

Visions of a Sustainable Georgia sets stage for new era

by Suzanne Burnes, Pollution Prevention Specialist

What will Georgia look like in 25 years? Will it still be plagued with air pollution, water shortages and other environmental problems? These and other issues were the topics of discussion on September 30, when nearly 200 of Atlanta's government, business and environmental leaders came together for *Visions of a Sustainable Georgia: Partnering for a Prosperous Future*. This conference, hosted by P²AD, provided a forum for people from a variety of backgrounds to discuss some of the most pressing issues facing metro Atlanta and the state of Georgia in the coming quarter-century.

Following a provocative keynote speech by noted ecologist and national environmental leader Dr. David Orr, a panel composed of leaders in public health, industry, and land conservation provided attendees with their insights into critical environmental issues facing Georgia in the coming decades.

Dr. Carol Couch, director of the



Panelists Clay Long, Howard Frumkin, Gail Smith, Chris Sawyer, and Bill Miller discuss critical factors for sustainability.

Georgia Environmental Protection Division, spoke to the group about EPD's role in a sustainable Georgia, and the day concluded with an afternoon panel discussion of regulatory incentives for proactive environmental measures in the regulated community.

Serving as the framework for the day, the P²AD Partnership Program was highlighted from various perspectives. This new flagship initiative from P²AD is a voluntary environmental leadership program that recognizes and supports superior environmental performance among businesses and organizations operating in Georgia. The 34 charter members of the program were recognized as environmental leaders in the state.

Read more about the different perspectives shared at the *Visions* event throughout this issue of *From the Source*.

Partnership Program charter members

P²AD welcomes the following organizations as charter members:

Blue Ribbon

- General Motors Doraville Assembly
- Interface Flooring Systems, Inc.
- Lockheed Martin Aeronautics Company—US Air Force Plant 6
- Noramco, Inc.
- YKK National Manufacturing Center

Red Ribbon

- Metcam, Inc.

Yellow Ribbon

- Enviro-Log, Inc.
- Fort Benning US Army Infantry Center
- ifPeople
- The Valvoline Company
- Vulcan Cherokee Quarry
- Vulcan Dalton Quarry
- Vulcan Ellijay Quarry
- Vulcan Kennesaw Quarry
- Vulcan Rockmart Quarry
- Vulcan Stockbridge Quarry

White Ribbon Partners listed on page 3

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From the Source is a quarterly publication of the Pollution Prevention Assistance Division (P²AD) of the Georgia Department of Natural Resources (DNR).

P²AD provides free, confidential, technical assistance in the areas of pollution prevention, resource conservation, waste reduction, by-product reuse, and recycling. Our clients include manufacturers, commercial businesses, institutions, military and government facilities, agricultural operations, consultants, and the citizens of Georgia.

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Director's column

by Bob Donaghue

Reward the best and motivate the rest

I would like to thank all those who attended our P²AD Partnership Program conference, *Visions of a Sustainable Georgia: Partnering for a Prosperous Future*, on September 30. Attendance numbered more than 200 people, with good representation from business, government, academia, and environmental organizations. Participants gave the conference high marks, and showed a strong desire for action around Georgia's ecological future.

The audience evaluations also praised Dr. David Orr's talk about our global future, a future that is likely to be more complex and require urgent responses. Multi-dimensional issues such as climate change, overpopulation, and our reliance on non-renewable energy sources were at the heart of his picture of tomorrow. See page five for more about Dr. Orr's talk.

P²AD staff was energized by the turnout and positive comments throughout the day.

During lunch, the charter members of the P²AD Partnership Program were recognized for their commitment to a sustainable Georgia. Each received a plaque engraved with their organization's name and partnership level. The wooden plaques were made from reclaimed southern yellow pine originally used to build World War II-era warehouses at Fort Gordon in Augusta. Dr. Chuck Boelkins, P²AD's resource recovery specialist

and master woodworker, spent many

hours working to create the beautifully inscribed plaques that reflect a commitment to a conservation ethic by our partners. I wish to thank him personally and publicly.

Dr. Carol Couch, EPD director, spoke about the many complex issues facing us, and declared simply, "there is no alternative to sustainability." She also made it clear that regulation is only one tool for achieving sustainability, and that a non-regulatory approach, like the one used by P²AD, is an important component of the state's overall environmental strategy.

