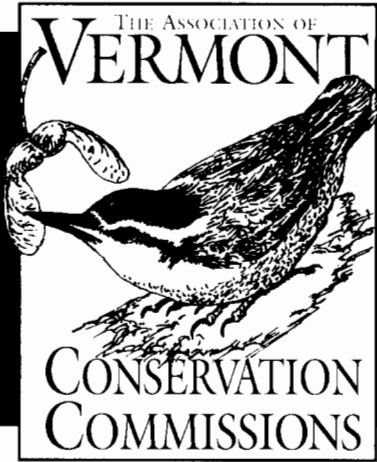


# THE SEEDLING

THE ASSOCIATION OF VERMONT CONSERVATION COMMISSIONS' NEWSLETTER



## BANNING BURN BARRELS

The illegal burning and dumping of solid waste threatens Vermonters' health and the environment. This article focuses on illegal burning and summarizes the health risks and then offers ideas on how conservation commissions can be part of the solutions.

### Environmental Hazards

The good old days in Vermont had some mighty bad environmental practices. In the 1930s, 1940s, and 1950s, it was common practice in the winter to take the trash out to the middle of the Connecticut River and pile it up on the ice. The trash was piled a couple stories high. When the ice went out, the trash was out of sight and out of mind. Also, the burning of trash—whether in backyard burn barrels, the woodstove, or the local dump—was once common and widespread in Vermont.

Nowadays, we know our rivers are not garbage disposals but unfortunately not all Vermonters have learned the hazards of using their burn barrels.

The Vermont Agency of Natural Resources (ANR) estimates that 18,000 households in Vermont illegally burned ~14,000 tons of

trash in 1997, although the extent of the burning is difficult to measure and the estimate is probably low.

Today's trash contains plastics, dyes, household chemicals, heavy metals, and other synthetic materials that produce highly toxic substances when burned. Here are some specific examples to think about the next time you see a neighbor burning trash:

- Burning a #3 PVC plastic releases hydrogen chloride gas. When breathed, the gas combines with water and forms hydrochloric acid in the lungs. Burning these plastics also releases dioxins and furans, which are two of the most toxic products known and are linked to cancer and birth defects.
- Burning meat trays or plastic utensils produces styrene gas, which can damage the eyes and mucous membranes; high doses of this gas can cause death.
- Burning bleached paper products such as frozen food boxes releases hydrogen hydrocarbons that have been associated with blood abnormalities and leukemia.

Some of these chemicals cause acute respiratory symptoms or eye

irritations. Others may accumulate over time to cause long-term respiratory problems, cancer, or birth defects.

One-half of the health risks associated with burning trash come from the inhalation of the pollutants released into the air. The other half of the risks come from ingestion of toxic particles that have been deposited on water, soil, crops, and gardens. Children are at much greater risk because they absorb up to six times the dose of combustion products as an adult receives by breathing the same air. People with heart and respiratory diseases are also at increased risk.

For the amount of trash burned, the contaminants coming from burn barrels are far worse than what would be emitted from a large municipal incinerator. Burn barrels emit carbon monoxide and volatile organic compounds at levels 23 to 114 times higher than the legal levels for incinerators. Mercury emissions were four times higher and chromium levels were 46 times higher from burn barrels than from well-run incinerators.

One more shocking example

*(see Burn Barrels, page 2)*

*(Burn Barrels, continued from page 1)*

is that 37 households burning their trash emitted as much dioxins per day as did a 200 ton-per-day incinerator serving 100,000 people.

Municipal incinerators burn at very hot temperatures with plenty of oxygen, thus destroying many dangerous chemicals. Many of the remaining toxins are captured in the smokestacks using high technology. What is left is discharged high into the atmosphere so that it has a chance to be diluted before we breathe it.

The opposite conditions are often true for burn barrels, in which trash is burned at a lower temperature with lower levels of oxygen. Dangerous chemicals are not destroyed, there are no smokestacks to capture more of the toxins, and the ashes are rarely disposed of safely. Most important of all, the heavy concentrations of smoke containing poisons are released at ground level so they directly contaminate places where we live and work and where our children play.

#### **Solutions: Enforcement**

Since the 1970s, Vermont has had solid waste rules that made it illegal to burn trash. Then, the Vermont Department of Health was the lead government agency, whereas now the lead group is ANR. Only untreated wood and yard debris may be burned legally in Vermont, although some municipalities have banned all burning.

Thus, enforcement of the law is one solution. Fining violators and publicizing enforcement actions will encourage some offenders to stop illegal burning.

