need to put a development on it. It might be previously developed, it might not be. But it is in a place where services are available, and the land around it is already developed.

Nikhil Nadkarni: OK, the next question – Is there a calculation in regards to the cost of sprawl that city councils can use, specifically, based on the cost of supplying city services relative to using infill where services already exist?

Elaine Clegg: The two that I know of – and Megan might be able to provide the link to one of them – one is at the American Farmland Trust has done a lot of cost-of-services analyses around the Country, mostly in partnership with local universities. In Idaho, those studies have been done in partnership with the University of Idaho, which is our land grant university. A lot of them use their extension agency to do those. Those studies are available on the Website of the American Farmland Trust.

Smart Growth America and EPA did a joint project a couple of years ago. And I don’t have the link to it, but I’m sure we could find it, that compared development of a piece of land in a Smart Growth pattern versus in a typical suburban sprawling pattern, and the consequent emissions and use of energy, and GHGs. So I’ll look to see if I can find a link for that.

Nikhil Nadkarni: The next question – While there is a big demand for higher-density living, have you seen any concerns by prospective buyers around new high-density development and the inevitable homeowner association suits against developers?

Elaine Clegg: We get a lot of that. Previous to the study that we did looking at literature on infill across the country, we did a case study project here researching 12 different infill projects that had been on the ground for at least five years, were completed, and were being lived in. And that study found that while there were lots of fears before those developments were built, particularly around parking and traffic and those kinds of things, most of those specific concerns did not come true. And, in fact, surprisingly, traffic actually fell around most of these infill locations. Chris might not be surprised by that because once people have enough density are able to walk and bike to places more easily. But, yes, the opposition continues to be a problem.

The way that we are approaching it in the Boise region is that we're working on a new comprehensive plan. And we broke the City into nine different regions. And we got the neighborhood associations and the homeowner associations in each of those regions together and created a map that we call the areas of change and the areas of stability. Let the neighborhoods identify for us the places where they understood that there were likely to be changes in their neighborhoods and the places where they prefer a more stable pattern. That doesn't mean that there will be no changes in the areas of stability. But it means that those changes will be less intense and lower density, more likely.

So now what we're doing is we've translated that into creating infill areas where we will concentrate incentives to go a much higher density. These are mostly either on – they're all on transportation corridors. Particularly on our bus corridors, we don't presently have any light rail or streetcar. But we're working toward a commuter rail and a bus rapid transit as well as a streetcar. So we're concentrating changes in our zoning code to make it easier to create high density and do those kinds of infill in these areas of change.

By getting the buy-in early before any development is being proposed, and by making the code changes so that the development is by right, we hope – we're not completely through the process, but the idea is that we will reduce the amount of friction between existing residents and developers of infill.

Nikhil Nadkarni: OK, thanks, Elaine. I guess we'll move on to some questions for Mr. Zimmerman. First of all, it looks like you have some narrow street widths shown in the pictures of the Shirlington streets. Was it an issue convincing the Fire Department to approve of these street widths?

Chris Zimmerman: Actually, the Shirlington street widths are not especially narrow. We, of course, have had that question as we've planned streets all over the county. And we have tried to push them down. But, frankly, there is an awful lot of work that shows that, within reasonable tolerances, you have greater safety and less need for fire trucks to be running down a street because of the effect on the number of collisions is significant, and that's a large part of what the Fire Department responds to, after all. So, yes, there are issues in some places. But most transportation departments have tended to build over-wide streets beyond what the Fire Department will insist is necessary.

We've had issues on street width for reasons that even bus operators are wanting them to be wider than sometimes you want. And we try to actually put in yield streets in some of the

neighborhoods in places; and that can be more difficult. But I'd say that we have more issue with citizens who don't always understand that, who think that wider streets are safer and don't necessarily understand that, actually, the opposite is generally the case.

On the other hand, we have a growing number of people who live here who understand this stuff and can make the argument for us, which is part of why it works here, which is engaging the community to the point where they are educated that they own the plan and they understand it.

Nikhil Nadkarni: OK, our next question – So in regards to Arlington building the parking, commercial buildings, and residential development in Shirlington, how did the municipality go about getting this developed?

Chris Zimmerman: Well, in this case, in some ways, it was simpler, not to say easier. But it was simpler because, in that case, there was one landowner. There was one company. A real estate investment trust owned the whole shopping center. So they had the problem of what to do with this land and the fact that, with the department store having gone away, all they had supporting it was one movie theater basically bringing in people to eat at restaurants. And so they were looking to do something.

