Recipients of the 2004 - 2005 Vermont Governor's Awards for Environmental Excellence & Pollution Prevention

Those honored have chosen to see the world of possibilities
and achieved excellence in pursuit of a preferred future.
We can learn from their experiences and share in the joy of their achievement.

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Selection Criteria:

- *Benefits to the environment*
- *Health & safety benefits*
- *Use of Innovative approaches, techniques and/or technologies*
- *Level of commitment and leadership in waste reduction and pollution prevention*
- *Ability of program or activity to serve as a model for other efforts*
- *Economic efficiency*

Special Youth Environmental Citizenship Award - Projects accomplished by a young person or young people (no older than 21 years of age) that achieve significant positive environmental outcomes.

- **CP Stepping Stones 12th Grader, Jeff Ploof** – *The Big Dig*
- **David Cairns** – *Every Day is Earth Day at Bishop Marshall*
- **Jack Parmer** – *Burlington High School Eco-Club*
- **Montpelier Public School District/Central Vermont Solid Waste Management District** – *"Closing the Loop"; The Montpelier School District Composting Project*
- **Newfane's 5th and 6th Graders** – Conserving Resources for the Future
- **Stowe Elementary School Fifth Graders; Alana LaViale and Tegan Garon** – *Schoolyard Habitat and Outdoor Classroom*

Environmental Excellence in Education & Outreach - Projects that inform and educate others about environmentally responsible practices or that empower citizens to enhance the quality of the environment for local, regional or global communities.

- **Camels Hump Middle School** - *The Richmond Rivershore Preserve: A Look at the Cultural and Natural Landscape Over Time*
- **Efficiency Vermont/Middlebury College/Middlebury Global Warming Action Coalition/Aubuchon Hardware & Kinney Drugs** – *Middlebury 72 Hours of Light Event--The Green Team*
- **Sugarbush Resort** – *Mt. Ellen Biodiesel Pilot Project*

- **University of Vermont (UVM)** – *Eco-Reps Program*
- **Vermont Forum on Sprawl/Sustainable Schools Project/Shelburne Farms** – *Healthy Neighborhoods/Healthy Kids Project*

Environmental Excellence in Pollution Prevention - Projects that reduce or eliminate the generation of pollutants and wastes at the source. The award category also includes toxics use reduction (TUR) efforts.

- **Burlington Electric Department IBEW (International Brotherhood of Electrical Workers)** - *Exercising Workers' Right-To-Know to Win Big for Workers, the Public, and the Environment*
- **Hubbardton Forge** – *Setting New Industry Standards with Bioremediation Parts Cleaning*
- **IBM Photochemical Solvent & Waste Reduction Teams** – *Photochemical Waste Reduction and On-Site Treatment Of Photochemical Waste Solvent*
- **IBM Soft Mask Gate Electrode Formation Team** - *Soft Mask Gate Electrode Formation*

Environmental Excellence in Environmental Stewardship & Resource Protection - Projects with measurable and direct benefits to air, land or water – or fish, wildlife and human communities dependent upon a clean and healthy environment.

- **Jeffrey Hollender/Seventh Generation** – *Growing a Sustainable Company*
- **NRG Systems, Inc.** – *NRG Systems Green Manufacturing and Office Facility*

Environmental Excellence in Resource Conservation - Projects that conserve resources and protect the environment by minimizing resource consumption or by applying the strategies of reuse or recycling.

- **WDEV Trading Post Program** – *Facilitating Community-based Materials Reuse*

Environmental Excellence in Land Use & Land Use Planning - Projects that preserve or conserve land to create ecological and environmental benefits or that advance smart growth alternatives.

- **Main Street Landing** – *Lake & College Redevelopment Project*

The 2004 – 2005 Vermont Governor's Awards for Environmental Excellence & Pollution Prevention

Governor's Message

I am honored to recognize this year's recipients of the Governor's Awards for Environmental Excellence & Pollution Prevention. Those recognized today are in the vanguard of Vermonters helping to build a more livable and sustainable future. They have helped inform and educate young Vermonters about the importance of environmental protection and resource conservation. They have modeled resource stewardship so that we can better understand how we too can be good environmental citizens. Through their actions they have evidenced why we need not characterize our efforts to protect the environment and to achieve prosperity as two separate paths. These paths, in the best of all circumstances, are the same when we work to achieve prosperity WITHOUT pollution.

As Vermonters the choice is ours to see either a world of possibilities or a world of problems. Those honored today have clearly chosen to see the world of possibilities and achieved excellence in pursuit of a preferred future. We can learn from their experiences and share in the joy of their achievement.

On behalf of all Vermonters, I wish to say thank you for your work on behalf of the state's environment and offer my congratulations to each of you being recognized today.

James Douglas, Governor

Recognizing that some of our award-winners this year will need to catch buses home this afternoon, we'll begin with recipients of the Special Youth Environmental Citizenship Award.

The **Special Youth Environmental Citizenship Award** is given for projects accomplished by a young person or young people that achieve significant positive environmental outcomes. This is the first year we will honor award recipients in this category, and we are proud to honor six award winners.

- **CP Stepping Stones 12th Grader, Jeff Ploof** – *The Big Dig*

It's clearly evident that great things can be accomplished by the combined actions of many working in concert, but to say that this is the only – or even the best – way to create change is to ignore the historical significance of the power a single individual can wield as a force for change.

Jeff Ploof is today a graduate of CP Stepping Stones, an independent school in Winooski. As a student there, beginning in 2001, Jeff initiated and implemented on his own an environmental clean-up project specific to the Winooski River and its banks, called The Big Dig. Inspired and disheartened as he was when he saw a single shopping cart partially submerged near the banks of the Winooski River, Jeff channeled his emotions toward accomplishment of a single goal – get that cart out of the river. He accessed tools, asked for help, and after much effort wrestled that mangled cart from the grip of the mighty Winooski. This sense of environmental injustice – and of accomplishment precipitated a series of events that has since come to be known as "The Big Dig". According to Jeff, if it "doesn't decompose (it) doesn't belong [in the river]."

Since that first day, Jeff's Big Dig has involved 15 others and removed an estimated ton of discarded refuse from the river. This has been accomplished through manual trash removal during multiple trips to the river per week – over the past four years!

