



HUDSON VALLEY

PATTERN FOR PROGRESS

FELLOWS PROJECT PAPER

RECYCLING: CHANGING HABITS

A White Paper from
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Promoting regional, balanced and sustainable solutions
that enhance the growth and vitality of the Hudson Valley

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RECYCLING: CHANGING HABITS

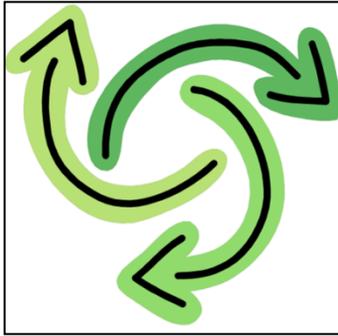


TABLE OF CONTENTS

YOU SAY YOU WANT A REVOLUTION

PAGE THREE

- RECOMMUNITY & THE RECYCLING REVOLUTION
- PROJECT OVERVIEW
- NY STATE RECYCLING LAWS

WELL, YOU KNOW

PAGE FOUR

- SOME FACTS AND FIGURES
- BARRIERS AND BENEFITS

WE ALL WANT TO CHANGE THE WORLD

PAGE FIVE

- RECOMMENDED SOLUTIONS
- ACTION PLANS

YOU SAY YOU WANT A REVOLUTION

Hudson Valley Pattern for Progress and the project sponsor charged this 2012 Fellows Team with identifying strategies and developing supportive action plans to increase recycling efforts.

ReCommunity, the project sponsor, is a leader in the **recovery revolution** that is focused on dramatically reducing the volume of land-filled waste through conversion into useful products such as recycled commodities, low-carbon energy, engineered feedstock, bio-fuels, along with other value-added recycled products.

In February 2012, ReCommunity opened a \$7.5 million state-of-the-art automated material recovery facility for household recyclables in Beacon, New York. Leading up to this grand opening, a key concern for ReCommunity was this: "Well, we built it. Will they come?"



ABOUT RECOMMUNITY

"ReCommunity is committed to what we call 'Leading the Recovery Revolution' and we are happy to bring our services, along with new green jobs, to the Greater Hudson Valley," said Jim Bohlig, the company's chief executive. "We exist to extract as much value as we can from recyclable materials and convert them to 'recovered resources' that replace the use of virgin natural resources."

At full capacity, ReCommunity estimates its new facility will prevent 261,186 metric tons of carbon dioxide-equivalent greenhouse gases from being emitted annually, comparable to removing 47,838 cars from the road each year. It will also save 122,955 cubic yards of landfill space by recovering material from the waste stream that can be recycled into new products.

PROJECT OVERVIEW

The Fellows Team met several times with ReCommunity leadership to discuss the scope and parameters of the project. With the company's emphasis on education as a key tool to increase recycling rates, the Team identified school-based recycling initiatives as an obvious first step. Additional strategies to raise awareness of recycling and increase recycling efforts were identified as well.

CURRENT RECYCLING PRACTICES

The introduction of the Solid Waste Management Act of 1988 and the New York State Returnable Container Act of 1982 significantly impacted on the rate of recycling in New York State.

The New York State Returnable Container Act, also known as the "Bottle Bill," has been a tremendous success. Over the last 26 years it has achieved significant impacts to create a cleaner and healthier New York. The Bottle Bill has:

- reduced roadside container litter by 70 percent
- recycled 90 billion containers, equal to 6 million tons of materials, at no cost to local governments
- saved more than 52 million barrels of oil; and
- eliminated 200,000 metric tons of greenhouse gases each year.

WELL, YOU KNOW

SOME DATA ON RECYCLING

According to the Recycling Facts website:

- Each person creates about 4.7 pounds of waste every single day
- In the US, 33.4% of solid waste is either recycled or composted, 12.6% is burned in combustion facilities and 54% makes its way into landfill
- The amount of recycling in 2007 saved the energy equivalent of 10.7 billion gallons of gasoline and prevented the release of carbon dioxide of approximately 35 million cars
- The number of landfills in the US is decreasing while their size is increasing. In 1998 there were 8,000 landfills but only 1,754 in 2007
- Each ton of mixed paper that is recycled can save the energy equivalent to 185 gallons of gasoline
- Approximately 8,660 curbside recycling programs exist in the United States
- There are about 3,510 community composting programs in the United States
- Disposal of waste to landfills has decreased from 89% in 1980 to 54% in 2007
- Recycling one ton of aluminum cans conserves the equivalent of 1,665 gallons of gasoline

CHALLENGES TO SHAPING THE PUBLIC'S RECYCLING HABITS

In "*Recycling: Why People Participate; Why They Don't*," motivations for and barriers to recycling were explored.

