VERMONT URBAN & COMMUNITY FORESTRY PROGRAM

FORESTS, TREES AND WATER

PLANT LIVE GROW

What is Urban Watershed Forestry?

Urban watershed forestry is an integration of the fields of ***urban and community forestry*** and ***watershed planning***. Urban and community forestry is the management of the urban forest for environmental, community and economic benefits, while watershed planning promotes sound land use and resource management to improve water resources within a watershed.

Watershed Benefits of Trees and Forests

The important link between watershed health and trees and forests has been documented by many. Here are few of the reasons trees and forests benefit the watershed.

- Reduce **STORMWATER RUNOFF** and **FLOODING**
- Improve regional **AIR QUALITY**
- Reduce stream channel **EROSION**
- Improve **SOIL AND WATER QUALITY**
- Provide **HABITAT** for terrestrial and aquatic wildlife
- Reduce summer air and water **TEMPERATURES**

Kettle Pond, Marshfield, VT

Additional Benefits of Trees and Forests

At a smaller parcel size scale, the benefits of trees and forests become even more evident. When community forests are planned and designed as green infrastructure they become valuable components of sustainable communities. They provide ecological services that benefit the environment, economic and social conditions of the community.

- **ECONOMIC** benefits include increased property values, energy efficiency, and economic development.
- **ENVIRONMENTAL** benefits include reduced stormwater runoff and atmospheric carbon dioxide, improved air, soil and water quality, reduced stream channel erosion, habitat for terrestrial and aquatic wildlife, and reduced summer air and water temperatures.
- **SOCIAL** benefits include increased livability, improved health and well-being, provide esthetics and increased recreational opportunities.

Church Street, Burlington, VT

Urban Watershed Forestry Goals

Urban Watershed Forestry recognizes that forest cover is the highest and best use of land in a watershed. The basic aim is to *reduce forest loss and maximize forest gains over time*. This can be achieved through three overarching goals: **Protect**, **Enhance** and **Reforest**.

PROTECT undeveloped forests and the impacts of land development by creating and applying various inventory and planning techniques, regulatory tools and incentives.

- Protect priority forests such as riparian forests, forests on steep slopes and forests on erodible soils through conservation easements or land acquisition.
- Prevent forest loss during development and redevelopment through planning, regulations and financial incentives including stream buffer and low impact development ordinances, overlay zoning and stormwater credits.
- Maintain existing forest canopy by protecting significant trees and restricting tree removal in developed areas.

ENHANCE the health, condition and function of urban forest fragments.

- Increasing and improving structure, hydrologic function, diversity and wildlife habitat, and improving conditions for tree growth to ensure long-term sustainability of the forest including managing for invasive species and protecting soil from erosion.

REFOREST open land through active replanting or allowing for natural regeneration to regain some of the functions and benefits that forests and trees provide for watershed health.

- Plant trees during development and redevelopment with landscaping and shading requirements, and incorporating trees in stormwater treatment practices.
- Reforest public land by allowing natural regeneration and active reforestation.
- Reforest private land through education and tree planting incentives.

Trees extend the life of pavement, reducing replacement costs. Bennington, VT.

Trees enhance bioretention areas and add aesthetic value. Burlington, VT.

Trees act as interceptors to minimize stormwater run offon im pervious surfaces. Brattleboro, VT.

References

Watershed Forestry Resource Guide, Center for Watershed Protection and US Forest Service, Northeastern Area State & Private Forestry
Control Stormwater Runoff with Trees Fact Sheet, Center for Urban Forest Research, Pacific Southwest Research Station, USDA Forest Service.
Using Trees to Reduce Stormwater Runoff(Powerpoint), Center for Watershed Protection.
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