One of Jeff's proudest accomplishments has been the safe he pulled out of the river over the course of several weeks. One of his favorite catch phrases is, "Scrap metal today, Toyota tomorrow". Jeff's efforts on behalf of the environment offer a model of selflessness that we can all take inspiration from. The name, "Big Dig" will live on at CP Stepping Stones as Jeff's legacy of service to his community and to the environment.

- **David Cairns** – *Every Day is Earth Day at Bishop Marshall*

As a Boy Scout and as an eighth-grade student at Bishop Marshall School, in Morrisville, David Cairns was convinced that the school was generating more waste than it should and than it needed to. Taking the situation into his own hands as part of an Eagle Scout Project he decided to educate staff, students and their families on how to reduce, re-use, recycle and to rethink their use of materials and to improve the recycling and composting programs at Bishop Marshall.

Assisted by Mrs. Mary Elfer and the thirteen students in her fourth grade class, David helped facilitate brainstorming sessions that resulted in the creation of two skits. "Composting Kids" taught about the benefits of composting food waste and introduced the program for collecting food waste at Bishop Marshall to use as compost in the flower beds and in the "Garden of Eating", a vegetable garden behind the school, tended during summer school, and harvested in the Fall to provide food for Homecoming and the annual Thanksgiving dinner. The second skit, "Paper Recyclers" taught students about re-thinking and re-using paper and what could go into the paper bins placed in the classrooms and what kinds of paper could and could not be put into the bins to be recycled.

A hallway bulletin board, at the program's end showed project results. Over the length of the project 577 gallons, or more than half a ton of paper was diverted from the landfill by recycling. Cafeteria and kitchen scraps were composted in the outdoor bin or the worm aquarium and 204 gallons, or 978 pounds of cafeteria food waste and food disposed by the kitchen were fed to the pigs. Bins were used to collect the remaining recyclables and returnables.

The students and staff at Bishop Marshall learned to rethink their choices in materials selection. The school switched to using recycled paper for photocopying and teachers were encouraged to use double sided copying. Students reduced packaging brought from home in their lunch boxes. The staff and students re-used paper from the recycling bin for scrap paper and some paper was made into new paper in Art class.

According to David, “We all learned that clear communication is key to developing working systems”. That’s a powerful life lesson with application in all our efforts to achieve environmental excellence.

- **Jack Parmer** – *Burlington High School Eco-Club*

Burlington High School is the only public high school in Vermont's largest city….and it has an Eco-Club, thanks to the efforts of Jack Parmer. Jack is currently a first year student at UVM, having graduated from BHS in 2005.

While a senior at Burlington High School, after establishing the Eco-Club, he used it as a tool for working with others to inform, educate and empower staff and students to reduce their environmental impact. He organized students to monitor the cafetaria compost bins. He worked with school administrators and food services personnel to transition from disposable to washable and reusable trays in the cafeteria. He designed a mural to communicate with students about the high environmental and energy costs of the styrafoam products being used and advocated for alternatives.

Jack designed and organized an incentives program that allowed teachers to give extra credit to student assignments printed on the opposite side of previously used paper. He initiated a walk or bike to school program to prevent the fuel consumption and air emissions associated with solo-commuting. Students leaving their cars parked and either walking or biking to school earned community service credit. Maybe one of Jack's most exctiting projects involved building a Living Machine in the school greenhouse. This Living Machine demonstrates a method of filtering waste water using a living ecosystem and offers a laboratory for other students to experiment with and learn from.

The many programs that Jack helped to institutionalize have helped change wasteful behaviors and set the school on a path toward a more sustainable future. Jack's passion for the environment is clearly evident and, hopefully, contagious enough to have inspired a successor.

- **Montpelier Public School District/Central Vermont Solid Waste Management District** – *"Closing the Loop"; The Montpelier School District Composting Project*

If we are ever to achieve sustainable lifestyles, communities, and enterprises we're going to have to better learn how to make circles of straight lines. Put another way, society will need to learn how to more closely mimic nature by taking linear operations and making them cyclic – more circular.

The Montpelier Public School District is comprised of three schools; Union Elementary - kindergarten through grade 5; Main Street Middle School - grades 6 through 8; and Montpelier High School - grades 9 through 12.

The Central Vermont Solid Waste Management District provides leadership, education and services for residents and businesses in reducing and managing their solid waste in order to protect public health and the environment to the greatest extent feasible. The District has committed to helping its 22 member communities work toward Zero Waste.

With the help of a 2003 Vermont Agency of Natural Resources Composting Grant the school district and waste district worked collaboratively to create a sustainable closed loop system. Students, faculty and staff composted cafeteria food scraps that were delivered to a local compost facility. In turn, the compost was used as a soil amendment in the high school's solar greenhouse that was used to grow produce. The greenhouse then sold its produce to the school district's food service program which served the vegetables in all three school cafeterias. Organic waste generated by the cafeterias gets collected, composted, and the cycle continues endlessly.

Education is the backbone of the Montpelier Composting Project. The importance of educating participants, especially students, cannot be omitted nor underestimated. It sets the stage for responsible, hands-on cafeteria composting; it imparts vital knowledge about sustainable and unsustainable practices that impact our earth and local environment, and it inspires young people to achieve environmental excellence beyond the immediate project.

Over 1,000 students and 300 faculty, staff and parents were trained on how to do closed loop composting. Through classroom trainings, hands-on composting in the cafeteria, field trips, newsletters, math contests, fund raisers, student presentations, plantings and celebrations, school and community members were immersed in a year-long educational process that explored how to realize value from discarded food scraps and the positive impact closed loop composting has on the local environment. Union Elementary School students took the project one step further by convincing the school district to switch from disposable plastic to reusable metal utensils, thereby preventing over 50,000 pieces of plastic from entering the landfill. Perhaps the greatest lesson learned by all is that each person, whether in kindergarten or the principal's office, can make an important difference.

The City of Montpelier Commercial Compost Program, of which the school district is a partner, has diverted over 195 tons of organic waste from the landfill. The School District's contribution towards that total has been 12 tons. And all of this was the result of taking a line -- that began in the school cafeteria and ended at a landfill – eliminating the landfill, and stretching it around into a circle!

