

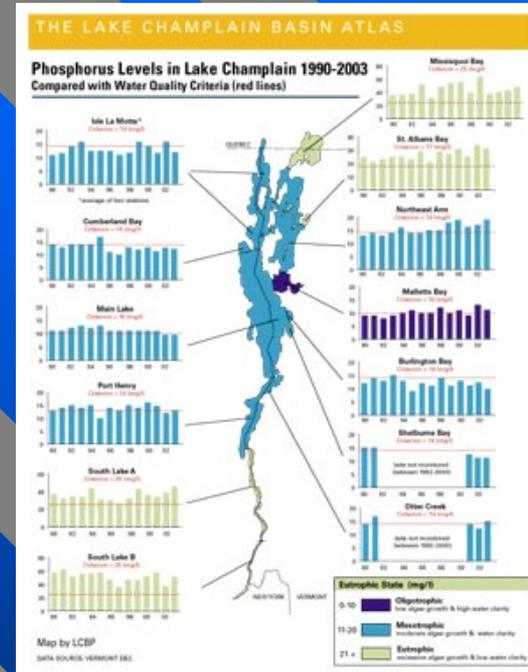
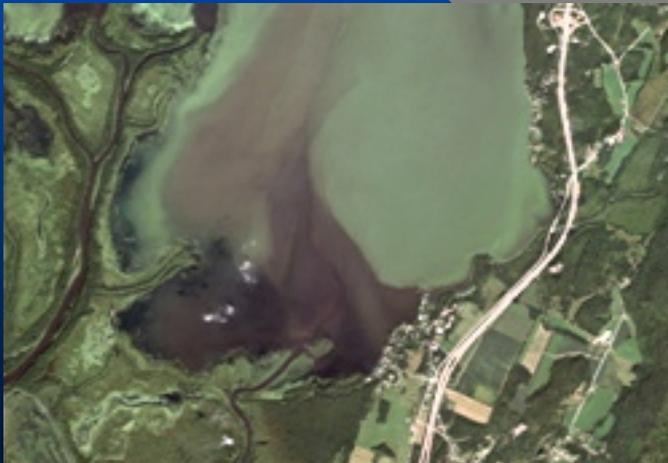
Engaging the Business Community in Sustainable Landscaping



UVM Extension, Lake Champlain Sea, Grant Friends of
Burlington Gardens, Burlington Public Works

The Problem: Excess Phosphorous

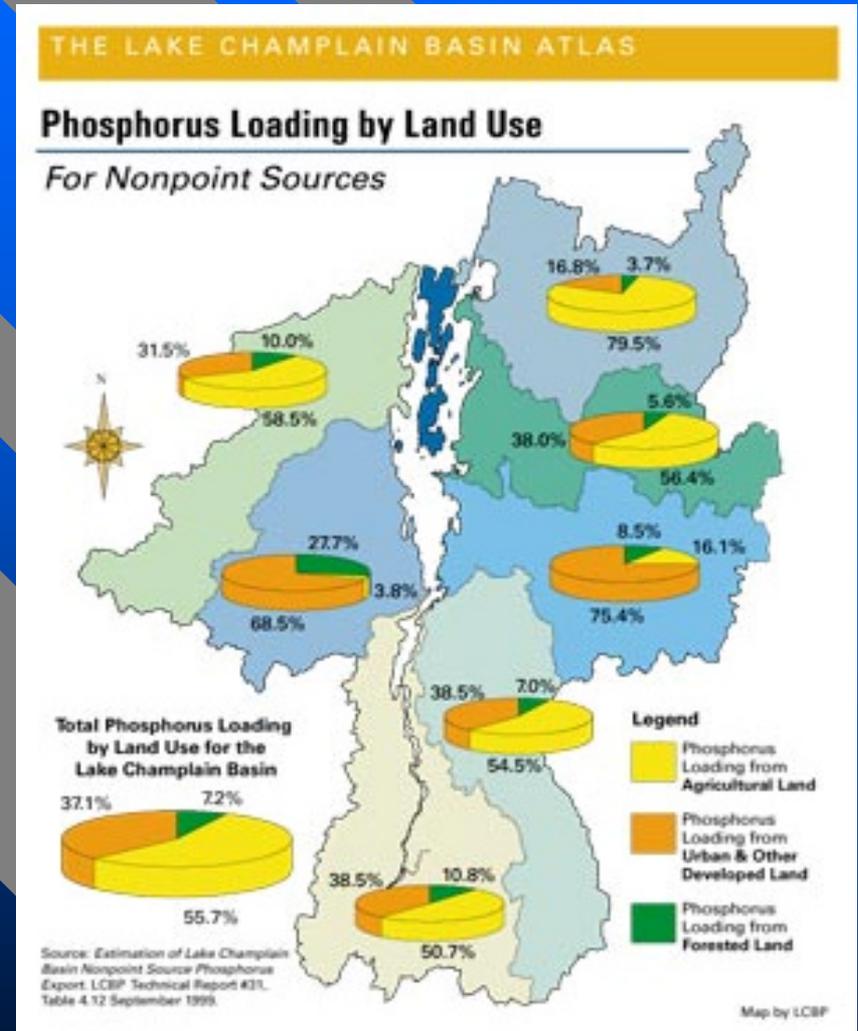
- Excess P in lake
- Basin under P TMDL
- Target: 27% (80 mt/yr) input reductions