- **Motivations** focused on the perceived effectiveness of recycling. The more that people see recycling as effective, the more likely they are to participate or to participate more fully.
- Researchers found a direct link between recycling behavior and an individual's belief in and knowledge of the benefits of recycling.
- **Benefits of recycling** included extension of the supply of natural resources, litter reduction, improvement of environmental quality; preservation of landfill space, energy conservation and resolution of a national problem.
- **Barriers to recycling** included inconvenience ~ lack of time or space, pest concerns, messiness, lack of knowledge regarding what can and cannot be recycled and difficulty moving recycling bin to curb.

A 2009 National Public Radio program entitled "*Amid Recession, People Throwing Less Away*" featured an interview with waste industry analyst Jim Thompson of the Waste Business Journal.

- Mr. Thompson explained that people consume less during a recession which means they're throwing less stuff away.
- The program checked in with a waste transfer station in Maryland and included interviews with "garbage guys" from across the country. Key reasons for the decrease include fewer people moving in and out of houses, which means less moving waste; people purchasing fewer items in stores which means less packaging getting disposed.
- Mr. Thompson said that **residential volume of recyclables decreased about five percent in 2009**, the first time there was a decrease in residential volumes in the 20 years such information has been tracked.

KEY IMPEDIMENTS TO CHANGING HABITS

The following were identified as key impediments to changing recycling habits:

- Lack of consistent recycling policies from state to state, municipality to municipality, town to town, etc.
- Lack of enforcement protocols
- Resistance to regional collaboration
- Lack of knowledge regarding what is and is not recyclable
- Single stream vs. dual stream

WE ALL WANT TO CHANGE THE WORLD

RECOMMENDED SOLUTIONS AND ACTION PLANS

The Fellows Team developed six recommendations for ReCommunity which can affect changes in consumers' recycling attitudes and habits.



SOLUTION ONE - SCHOOL RECYCLING PROGRAM

The Fellows Team researched and discussed the elements that go into a school recycling program. We received information from Green Schools of Rockland, NY DEC School Recycling Resource Book and the ABC's of Recycling "It's Elementary" Guide. These guides were very helpful in formulating the plan for the school program.

Tom Murphy, of M&T Bank and former Pattern Fellows graduate, introduced our team to the Superintendent of Beacon School District as well as the Principals of the Middle School and the High School. We discussed our project with them and asked for their help in instituting a pilot recycling program. We then met with the custodial staff, two Life Science teachers and Stevie Borrello, a senior at the high school who has dedicated herself to recycling and other environmental issues. All were very grateful that ReCommunity and the Pattern Fellows were taking an active role in this important issue.



We then contacted Royal Carting, and asked for its assistance in funding this program. The results were outstanding. Royal Carting donated three large bins for the middle school, six large bins for the high school and scheduled an extra pick-up day at the high school.



ReCommunity funded the cost of ten 23-gallon containers which will be used by the High School this year in all the Science Classrooms as a test run to work out the details of collection by the 35 member Recycling Committee (students). ReCommunity will also fund the majority of the cost of 40 additional bins for the Middle School. These bins will be branded with the school logo and the tag line for the recycling program.

Data will be gathered by the students and presented to ReCommunity to monitor the effectiveness of the program and the decrease in waste going to the landfill from the school. Assemblies have been scheduled for next year for ReCommunity to present education videos and answer questions from the students. The Life Science teachers and Stevie were given an up-close and personal tour of the new Beacon facility and were involved in the direction and implementation of the container program.



SPECIAL NOTE: The school recycling program was the highlight of the Grand Opening Celebration and press conference at the Beacon facility in April 2011. Elected officials, ReCommunity executives, Pattern Fellows and members of the public were educated on how the new facility operates, and were informed of the new recycling program at the schools. The branded tag line for all printed materials/ bins is **"Don't Throw Away Our FutuRE."** A sample of the bin was unveiled and details of the program were announced by the Fellows Team at this event.