Newfane Elementary 

- **Newfane's 5th and 6th Graders** – Conserving Resources for the Future

How easy it can be to avoid difficult questions. Not so for the 5th and 6th grade students at the Newfane Elementary School. Tough questions actually were the springboard for an impressive effort to live more sustainably. Questions like:

> How many food wrappers go into the waste stream and how long does it take them to decompose?
>
> How much electricity do we use in a day, and are there ways to use less electricity?
>
> Are the school buses at Newfane Elementary being used in an efficient way?
>
> Can we reduce the amount of fuel being used for heating?
>
> Can we see how much water we are wasting here?

It's clear from the type of questions students asked that the future and resource conservation are not divergent topics at the Newfane Elementary School. Here, last year's 5th and 6th graders conducted a comprehensive assessment of their school – pursuing answers to their questions, drafted a 53 page assessment report, presented it to the School Board, and set about investing limited financial resources to implement strategies to conserve resources for the future. The project, called Wild Treasures, offered a unique way to approach environmental problem solving. Wild Treasures allowed students to complete tasks and earn money to conduct research or to buy new things to help conserve resources or protect the environment. Through Wild Treasures, students conducted original scientific research and used their findings to make specific recommendations to the School Board. Over that past two years students have earned about $3,000, with all of the money going, as the students say, "…to make the school more environmentally friendly for the future".

Newfane students set up systems to recycle, to vermicompost (that is, with worms), they replaced leaky faucets and toilets, and helped the custodian transition to environmentally preferable chemical cleaning supplies. They adopted window quilts and cleaned and prepped each one for repairs, they worked with an electrician to re-switch lights so they could turn half of them off on sunny days. Students have even "fooled" the refrigerator to run more efficiently by keeping it as full as possible.

Some say it takes a child to lead. If the students at Newfane Elementary are to be the leaders pointing toward a more sustainable future…then I can only hope that Vermonters are prepared to follow.

- **Stowe Elementary School Fifth Graders; Alana LaViale and Tegan Garon** – *Schoolyard Habitat and Outdoor Classroom*

Stowe Elementary is a public elementary school with 286 students AND many, many birds thanks to the efforts of Alana LaViale and Tegan Garon. As 5th graders, Alana and Tegan were instrumental in making the schoolyard at once more beautiful and more inviting to wildlife.

Initiated in 2003, the efforts of the two girls proved pivotal in achieving the environmental outcomes desired by the school "Habitat Team" and that were part of "The Bird Project". In the fall, they planted over 150 spring bulbs with 5th grade classmates in new and existing gardens. They created a nature path through a wild area and lead students and community members on tours. They worked with 4th graders to create bird feeders that were sold at an annual student art show.

Gravel walkways now lead to a beautiful bench area surrounded by raised-bed gardens. Other gardens, bushes, and a nature trail are part of the area and a beautiful bird feeder is suspended in the area. A spruce tree, donated by the school's Parent Teacher Organization, served as their "Peace Tree" during the winter holidays and it was adorned with hand-made, environmentally safe decorations this past winter.

The accomplishments of Alana and Tegan can be seen in the outdoor classroom. Harder to see and measure is the student ownership they modeled for their schoolmates. While this project has been influenced by many students who were involved in planning, groundbreaking, planting and on-going care, Tegan and Alana showed the community that students can do more than simply participate in what is laid out for them. They can be responsible for the initiation of related projects and influence others to join them in support of our environment!

The next award category is for **Environmental Excellence in Education & Outreach**. Award recipients in this category all worked creatively and tirelessly to inform and educate Vermonters about environmentally responsible practices or empowered citizens to enhance the quality of the environment for local, regional or global communities. This year we honor five award recipients in this category.

- **Camels Hump Middle School** - *The Richmond Rivershore Preserve: A Look at the Cultural and Natural Landscape Over Time*

In cooperation with the Richmond Land Trust, Vermont Institute of Natural Science and the Richmond Parks and Recreation Department, the 7th and 8th graders forming the Sequoia Team at Camels Hump Middle School participated in a two year-long Community Mapping Program. The project investigated the Richmond Rivershore Preserve, owned by the Richmond Land Trust and the Town of Richmond, a unique "silver maple-ostrich fern riverine floodplain forest" along the Winooski River corridor. Students received GIS and GPS training from VINS to map out a 3 mile trail that meanders through the rich landscape. For months, students researched the historical, cultural and natural significance of the landscape. On a weekly basis, groups traveled to the Preserve to examine various layers of the landscape: geology, soils, plants, animals, weather and climate, slope and aspect, and hydrology. As a result of the research and field work, a series of community presentations were given, a web page was designed, and a multitude of maps were created for local organizations.

As partners in the project, the goal was for students to study a local place in-depth, and from the information and data collected, to be able to return something to the community. Students learned about cultural geography, flora and fauna, GIS technology, recreation, soil profile, geologic history, and art. The research and data inventory was presented to the public at the end of the school year. Presentations were prepared for town meeting day, the evening "Walks and Talks" series, the Richmond Land Trust annual meeting, the Richmond Select Board, and the community and parents.

The study of the Rivershore Preserve helped students examine the interdependence of living organisms and the environment. The Community Mapping Project allowed them to connect not only with the place they call home, but also to local scientists that guided them as they plunged into scientific inquiry at a large-scale level. As such, the effort promoted environmental stewardship and investment in the local community.

We're delighted that teachers, students, and local community members are working collaboratively, making a critical investment in environmental literacy, in environmental stewardship, and in their own community.

- **Efficiency Vermont/Middlebury College/Middlebury Global Warming Action Coalition/Aubuchon Hardware &** – *Middlebury 72 Hours of Light Event--The Green Team*

Synergy is a term that describes the interaction of two or more agents or forces so that their combined effect is greater than the sum of their individual effects. And the textbook case for synergy now presents itself as the work done by the five collaborators that spearheaded the Middlebury 72 Hours of Light Event.

