Urban and Community Forestry Program
2010 Accomplishment Report – Vermont

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Introduction

The Vermont Urban and Community Forestry (VTUCF) Program's mission is to promote the stewardship of urban and rural forest landscapes to enhance the quality of life in Vermont communities. This mission recognizes the need to address environmental, economic, and social values of forests from the urban core, to suburban developments, to rural forest land. The program assists in developing sustainable local programs by providing technical assistance, information, and education. The program team consists of the State coordinator, a community involvement coordinator, and five district urban and community foresters. The Vermont Urban and Community Forestry Council, which is composed of 20 members representing professional associations, educational institutions, nonprofit groups, regional officials, tree boards, and State agencies, works in partnership with the VTUCF Program to identify the State's urban and community forestry needs and to determine program direction.

Key Accomplishments

Urban Tree Canopy Cover Target Set in Burlington's Climate Action Plan

The city of Burlington has recently revised its 1999 Climate Action Plan to better prepare the city to reach its greenhouse gas (GHG) reduction target of 20 percent emission levels by 2020. In the planning process, urban forestry was recognized for its benefits in carbon sequestration and storage, and became a primary GHG reduction factor of the new plan.

To assist in analyzing how Burlington's urban forest can further contribute to reducing GHG emissions, the city utilized the urban tree canopy (UTC) study that was completed in 2008 with the assistance of the Vermont Division of Forests, University of Vermont Spatial Analysis Laboratory, and the U.S. Forest Service. Currently, 43 percent of the city of Burlington's land area—2,648 acres—is covered by tree canopy. Based on the possible tree canopy cover, the city determined that if it increased canopy cover to 50 percent, the average annual avoided emissions would be 12,087 tCO_2e,[1] the second highest average annual avoided emissions of all solutions investigated. The proposed strategy would increase the UTC by planting a total of 588 trees per year and by maintaining the existing urban tree canopy. This would be achieved both on public and private property. In conjunction with existing tree maintenance and conservation practices, this rate of tree planting would increase the UTC to 50 percent in 40 years and would be equal to 125 additional acres planted in trees. While not considered as part of this analysis, this strategy will also result in a reduction of energy usage and emissions due to shading, which directly lowers cooling energy and indirectly lowers cooling energy by reducing the urban heat island effect.

[1] tCO_2e = metric tonnes of Carbon Dioxide Equivalent

Urban forests are truly on the front line of defense for global climate change and will play a leading role in Burlington's fight against it.

SOUL Goes to College

To build urban forestry leaders at the local level, Vermont has been offering a course called *Stewardship of the Urban Landscape*, aka SOUL, for almost 15 years. Over the years, the program has matured to increase program capacity and meet outcomes. Strategic changes include using Vermont's video conferencing network to cost effectively bring the program across the State and forming regional list-servs to foster continual communication. This year, the program took another large leap forward by offering three University of Vermont (UVM) course credits and an online classroom feature. The new elements enable us to reach a younger audience that will be our next generation of urban forestry professionals, and to expand participant knowledge by creating a more personalized and engaging learning experience. The digital classroom also allowed us to broaden our curriculum to include more indepth instruction on topics such as ecosystem services, invasive terrestrial plants, and urban watershed forestry. New subject matter was introduced through required readings from current events and research papers, followed by facilitated discussions with experts through online forums. Furthermore, this medium created a new means for participants to network statewide. Ultimately, 70 Vermonters from 42 different communities and 3 UVM students graduated from the 2010 SOUL course. We hope to see all SOUL graduates on our new Facebook group page as we strive to keep them well informed and connected.

The City of Rutland Strategically Plants Trees for Water Quality

Rutland, VT, is home to Moon Brook, an urban stormwater-impaired waterway. In 2009, a total maximum daily load (TMDL) was established to reduce the impacts from runoff. While very specific techniques will be utilized to meet the TMDL, the city believes its long-standing urban forestry program and tree canopy are vital components to helping them meet pollutant loads into Moon Brook. To understand its current green infrastructure, the city worked with the Vermont Division of Forests, University of Vermont Spatial Analysis Laboratory, and the U.S. Forest Service to conduct an Urban Tree Canopy assessment. The analysis found that more than 1,784 acres of the city were covered by tree canopy (termed Existing UTC) representing 37 percent of all land in the city (figure 1). An additional 51 percent (2,470 acres) of the city could theoretically be improved (Possible UTC) to support tree canopy.

Further analysis was completed for the Moon Brook watersheds to determine where tree canopy protection and enhancement techniques can be implemented (figure 1). The city is currently reviewing the data to determine which specific parcels in the watershed will benefit the most from tree planting—low tree canopy, high impervious area, and high possible tree canopy. This fall the city will offer free trees through their water supply bills to those landowners for spring 2011 planting. While water quality improvement from trees will not be evident in the first few years, Rutland is looking at the long-term benefits that the city's green infrastructure will afford not only towards water quality, but as a vital component of a sustainable livable community.

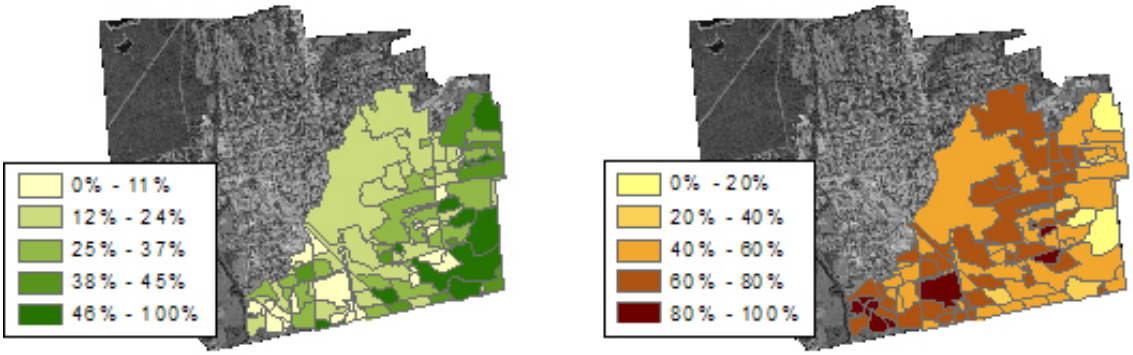

Figure 1: Urban tree canopy (percent) by subwatershed in Moon Brook (green) and possible urban tree canopy in Moon Brook (orange).

Rutland City Forester David Schneider discusses tree production practices in the city's tree nursery. Some of these trees will most likely find a new home in the Moon Brook watershed where they will help improve water quality.

Statistical Highlights

Managing Communities:	18
Developing Communities:	63
Population of Participating Communities:	561,192
Volunteer Assistance Generated (hours):	13,070