BUDGET FOR PILOT PROGRAM

Item	Amount/Cost per unit	Total \$
Large 65 Gallon Bins	7 / \$85.00	\$595
23 Gallon Bins	50/\$40.00	\$2,000
Printed Materials		\$500
Total		\$3,095

ELEMENTS OF A GOOD SCHOOL RECYCLING PROGRAM

- Organize a team including school administrator, teachers, head custodian, students from every grade, parents, PTA representatives and food service companies.
- Identify recyclables and develop checklist.
- Conduct a waste management assessment and identify goals for program on a room-by-room basis. Look at each room in the school and develop a waste reduction and reuse plan to save energy, reduce landfill space and reduce waste cost to the school.
- Research Waste Hauling Services and how they can help.
- Develop a collection system – when, where and how the recycle bins are picked up in each room. Create a tracking form to monitor weight of mixed pounds by date. Make sure containers are well marked and located next to regular waste cans. Be sure to select the right bins for each classroom and common area.
- Build awareness by communicating your plans to all members of the school, the public and the press.
- Consider holding a program kick-off either at a school assembly at the local Recycling Plant or even Town Hall.
- Recognize and award participation in the program for all segments including students, teachers, community and local businesses.
- Develop and implement fundraising activities for future programs and ideas.
- Calendar and Poster contests to get students involved in the campaign (NY Recycles 2012 Calendar is an excellent example – <http://www.dec.ny.gov/education/32506.html>.)



SOLUTION TWO – COUNTY-WIDE COORDINATOR

In addition to the development and funding of the Education Center at ReCommunity in Beacon, the group suggests hiring a County Coordinator to work directly with municipalities, schools, Solid Waste Committee, civic groups and clubs to increase education and source additional funding opportunities.

Action Plan: ReCommunity can hire one additional staff member (or could be a college intern) who reports to Chris Coady and is responsible for coordinating efforts and activities of the various groups in the ReCommunity territory. Duties to include:

- Liaise between ReCommunity and Solid Waste Committee to attain economies of scale on solutions to regional dilemmas
- Implement county-wide school recycling program
- Coordinate mobile recycling unit activities and schedule
- Build regional outreach education capacity to assist planning units in improving recycling rates
- Educate manufacturers on feasibility and benefits of designing for reuse and remanufacture
- Coordinate the Education Center visits by civic groups, clubs and schools
- Source funding opportunities for educational outreach
- Become ReCommunity's voice within NYS Association for Reduction, Reuse and Recycling, NYS Association of Environmental Management Councils, NYS Association for Solid Waste Management and NYS DEC



SOLUTION THREE – MOBILE RECYCLING VEHICLE



We suggest the purchase of a mobile recycling vehicle to educate the public on increasing recycling and end uses for recycled products.

Action Plan: The mobile recycling education center currently in use in Tempe, Arizona, as well as another unit created by the Coca Cola Company, is like a “field trip” that comes to you. The public can learn about the waste we generate, why and where to reduce, reuse and recycle, what the items we recycle are made into for us to buy, important lessons on household hazardous waste and a whole lot more. The vehicle has a wide variety of hands-on and take-home education materials for both children and adults. County specific programs can be presented and this vehicle can be demographically shared by all ReCommunity counties. Coca Cola’s vehicle travels more than 120,000 miles per year visiting more than 200 events and venues across North America. The cost for this vehicle can range from \$100,000 to \$250,000.

The table below shows residual rate reductions and total vehicle visits for a three and a half year period from Tempe, Arizona.

Year	# of Total Visitors	# of School Children	Residual Rates from Recycling Facility
2009	5654	2063	26.9%
2010	8270	3253	23.9%
2011	8190	3927	19.9%
2012 (Jan/Feb)	896	438	

Residual rate equals percentage of items left on belt which cannot be recycled. Lower percentages are desired



SOLUTION FOUR – RECYCLE-TO-GO

One area where public habits can be influenced, and where little attention is paid, is recycling on the go (away from home); in the car, boat, sporting events, parks and beaches. The group feels that progress in this area can significantly increase recycling rates and reduce landfills.



Action Plan: *Recycle on the Go* (IROGO) is a program created by the Environmental Protection Agency. ReCommunity can supplement this program locally with a “Recycle-To-Go” program. Elements of this program are simple; create a recycling container that is placed inside the car, car trunk, boat, or camper. The unit should have a handle for easy transport. Recyclable items consumed away from home can be placed in this container and transported back to the home bin. This unit should be sturdy, washable and easily carried. It can become a standard feature in every car in America.



The Recycle-To-Go brand of containers can significantly reduce the amount of trash that never makes it to the seldom used public recycling containers. ReCommunity and the Pattern Fellows can present this program to one or more environmentally friendly car and boat manufacturers. Recycle-To-Go containers and their use can become as commonplace as seatbelts.