Middlebury College is the largest private college in Vermont and a nationally recognized liberal arts college, known for its commitment to sustainabilty. Efficiency Vermont is the nation's first energy efficiency utiltity helping Vermont households and businesses reduce their energy use to save money, strengthen the economy and protect the environment. The Middlebury Global Warming Action Coalition is a local community advocacy group representing environmental and climate change interests. Aubuchon Hardware and Kinney Drugstore are regional retailers with stores located in Middlebury that sell ENERGY STAR qualified lighting products.

The Middlebury 72 Hours of Light Event, conceived by Steven Maier as a project for the 31 students that made up his Conservation and Environmental Policy class at Middlebury College, was intended to challenge students to create an event that would lead to local action resulting in tangible improvements to the environment.

More concretely, students tasked themselves with distributing as many energy efficient ENERGY STAR qualified compact fluorescent Light bulbs as possible over a 72-hour period in hopes of decreasing Middlebury's energy consumption and "lightening" consumers' electric bills. Secondly, they aimed to educate the community about energy consumption, efficiency, and global warming issues.

Over the course of the three days, the class distributed 6,482 ENERGY STAR light bulbs and reached more than 800 Middlebury and surrounding area residents and businesses, providing an estimated $140,000 in lifetime economic benefit, and reducing annual lighting-related emissions by nearly one-half million pounds of carbon dioxide. The lifetime emissions reduction from the 6,482 bulbs is nearly three million pounds.

Where the four walls of the classroom expand to include the surrounding community and challenge young people to think outside the box, it is eminently clear that there can be many winners.

- **Sugarbush Resort** – *Mt. Ellen Biodiesel Pilot Project*

Sugarbush is a four season destination resort providing developed winter recreation for its guests. They operate two ski mountain facilities, a championship golf course, health and racquet club and full service lodging and food & beverage operations.

Taking their lead from the National Ski Area Association's slogan "Keep Winter Cool," Sugarbush Resort approached the task of reducing its own contributions of global warming gases by offsetting a predetermined amount of petrodiesel they use in winter operations with an alternative, domestically produced and renewable fuel – biodiesel.

Instituting a Biodiesel Pilot Project was an idea that was formulated by Sugarbush's Green Team. The Green Team's mission is to find ways in which the resort can reduce its ecological footprint on the environment and look for areas where the resort can improve operations through use of renewable, rather than nonrenewable, resources.

With the financial assistance of the Vermont Sustainable Jobs Fund, Sugarbush transitioned a part of its fleet and documented performance of biodiesel in the challenging winter environment. Prior to this past season all of Sugarbush's snow grooming and snow removal equipment at the Mount Ellen and Lincoln Peak ski areas were run on conventional petrodiesel. For the 2004-2005 winter season, four snow groomers and one bucket loader at Mount Ellen were run on a B20 biodiesel blend, and the experience was compared to the performance of similar equipment run on petrodiesel at Linclon Peak.

Data, analysis, and experience using the fuel helped reveal the many benefits of transitioning from petrodiesel to biodiesel – even where Vermont's cold winter temperatures pose special challenges. They determined that by using 15,000 gallons of B20 biodiesel, approximately 3,000 gallons of petrodiesel were displaced by a domestically produced and renewable product. Additionally, by using biodiesel Sugarbush estimates it will be offsetting the emission of approximately 9,000 pounds per year of CO_2 equivalent.

In the final analysis, Sugarbush Resort hopes its biodiesel experience can set a new standard for ski area operations throughout Vermont and New England.

- **University of Vermont (UVM)** – *Eco-Reps Program*

The University of Vermont aspires to be the leading environmental small research university in its academic programs, campus practices, and cultural emphasis on environmental responsibility. The University serves close to 10,000 students and 3,500 faculty and staff. The environmental impacts of any institution are partly the result of individual lifestyle choices and behaviors. The UVM campus houses more than 3,800 undergraduate students in 26 residence halls; while one student has only a small impact on waste generation, water use and electricity consumption, the combined impact of 3,800 students is substantial.

The Eco-Rep program, modeled after successful programs at Harvard and Tufts universities, was developed at UVM by the Recycling Office and the Environmental Council, in collaboration with Residential Life, the Energy Management Office, and campus environmental student advocacy groups. Students are hired to work four hours per week during the academic year to educate their dorm-mates about recycling, composting, energy use, water use, food, and transportation. The program is coordinated by a graduate student working 10 hours per week, with oversight by the Recycling Office.

Topics Eco-Reps cover with their peers include solid waste, recycling, energy conservation, environmental education and water conservation. The goal of such conversations is to reduce the operating costs and environmental impacts of the University residence halls by improving the environmental behavior and culture of its residents. Last year's effort was a pilot program that covered almost 50% of the residents. The program proved successful and has now been expanded for the 2005-2006 academic year to other campus buildings.

The Program Coordinator communicates on a regular basis with Eco-Reps through an e-mail ListServ. Eco-Reps use the list to communicate ideas and plan activities as a group, since face-to-face meetings only occurred every other week. Eco-Reps receive an activities handbook, and attend bi-weekly meetings to plan activities and provide feedback to the coordinators. Activities include posting information weekly on an Eco-Bulletin board in their hall; conducting energy audits; going door to door talking to students; conducting surveys; and working on special projects.

The Eco-Rep program is an innovative approach to empowering students to adopt environmentally preferable behaviors. Rather than a top-down approach to changing student behaviors, the program fosters peer-to-peer learning. While the Eco-Reps rely on technology and maintain a website and active listserv, their most important approach is face-to-face interactions. Eco-Reps spend much of their time going door-to-door through the dorms, tabling at events, and engaging in discussions with other students. Through these interactions, the Eco-Reps are not only spreading information and changing behaviors, but they are also fostering a stronger environmental community on campus and beyond.

The Eco-Rep program benefits the environment both by reducing immediate impacts and by encouraging ecologically sustainable habits that students will hopefully carry with them when they move off campus into the Burlington community and into adulthood.

- **Vermont Forum on Sprawl/Sustainable Schools Project/Shelburne Farms** – *Healthy Neighborhoods/Healthy Kids Project*

A growing body of research, including studies from the Centers for Disease Control, indicates there are connections between community design and public health. This being the case, by addressing community design issues we may be able to create safer and more healthful conditions for Vermont's young people – and reduce health care costs for all of society.

