

Chelsea Center For Recycling and Economic Development

Newsletter

Spring 2000

MANUFACTURER PROFILE: Conigliaro Industries, Inc.



A 3.5 gallon bucket of Conigliaro Industries Boston's Best Patch, made from old computers

Ever been so frustrated that you wish you could run over your computer? You may already have. Conigliaro Industries of Framingham is manufacturing Boston's Best Patch, a cold patch made from 100% recycled aggregate materials to fill potholes and large cracks in pavement. The cold patch is a blend of ground mixed plastics, including old computer housings and flower pots, liquid asphalt, and standard aggregate. The cold patch is sold

in hardware stores in 30-pound buckets, each using 20.4 pounds of recycled plastic, an unusual mix that makes the product much lighter and easier to use than traditional patches.

Greg Conigliaro founded his company in 1990 to provide recycling services to businesses, institutions, and municipalities across New England, New York, and New Jersey. The company collects and processes all types of plastic, paper, metal, rubber, glass, textiles, and wood from about 550 customers. As he began to see more and more difficult-to-recycle plastics come into his facilities, Conigliaro decided in 1992 to develop his own markets for the material by vertically integrating his company. Now Conigliaro Industries not only collects and processes recyclables, but it also manufactures several products with recycled content, including packaging peanuts, mulch, and the cold patch.

A big believer in win-win partnerships, Conigliaro turned to both the public and private sectors for about 45% of the financing needed for the cold patch project. The American Plastics Council provided \$110,000 for processing equipment to produce a high-grade mixed plastics aggregate. Through its Recycling Industries Reimbursement Credit (RIRC) program, the Department of Environmental Protection awarded Conigliaro a \$45,000 grant to develop the cold patch mixing system. Finally, an \$8,000 new product development grant from the Chelsea Center allowed the company to determine the best formula for the product.

Boston's Best Patch was tested in four towns through the state's Pilot Purchase Program, where it was found to be very workable and effective. Conigliaro plans to market the product, which was launched September 1, 1999, through hardware stores and to municipalities. "It is an ideal situation if the towns like and use the product, because they supply some of the raw material—the computers—and by purchasing the product, help close the recycling loop," says Greg Conigliaro, president of the company.

Conigliaro's annual sales are \$2.35 million, with a goal of \$5 million by 2001 and \$10 million by 2005. For more information about Conigliaro Industries and Boston's Best Patch, visit www.conigliaro.com or call (888) CONIG-25.

SERVICE PROVIDER PROFILE: MassBusiness's Recycling Loan Fund

Conventional lenders of financing often shy away from recycling companies because they don't understand the industry or they perceive it to be too risky. But recyclers can expect a friendly response from the Massachusetts Business Development Corporation (MassBusiness), which operates a Recycling Loan Fund (RLF) especially for the recycling industry.

The RLF is capitalized with about \$4 million from the Clean Environment Fund through a contract with the Department of Environmental Protection. The RLF offers both conventional loans and subordinated debt. Loans can range from \$50,000 to \$300,000 with terms of up to ten years, and the interest rates can be fixed or floating. Financing can be used for working capital, machinery and equipment, real estate, mergers and acquisitions, debt restructuring, or any other reasonable business purpose.

MassBusiness recently funded three recycling companies through the RLF, including one nonprofit organization. Planet Aid, Inc. of Holliston is a nonprofit wholesaler and retailer of used clothing, with four retail outlets. They are using a \$150,000 loan to purchase equipment, which includes collection containers and trucks. Agresource, Inc. in Amesbury received a \$200,000 loan for equipment for their composting and land application business. Universal Fibers, a waste paper brokerage and recycling business in Westfield, used a \$300,000 loan to acquire a 74-year-old scrap metal and paper recycling business.

To date, MassBusiness has awarded fifteen loans through this program, totaling close to \$2.7 million and leveraging nearly \$9 million in public and private sector financing. To learn more about the RLF's eligibility requirements and services, contact Karen Michalski of MassBusiness at (617) 350-8877 or visit www.mass-business.com.

