Eva Wong: Thanks Dru. And I'm sorry about the beeping sound. Could everyone be sure to put their phones on mute by pressing *6 or using your mute button? It looks like you already have one question from A.J. at USC. But he didn't actually type in a question.

A.J. at USC: I just wanted to ask about the approach that you took in simulating the models? What parameters did you consider?

Dru Crawley: You mean for the building itself?

A.J. at USC: For the simulation.

Dru Crawley: For the simulation, I started with information from the Commercial Buildings Energy Consumption Survey, which comes out of the Energy Information Administration. And it looked at the buildings, the small offices in the lowest quartile of that, to see what the typical size and floors were. I then applied the ASHRAE Standard 90.1 which has the requirements for energy in the U.S., and used that to set the baseline for a lot of the other information. I compared it back to other studies that we've done – other real buildings – to make sure that the building was reasonable in terms of energy consumption.

A.J. at USC: Thanks.

Eva Wong: Are there other questions? Well Dru, when do you expect to finish your research? Just curious for keeping an eye out for it.

Dru Crawley: I'm expecting to finish this summer – I have all of the analysis, or I have all of the runs done at this point. And what I've done – I've got 25 locations throughout the world, large population centers with these three different cases, and now it's just a matter of getting the data – later this fall is my guess.

Eva Wong: Ok that's great. Well thanks a lot, we appreciate it. And if people later on have follow-up questions, please feel free to email Dru – I hope that's okay, Dru, for me to say that.

Dru Crawley: Sure.

Eva Wong: And now for our last speaker we have Sara Espinoza. And she has been on our call just a couple of months ago to talk about a course that they've been developing, and now it's been developed and it's online. So Sara, do you want to go through it a little bit?

Slide 46: Weather and the Built Environment: Free, interactive, one-hour online course

Sara Espinoza: Yeah, and I'll actually be very brief, I just have a couple of slides. As Eva mentioned, I'm with the National Environmental Education Foundation, and we have been working for several years now to create environmental education materials for

broadcast meteorologists that are tied to weather reporting, but sort of extend to other environmental science concepts. And as part of that effort we have been working with an organization called the Cooperative program for Operational Meteorology, Education and Training, which is also known as COMET – they are part of the University Corporation for Atmospheric Research out in Boulder – to develop a series of short online environmental education courses that are tied to the weather. And what we've found is despite the fact that these were designed originally for TV meteorologists, they're really great resources and sort of topic primers for anyone who is interested. So I just wanted to quickly introduce the Weather and the Built Environment course, which we've just released about two months ago, now to this group as something that may be interesting to you or to some of your constituencies. It's free, it's online, and it's highly interactive. It's really designed for busy professionals – so it's broken down into short units and even shorter lessons that you can walk away from and come back to as you would like.

Slide 47: Weather and the Built Environment

Sara Espinoza: This second slide just outlines the main topics that are covered in this course. We go over past and current U.S. growth trends – sort of how have suburban and city areas changed, and how are they projected to change in the future. And then the second two units of the course focus on how weather and the built environment relate. So the second unit really focuses on wet weather; how increased pavement increase flooding in a city, and how might that impact local water quality. And then the third unit focuses in mostly on urban heat island effects, and a little bit on air quality sources and conditions. The whole course takes about an hour to work through. All of the graphics that are in here are copyright-cleared, so they're available for your use. And we're actually working on also putting these into podcasts, so that they could be downloaded into an iPod or into iTunes as well.

Slide 48: Weather and the Built Environment

Sara Espinoza: So I'm happy to answer any content questions, but as I said I just want to very briefly bring this to your attention. The link to access the course is on this last slide. It's free – you do have to register with COMET, but that is also free – and really available to anyone who will find it useful.

Eva Wong: Thanks Sara. Questions anyone? Well I guess with that we can start with going around with any updates. To keep this kind of organized, I was thinking maybe if you have an update you can just show through the "Feedback to Presenter" indicator – maybe change your color from green to purple as if you had a question, and then I'll call on you. But I know for an update I was going to ask Jim Yarbrough from Region 6 to talk a little about their work they're doing, just to kick off the update process.

Jim Yarbrough: Okay, Eva. I think just very briefly – I think my colleagues Kevin Lefebvre from the city of Dallas, and David Hitchcock from Houston Advanced Research Center, and Holly Wilson from OAQPS are on, if I'm reading that correctly from the participants, so please chime in. But very briefly – the city of Dallas, the North Central

Texas Council of Governments, and EPA are working together on something called the Dallas Sustainable Skylines Initiative. We have seven projects we're trying to complete within a three-year period. One of the projects is focused on urban heat island and stormwater mitigation. And the Houston Advanced Research Center is under contract through Eva's office to provide really a look at the critical areas of urban heat island influence and impermeable pavements in the Dallas-Fort Worth area. And based upon David's work at HARC, which is going to be finished I understand pretty soon, the initiative is going to sponsor a roll-out to the private sector really with three foci. One: reforestation to address regional aspects of the heat island. And then number two and three: reflective roofs and reflective pavements. And, along those lines, we've been really fortunate that the Texas Trees Foundation has really stepped up to work with the city of Dallas, as well as the Urban Forestry Advisory Council to the City of Dallas, to help sponsor really a very interesting one-day event that's going to sort of accompany David's report roll-out. And I guess, David that's supposed to be in June at this point?