A unique collaboration between the Vermont Forum on Sprawl and The Sustainable Schools Project at Shelburne Farms resulted in an effort to create both healthy neighborhoods and healthy kids. The Healthy Neighborhoods/Healthy Kids program engages youth in community planning and revitalization activities. Last year the 4th and 5th grade students at Burlington's Lawrence Barnes Elementary School drew connections between the design of their communities and their health. As part of a "What does my ideal neighborhood look like?" activity, students created a Neighborhood Report Card to grade their own "ideal neighborhood" drawings.

Children then used their Neighborhood Report Cards to evaluate the health of their actual neighborhoods, making links to how their design either promotes or discourages healthful activities. Nine groups toured their community, evaluating nine local neighborhoods on features such as condition of sidewalks, parks, cleanliness, safety features and presence of grafitti.

One of the features that all student groups pointed out was the lack of a "School Zone" sign by their school. Students presented their findings to neighborhood and city boards - and the city council immediately responded by drafting a resolution to put in the signs on North Street by the school. Burlington Mayor Peter Clavelle and City Councilor Phil Fiermonte attended the unveiling of the sign, as did Steve Goodkind, Director of Burlington's Department of Public Works.

By engaging students to imagine their "ideal" neighborhood and creating a neighborhood Report Card, the project gives students an important tool they can use to create a more livable and healthful community.

The next award category is for **Environmental Excellence in Pollution Prevention**. Award recipients in this category implemented projects that reduced or eliminated the generation of pollutants and wastes at the source – before it was ever generated. This year four award recipients are honored.

- **Burlington Electric Department IBEW (International Brotherhood of Electrical Workers)** - *Exercising Workers' Right-To-Know to Win Big for Workers, the Public, and the Environment*

The Burlington Electric Department International Brotherhood of Electrical Workers, Locals 300 and 2326, represent most of Vermont's electrical and communication utility workers…and this is the first time we honor a labor union with a Governor's Award for Environmental Excellence & Pollution Prevention. Besides ensuring a safer environment for the public and for workers the result might be the most significant toxic use reduction example in Vermont regulatory history.

Utility poles are a ubiquitous element in our environment; found in both urban and rural settings throughout the state. Transmission lines suspended from wooden poles link Vermonters with energy producers throughout the Northeast and beyond. This being the case, it's especially difficult to imagine the environmental and human health consequences stemming from use of these very same poles.

Telephone and electric power poles, typically made of Southern Pine, are pressure treated with a chemical that is both a preservative and a pesticide to prevent rot and insect damage. Because of a policy change made at the national level, utility poles destined for installation in Vermont came having been subject to a new and improved "clean" creosote pressure treatment. While creosote is a proven pesticide with some advantage in marine environments it has been disappearing as the pole pressure treatment of choice in the northeast for decades.

Almost immediately, linesmen working with the new poles noticed that many poles seemed to "bleed" the chemical creosote excessively – especially in direct sunlinght – and that exposure to this chemical was causing skin irritation, swelling, and headaches. Concern mounted where such poles were to be installed in places where children might be exposed to the chemical.

Union workers spent countless hours doing the necessary technical research to better understand the human health and environmental hazards of exposure to "clean" creosote. They discovered factual errors in the manufacturer's information on the Material Safety Data Sheet which led to a realization that the new poles required ten times more chemical pesticide to be retained by the wood to be as effective as older poles. If one considers a City like Burlington, which has approximately 4,000 utility poles, then this difference means that a portion of more than 500 tons of treatment chemical have potential to be released into the environment.

After voicing their concerns and sharing the results of their research with the national company supplying the utility poles the Unions decided to seek an order from the Vermont Public Service Board limiting the use of poles treated with creosote in Vermont to unusual circumstances only. The International Brotherhood of Electrical Workers prevailed in making their case and in its report describing the final stipulation, the Public Service Board concluded that, "The parties have worked diligently to resolve this case, and I believe they have reached a settlement that will protect both the workers who must be in contact with the poles as well as the general public and the environment…"

HUBBARDTON FORGE®
HAND-FORGED, VERMONT-MADE
LIGHTING AND ACCESSORIES

- **Hubbardton Forge** – *Setting New Industry Standards with Bioremediation Parts Cleaning*

Hubbardton Forge, a three-time former recipient of Governor's Awards for Environmental Excellence, returns this year to be honored for a project that clearly exhibits environmental excellence and leadership by making it the first in the northeast to put into production cutting edge technology to reduce process waste and prevent pollution.

Hubbardton Forge is a manufacturer of hand-forged wrought-iron lighting and accessories for the high-end residential and commercial lighting market. The company was founded in 1974 as a two-man craft-art metals studio. Over the last 31 years, the company has grown into a strong domestic manufacturing company with a nationally known brand. Hubbardton Forge's more than 200 employees produce unique lighting designs, available in seven different powder-coated finishes, and sold through approximately 1200 lighting and design stores throughout North America.

The manufacture of wrought iron lighting requires several steps; forging, assembly, cleaning, and powder coating describe but a few key steps. The cleaning of parts before powder coating is a science requiring exact chemistries, temperatures, and pressures. The cost of a mistake in either one of these parameters is product that the powder coating won't adhere to.

In the past, Hubbardton Forge has used an aqueous cleaning process for preparation of parts to receive the final powder coated finish. In 1995 they changed from an alkaline-based dip system to an acid-based iron phosphate conversion coating applied in a batch washer. This change resulted in a significant reduction in chemical, water, and energy use. However, the company's continuous improvement process, led by "Yankee frugality," production growth pressures and environmental commitment, kept them looking for an even better way to clean parts.

In 2003 Hubbardton Forge found that better way and began implementing it in 2004. Bioremediation involves the use of an alkaline cleaner that employs microbes that, in effect, "eat" the soils and oils on metal parts. The process is very similar to what happens at a sewage treatment plant and, in the company's unique application, could be made to work in their existing batch washer with only minor modification. The transition to bioremediation not only reduces environmental risk but reduces energy and process costs such that Hubbardton Forge expects to save nearly $200,000 annually.

As the oldest contemporary commercial forge, Hubbardton Forge is clearly committed to quality, to honest simplicity, and to environmental excellence. Once again, pollution prevention proves to be an important strategy for achieving both economic and environmental goals – simultaneously.