In 1999, ANR took formal enforcement action on 15 complaints of illegal burning; 70 additional cases of illegal disposal were resolved through voluntary compliance. However, ANR does not have the enforcement resources to

follow up on all reports of illegal disposal of solid waste. Therefore, regional, district, and local enforcement programs are also needed.

In other New England states, conservation commissions often do play the role of watchdog for the environment in their communities, reporting illegal activities to the proper authorities. In Vermont, conservation commissions can report illegal disposal of solid waste to the Environmental Enforcement Officers of the ANR Enforcement Division (802/241-3820).

#### **Education**

Why do some Vermonters burn trash? Some may want to avoid disposal costs at a landfill or solid waste transfer station, which do continue to rise. But burning trash to save a few dollars isn't worth the price of family and neighbors' health. Often a bit of education is all that is needed to convince some folks to stop the illegal burning.

To reduce illegal dumping of solid waste, the Central Vermont Solid Waste District created the Adopt-a-Site program in which local volunteers have "adopted" and cleaned up illegal dumpsites. The Plainfield Conservation Commission has been one of the volunteer groups that has adopted an illegal dumpsite.

Education can be carried out in numerous ways, such as:  
Talk to violators one-on-one  
Conduct an educational campaign  
Hold a town meeting on the subject and invite speakers  
Write a report for the town report  
Produce a brochure that can be mailed to every household (possibly with the tax bill or another mailing); ANR has brochures for you to use or modify  
Hold a poster contest and then display the winning poster.

*(see Burn Barrels, page 5)*

*Featured Conservation Organization*

## **WILDLANDS PROJECT**



The Wildlands Project was organized in 1991, with its national headquarters now in Richmond, Vermont.

Blending science and action, the organization has a vision of parks and wilderness areas as the building blocks of wildlands networks with vibrant human communities imbedded in the healthy ecosystems. Projects range from Mexico to Canada.

One of their most important contributions to the conservation movement is their push to redefine the scale of conservation planning—at the landscape level. As one of their reports states: "Bigger is better. Connected is critical. Carnivores are key."

*Wild Earth* is their journal for the wilderness wing of the American conservation movement. The country's best conservation writers are regular contributors who translate conservation biology principles for a general audience. The quarterly journal not only features great articles but wonderful original artwork as well.

Members of AVCC can receive a complimentary issue of the journal by contacting the Wildlands Project at 802/434-4077 or info@wildlandsproject.org.



# VERMONT CONSERVATION COMMISSIONS BULLETIN BOARD

In addition to actively working to discourage illegal dumping in their city, the **Colchester** Conservation Commission successfully ran Green Up Day again, with over 200 residents participating, including local boy and girl scouts and high school students. The Rotary Club runs the free cookout. In their advisory role, the Commission offered management recommendations for the master plan of the publically owned Law Island, and they also worked with the Winooski Valley Park District to offer suggestions on the placement of a public bicycle trail.

The **Sandgate** Conservation Commission coordinated Green Up Day in their town as well, distributing bags, keeping statistics, and monitoring progress.

The "Community Award" of the Vermont Tree Stewards Awards went to the town of Starksboro for their wonderful work with their municipal forest and with identifying forest-related community indicators to help guide community decisions. Congratulations to the **Starksboro** Conservation Commission who accepted the award and led the effort.

Weston was given the state designation of a Village Center and thus is eligible for various funding sources and tax credits

for rehabilitation of old buildings. The newly reenergized **Weston** Conservation Commission has been assisting with handicapped accessibility for an old school that now serves as a daycare facility.

From track and sign documentation, illegal dumping, to water turbidity, resource inventory, or biodiversity the Community Mapping Program brings together educators, students, and community organizations to collaborate on community sustainability ([www.communitymap.org](http://www.communitymap.org)). Founded by the Orton Family Foundation and the Vermont Institute of Natural Science, the Program gets middle and high school student out into their communities, conducting fieldwork, and using tools such as Geographic Information Systems (GIS) and Global Positioning Systems (GPS). Two recent Vermont projects include the Hartford Memorial Middle School Students, who presented their vernal pool fieldwork at the Hurricane Hill Town Forest to the **Hartford** Conservation Commission this spring and presented their completed interpretive trail brochure to the Hartford Parks and Recreation Department.