David Hitchcock: We hope so. We need it to be a lot hotter there than it is right now, though.

Jim Yarbrough: Right. And then we'll have similar roll-outs to focus on reflective roofs and reflective pavements. And regarding pavements, we've been encouraged that several local industries and industry associations have stepped up and indicated that they would like to take part in this roll-out, and perhaps later on in the year sponsor a seminar to talk about all different kinds of cool pavement options for the Dallas area. So anyway, that's taking off and we're encouraged that the private sector is responding.

Eva Wong: Thanks Jim. Does anyone have questions for Jim?

Demitric: Yeah, Jim, it's Demitric – sorry to jump in there Eva – because you've connected the urban heat island to stormwater mitigation, is it right to assume that the reflective pavements are all or some pervious?

Jim Yarbrough: Yeah, in fact we are looking at cool permeable pavements. And so far the industries that have indicated an interest are representing different products, but very permeable concrete pavements are one option. Even grass pavers are another that may be featured at the seminar later in the year. So we're not just focusing on one, but I think we're looking at various options that can be presented to the private sector to look at cost as well, because – as has been explained – in Texas we don't have necessarily the demand yet to force down the cost for some of these alternative pavements, as might be the case in California.

Demitric: Thank you.

Eva Wong: Any other questions? Actually, I was going to ask someone from Dallas, or maybe David – could you talk a little bit about the building code? And cool roofs? I didn't have a chance to read through the recent adoption, but just even a line or two about what's going on there.

David Hitchcock: Okay, there are a couple of building code changes, well there are a lot of building code changes, going on in both the City of Dallas and the City of Houston. The city of Dallas – not just the cool roof provisions that are in there, but the Dallas Code is incorporating a lot of LEED-related standards. And LEED contains not only references to roofing, but also to other development characteristics that include heat island mitigation. The Houston Code has been changed specifically to incorporate cool roofs, and there's a series of other changes that are being reviewed tonight in a meeting with the City's Code Committee.

Eva Wong: So have those already been adopted?

David Hitchcock: The cool roofs?

Eva Wong: Yeah.

David Hitchcock: The cool roof change has been adopted. The first phase in Dallas – their green building ordinance changes have been adopted as well.

Eva Wong: Okay, great.

Kevin Lefebvre: Hi, this is Kevin from the City of Dallas. David's right – about two or three weeks ago our city council and mayor approved the green building ordinance, and it'll be a two-phase project. But basically everything that will be built in the City of Dallas – the first phase goes in 2009 and the second phase in 2012, and after that everything built will have to meet certain green standards. And that's not just city or municipal buildings, it's also residential, commercial, remodels, everything.

Eva Wong: Oh, wow that's huge. Can I ask – it's not requiring cool roofs, it's using that as an option to comply?

Kevin Lefebvre: Right, it's more of a menu to where developers or people doing remodels can choose from a punch list of options, meeting a certain number of points in different areas – energy consumption, water usage, things like that, landscape, etc. You have to get a certain number of points to – it's kind-of based on the LEED – and basically it comes down to it needs to be certifiable. But it's not hard and fast, because you can't – some people don't have as many resources as others, so they can't dictate directly what they have to have – it's just that giving them multiple options from each area and they have to pick two or three to hit a certain number of points for each area.

Eva Wong: Okay great. And will you have any grants – will the City be providing any grants or any kind of technical assistance to help people comply with the code changes?

Kevin Lefebvre: At this point, I could not answer that question accurately. I don't believe we are, but I can certainly try and find out a little bit more clear of an answer.

Eva Wong: Okay, thanks Kevin, that's helpful – that's good news. I don't see any people indicating that they have an update. So I guess we will be coming to a close. I want to tell everyone who's on the phone that this will be my last webcast, I'm very sorry to say that. I'm going to be leaving the EPA this summer to move to Uganda because my husband has received a new position there with the World Bank – he's an environmental specialist as well. So we'll be moving over there for about three years, and I do hope that this program will continue, and we're working on finding a replacement. So I am not actually going to leave until towards the end of June, so I do hope that you'll send me recommendations for webcast topics that you continue to hear about, so that I have some topics to hand over to this next person to keep the program going. I also want to note – I know we said that the Urban Heat Island Compendium would be up soon, and it is pretty much. A couple of the chapters are already done, but we thought it made the most sense to actually post it when we post the revamped website. And that's taking a bit longer – to actually change all of the webpages. And even in the revised webcast call page, I noticed there were some errors, so I apologize for that – it's just a whole process and so we're continuing to evolve that and fix that. But the webcast page – which now posts the powerpoints and recordings, and kind of organizes the presentations by topic – which I thought would be a lot more helpful and useful than by the date the webcast or conference call was given. That will be – as I was saying – tweaked and refined a bit more, but always open to suggestions if you have any.