- **IBM Photochemical Solvent & Waste Reduction Teams** – *Photochemical Waste Reduction and On-Site Treatment Of Photochemical Waste Solvent*

IBM currently holds the distinction of being the only company to receive a Governor's Award for Environmental Excellence each year since the awards program was begun in 1993. This year we recognize the Photochemical Solvent & Waste Reduction Teams for their efforts.

Photolithography is a key process in production of semiconductors at the IBM Burlington site. A photoactive-based polymer dissolved in a solvent or solvent mixture, called photoresist, is applied to silicon wafers and exposed with light projected through a photo mask to define device geometry such as circuit lines. These photochemicals have a limited shelf life ranging from 6 to 12 months and, therefore, are candidates for tight controls as to use – even more especially because waste photochemicals, most often the result of shelf expiration, are expensive to replace and to dispose of properly.

The two teams, working alone and in concert, have implemented numerous initiatives over the past three years related to chemical use optimization, general housekeeping and tool maintenance procedures, and more efficient inventory management in order to reduce the disposal of photochemical waste. Both simple and more complex actions contributed to IBM's success. Additionally, the teams devised a way to deal with photochemical waste using biological treatment. Such wastes are regulated as an ignitable hazardous waste. By eliminating the need to send more than one million pounds of hazardous waste off-site IBM eliminated 25 roadway shipments and the use of approximately 2,000 gallons of diesel fuel for transportation and associated engine emissions.

On a percentage basis, waste volume was reduced 68% from 2002 to 2003 and 43% from 2003 to 2004. The efforts of these two teams resulted in cost savings, process stability in a widespread semiconductor manufacturing step, and environmental and safety benefits extending beyond IBM to the worldwide semiconductor industry. Approximately 19,400 pounds of waste photochemicals have been eliminated due to the source reduction activity. Off-site hazardous waste shipments were reduced by an average of 384,000 pounds per year. Cost savings from this project have totaled $ 211,500 to date in chemical and hazardous waste disposal costs

- **IBM Soft Mask Gate Electrode Formation Team** - *Soft Mask Gate Electrode Formation*

A giant in the world of the exceedingly small, IBM Burlington continues to exemplify how an ongoing commitment to pollution prevention and continuous improvement helps reduce chemical use and waste generation in semiconductor manufacturing operations.

With multiple applications this year, IBM wasn't taking for chance the opportunity to make the point that pollution prevention is best where it's institutionalized as part of the culture; part of the very fabric of how a company does business. This being the case at IBM, I'd like also to recognize the exemplary efforts of the Softmask Gate Electrode Formation Team.

A key step in integrated circuit manufacturing is the formation of the conductive gate electrode because it determines the performance and yield of the integrated circuit. The industry standard was a hardmask process that was both complex and time-intensive to complete. The softmask process developed at IBM reduced complexity, defects, and processing time, as well as reduced the company's use of both toxic and global warming gases, with a half-life in our atmosphere of from 5,000 to 50,000 years.

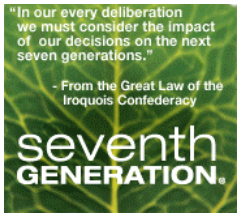
In April 2002, IBM joined Climate Leaders, a voluntary program launched by the U.S. Environmental Protection Agency to challenge business to do more than business as usual. IBM pledged to:

Achieve an absolute 10% reduction in perfluorocarbon emissions from IBM's semiconductor manufacturing processes by 2005, using 2000 as base year.

With development of the softmask process, IBM made good on its pledge and use of perfluorocarbons was reduced the equivalent of 55.4 metric tons or 121,966 pounds of CO_2 .

Softmask gate electrode formation has decreased the environmental impact of IBM's integrated circuit manufacturing in Vermont and New York while enhancing the yield performance of IBM's most advanced technologies and significantly reducing its contributions to climate change.

The next award category is for **Environmental Excellence in Environmental Stewardship & Resource Protection**. Award recipients in this category implemented projects with measurable and direct benefits to air, land or water – or fish, wildlife and human communities dependent upon a clean and healthy environment. This year we honor two award recipients.



- **Jeffrey Hollender/Seventh Generation** – *Growing a Sustainable Company*

How does one truly honor future generations of Vermonters, Americans, and Global Citizens? To begin, according to the Great Law of the Iroquois Confederacy, "We must consider the impact of our decisions on the next seven generations". That's an awesome responsibility. At Seventh Generation, President and CEO Jeffrey Hollender has worked tirelessly to build a company named after and driven by this principle.

Headquartered in Burlington, Seventh Generation employs 45 team members. The company is the nation's leading brand of non-toxic, environmentally safe household products. With national distribution in thousands of natural product, grocery, and other retail stores, they've become an authority on products that protect public health and the environment.

All Seventh Generation products are made from non-toxic and environmentally friendly ingredients. The ingredients in their cleaning products are also biodegradable, hypoallergenic, do not contain phosphates, and will not cause chronic health issues. Their natural paper products use sources of paper like old phone books that normally end up in landfills and their white paper products are whitened without the use of chlorine.

Over the past two years, Seventh Generation has made a host of changes to improve the environmental performance of their products. For example, they eliminated chlorine-processed pulp in their baby wipes, shifted transportation of some products from truck to less polluting rail, and began engaging their suppliers on Corporate Responsibility and environmental issues.

2003 marked the first year they began bypassing their warehouses and shipped significant amounts of products from their suppliers directly to customers. These shorter, more direct shipments resulted in measurable reductions in transportation-related pollutants.

In addition, Seventh Generation quantifies the environmental benefits of choosing their products. These calculations are verified by an independent group with in-depth documentation. Since 1988, customers, through their purchase of Seventh Generation products, have saved 327,800 trees, 233,000 tons of greenhouse gasses, 1,313,700 gallons of petroleum, and 123,642,500 gallons of water.

From his experience in leading a values-based sutainable company, Jeffrey Hollender co-wrote “What Matters Most”, a book examining what corporations and their leadership are doing to contribute to a sustainable, ethical business community. According to Hollender, businesses have an obligation to provide workable solutions to the daunting challenges facing the planet. "Corporate social responsibility must become a critical part of every company's core competence and strategy."