SOLUTION FIVE – EXTENDED PRODUCER RESPONSIBILITY

Canada, along with many countries in Europe, Asia and Latin America currently mandate that companies assume the cost of recycling their packaging. While the United States has no such mandate for companies, some domestic firms have begun programs to lessen the cost of recycling to municipalities. Coke, Pepsi, Dannon and Starbucks have all stepped up efforts to get the public to recycle their containers in their stores. More and more environmentally conscious consumers are demanding that companies share their values too. Asking customers to return packaging to bins in their stores or plants is a growing trend among consumer companies.



Action Plan: We suggest that ReCommunity explore a cobranded marketing campaign that supports extended producer responsibility. Companies such as Wal-Mart, Starbucks and Dannon can have a broad effect on what their suppliers do, as well as possess the advertising strength to change people's habits. This campaign can be the first in the country where a recycling facility partners with companies to shift the cost of recycling away from municipalities.



SOLUTION SIX – FUNDING OPPORTUNITIES FOR RECOMMENDED SOLUTIONS

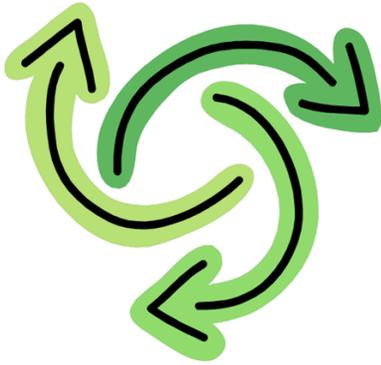
The group researched funding opportunities for the above mentioned ideas, including the NY Bottle Bill Fund.

Action Plan: ReCommunity, in conjunction with a local non-profit organization (Pattern for Progress, HVEDC) should apply for grants from the following foundations: The Wal-Mart Foundation, Entergy Corporation Contributions Program, Dominion Foundation and Deupree Family Foundation. See Exhibit A for more details. The New York State Returnable Container Act also known as the "Bottle Bill" has been a tremendous success; however one area of concern is that 80 % of all unclaimed monies collected in this fund are being swept into the NY State General Fund and no longer allocated to the Environmental Protection Fund. The EPA provides grants for projects that involve recycling and preserving farmland and open space. A bill sponsored by Senate Environmental Conservation Chairman Mark Grisanti and Assemblyman George Latimer seeks to remedy this situation. Staged over 4 years, the unclaimed deposit money would be diverted from the General Fund to the EPF.

Our group suggests ReCommunity work with local elected officials and the public to lobby in Albany offering suggested uses for these dollars and detailing increased savings to state and local municipalities.

EXHIBIT A

<i>Recommended Funders for the</i>					
Foundation Name	Priority	Notes	App.Info/Deadlines	Grant Ranges	Contact Info
1)The Wal-Mart Foundation, Inc.	strong	The foundation supports organizations involved with education and environmental sustainability. Local Community Contribution program area applies, also a state giving program for organizations with a wider impact [\$25,000].	Apply online. Notification within 90 days. Application due by 12/1/2012.	\$250 - \$5,000	702 S.W. 8th St., Dept. 8887, # 0555 Bentonville, AR 72716-0555 Telephone: (800) 530-9925 Contact: Julie Gehrki, Sr. Mgr., Wal-Mart Foundation URL: walmartfoundation.org
2)Entergy Corporation Contributions Program	strong	Open Grants apply - interested in community improvement and enrichment as well as the environment in Orange County. Funds available for program development.	Grant application online and accepted on an ongoing basis. Notification within 6-8 weeks.	? - \$200,000	639 Loyola Ave. New Orleans, LA 70161-1000 Telephone: (504) 576-6980 Contact: Patty Riddlebarger, Dir., Corp. Social Responsibility URL: www.entergy.com/our_community
3)Dominion Foundation	strong	Supports environmental stewardship and education as well as civic and community development. Giving in NY.	Initial approach: online eligibility quiz followed by full proposal. No deadlines. Notification within 2 -6 weeks.	\$1,000 - \$15,000	501 Martindale St., Ste. 500 Pittsburgh, PA 15212-5835 Telephone: (412) 237-2973 Contact: James C. Mesloh, Exec. Dir. http://www.dom.com/about/community/charitable-giving-and-the-dominion-foundation.jsp
4)Deupree Family Foundation	strong	Interested in education including environmental education, local non-profits and parks.	Initial approach: email. Full proposal due by April 15.	\$1,000 - \$30,000	P.O. Box 126 New Hartford, CT 06057-0126 Contact: Susan D. Jones, Pres. E-mail: info@deupreefamilyfoundation.org URL: www.deupreefamilyfoundation.org



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