And another example in Bradford: Nancy Jones' Oxbow High School students located,

studied, and mapped seven vernal pools in town as part of a collaboration with the **Bradford** Conservation Commission. It's helpful that Nancy also serves on the Conservation Commission and helped to get it active again in 2002 after a few years of inactivity. The Conservation Commission also sponsored a design-a-sign competition at the High School. Two entries were chosen, and a local artist combined the themes into one sign, which will be installed at Wright's Mountain, which is owned by the town. It is hoped that the sign will instill pride and help curtail vandalism. An official sign dedication ceremony was held in early August.

The **Charlotte** Conservation Commission and the Charlotte Land Trust have taken the concept of an open space map one step further and have produced the new Natural and Cultural Features with High Public Value map. Intended for educational and land use planning purposes, the map is a compilation of information from the Town Plan and other documents. Contact Linda Hamilton, Vice-Chair of the Conservation Commission for a copy (802/425-5795 or [ferntip@gmavt.net](mailto:ferntip@gmavt.net)).

## Conservation Commission Summer Outing 2003

Six conservation commissions were represented at the Second Annual Summer Outing, sponsored this year by the Montpelier Conservation Commission on July 12.

The Montpelier Conservation Commission has been wildly successful in its 10-year history, especially in the area of land conservation. One main reason for its success might go back to its founding. A 1990 Master Plan recommended a conservation commission be formed, and the local planning commission led the effort. There was nervousness about "conservation," so the original group of conservation commissioners decided not to be an advocacy or political organization but to be educational.

The first few years featured hikes and programs for the public. Then, as with many land conservation projects, serendipity visited, and the Montpelier Conservation Commission began its first of many land conservation deals. "We knew when the time was right [to move into land conservation]," said Stephen Syz, the first Chair of the Commission (and pointing as he led the Summer Outing walk in the photograph above).

Back to the Outing, after we were given the history of the Commission and its projects, we went outside and walked some of the wonderful trails at the Vermont Institute of Natural Science North Branch Nature Center in Montpelier (which the Commission helped get there). We then



went downtown, ate our picnic lunches, and visited the site of a future city park and transit center.

I walked away from the Outing admiring how savvy this group of local conservationists has been. Much of their work is set up for success from the start. For example, the Commission asked that the recommendation to do an open space plan be put into the city's Master Plan so that justified their work. The Commission did a survey on Town Meeting Day, asking if the townspeople supported forming a local conservation fund. When the answer came back "yes," the Commission was justified in putting such a proposal on the ballot the following year.

If you weren't able to join us on the Outing, you can still learn about many of the Commission's projects on the city's website at [www.montpelier-vt.org](http://www.montpelier-vt.org). Check out their three-year strategic plan, an annual report, the Montpelier Open Space Plan, the vegetation management plan for the Winooski River as well as information on the Montpelier Conservation Fund.

### Zero Waste in Your Town?

The Bar Harbor (Maine) Conservation Commission sponsored a community forum on Zero Waste, a waste minimization model that is gaining international attention. From Australia (where the vision began) to Seattle, cities, counties, and corporations are signing on. In New Zealand, 33 out of 74 municipalities have committed to a Zero Waste policy ([www.zerowaste.co.nz](http://www.zerowaste.co.nz)). The model includes innovative grass-roots composting and recycling programs and the development of waste-minimizing consumer options. Guest speaker Mark Dittrick was the principle designer of Zero Waste 2005, a unique waste strategy adopted by Annapolis Royal, Nova Scotia in 1998, which is the only town in Canada with programs in place for the composting of all organic wastes, residential and commercial, within the town limits. For more information, see [www.zerowasteamerica.org](http://www.zerowasteamerica.org).

## Ordinances

Approximately 20–25% of Vermont municipalities have adopted some sort of ordinance that bans trash burning. Currently, the Solid Waste Management Division is inventorying the towns to learn the exact number that have such ordinances.

If state law already prohibits the illegal burning of solid waste, then why do towns need to pass local ordinances? According to Andrea Cohen, the Vermont Solid Waste Program Manager, the answer is because towns do not have the authority to enforce state laws. Thus, towns pass such local ordinances so they can enforce the illegal burning themselves.

The Division has worked with the Vermont League of Cities and Towns to draft a model ordinance limiting the illegal burning and dumping of solid waste. Towns can use this ordinance as a starting point to develop their own ordinance suited to the specific needs of the town. It is recommended that a town contact their town attorney and their local solid waste management district before enacting any solid waste ordinance.

The individual town ordinances would state who enforces the ordinance in town. Possibilities include the town health officer, the town attorney, the appointed representative to the board of supervisors of the local solid waste management district, members of the Selectboard, or the town constable and law enforcement officials.