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CHELSEA ReTERN RECYCLED INTO FULL-TIME SELECTECH EMPLOYEE

When SelecTech, a manufacturer of injection molded products using difficult-to-recycle materials like carpet waste and mixed plastics (see the Winter/Spring 1999 issue), discovered problems with the blend in one of its flooring products, they asked the Chelsea Center for help. In response, we offered SelecTech a ReTERN—a recycling intern—to work on the problem.

Ming Lu, who was completing his master's degree last summer in plastics engineering at the University of Massachusetts Lowell, took on the assignment. Not only did Lu identify the cause of the problem—a nonuniform mixture of carpet waste and recycled PVC—but he also solved the problem by running several tests and determining the optimum amount of mixing required. Tom Ricciardelli, president of SelecTech, rewarded Lu's problem solving with a full-time job at the end of the internship.

"We are a young, entrepreneurial company with rapid growth and we have lots of issues to be resolved," says Ricciardelli. In other words, management had little time to supervise an intern. Ricciardelli admits that he gave Lu practically no guidance and told him to figure it out on his own. Lu enjoyed the freedom to work through the problem and develop solutions.

The same spirit that set Lu loose on the problem also let him find the solution. "Michael (SelecTech's vice president for manufacturing) and Tom were very supportive and let me use the machines to run tests," says Lu. Not just any company would stop manufacturing products so an intern could test his new blends on the equipment. "They gave me lots of chances to succeed," says Lu.

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The Chelsea Center for Recycling and Economic Development was founded by the Commonwealth of Massachusetts in 1995 to create jobs, support recycling efforts, and help the economy and the environment by working to increase the use of recycled materials by Massachusetts manufacturers. The Chelsea Center's goal is to help create an infrastructure for a sustainable materials economy in Massachusetts, where businesses will thrive that rely on locally discarded goods as their feedstock and that minimize pressure on the environment by reducing waste, pollution, dependence on virgin materials, and dependence on disposal facilities.

The Chelsea Center accomplishes this mission through:

- Working with manufacturers to help them overcome technical and business barriers to increasing their use of recyclable feedstocks;
- Working with municipalities to help them recognize the value of their waste materials and to turn them into new products; and
- Working with economic developers and other business service organizations to educate them on the value and importance of working with the recycling industry.

For more information, contact the Chelsea Center at (617) 887-2300, info@chelseacenter.org, or visit the Chelsea Center's web site at www.chelseacenter.org.

MUNICIPAL PROFILE: THE CITY OF TAUNTON

The City of Taunton's once substantial manufacturing base had diminished over the years as manufacturing facilities and lots had been abandoned, blighted, and contaminated. But the city's Industrial Development Commission, using local tax relief, state tax credits, and local economic development initiatives, continues to identify new manufacturing opportunities, strengthen existing businesses, and create jobs. Richard Shafer, executive director of the Commission, believes recycling can play a major role in rejuvenating the area's manufacturing sector.

With a community economic development grant from the Chelsea Center, the city has hired a consultant to inventory manufacturers' scraps and other solid waste and to assess whether the materials can be used as feedstock for new or existing recycling-based manufacturers. The research will help the city create a recycling-based community economic development plan later this summer, which will be incorporated into the redevelopment strategy of the Sustainable Taunton Committee, which Shafer co-chairs. "We have always been supportive of manufacturing concerns," says Shafer. "Companies that are looking at recycling are part of the solution, not the problem."

Shafer describes his office's duties as providing connections and support for existing businesses and those that wish to site in Taunton. His office has written letters of support for grant requests, served as an advocate in permitting processes, and assisted with real estate searches. Shafer also provides important business to business connections—like the ones he hopes to make between companies that are generating wastes that other Taunton manufacturers could use as feedstock.

Take SelecTech for example. SelecTech makes several injection molded products from a variety of difficult-to-recycle plastics. Shafer's office provided a loan allowing SelecTech to buy their first injection molding machine. He also refers local businesses with scrap plastics to SelecTech, reducing disposal fees for the businesses and supplying a local source of feedstock for SelecTech. "Dick Shafer was just phenomenal," says Tom Ricciardelli, president of SelecTech. "He helped us secure financing and was a real advocate for us."