Stan Meiburg, EPA deputy regional administrator, closed out the conference with a show of strong support for the P²AD Partnership Program. He emphasized EPA's commitment to fostering superior environmental performance and increased social responsibility through recognition and meaningful incentives. He stressed that not only is this good for the environment and the community, but also good for the bottom line. Read more about other speakers' insights on page nine of this issue.

A common theme throughout the conference highlighted

See Director, page 5



City of Atlanta partners with P²AD to help water customers save money

by Judy Adler, PE., Program Manager, and Tracy Paden, Cookerly Public Relations

Atlanta has joined forces with P²AD to assist businesses in reducing the financial impact of increased water and sewer rates that took effect earlier this year.

The City and P²AD will work with participating commercial partners to survey their operations and identify opportunities to decrease water consumption, ultimately reducing the impact of the rate increases. Reducing water use also benefits the city and state by prolonging the life of existing water supplies; minimizing the impact of drought; reducing capital costs by postponing or avoiding water and sewer infrastructure expansions; and increasing the amount of water in streams, rivers and aquifers.

“For businesses that use millions of gallons of water a year, water and sewer fees account for a significant portion of their operating costs,” said Atlanta Mayor Shirley Franklin. “We are excited about working with P²AD to help our customers save money and conserve water.”

P²AD and the City contacted top water users earlier this year to offer assistance in developing water conservation plans. Several businesses responded, indicating that they would be willing to form internal water conservation teams and take action to conserve water. Water efficiency experts from P²AD and the City will begin making visits to Lenox Square Mall, The Westin Peachtree Plaza and other businesses in the coming months to assess their current water usage and suggest ways to reduce waste and improve efficiencies. They also will work with the Atlanta City Jail to develop a water conservation plan. Some of the responding customers have already gone to great lengths to conserve water; for others, this will be the first systematic water conservation effort.

“This partnership is a perfect example of how business and government can work together to protect natural resources and save money at the same time,” said Bob Donaghue, director of P²AD. “By collaborating with clients to accomplish common goals, we are proving that good environmental practices also make good business sense.”



P²AD's Judy Adler and Amara Conteh of the Lenox Woods Apartments test the flow rate from a spigot.

[See City of Atlanta, page 10](#)

P²AD White Ribbon Partners

American Society of Civil Engineers, Georgia Section
Board of Regents of the University System of Georgia
Center for Transportation and the Environment (CTE)
City of Atlanta
Earth Share of Georgia
Earth Tech, Inc.
Economic Development Institute, Energy and Environmental Management Center (Georgia Tech)
Engineering Outreach Service (University of Georgia's Faculty of Engineering)
Environmental Resource Services, Inc.
EnviroShare
Georgia Adopt-A-Stream
Georgia Chapter Academy of Certified Hazardous Materials Managers
Georgia Recycling Coalition, Inc.
Georgia Water & Pollution Control Association
Group Six Consulting, LLC
Southface Energy Institute
The Clean Air Campaign
U.S. Army Southern Regional Environmental Office (SREO)

Enviro-Log turns waste into profits

by Chuck Boelkins, PhD, Resource Recovery Specialist

Have you ever wished you could sell your company's waste instead of paying a hauler to take it to a landfill or incinerator? Soon a new Georgia company will make that possible for a number of supermarket chains in the Southeast.

In late January 2003, P²AD received a request to help a produce re-packer, Tanimura & Antle (T&A, located in Jackson), find some alternative to the landfill for disposal of their waxed old corrugated containers (WOCC). T&A generates from 940 to 1,250 tons per year of WOCC with disposal costs of \$75,000 to \$100,000. Unlike regular corrugated containers, the heavy wax coating on WOCC prevents

recycling because the wax won't allow the paper to dissolve.

An extensive

Where can I purchase Enviro-Logs in Georgia?
The Home Depot*
Harry's Farmers Markets
Whole Foods
Ingles Food Stores
Georgia State Parks
Bass Pro Shops
John Blakely RV Centers
*select locations

search led to the discovery of a small California company that manufactured patented machinery for making synthetic fire logs from WOCC. P²AD learned that Enviro-Log, Inc., (located in Fitzgerald, GA), had contracted to buy the machinery and was looking for a steady supply of WOCC, so it connected them with T&A and several supermarket chains.

