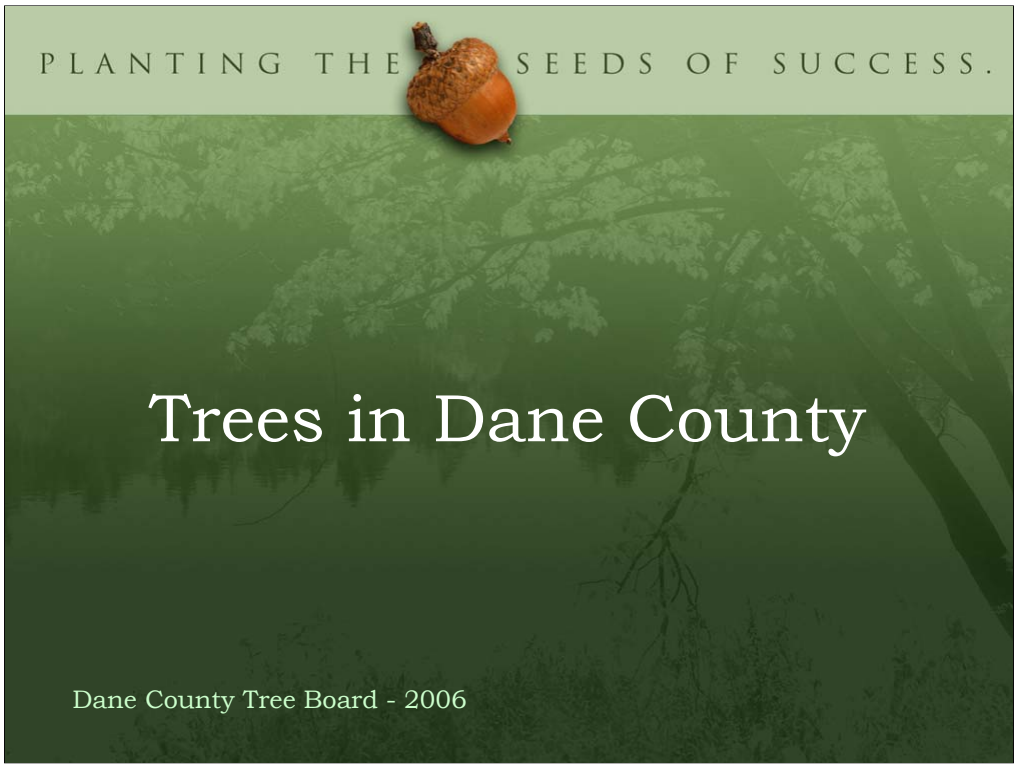

Customized for: Midwest climate region. See climate region map at: http://cufr.ucdavis.edu/images/ncz_map.jpg

NOTE: *This powerpoint is a research product created by the Center for Urban Forest Research in collaboration with the California Urban Forest Council, Crocker/Flanagan Marketing, Inc. and Hal Voege Consulting. The purpose of the research was to identify barriers and obstacles that prevent the effective delivery of urban forestry technology and information, allowing us – as supporters of urban forests – to better communicate our messages and take urban forestry to the next level. The results of our Center's research, along with Everett Rogers' pioneering work on the art of persuasion (see powerpoint of research findings), guided the development of this product. It was designed as a presentation to local elected officials, and is to be presented by* ***someone they trust****. We realize that it may not be right for every situation, so please customize it as needed. It is especially important to use pictures from your community where appropriate. The photos in this presentation are easily replaced by clicking on the picture and inserting yours from your file.*

Two additional related products are also available:

1. A powerpoint presentation which summarizes the research findings – "Obtaining an Investment in the Urban Forest From Local Decision Makers"

2. A Community Handbook, to be used by community forest supporters planning to market the community forest – "Planting the Seeds of Success, Marketing the Community Forest"

NOTE: *This is the introductory slide that presents an overview of what you will be telling the local elected officials. It sets the stage for the rest of your talk. Subsequent slides provide more details and actual research evidence.*

Slide: Suggest to the local elected officials that trees, the green infrastructure, are an integral and important part of your community's infrastructure for a number of reasons:

1. Trees are part of our infrastructure. They are the green infrastructure that pays us back in so many ways, as you will see during the next few minutes.
2. Trees are vital to the health of our community – they provide clean air, clean water, and psychological well-being.
3. Trees are our legacy. Our children and grandchildren will reap the benefits of the trees we plant and maintain today.
4. Trees have a positive impact on business in our community. With more attractive business we get more shoppers and who bring more dollars to our community.
5. Trees are a wise use of our community budget dollars….let's take a look.

Trees. Vital to Our Community's Health.

- Tree-filled neighborhoods:
  - Lower levels of domestic violence
  - Are safer and more sociable
- Tree-filled landscapes reduce stress
- Trees decrease need for medication and speed hospital recovery times

NOTE: *The next six slides provide evidence from scientific research that trees are beneficial to communities for a variety of reasons. As you will see, each bullet item has a scientific reference.*

•Trees reduce levels of domestic violence and foster safer, more sociable neighborhood environments (Sullivan and Kuo, 1996).

Sullivan, W.C. and Kuo, E.E. "Do Trees Strengthen Urban Communities, Reduce Domestic Violence?" *Arborist News,* 5 (1996): 33-34.

•Views of nature reduce the stress response of both body and mind when stressors of urban conditions are present (Parsons et. al., 1998).

