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The Tree Project Stakeholder Advisory Workshop Followup Questions and Comments

November 15, 2006

TO: The Tree Project Stakeholders

FROM: The Tree Project Planning Team

Thank you to all our stakeholders for attending the kickoff Stakeholder Advisory Workshop on November 2. The Project Planning Team appreciates the great brainstorming and valuable comments provided.

This memo will clarify some of the questions stakeholders mentioned at the Workshop. Please review these notes, and let us know if you have any additional comments.

We are preparing the Phase 1 Project Report, which will be sent to you in the near future. If you have additional advice for the Phase 1 Project Report and for preparation of the revised Phase 2 Project Plan, please e:mail or call a member of the Project Planning Team.

Followup Q & A

1. Will The Tree Project advocate the removal of existing trees if they are found to be less than optimal for environmental improvement?

No! The Tree Project exists because, like you, we love trees. We recognize that trees provide a wide range of benefits to our urban areas, people, and wildlife. The Tree Project goal is to quantify the various environmental benefits and costs of different tree species in the Colorado climate so we can create a guideline for those who would like to use trees as an environmental improvement tool in future planting and design.

2. Have scientists already identified and quantified the environmental benefits and costs of trees?

Yes. A significant amount of research has been done by scientists across the country to quantify the environmental benefits and costs of trees. IES' Tree Project Planning Team has compiled a

significant amount of this information. While extensive data and information exist regarding the environmental costs and benefits of trees, turning this scientific information into action in our communities and establishing the tradeoffs of all the environmental plusses and minuses are significant missing links. Water consumption and water conservation potential related to trees is still not clear in the scientific community, particularly in Colorado. IES plans to use existing data, advanced computer models, and a field study on water use to create a comprehensive plan to using trees to improve air quality, carbon sequestration, and energy and water conservation.

3. Has there been a comprehensive literature review of this information?

Yes! The complete Tree Project Bibliography will be posted on our website soon. Printed copies of the bibliography are available on request. There may be earlier research or research in progress that we could not find on the internet and through personal contacts. We are always searching for new information and updating our database. Please let us know if you have additional research reports so we can add them to our Tree Project Bibliography.

4. What if only a small number of tree species are identified to provide the most environmental benefit? Will IES advocate planting only these? Won't this be bad for tree diversity?

With a wide range of environmental benefits to address, many different species will be valuable when creating the optimal design for a site. The goal of The Tree Project is to make sure we identify which species are best for a broad range of environmental factors. At a particular site, many varieties and species of trees can be recommended to provide the greatest environmental improvement, while still addressing traditional urban forest concerns, like aesthetics, safety, and biodiversity. We recognize that diversity is very important, especially in preventing infestation and disease.

5. Why doesn't The Tree Project address the stormwater benefits of trees?

We recognize that trees provide many benefits for stormwater quality improvement and reduction of runoff. The IES Tree Project Steering Committee determined that maintenance issues related to storm sewers and root damage were outside the scope of the project. Because we are advocating increased and optimized tree planting, we expect this will improve stormwater management in the Front Range.

With additional future funding and Stakeholder participation, IES hopes to expand the scope of The Tree Project to address tree-related stormwater benefits and costs. Your suggestions are welcome.

6. Is the carbon sequestration benefit provided by trees only a short term benefit, because eventually those trees, when they die, release the carbon back into the atmosphere? Additional trees require additional maintenance that adds to carbon emissions; won't this be counter-productive?

According to the Center for Urban Forest Research (CUFR), rates of net annual sequestration by trees vary regionally, by species, disposal techniques and maintenance intensity[1]. However,

because trees cause a reduction in emissions through shade and temperature reduction, their benefit to avoided carbon emissions often exceeds their benefit in direct carbon sequestration. "When considering total urban carbon balance, including fossil fuel emissions, urban forests can … affect carbon balance indirectly through their effect on urban energy [use] and subsequently, CO_2 emissions related to energy use."[1] Though more regional research is needed, guidelines for calculating this carbon benefit are provided by the CUFR[2] and will be applied to The Tree Project.

7. What is the timeline of the project?

Phase 1 of the project will be completed in 2006. Phase 2 is scheduled to be completed by the end of 2007.

8. Are there other, more important issues related to tree planting than optimizing environmental benefits?

Colorado's environment is our biggest tourist attraction, and the foundation for all life here. There are other groups working on other aspects of making Colorado's environment more sustainable. The Tree Project focuses on important environmental and energy concerns.

Urban tree planting and maintenance involve many issues. The Colorado Front Range is fortunate to have numerous urban forest experts in local, state, and federal agencies and private businesses who are knowledgeable about tree aesthetics, community history, disease, colors, fruit, safety, maintenance costs, and other concerns. The Tree Project will build on this expertise, and further improve urban forestry knowledge about the benefits and costs of trees. The Tree Project will add the understanding of important environmental factors on top of the current knowledge. For example, if tree planting is included in a design plan for a new developer, it would be great if, along with aesthetics, tree health, maintenance concerns, and other current issues, we have a technically sound, integrated approach to reducing energy at the site! And improving air quality! And saving water! If we do it right the first time, thirty years from now we will have a beautiful urban forest and improved environmental quality.

Do you have additional information and ideas to contribute? Please call or e:mail to The Tree Project Planning Team. Thanks again for your help and interest.

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1. Pataki, et al. (2006). Urban ecosystems and the North American carbon cycle. *Global Change Biology*. (12) 1-11. http://www.fs.fed.us/psw/programs/cufr/products/CUFR_663_UrbanEcosystems&N.AmericanCO2Cycle.pdf
2. McPherson, E.G., Simpson, J. (1999, January). *Carbon dioxide reduction through urban forestry: guidelines for professional and volunteer tree planters*. http://www.fs.fed.us/psw/programs/cufr/products/cufr_43.pdf