Enviro-Log, Inc. is building a business by providing the grocery industry with an alternative to the landfill for WOCC. It has built a plant with the capacity to convert 7,500 tons per year of WOCC into 3 million synthetic fire logs, which employs 35 people in a county in great need of jobs. Enviro-Log, Inc. shreds the waxed cardboard into 1/2-inch chips, then washes, dries, and extrudes it into four-inch by four-inch by 12-inch-long "logs" weighing five pounds. When burned, these logs produce 50% more BTUs than five pounds of white oak, and release no harmful emissions.

The perfect logistics model

One of the toughest barriers to recycling any material is the cost of transportation from the point of generation to the recycling or processing plant. Higher costs are incurred when the trucker must make one leg of a trip without carrying a revenue-generating load. Enviro-Log, Inc. has been able to take advantage of existing distribution channels to create a rare closed distribution loop.

All large supermarket chains have distribution centers. Trucks that deliver products from the distribution centers to the stores then collect the stores' WOCC and carry it back to the centers. Enviro-Log, Inc. trucks deliver pallets of firelogs to the distribution centers and then carry the WOCC back to their manufacturing plant.

Because of the reduced transportation costs (no empty



backhauls), the synthetic firelogs can be sold for less than "traditional" synthetic firelogs made from sawdust and waste petroleum products. The company estimates that one ton of Enviro-Logs (about 400 units) will produce gross profits of about \$300. And, as a bonus, the supermarkets will avoid about \$80 per ton in landfill costs. Talk about turning sow's ears into silk!

The economic benefits from this new business will be substantial for Georgia companies. The sale of 7,500 tons per year of Enviro-Logs would create gross profits of close to \$2 million annually for the grocery chains, and save \$600,000 annually in disposal costs. Additionally, state landfills would avoid using up about 15,000 cubic yards of space for disposal of WOCC. Finally, the environmental consequences of recycling 7,500 tons of WOCC by Enviro-Log, Inc. include the reduction of greenhouse gas emissions by 7,332 MTCE (Metric Tons of Carbon Equivalent) annually.

P²AD is proud to have assisted not only with pollution prevention, but with significant economic development for Ben Hill County, as well as increasing the bottom line for the state's grocery marketers.

More Info
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David Orr encourages *Vision* audience to tackle challenges of sustainability

by Suzanne Burnes, Pollution Prevention Specialist

At P²AD's *Visions of a Sustainable Georgia: Partnering for a Prosperous Future* conference on September 30, Dr. David Orr provided the keynote address. Drawing from his experiences as an eminent scholar in the field of ecology and the environment, Dr. Orr challenged the audience to work together to address what he sees as looming challenges to sustainability.

Dr. Orr began his remarks by noting that the environment is a lynch-pin issue – if you forget the environment long enough, you won't have an economy to talk about. He defined sustainability as how we sustain the human presence on this planet over the long term, and noted that there was not one path to getting there. "Sustainability isn't about whether you are 'liberal' or 'conservative' – it's about how you relate to the future. It's our generation *with*– or our generation *against*– the interests of our children and our grandchildren and our great grandchildren," he said.

Dr. Orr went on to identify for the audience what he believes to be the major challenges to a sustainable future, including politics, climate change, sprawl, education, building performance, and our modern agricultural systems. As he discussed these challenges, he noted solutions that would begin to address them.

For example, using "feebates"



as a public policy tool encourages the transition away from petroleum dependency and begins to address climate change impacts of our transportation choices. With feebates, the purchaser of a fuel-inefficient vehicle with poor fuel efficiency pays a fee; the purchaser of a fuel-efficient vehicle gets a rebate.

High performing, efficient new construction is another tool that is currently available to address climate change impacts of our built environment. According to Dr. Orr, we're getting ready to build more buildings in the next 50 years than we've built in the past 5,000, and the only way to minimize this impact on the generations to come is to build high performance buildings. We now know how to do this with costs *at or below* the cost of traditional construction, he added.