- Eutrophication
- Noxious & toxic algal blooms
- Economic impacts

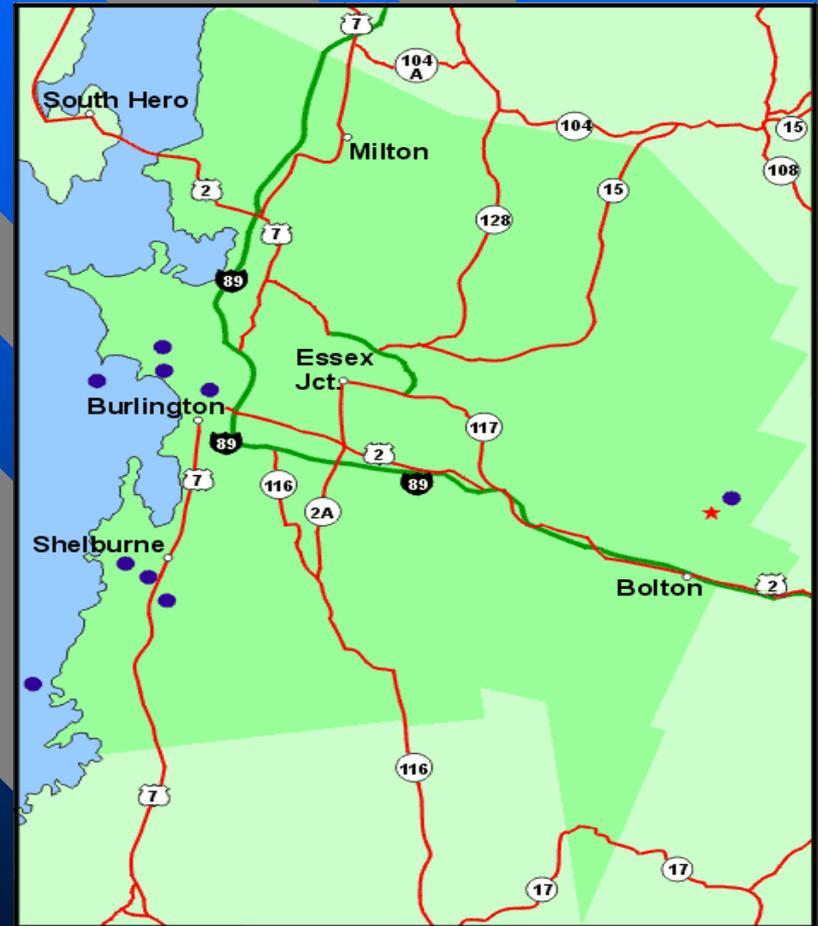
Phosphorous in Urban Storm Water

- Urban areas are 5.6% of lake watershed
- Contribute 37% of total annual P load
- Target basin: > 75% of P load to lake from urban sources
- Lawn fertilizer a principal source



Chittenden County, VT

- Most densely populated
- Most developed
- Most impervious cover
- Only defined urbanized area



Englesby Brook Watershed

Figure 1.1 Englesby Brook Watershed Map



1-5

- Small watershed (.94 mi² or ~ 570 acres)
- 22% impervious cover
- Mixed institutional, recreational, residential, commercial, industrial land use
- Impaired waterway

Impairments

■ Sediments



■ Storm water runoff

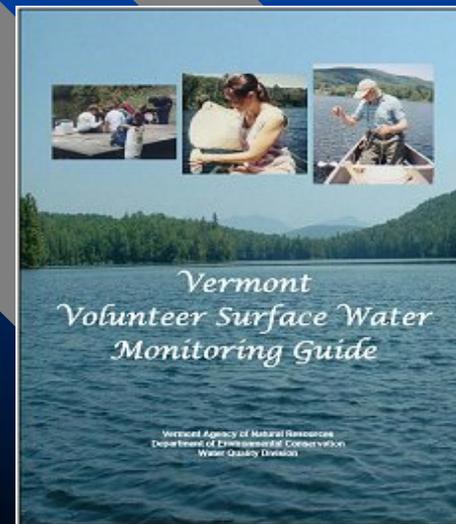


■ Pathogens



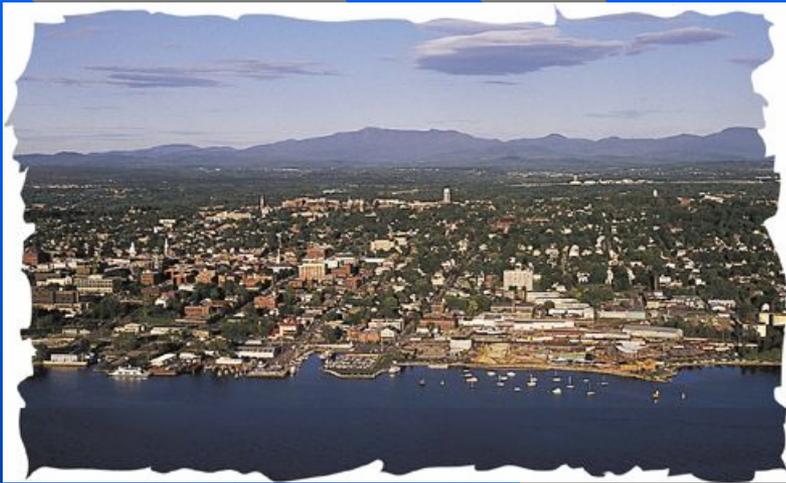
Restoration Project

- \$2.2 million engineering retrofits
- Residential public awareness
- Youth urban watersheds education



What's Missing?