Vermonters can be proud to have a company so in the forefront of the sustainability movement right within the state’s borders. Where Seventh Generation continues to succeed in the marketplace we can hope to bequeath to the next seven generations a future where hope may continue to flourish.

- **NRG Systems, Inc.** – *NRG Systems Green Manufacturing and Office Facility*

NRG Systems, founded in 1982, is one of Vermont's fastest growing technology companies. The company has 46 employees and expects to more than double its sales within five years. NRG manufactures wind measuring systems and products--vanes, anemometers, towers, instruments and accessories--that are used to measure and analyze wind speed, direction and other environmental data for siting and operating wind turbines. NRG products are used by electric utilities, wind farm developers, research institutes, universities, government agencies and homeowners and can be found in more than 110 countries, on every continent.

NRG Systems recently completed a 46,000 square foot manufacturing and office facility in Hinesburg. The facility is powered primarily by renewable energy and features the latest in energy efficiency technology and green building design. The facility was awarded gold LEED certification, making it the first gold and highest LEED-certified building in Vermont and one of only four industrial facilities in the world to receive this designation. LEED is the nationally accepted standard and rating system for high performance, sustainable (green) buildings developed by the U.S. Green Building Council. Conventional buildings use more than three times the energy as the NRG building. The building's unique design, the materials used, the energy, water and other resources saved all reduce the company's impact on the environment and create a healthier place for its employees. The building represents the culmination of a dream for company owners Jan and David Blittersdorf who wanted to build the most beautiful, energy-efficient, and people-friendly workplace that modern technology could offer, while supporting the company's mission of environmental protection and renewable energy.

Buildings have a tremendous impact on the environment. According to the U.S. Department of Energy, buildings represent 39% of the energy used in the U.S., and they consume about 70% of the nation's electricity. Green buildings, like NRG's, strive to minimize impacts on the environment by addressing five main areas: sustainable planning and design; energy use; water quality and efficiency; materials use and selection; and, indoor environment and air quality.

The building features a 73-kilowatt solar photovoltaic system, which provides three-quarters of the building's electricity. A 10-kilowatt wind turbine complements the $450,000 solar installation, which is the largest solar installation in Vermont. The building also uses another renewable resource--wood pellets made from lumber milling waste--for its heating needs. Wood pellets are 30% cheaper than oil and half the cost of propane.

Because of its proximity to the town center of Hinesburg, NRG has also made it convenient for employees to access services by foot or bike. NRG provides bike racks and an electric vehicle charging station and offers its employees a cash incentive toward the purchase of hybrid vehicles to encourage alternative transportation.

According to NRG Systems, the cost of building to "green" standards was $13.81 per square foot or about 8% more. NRG expects these costs to be paid for in less than five years.

NRG's goal was to produce a model long-lasting, durable and healthy manufacturing and office facility. While the owners kept a watchful eye on the building costs, it was the "soft" benefits that drove the design and purchasing decisions. The result is a beautiful, healthy and sustainable building that made economic and environmental sense. Jan Blittersdorf sums it up this way, "If we can spark one person to build differently as a result, that would be a wonderful effect." With the level of interest NRG's green manufacturing facility has generated, it certainly appears that this spark has been ignited.

The next award category is for **Environmental Excellence in Resource Conservation**. Award-winning projects in this award category served either to conserve resources and protect the environment by minimizing resource consumption or by applying the strategies of reuse or recycling. This year we honor a single award recipient.

- **WDEV Trading Post Program** – *Facilitating Community-based Materials Reuse*

Dana Jewell | Eric Michaels

WDEV, with its broadcasting station in Waterbury, is an independently owned and operated radio station. It began in 1931 as WDEV-AM. WDEV-AM acquired and began simulcasting with WDEV-FM in 1993 expanding the listening area into the Champlain Valley and Central Vermont. WDEV provides local and national news, sports coverage, onsite coverage of many local business and nonprofit events, and the Trading Post Program.

The WDEV Trading Post Program is a call-in and write-in show through which Vermonters selling items, seeking items, or trading items can find each other. The WDEV Trading Post is considered one of the longest running features in New England Radio. It began as a write-in program and was hosted by Lloyd Squier - one of the original founders of WDEV-AM in 1931. There have been several hosts of the program including the late Rusty Parker and the beloved Harold Grout known to Trading Post listeners as "Cousin Harold". In 1995, WDEV changed the program from just a write-in program to include a call-in segment. The response was so overwhelming that the Saturday half-hour program was opened up for a full hour and weekday programs were expanded to about 20 minutes. Dana Jewell now hosts the program Mondays through Saturdays at 6:35 am and Eric Michaels, Station Manager, hosts the hour-long "Bonus Trading Post" Saturdays from 8:00 to 9:00 am. Thousands and thousands of items from cars to canning jars have gone from being potential trash in one household to a find fit for another.

For more than seven decades now WDEV's Trading Post has mediated Vermonters' "recycling and re-use" of what might otherwise have become trash long before these terms were to become part of the common lexicon! In addition to the waste reduction and resource conservation benefits, the show and the exchanges on the show helps foster an important sense of community. The very idea of radio being used to so successfully put Vermonters in touch with each other for both environmental and social benefit is a timeless example of what we can and must do to live more sustainably.

The last award category is for **Environmental Excellence in Land Use & Land Use Planning.** Award-winning projects preserved or conserved land to create ecological and other environmental benefits. A single award recipient is recognized this year in this award category. This year we honor a single award recipient in this category.

- **Main Street Landing** – *Lake & College Redevelopment Project*

Main Street Landing is not your typical development company. It's a company with a vision that includes a environmental sensitivity and social conscience. Melinda Moulton and Lisa Steele manage the Main Street Landing Company and freely admit that they want to do more than simply build buildings, they want to nurture the relationships that allow them to help build a more sustainable future.

The Lake & College Redevelopment Project, located on the corner of Lake and College Streets on the Burlington Waterfront is a sustainable building project that incorporates reuse of a vacant urban site and transforms it into a public/private commercial and performing arts center. The project includes a two-screen cinema and black box performance theater, 30,000 square feet of public promenades, 18,000 square feet of additional parkland, and LEED Certification from the Green Building Council.