As an educator, Dr. Orr emphasized that sustainability was a crisis in education. He pointed to the

See Orr, page 8

Momentum building

Georgia's potential as a global leader in sustainability. Most of the institutional pieces are in place; it now requires vision, trust, and open communication. The P²AD Partnership Program provides one such vision, and the tools to light the path to a sustainable future.

Momentum is building in this state toward sustainability. New visionaries within the construction industry, the military, the business community, Georgia's world-renowned universities, and – especially– members of the general public are leading it. Thousands of citizens belong to environmental organizations like the Georgia Conservancy, Chattahoochee Riverkeeper, Georgia Environmental Council, and Southface. These are just a few of the ways volunteerism reflects their commitment to protect the Georgia our children will inherit.

It is an exciting time to be involved in action-oriented conservation and sustainability efforts in Georgia. As you read this issue of *From the Source*, you will see many other examples of environmental leadership and innovation, and you will learn about organizations that embrace all three facets of sustainability: people, planet, and profit. Motivation is the key.

A handwritten signature in black ink that reads "Bob Donaghy".

On-site recycling—tips for free, not tipping fees

by Parker Snyder, EarthCraft Fellow,
Southface Energy Institute

More and more Georgia homebuilders are discovering that on-site recycling of construction waste is not only good for the environment – it's good for the bottom line. Kenneth Patterson, the president of Packer Industries, an Atlanta-based manufacturer and distributor of job site recycling machinery, estimates that more than 3,000 residential home sites in the Atlanta area will incorporate some form of on-site recycling this year.

Builders recognize the profitability and sensibility of on-site recycling thanks in part to studies funded by P²AD in subdivisions such as Longleaf in Fulton County. Hedgewood Properties, an EarthCraft House production builder based in metro-Atlanta, was one of the city's first builders to demonstrate that wood waste can make effective mulch and drywall can be a good soil amendment.

By using the construction waste on-site, a builder saves money in two ways: reduced waste hauling fees, and reduced tipping fees. By sorting out the recyclable materials from the non-recyclable, a builder reduces the number of containers that need to be hauled to the landfill. The chipped aggregate can be used as a construction entrance pad to replace costly gravel pads. Builders save money by replacing gravel entrance pads.

Paul Barron of John Weiland Homes was an early advocate for Weiland's on-site recycling program



Unground wallboard awaits grinding and land-applying at a new construction site.

at the Rivergreen mixed-use development in Canton.

"I performed a cost-analysis and determined that we were saving money when you subtract the Dumpster cost and add in the money saved by using the recycled material," said Barron. He estimates they save \$325 per lot.

Weiland's success required the company rework its initial strategy. "The biggest hurdle that had to be overcome was that not all construction waste can be recycled on-site," Barron said. Some components like polystyrene and steel had to be hauled away to off-site recycling centers or dumpsites. "We were more successful once we included waste disposal in the same package as waste recycling."

Bobby Fischer, owner of Jobsite Recycling, has designed a complete package to serve clients like John Weiland Homes, which includes erosion control, waste removal and site management. "We handle the entire process, from grinding the waste to cleaning up the jobsite." At 65-75 cents a heated square foot, Fischer says on-site recycling is a good fit for dense subdivisions or homes less than 3,000 square feet.

P²AD Research in Residential Construction Waste Management

P²AD has funded several technical research projects related to the recycling and reuse of construction wastes at residential construction sites. Under contract with P²AD, the University of Georgia, College of Agriculture and Environmental Science, Cooperative Extension Service (AgP²) has completed research on the beneficial reuse of two residential construction wastes – scrap wallboard and wood wastes.

Scrap Wallboard

There are many potential benefits to reusing ground scrap wallboard onsite and few environmental or plant growth problems **when it is applied according to recommended application rates**. For more guidance on application rates, visit www.p2ad.org/pdfs/wbguide_1.pdf.

Engineered Wood Products

A recently completed study by the AgP² land application program indicates that the use of scrap engineered wood products (EWP) may be viable in the residential construction site environment. A committee comprised of the Environmental Protection Division (EPD), P²AD and AgP² are investigating the development of guidelines for appropriate uses and application rates based upon the results of the research. See www.engr.uga.edu/service/extension/agp2/resources/publication/N-T/Potential%20Environmental%20I28.pdf for more information.

