

# THE CENTER FOR RESEARCH ON VERMONT

R E S E A R C H - I N - P R O G R E S S S E M I N A R #160

## **“Disappearing Burlington Lawns: Students, Cars, and Land Use Change”**

**By Paul R. Bierman  
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**Monday, February 11, 2002, at 7:30 p.m.  
Memorial Lounge, Waterman Building  
University of Vermont**

How would you respond to the news that the University of Vermont Green was being paved so students could park their cars? Although the UVM Green is safe, in the past 20 years on Loomis, Buell, and South Willard streets, 2.2 acres of green lawns—about a third of the area of the UVM Green—have been converted to asphalt and gravel parking spaces.

Over the past three years, students and faculty in the UVM Geology Department have been studying land use change in Burlington's Hill Section. Using a combination of high-resolution air photographs and field work, they measured the area occupied by buildings, paved parking areas, unpaved parking areas, sidewalks, and green space to understand why and how neighborhoods are changing and in order to predict how neighborhood changes have affected the way rainfall runs off, finds its way to storm sewers, and enters Lake Champlain.

A dramatic loss of green space has occurred in some neighborhoods. Loss of permeable lawns, where rainfall could soak in, means that more water now runs into the streets, increasing run off volume by 2/3 and the peak run off by nearly 1/3. Such changes may well explain storm sewer overflows seen after heavy rainstorms.

Green space loss is driven by students, who inhabit 75 percent of rental properties. The study shows that ten times more green space was lost from rental properties than from homes occupied by owners. Parcels associated with students have the most people per parcel (3.0 times other groups) and the most automobiles per parcel (3.3 times other groups). Now that almost all students have their own cars, there is no place to park them except, of course, what was once the lawn. Since off-street parking commands premium rents, there is no economic incentive for landlords to preserve green space. Moreover, conversion of lawn parking to formal, paved parking appears to escape zoning controls and occurs without thoughtful planning. (For more information, visit <http://geology.uvm.edu/morphwww/urbanhydro/>.)

**Paul Bierman** is associate professor of geology at the University of Vermont. His areas of expertise include hydrology, chemistry, and the impact of humans on the built and natural landscape. He teaches a variety of courses at the undergraduate and graduate levels including Earth Hazards, Geohydrology, and Geomorphology. A resident of Burlington, he received his B.A. degree from Williams College and his Ph.D. from the University of Washington.

*ADA: Individuals requiring accommodations should contact Sue Pochop at the University of Vermont at 802/656-3166 no later than 02/07/02.*



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