The goal of Lake & College is to connect "local" mixed-use functions with public access. To insure this, a pedestrian linkage from Battery Park Extension to the Waterfront has been developed with a central overlook, stair, and elevator system whereby the public can walk from the park through Lake & College to the waterfront.

Thanks to its well-insulated envelope and high performance control system, Lake & College consumes 30% less energy than comparable buildings of its size and type. Punched window provide the building with warmth on cold winter days, and prevent overheating due to the low sun shining in over Lake Champlain on the long western exposure. Waterless urinals and efficient lighting help save water and energy. A sophisticated heat recovery system allows for plenty of fresh air while recapturing heat that would otherwise be vented from the building.

In addition, tenants – which now include Seventh Generation – are provided with a document outlining the "Environmental Guidelines for Building Improvements, Equipment Purchases, and Building Maintenance" to ensure that indoor air quality is not compromised and to further reduce the building's ecological footprint.

The Main Street Landing motto is, "Build Green to Save Green". This is an attitude that, if more widely shared, could transform how we in Vermont choose to build a preferred future.

On my own behalf and on behalf of all Vermonters, let me extend a very personal thank you to each of the award recipients. The environmental excellence you exemplify helps to ensure that Vermont remains the very special place it is.

And now it's also my honor to recognize a Vermont businessperson that has earned the right to be recognized as a **Vermont Business Environmental Leader** and several Vermont innkeepers whose properties were officially designated **Green Hotels In The Green Mountain State** this year:

Vermont Business Environmental Partnership

The Vermont Business Environmental Partnership is a voluntary, environmental assistance and business recognition program offered by the Environmental Assistance Office of the Vermont Department of Environmental Conservation and the Vermont Small Business Development Center. The Partnership joins efforts of the public and private sectors to achieve environmental and economic goals simultaneously. The goals of the Partnership are to achieve greater environmental and economic performance and to promote public recognition of environmental excellence.

Vermont small businesses joining the Partnership go beyond compliance with existing environmental regulations using pollution prevention strategies and many components of an Environmental Management System. The Vermont Business Environmental Partnership allows participants to be recognized as an Environmental Partner when they achieve a set of core environmental standards and a total of six elective standards.

The following business is recognized as having achieved designation as a Vermont Business Environmental Leader in 2004 - 2005:

- **EHV-Weidmann Industries, Inc.** (located in St. Johnsbury)

EHV-Weidmann Industries in St. Johnsbury, has been recognized by the Vermont Department of Environmental Conservation and the Vermont Small Business Development Center as the first *Environmental Leader* in the Vermont Business Environmental Partnership. EHV-Weidmann, an ISO 14001 registered company that specializes in products for the electrical power transmission and distribution industry as well as products for the home furnishings and light construction industry, has significantly reduced its hazardous wastes and has developed an extensive recycling program that diverts hundreds of thousands of pounds of solid waste from the landfill per year. Not only does EHV-Weidmann recycle, they "close the loop" by making products from recycled material. While many of EHV-Weidmann's products contain 10 – 50% recycled fibers, their "Tuff Vent" line is made from 100% recycled cardboard. Even more impressive is the company's practice of using their own waste sawdust as a constant ingredient in the production of insulation pressboard. Last year, this alone diverted 335,000 pounds of sawdust from the landfill. EHV-Weidmann Industries has voluntarily adopted many best management practices that go beyond compliance with environmental regulations. According to Larry Corrow, Environmental and Safety Director at EHV-Weidmann Industries, "We are proud of voluntarily implementing our Environmental Management System. This approach makes good business sense and assists us in serving customers while helping to protect human health and the environment."

Vermont Business Environmental Partnership -- Green Hotels in the Green Mountain State

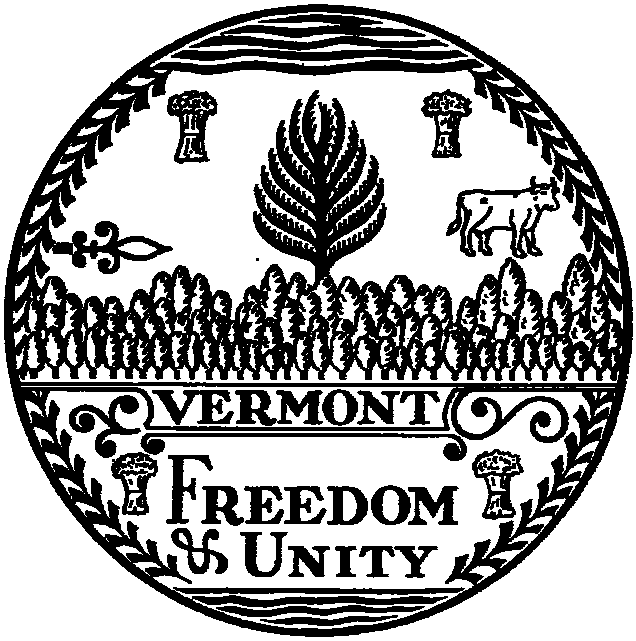
Tourism is already the world's largest industry and, if current trends continue, travel and tourism will soon be the largest industry in Vermont. Lodging is an important segment of this growing industry, providing tremendous diversity and stability to the state's economy. This sector of the economy, more than most however, is highly dependent upon a clean and scenic environment. This is the magnet attracting many visitors to our state – and keeps them coming back. The lodging industry in Vermont, with nearly 20,000 guest rooms, is already one of the greenest in the nation. Vermont innkeepers are recognized nationally as leaders in environmental management and environmental protection.

The following properties are recognized as having achieved designation as **Green Hotels in the Green Mountain State** in 2004 and 2005:

- **The Richmond Victorian Inn** (Richmond)
- **Fitch Hill Inn** (Hyde Park)
- **The Lang House** (Burlington)
- **Catamount Bed & Breakfast** (Williston)
- **The Bridges Resort** (Warren)
- **The Inn on the Green** (Middlebury)

My congratulations and thanks to Governor's Award recipients, to the first Vermont Business Environmental Leader, and to the managers and staff of properties being recognized this year as **Green Hotels In The Green Mountain State**. I wish you all continued environmental *AND* economic success!

THANK YOU!



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