More info

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Robins Air Force Base wins top environmental award

by Marci DeSart, Pollution Prevention Specialist



Mary Kicklighter, deputy director for environmental management at Robins AFB accepts the 2004 White House Closing the Circle Award for Pollution Prevention.

During recent ceremonies in Washington, D.C., Robins Air Force Base was presented with a 2004 White House Closing the Circle Award in the Waste/Pollution Prevention award category. This national award program recognizes federal employees and their facilities for efforts that resulted in significant contributions to, or made a significant impact on the environment.

Attempts to prevent pollution throughout Robins' operations have led to a variety of changes, which are responsible for a 41-ton decrease in waste per year. This translates into almost \$100,000 in annual savings.

Robins, a long-time member of the Georgia Department of Defense Pollution Prevention Partnership, also received an honorable mention in the Environmental Management Systems (EMS) category, which recognizes the most effective and innovative programs to implement an EMS at

federal facilities.

"This is a significant achievement for us," said Steve Coyle, director, environmental management at Robins. "We were competing against the entire federal government, more than 200 nominations. It recognizes our programs to reduce the pollution impact of weapon systems on the entire nation."

Mary Kicklighter, deputy director for environmental management said the strength of the Robins program is its diversity. "We have a number of base organizations contributing to our pollution prevention effort," she said. "Our achievements range from alternative technology for paint and depaint, to our alternative fuel vehicle program and our solid waste recycling

program. This award includes our entire pollution prevention program."

According to Linda Larson, solid waste and recycling program manager at Robins, several factors contributed to

this most recent honor. "It's due to a lot of effort between several base agencies," she said. "About 53% of our solid waste in 2003 was diverted to reuse, recycling or composting." The development of a new composting facility has been a significant component in diverting organic waste streams from land-

scaping and horse stables.

"That facility is going to give us an opportunity to look at other organic waste that could be recycled such as wastewater treatment material, wood waste such as old pallets and also food waste," she said. "The real target of our efforts is to achieve a sustainable installation to support the mission cost effectively."

Selected Robins P2 Projects

- Aircraft paint product substitution
Results: Reduction of 97% of hazardous waste, 30% of manpower, and 65% of materials for a potential \$75M annual savings
- Sludge dewatering process review and improvements at the Industrial Wastewater Treatment Plant
Results: 25% volume reduction, 25% reduction in overall chemical usage, and savings of \$151K
- Alternate depaint process
Results: 40% reduction (78,000 pounds) in methylene chloride use
- Process improvements for flightline vacuum waste collection process
Results: 33% reduction in waste, and savings of \$107K
- Flashjet paint stripping system
Results: \$900K savings annually
- Mandatory recycling policy signed by the installation commander and widely disseminated across the entire base
- Using reclaimed engine coolant, recycled antifreeze, and purchasing re-refined lubricating oil

More Info

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Sustainability a crisis in education

sharp decline in reading and the lack of curricula integrating sustainability issues, and expressed great concern that Americans now get most of their information from television, which is being controlled by fewer and fewer large media corporations concerned with more with profit than education. Complicated issues, he said, don't sell advertising, and therefore don't get air time. This system must change, Dr. Orr added, in order for our population to begin to understand the issues of sustainability facing our children and grandchildren.

Dr. Orr highlighted the coming ecological design revolution as critical to maintaining a consumption-based economy. Ecological design, through approaches like Janine Benyus' biomimicry, uses nature as a standard, protects diversity, accounts for all costs, uses current sunlight, and elimi-

nates waste. It allows us to begin to see buildings, landscapes and communities as whole systems. When we live in a society where

“Sustainability isn't about whether you are “liberal” or “conservative” – it's about how you relate to the future. It's our generation *with* or our generation *against* the interests of our children and our grandchildren and our great grandchildren.”

–David Orr

“one pound of product on the shelf at Walmart leaves 3,200 pounds of waste upstream,” according to Orr, design problems must be addressed on a whole system scale to get us to sustainability.

After providing a plethora of statistics on the mass environmental

degradation he said is caused by modern agriculture, Dr. Orr stated that our food system has run havoc on our land and waters, and is killing us. Yet this is a design problem that we could fix, he said, if we just looked at whole systems in our approach to producing food.