Three of Vermont's solid

waste districts have enacted countywide ordinances on illegal burning. If your town is a member of the Chittenden, Northwest, or Addison solid waste district, you can call them up and ask how you can help. The Addison County Solid Waste District has a \$5,000 per year contract with the local sheriff's department to enforce their ordinance banning illegal burning and disposal of solid waste. Passed in 1995, the ordinance includes a graduated fine from \$35 to \$500 per occurrence for violations. The District also accepts burn barrels for recycling at no charge.

Is illegal burning best addressed at the municipal or county level? Cohen believes it is easier to address at the county level because the process is less personal and more formalized and has more enforcement potential. "If a town is part of a solid waste district, it is better to deal with it at the solid waste district level," said Cohen. "It takes it off the backs of the towns and is not as close and personal."

## Conclusion

With 18,000 Vermont households still burning trash, conservation commissions can play an important role to protect Vermont's air quality by working on the issue of the illegal burning of solid waste. People have little choice about the air they breathe. If your water is contaminated, you can buy bottled water. What do you do if your air is contaminated?

# AVCC

The Association of Vermont Conservation Commissions is a private, nonprofit organization serving the municipal conservation commissions in Vermont.

Annual memberships are:  
Conservation commission, \$50;  
Other organizations, \$50;  
Individuals, \$25.

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## Footnote

*A packet of information with the model ordinance will be mailed to each conservation commission within the next few months. We extend our thanks to the Vermont Waste Management Division and to Casella Waste System for a grant and a donation, respectively, for our solid waste initiative that includes this issue of the newsletter and the packet mailing.*

# CONSERVATION CONNECTIONS

The **Composting Association of Vermont** is a new membership organization dedicated to supporting and promoting all aspects of organics recycling with a focus on large-scale residual composting. Call 802/223-1903 or visit [www.compostingvermont.org](http://www.compostingvermont.org).

And speaking of compostables, Burlington Eco-Info started a **"Scoop the Poop Campaign"** to encourage dog owners to pick up their dogs' wastes so the wastes don't run off into waterways and add to water pollution, including *E. coli* bacterial contamination. Signs have been posted at several lakeside parks in Burlington; to see the humorous artwork on-line, visit [www.BurlingtonEcoInfo.net](http://www.BurlingtonEcoInfo.net) and look under "stormwater issues."

More tips on creating outdoor signs and exhibits can be found in the **Lake Champlain Wayside Exhibit Manual**, available for free from the Lake Champlain Basin Program (802/372-3213 or [www.lcbp.org/wayside.htm](http://www.lcbp.org/wayside.htm)).

The Vermont Department of Housing and Community Affairs (DHCA) released the second edition of the **Zoning Administrator's Handbook**, which can be

downloaded from their website at [www.dhca.state.vt.us/planning](http://www.dhca.state.vt.us/planning).

The FY04 **Municipal Planning Grant Program** application deadline is September 30, 2003. The funds are targeted to assist town planning efforts. Call 828-5249 to receive a copy of the application or for assistance. Applications can also be downloaded from DHCA's website (above).

Save Our World-Vermont generously donated an **Earth flag** to our silent auction this April. The nonprofit organization works for a sustainable future for all life on our planet. They sponsor the flying of the Earth Flag, believing that to be the most powerful symbol available for changing human thinking. Contact Marion Leonard at 802/767-3273. Membership is \$10 per year; flags are available to members at cost: \$30 plus \$4 postage.

**Groundswell** is a large-format, graphic publication about community planning and design with a focus on visioning, visual analyses, design charrettes, design districts, and open space planning. Individual copies are \$12 plus \$2.50 postage. Contact Diane Gayer of the Vermont Design Institute at

802/355-2150 or [vtdesign@sover.net](mailto:vtdesign@sover.net).

The Vermont Smart Growth Collaborative is sponsoring a **national conference on smart growth and sprawl on October 9** at the Radisson Hotel in Burlington. Speakers include Governor Douglas and former governor of Maryland Parris Glendening. The conference will include presentations on assessments of Vermont and other states' investments and policies that support smart growth or support sprawl. Call 802/864-6310 for more information.

The **Vermont Pedestrian and Bicycle Facility Planning and Design Manual** is now available from the Vermont Agency of Transportation. This comprehensive hands-on manual is available in both hard copy and electronic formats and is also on the web at [www.aot.state.vt.us/](http://www.aot.state.vt.us/). Contact Amy Bell at 802/828-5799 or [amy.bell@state.vt.us](mailto:amy.bell@state.vt.us) for a copy or to learn about their outreach workshops to promote the use of the Manual.



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ADDRESS CORRECTION REQUESTED

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