For more information, contact Richard Shafer, executive director of the Taunton Industrial Development Commission, at (508) 821-1168 or rshafer@tmlp.com. For more information about community economic development grants, see p.3.



(left to right) Dick Shafer; Janseen Moniz, Intern; Jennifer Hyde, Project Consultant; Robert Nunes, former Mayor; Amy Perlmutter, Chelsea Center

1999 RESULTS ARE IN

In FY 1999, the Chelsea Center's work resulted in the following accomplishments:

- More than 10 manufacturers directly benefited from 15 grants to develop, improve, or test recycled products, and many other companies benefited from referrals and other assistance.
- 5 new or improved recycled products entered the market, with others to come in the near future.
- 21 companies received grants to offset the costs of marketing their products at exhibitions.
- 173 companies received free publicity through the Directory of Recycled Product Manufacturers.
- 14 interns helped 12 companies and organizations address some sort of business challenge.
- 33 municipalities and other agencies received recycled products manufactured in Massachusetts through pilot purchases.
- Professors and students at 10 public and private schools participated in work with the Chelsea Center through applied research, internships, and technical assistance to manufacturers.
- More than 300 people participated in workshops sponsored or co-sponsored by the Chelsea Center.

For more information about the Chelsea Center's activities and accomplishments in Fiscal Year 1999, please look at our end of year report. You can view it on our web site or order it by calling our office.

CHELSEA CENTER GROWS BY TWO

Two staff members have joined the Chelsea Center team. We welcomed Jennifer K. Capuano in April 1999 as our director of economic development programs. She is managing our Community Economic Development through Recycling project, as well as activities to attract recycled product manufacturers to the state. Jennifer managed economic development and human services programs for the City of Newton and has also worked for East Boston Main Streets and the Massachusetts Housing and Shelter Alliance. She is currently completing her thesis for her master's degree in urban and environmental policy from Tufts University.

Kirsten Hickey came aboard as our office manager in May 1999. Kirsten holds the Chelsea Center together by managing the administration of the office and providing general office support for Chelsea Center projects. Kirsten previously served as an accounting clerk and as the staff secretary at the New England Interstate Water Pollution Control Commission in Lowell. She received her bachelor's degree in accounting from Newbury College. Kirsten also manages the Chelsea Center's web site and is working on her web master certificate at North Shore Community College.

GRANT AND INTERNSHIP OPPORTUNITIES

Seeking Internships and Interns for Spring and Summer 2000

The Chelsea Center is seeking internship opportunities with Massachusetts recycled product manufacturers for the spring semester and the summer. If you have a business or technical problem and have not found the time or expertise to solve it, please call the Chelsea Center to request an internship application. Spring internships are for 120 hours and must be completed by June 30, 2000. Summer internships will start on or after July 1, 2000 and will last 375 hours (10 weeks full time). Interns are senior or graduate level students attending colleges or universities in Massachusetts. Additional information and applications for both manufacturers and students can be found at www.chelseacenter.org or by contacting Gail Harris at (617) 884-6237 or gailh@chelseacenter.org.

Grants for Community Economic Development through Recycling

The Chelsea Center has issued its FY 2001 Request for Responses for the Community Economic Development through Recycling Grants. The grants support community-based efforts to turn local waste materials into new jobs and products. The solicitation is open to any Massachusetts local government and/or community-based nonprofit organization. The deadline for pre-proposals is April 4, with final proposals due June 1, 2000. For more information, contact Jennifer Capuano at (617) 887-0410 or jenniferc@chelseacenter.org.

Technical Research Grants Available

The Chelsea Center has issued its FY 2001 Request for Responses for Technical Research Grants. This grant program supports research that will help overcome technical barriers to the use of recovered materials in Massachusetts. Researchers at accredited public and private universities and colleges and/or at private research institutions are invited to submit proposals by April 19, 2000. Work will begin next fiscal year. Five grants were awarded this fiscal year. For more information contact Jodie Siegel at (617) 884-4324 or jodies@chelseacenter.org.