Parsons, R.; Tassinary, L.G.; Ulrich, R.S.; Hebl, M.R.; and Grossman-Alexander, M. "The View From the Road: Implications for Stress Recovery and Immunization." *Journal of Environmental Psychology,* 18 (1998): 2, 113-140.

•Hospital patients that see trees need less medication and have faster recovery times following surgery (Ulrich, 1985).

Ulrich, R.S. "Human Responses to Vegetation and Landscapes." *Landscape and Urban Planning,* 13 (1985): 29-44.

Trees. Important to Air Quality

- 100 trees remove 53 tons of CO_2/year
- 100 trees remove 430 lbs of pollutants per year, including:
  - 72 lbs of ozone
  - 81 lbs of particulates

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•100 trees (large, 40 yr old, public) remove 53.1 tons of CO_2 from the atmosphere per year (McPherson et. al., 2005).
McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

•100 trees (large, 40 yr old, public) remove 430.3 lbs. of pollutants per year, worth about $1,280 in emission credits (McPherson et. al., 2005).
McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

ALSO MENTION: Shaded parking lots are important to human heath by improving air quality. The shade results in cooler vehicle cabin temperatures and cooler gas tanks. Therefore, fewer volatile organic compounds are being released into the atmosphere. In a study the Center for Urban Forest Research conducted in the Central Valley of California, shaded parking lots were 3^0 cooler, cabin temperatures were 40-50^0 cooler, and gas tank temperatures were 4-8^0 cooler. Achieving 50% shade resulted in a 1 ton per day reduction in volatile organic

Trees Save the Environment.

- 100 mature trees catch about
  539,000 gallons of rainwater
  per year…
  - Less $ for stormwater control
  - Cleaner water

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•100 large mature trees intercept 538,700 gallons of rainfall per year, reducing the need for stormwater controls, and providing cleaner water. (McPherson et. al., 2005).

McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

Trees. A Savings for Homeowners.

- Save 56% of annual air conditioning costs
- Save up to 25% of winter heating costs

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•Shade from two large trees on the west side of a house and one on the east side save 56% of a typical residence's annual air conditioning costs. (McPherson et. al., 2005).

McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

•Trees properly placed around buildings as windbreaks can save up to 25% on winter heating costs (Heisler, 1986).

Heisler, G.M. 1986. "Energy Savings With Trees." *Journal of Arboriculture*, 12:113-125.

Trees Sell Houses.

- Each large front yard tree adds about 1% to sales price
- Large specimen trees can add 10%, or more, to property values.

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•Each large front yard tree adds about 1% to the resale value of a home (Anderson and Cordell, 1988).

Anderson, L.M.; Cordell, H.K. "Residential Property Values Improve by Landscaping With Trees." *Southern Journal of Applied Forestry*, 9 (1988): 162-166.

•Landscaping with trees can significantly increase property values. One example is: A value of 9% ($15,000) was determined in a US Tax Court case fro the loss of a large black oak tree on a property valued at $164,500 (Neely, 1988).

Neely, D., ed. *Valuation of Landscape Trees, Shrubs, and Other Plants*. Seventh Edition. Urbana, IL: International Society of Arboriculture, 1988.

Trees Mean Better Business.

In tree-lined commercial districts…

- More frequent shopping
- Longer shopping trips
- Shoppers spend more for parking
- Shoppers spend 12% more for goods

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•Shoppers shop more often and longer in well-landscaped business districts, and are willing to pay more for parking, and up to 12% more for goods and services (Wolf, 1999).

Wolf, K.L. "Nature and Commerce: Human Ecology in Business Districts." In C. Kollin, ed. *Building Cities of Green: Proceedings of the 1999*

National Urban Forest Conference. Washington, D.C.: American Forests, 1999, 56-59.

NOTE: *This slide provides evidence from scientific research that trees are beneficial to communities.*

•Typical benefits – energy savings, air quality, stormwater runoff/water quality, and real estate – from 100 trees over 40 years are worth $378,880 (McPherson et. al., 2005).
McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

•Typical costs – tree and planting, pruning, removal and disposal, pest and disease control, infrastructure, irrigation, clean-up, liability and legal, administration and other – for 100 trees over 40 years are $147,960 (McPherson et. al., 2005).
McPherson, E.G., J.R. Simpson, P.J. Peper, S.E. Maco, S.L. Gardner, S.K. Cozad and Q. Xiao. 2005. *Midwest community tree guide: benefits, costs and strategic planting.* Davis, CA: Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service. 82.

Data

Estimated 40-year total benefits and costs for a public tree planting of 100 large trees.

Average annual benefit = $94.72/tree

x 40 years = 3788.80/tree

Slide: Ask the questions: What would Dane County be like without trees? What do you want our community to look like? Suggest that their vision can have a tremendous impact on the quality of life for their children and grandchildren.

NOTE: *This slide is a summary slide and is intended to bring it all together for the officials.*

Slide: Remind the officials that the benefits they have seen do not just happen, even if trees are present in your community. Further remind them, that in order to ensure the benefits will continue to be present for future generations they must ensure that the community has healthy trees and a healthy community forest. It then follows that healthy trees require a commitment to quality care, and that depends on an investment from them.

Give specific examples

Oak Wilt

Gypsy Moth

NOTE: *Dane County Tree Board, founded in 1993, is comprised of a diverse group of volunteers involved in various aspects of tree management throughout Dane County. We have one staff member who is also a UW-Extension horticulturist, and is available to answer questions and provide information to the public.*