Business and Institutional Properties



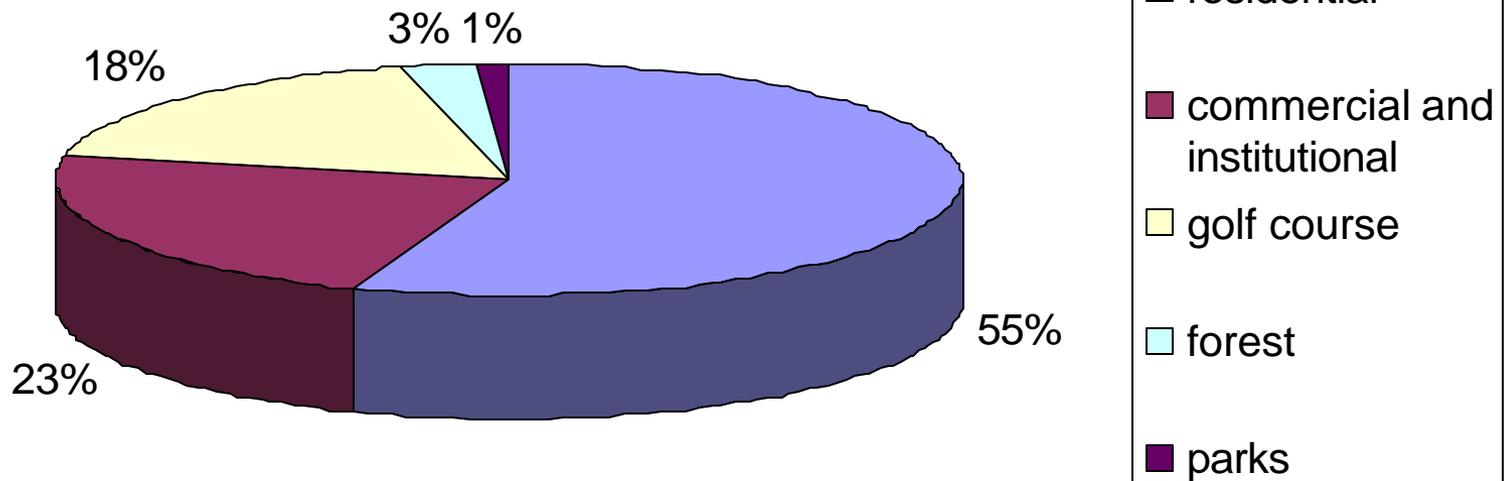
- Overlooked in water quality education
- Significant property in urban watersheds

- Owners/managers often unaware of impact of grounds care
- Leave management decisions to commercial lawn services



Englesby Watershed Land Use

Englesby Watershed Land Use



Property Types

- Commercial



- Institutional



- Commons



Project Activity: Database

- Identify property type, managed landscape area, location
- Grounds keeping practices survey



Identify Priority Properties

landscape area, maintenance level, location

Low



High



Promoting Change

- Inform managers about NPS issues and low input grounds keeping
- Identify potential adopters
- One-on-one training on low input /no P grounds care practices
- Technical support by Master Gardeners and Friends of Burlington Gardens (on site and hotline)

Database and Survey Results

- 73 total business and institutional properties on 131 acres
- 42 identified priority properties
- 79.75 acres of commercial lawn area (14% of total watershed area)
- 35 property managers in survey
- 18 completed survey (43% response rate)

Low Input Adoption

- Ten managers adopted low input/no P practices
- Manage 16 of the 42 priority properties (35%)
- 47.04 acres of 131 acres (59%) of commercial landscape in low input/no P grounds care

Who Were They?

Industry



Commercial



Apartments



Service



School



Church



**Two managers were grounds care companies
which adopted low input practices for their
business for use outside watershed**



Portrait of an Adopter: Storage Building at Burlington Electric



Impacts

- P reduction target is 80 mt/yr for entire 8234 mi² basin
- Project watershed 0.94 mi²
- Project estimated P reduction 0.45 – 0.93 metric tons
- Achieved 0.6 – 1.2% of total basin target in 1.14 x 10⁴ area
- Reviewing USGS data for reductions in P concentrations



Sustainability

- **Low input is sustainable**
- **Maintain acceptable lawns and realize cost savings**
- **All continue low input practices after 2 years**
- **Positive feedback from customers and public**



Thank You



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USDA CSREES