Trade Show Grants Available

If the cost of exhibiting at a trade show is holding back the marketing of your recycled product, consider applying for a Trade Show Grant from the Chelsea Center. Massachusetts recycled product manufacturers may receive a grant worth 50% of the cost to exhibit at the show, not to exceed \$500 per fiscal year. The Chelsea Center will provide support for the New England EnviroExpo in May and Mass Plastics in October and will consider other venues proposed by manufacturers. For more information, contact Gail Harris at (617) 884-6237 or gailh@chelseacenter.org.

Independent Testing Grants Available

Do you require testing services to implement or improve your use of recovered materials? Would the services of an independent laboratory, to verify performance of a new recycled product or one with increased recycled content, help move your product into a better market position? The Chelsea Center is offering grants of up to \$5,000 for projects of this nature. Companies are required to provide an in-kind or cash match. Please contact Jodie Siegel at (617) 884-4324 or jodies@chelseacenter.org.

Grants Available from the Chelsea Center

Community Economic Development through Recycling Grants

For Whom: Local governments and community-based nonprofits

How Much: up to \$25,000

Deadline: April 4, 2000

Contact: Jennifer Capuano at (617) 887-0410

Technical Research Grants

For Whom: University/college researchers and private research institutions

How Much: up to \$50,000

Deadline: April 19, 2000

Contact: Jodie Siegel at (617) 884-4324

Trade Show Grants

For Whom: Recycled products manufacturers

How Much: up to \$500

Deadline: open

Contact: Gail Harris at (617) 884-6237

Independent Testing Grants

For Whom: Recycled products manufacturers

How Much: up to \$5,000

Deadline: open

Contact: Jodie Siegel at (617) 884-4324

Recycling Internship Program

For Whom: Massachusetts manufacturers or those who aspire to be

How Much: Intern stipend paid by the Chelsea Center

Deadline: Open

Contact: Gail Harris at (617) 884-6237

Service Provider Directory Updated

We have nearly completed the update to our Directory of Services for the Recycling Industry. This publication provides a one-page profile of over 50 public and nonprofit agencies and organizations in the state that provide services to businesses, with a particular emphasis on the recycling industry. These services include financing in the form of direct assistance or referrals to grants, loans and venture capital; technical assistance and research; product procurement; site finding; materials sourcing; business plan review; education and training; export help; and minority assistance. It also lists other key contacts and resources in recycling. The guide has been valuable to businesses that engage in recycling activities or that want to, as well as to other providers of business services. The new guide will be completed by late April. Keep an eye on our web site for notification, or call the office to place your order.

Technical Reports Released

Eleven new technical reports on research sponsored by the Chelsea Center have been released:

#9 Erving Paper – Dispersion Pilot Project, 1999, Researchers: Thomas Newton, Erving Paper, Craig Calvert, Beloit Corporation

#10 Accelerated Aging of Specific Formulations of Recycled High Density Polyethylene Based Landscape Timbers, 1999, Researcher: Robert Malloy, Department of Plastics Engineering, University of Massachusetts Lowell

#11 Recycled HDPE Timber Retaining Wall Investigation, 1999, Researcher: Heather Miller, Department of Civil Engineering, University of Massachusetts Dartmouth

#12 Preliminary Investigation of Tire Shreds for Use in Residential Subsurface Leaching Field Systems, 1999, Researchers: Sukalyan Sengupta and Heather J. Miller, Department of Civil Engineering, University of Massachusetts Dartmouth

#13 Material Testing of an Industrial Resilient Floor Tile Made from Post-Consumer Carpet Waste, 2000, Researchers: Tom Ricciardelli, Ming Lu, SelecTech, Inc.

#14 Determining the Best Formulation for a Unique Asphalt Cold Patch Product Made with #3-7 Rigid Plastic Aggregate, 2000, Researchers: Anthony Conigliaro, Phil Watson, Conigliaro Industries

#15 Creative Paper, Inc., Waste Paper Recovery Project, 2000, Researcher: Gary Diadone, Merrimack Valley Manufacturing Partnership

#16 Continuous Extrusion of Recovered Ultra-High Molecular Weight Polyethylene, 2000, Researcher: Earle E. Day, Dorchester Industries, Inc.