Eva Wong: So I do see one purple indicator light, so Art, do you want to provide an update of some sort?

Art at GA DCA: Hi Eva, I'm sorry to hear that you're moving on, but congratulations and good luck to you. I wanted to provide an update. The City of Chamblee, Georgia, which is on the northeast side of Atlanta, became the first city in Georgia to adopt a LEED-based green building requirement for private developments as well as public developments. That will take place, or that will take effect, April 1, 2009. So they decided to include a little more flexibility and allow a Green Globes certification or a LEED basic level certification. But one or the other will be required for private developments over 20,000 square feet, as well as all future City projects.

Eva Wong: Art, can I ask is that for commercial buildings, or does it also apply to residential?

Art at GA DCA: Well it applies to residential multi-family and mixed-use, and commercial, but it's just a size threshold. So anything meeting that size threshold will have to be LEED certified. Of course you could build a smaller apartment complex – 5 units or whatever – and you wouldn't have to meet that requirement.

Eva Wong: Okay, that's great.

Art at GA DCA: It's a start – we're starting to get some favorable publicity, as well as some inquiries from developer organizations and contractors who want to learn more about LEED and what they'll have to do. And the State of Georgia Department of

Community Affairs is beginning to participate more in discussions about how LEED and LEED principles could be incorporated into building codes and model ordinances and so forth – so a slow process.

Eva Wong: But in the right direction, so that's great.

Eva Wong: I see that Jeff King has something.

Jeff King: Yeah, along the same lines here in the D.C. region. The Council of Governments, which represents a lot of the jurisdictions in the region, and the Intergovernmental Green Building Group that we have here, endorsed adopting LEED for at least government buildings. And we've started seeing a couple of our counties starting to take action – I think Loudoun County and Montgomery County have each put in some changes to their code that include requirements for LEED, and so that's something that's happened in the last couple of months.

Eva Wong: That's great.

Jeff King: The only other thing I can say is we also just had a meeting on our SIP – our Eight-Hour Ozone SIP – we did have a tree canopy heat island component, which committed us to pulling together a group to start a canopy management initiative. And we held our first meeting in the last month or so. And on a parallel track, we have our Climate Change Steering Committee also thinking about land use and the tree canopy. I think in the case of the foresters, there is some discussion of trying to promote a 5% increase in canopy, which is a long way from where we are now. The Climate Change Steering Committee is a little less aggressive and they're shooting for a no net loss, but we'll see how all of that plays out.

Eva Wong: And Jeff, can I just clarify – what kind of tree inventory data do you have? Have you done a recent analysis so that you can track that?

Jeff King: I think that part of the effort of the first meeting was to sit around the table with the foresters from Maryland, D.C., and Virginia, as well as some other stakeholders in the U.S. Forest Service, to kind of come up with what datasets do we have, what do we need, where are we going to get it? The District of Columbia actually has a pretty robust database. I think they have pretty much inventoried all of the street trees in the city. But at this point I don't think we have a good handle on the total canopy, and that's part of the discussion for this work group is to get a sense of where we need to take it.

Question: Hey Jeff, did you say you're taking SIP credit for the urban canopy changes?

Jeff King: No, not yet. It's in our SIP as a voluntary measure – no SIP credit at this point is being given.

Kevin Lefebvre: I wanted to follow up; I actually have an answer already. I emailed one of the leads on our green building project, and she said that the Task Force actually will have a group of members that will be working specifically on incentives and grants.

Eva Wong: Oh, great.

Kevin Lefebvre: And currently our Housing Department has a program in place for affordable housing, and that we're also planning to request grants from a couple different enterprises. So our intent is to have assistance during Phase 1 of the program. So I was incorrect in my original assessment. And as far as guidance and training our Office of Environmental Quality – they're looking to try and incorporate a green office as one of our functions at the Office of Environmental Quality to develop a training program for developers and builders. We've got a little bit of time before that goes, but it'll definitely be interesting to see.

Eva Wong: Well that'll be good to kind-of keep tabs on, and I'm sure it's a lesson learned or a good peer exchange-type presentation in the future. Well thank you everyone, and again, I want to encourage you to email me webcast topics that you'd be interested in hearing about in the future. And I'll send forwarding information before I leave, so hopefully we'll keep in contact with some of you, so thank you.