And at that time, it was a company that was looking at more urban-type developments and, in fact, had done our Pentagon City – something I didn't show in the presentation – but our Pentagon Row development, which is another example of new urbanist development. And so, then, it was mostly a matter of shaping it.

They wanted us to be involved. And the main things that we brought to it were the civic presence. They wanted to bring in the library. That's why the deal with important, they needed space to be able to do parking. So we switched out some land for them so they could build a parking garage and also provide some parking space that we needed. And we moved the library in and then we did the theater over it in a deal with a theater company that operates the theater, which is actually a regionally and nationally prominent theater, which helped them to bring in an anchor. So that was part of it, as well. The other ones like Columbia Pike are complex in a different way because you have lots of different ownership.

Nikhil Nadkarni: OK, the next question – From some of the slides in your presentation, this attendee asked, what I see appears to be a lot of high-end housing and offices. Are moderate- to low-income people also included in the benefits of this Smart Growth?

Chris Zimmerman: That's been a major preoccupation for us. Affordable housing is one of the biggest issues – if not the biggest issue – year after year here. Arlington is very concerned because we have been very prosperous in the last 30 years, and so it's a very affluent community on average. On the other hand, we have a large portion of our community that is not. We have many people in our school system bringing reduced lunch. We're a big immigrant community. More than a quarter of our population was born in a different country. We have over 100 different languages spoken by the families of kids who go to our school system. So there is a significant part of the population that is not high-income, and we want them to be able to be here.

So we have had to incorporate a number of different provisions to maintain affordable housing for low- and moderate-income people. We've done that in a number of different ways including the maintenance of our own revolving loan fund that we call the Affordable Housing Investment Fund that we use to leverage other monies in working with non-profits in particular, but also with commercial developers to get committed affordable housing units. And, right now, we've got about 6,000 units of committed affordable housing in the County as a result of this. It's about 14 percent or so of our rental stock that is committed affordable housing.

We've incorporated things into, for instance, the areas that have the sector plans, the areas around the metro stations. We put in a provision a few years ago that essentially requires affordable housing to be included with a site plan proposal for development for any of those big developments that you've seen. That can either mean included affordable housing on the site. But it can be offsite. There is a provision for them to buy out; but if they do that, then they have to put cash into our fund that we'll use to secure more affordable housing.

But it's something we're working with all the time. And, right now, in fact, on our Columbia Pike Corridor, which has a great repository of affordable housing – and we want it to stay that way even as it redevelops – we're engaged in a big community planning effort precisely for that reason, so that as the communities develop, we've got a way to maintain as large a stock of affordable housing as possible.

Neelam Patel: I'd like to thank everyone for participating on the Webcast. Nikhil, thank you for asking questions. I'd like to thank our speakers Megan, Elaine, and Chris.

In closing, I just would like to reiterate the Smart Growth Guide that is posted on the Local Climate and Energy Website. This guide provides information on how local governments can plan, design, and implement Smart Growth approaches in their communities. And it's a great way to get started in your communities on some of the concepts that you've heard today through our presentations.

I would just also like to point out that some of the EPA-DOT-HUD partnership principles that Megan mentioned and that both Elaine and Chris embodied in their Smart Growth programs can be supported not only through the Smart Growth Guide, but we do have two additional guides that help to address some of these principles, including energy efficiency and affordable housing, a concept that Chris just described in answering the last question. And, also, in the near future, in the coming months, we will be releasing a guide on transportation control measures that can help with planning transit-oriented development in your communities. So I encourage you to check those out on our Website. And there are multiple other guides that can help with complementary greenhouse gas mitigation strategies – for example, energy efficiency in K-12 schools and reducing urban heat island effects.

So I hope that you did enjoy today's Webcast. And for the questions that we did not get to today, we will be asking our presenters to answer those. And we will post them on our Website when we do post presentations. The last piece of information that I think will be helpful is that, after today's Webcast, we will be sending out an e-mail with the presentations that you saw today, and also a link to the Smart Growth Guide that I have mentioned.

So thank you again for joining us. And we look forward to having you on our next Webcast April 29 on Smart Grid. Take care.

Operator: This concludes today's conference. You may now disconnect.

END