#17 Recycling and Reuse of Mixed-Fiber Fabric Remnants (Spandex, Cotton & Polyester), 2000, Researchers: Professor Kenneth D. Langley, Principal Investigator, Professor Yong K. Kim, Professor Armand F. Lewis, Department of Textile Sciences, University of Massachusetts Dartmouth

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RESOURCES AVAILABLE

More Resources Now Available at www.chelseacenter.org

The Chelsea Center web site has been redesigned and updated to provide helpful information in an easy-to-use format. The site includes:

- Technical research reports;
- The Commonwealth's Strategic Plan for Recycled Materials;
- A detailed listing and application information for our services;
- A list of the recycled product manufacturers in the state and links to their web sites;
- Classified ads for jobs and materials available and wanted;
- Business service providers and other resources;
- Updates on grants and other opportunities; and
- Our new end of FY 1999 report.

Chelsea Return Recycled into full-time... continued from page 2

Lu is now SelecTech's special projects engineer and is tackling new product development, new material blends, and production rates. He is also developing quality control systems for the company. "We have benefited tremendously from the Chelsea Center and UMass Lowell," says Ricciardelli of both Lu's contribution and his company's long-term relationships with the Chelsea Center and the university.

The Chelsea Center sponsors the ReTERN program, paying for senior or graduate level college interns to work for a recycled product manufacturer to solve a business or technical issue. The Chelsea Center solicits projects from companies and then matches them with students. For more information about the program, see the announcement on page 3.

Technical Reports Released, continued from page 4

#18 Development of Novel Applications for Using Recycled Rubber in Thermoplastics, 2000, Researchers: H.S.Liu, C.P.Richard, J.L.Mead, R.G.Stacer, Department of Plastics Engineering, University of Massachusetts Lowell

#19 An Investigation of the Potential to Expand the Manufacture of Wood-Plastic Composite Products in Massachusetts, 2000, The Forest and Wood Products Institute, Mount Wachusett Community College

All reports are available free of charge to businesses, individuals, and governments in Massachusetts, and are \$10 each for out-of-state requests. The reports are also available in PDF format on our web site, under "Publications."

NEW PROJECTS UNDERWAY

Four Recycling Economic Development Grants Awarded

The Chelsea Center is funding four projects under its new Community Economic Development through Recycling Program:

The Manufacturing Engineering Department at Boston University is investigating the potential for medical equipment remanufacturing in Chinatown.

The Center for Ecological Technology is working with community partners to identify the flow of materials generated by businesses in Adams and North Adams. This information will be analyzed to identify new options and exchanges for existing businesses, as well as opportunities for new business development.

Through its Chinatown Waste Reduction Initiative, the Asian Community Development Corporation is assessing the economic benefit potential and developing a business plan for urban composting technology and other material reuse or exchange programs for food-related businesses.

The City of Taunton is developing a recycling-based community economic development initiative, which will be incorporated in the Sustainable Taunton Development Committee's redevelopment strategy. (See page 2 for more information on Taunton's program to date.)

You can learn more about each of the projects by visiting our web site at www.chelseacenter.org. (See page 3 for information about this year's grant program.)

New Research Projects Nearing Completion

The Chelsea Center selected five research and development projects based on the responses to our February 1999 Request for Responses. Work on the projects began last summer and will be completed by the end of the fiscal year. The technical reports on these projects will be made available to the public.

Development of Synthetic Aggregate for Construction Material by UMass Lowell

Evaluation of Use of Manufactured Waste Asphalt Shingles in Hot Mix Asphalt by Worcester Polytechnic Institute

Use of Scrap Tire Chips as Substitute for Gravel in Residential Soil Absorption Systems by UMass Dartmouth

Process Development of Scrap Rubber/Thermoplastic Blends by UMass Lowell

Recycling Market Development for Engineering Thermoplastics from Used Electronic Equipment by Tufts University

(See page 3 for information on our current research and development grant solicitation.)

OTHER NEWS FROM AROUND THE STATE

MassHighway Increases its Commitment to Recycling

With support from the Executive Office of Environmental Affairs and the Department of Environmental Protection, MassHighway has hired a recycling coordinator, Jessica LeBlanc, to increase the department's use of recycled products and pollution prevention techniques. DEP and MassHighway held a workshop at the state's annual Vendor Fair with more than 50 attendees to discuss the state's use of recycled products in transportation projects. According to MassHighway's 1999 report on recycling and pollution prevention, the department procured more than \$580,000 of recycled products in 1997 and 1998, not including \$47,000 spent on recycled plastic lumber products for rest areas. MassHighway also incorporated more than 600,000 tons of recycled materials into their construction activities in 1997 and 1998, including reclaimed asphalt pavement, crushed cement concrete, and street sweepings. For more information about MassHighway's recycling activities and to find out how to get MassHighway to consider your recycled product, contact Jessica LeBlanc at (617) 973-7820.

Recycled Products Exhibit Ready for Road Tour

MassRecycle has put together an exhibit of products manufactured with recycled feedstock. The exhibit was displayed at the State House for Massachusetts Recycles Day (MRD) the week of November 15. The exhibit educates the public not only about the importance of buying recycled, but also about the many recycled products manufactured in Massachusetts. The Chelsea Center worked with MassRecycle to create the educational and entertaining display and also provided funding for the project through the Clean Environment Fund.

The exhibit is available for loan to municipalities in Massachusetts. It is portable and can be displayed in a 2' by 6' space, with a height of approximately 8 feet. In addition, two sandwich boards and other items can be placed in a circle around the display table. Municipalities or other agencies interested in borrowing the exhibit will be asked to help with transportation and set up. It takes two people about two to three hours to set up the display and MassRecycle can provide assistance. For more information, please contact Tom Evans at (617) 338-0244 or exhibit@massrecycle.org.

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MassRecycle to Present Third Annual Buy Recycled Pavilion

Nothing succeeds like success, which is why MassRecycle is once again sponsoring its Buy Recycled Pavilion at this year's EnviroExpo, May 9-11, 2000, at Boston's World Trade Center. Last year, over 30 companies exhibited their recycled products to a variety of buyers and environmental professionals at the Buy Recycled Pavilion. "Our audience is made up of representatives of public agencies, businesses, and nonprofits interested in introducing green products into their agency and business operations," said Don Savoie, executive director of MassRecycle. The Buy Recycled Pavilion will be just one part of the EnviroExpo, the largest environmental event held each year in New England, where hundreds of exhibitors will display their products and services. More than 9,000 environmental professionals are expected to attend what has become one of the largest and most comprehensive environmental conferences and expositions in the nation.

"We are excited about MassRecycle's Buy Recycled Pavilion because it helps us to bring the vendors of recycled products into the mainstream and to provide them with access to thousands of buyers of environmental products," said Daniel K. Moon, director of the EnviroExpo. "We also try to make the event affordable for the growing recycling businesses," Savoie said. "Exhibit space rates at the Buy Recycled Pavilion are a fraction of the regular cost." The Chelsea Center will help defray exhibition costs even further for selected companies (see page 3 for details.)

For more information about exhibiting, attending, or sponsoring the Buy Recycled Pavilion 2000, please call the MassRecycle office at (617) 338-0244, or send an email to brp@massrecycle.org.

Clean Environment Fund Requests Submitted

The Governor has released House 1, his FY 01 budget. This budget includes \$10.2 million for recycling from the Clean Environment Fund (CEF), which is comprised of unredeemed bottle bill deposits. Last year, House 1 recommended \$8.5 million from the CEF, and the legislature upped that amount to \$9.5 million in the final budget. The Executive Office of Environmental Affairs, backed by the Governor, is requesting a supplemental budget of \$1.55 million for this fiscal year to support more recycling equipment and education grants.

CEF funds support such activities as the municipal recycling incentive program, municipal equipment grants, DEP staff, municipal household hazardous products collection programs, environmentally preferable and recycled product procurement, consumer education, and the programs of the Chelsea Center. Over \$25 million is in the Fund, and MassRecycle is coordinating efforts to encourage an increase in the amount of money allocated from the CEF for recycling. Contact Don Savoie at MassRecycle for more information at (617) 338-0244.

The Chelsea Center is funded in part by the Clean Environment Fund, comprised of unredeemed bottle deposits, through the Executive Office of Environmental Affairs.

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