In conclusion, Dr. Orr noted the importance of maintaining hope and sustaining our spirit. He said he was more concerned about the sense of despair in the generation of young people today, than in their technical abilities. “The message of sustainability is thinking in systems and patterns over the long term, because ultimately this is one world and things are connected in ironic and strange ways that we will never figure out entirely, and what goes around comes around, and violence in all of its forms is wrong and will be self defeating. The long term isn't that far off.”

Calendar of Events

2004

- Nov. 7-10 14th Annual National Radon Meeting at the Newport Marriott Hotel, Newport, RI. Info: www.crcpd.org, or contact Curt Hopkins at (502) 227-4543 x2233.
- Dec. 5-10 Performance of Exterior Envelopes of Whole Buildings IX in Clearwater Beach, FL. Info: Laura Wagner, Oak Ridge National Laboratory at (865) 574-7267, (865) 574-9331, wagnerlw@ornl.gov, or www.ornl.gov/buildings.
- Dec. 6-10 First National Conference on Ecosystem Restoration in Orlando, FL. Info: Beth Miller-Tipton at (352) 392-5930, (352) 392-9734, bmiller-tipton@ifas.ufl.edu, or <http://conference.ifas.ufl.edu/ecosystem>.

Panelists focus on sustainability for Georgia

by Suzanne Burnes, Pollution Prevention Specialist and Camille Goswick, The Story



Dr. Howard Frumkin speaks to the audience about the public health-environment connection.

At the September 30 *Visions* event, participants were able to gain insights about the complex issues facing Georgia from a panel discussion and a luncheon talk by Dr. Carol Couch, EPD Director. Panelists concurred that though Georgia's environmental problems are looming large, there are some solutions.

The morning panel discussed complex issues about inter-generational responsibility, the role of arts and religion in fostering sustainability, and the critical importance of business and political leadership guiding the way to a sustainable Georgia.

Corporate responsibility

Panelists William Miller, manager of regulatory and environmental interface for environmental services of General Motors Corporation (GM), and Gail Smith, director of corporate and public affairs for Georgia Pacific (GP),

spoke about the steps their companies were taking to prevent pollution and take a long-term approach to environmental management.

Miller cited GM's commitment to environmental management systems by having all of its facilities and Tier 1 suppliers ISO14001 certified. When asked why GM hasn't been part of the recent hybrid vehicle surge, he responded that the majority of consumers are still demanding larger vehicles, and GM is focusing its efforts on improving fuel efficiencies for its entire vehicle line. While his company can address this element of our air quality problems, Miller noted the importance of public policy to address other sprawl effects.

Gail Smith highlighted GP's commitments to the Sustainable Forestry Initiative (SFI, visit www.aboutsfi.org for more information). GP no longer owns timberland, but it purchases timber from lands managed according to SFI principles, she said. Smith believes that customer demand and peer pressure were the best tools to motivate corporations to be socially and environmentally responsible.

Develop wisely and you protect health and environment

Dr. Howard Frumkin, a physician and professor at Emory Medical School, provided a public health perspective on sustainability. He brought the discussion to a small scale by talking about the 27 children that would be born in Georgia during the morning session, and

noted the health issues they would face in childhood were obesity, injury from car accidents, asthma and later in life, cancer and cardiovascular disease. He pointed to the direct impact our land use planning and transportation policies had in causing those conditions, and said the same things Georgia needs to do to protect the health of those 27 children were the same things the state needs to do to protect its environment.

Good community design "will get us a better social fabric and glue us together better as a society," Frumkin said, "something that is extraordinarily powerful as an indicator of good health. You haven't heard of sidewalk rage but you've heard of road rage. Given the transportation alternatives—one that pisses you off and makes you shake your fist at your fellow citizen and the other that lets you make eye contact and say hello—which one is going to predict better quality of life?"

Open space benefits environment and economy

Panelists Christopher Sawyer, vice chair of The Trust for Public Land (TPL), and Georgia Land Conservation Partnership council chair Clay Long, provided perspectives on the role of open space protection in a sustainable future for Georgia.

Sawyer said that Georgia could take one of two paths, one that preserved open space as an essential

See AM Panel, page 12

Becky Marshall joins P²AD staff

This summer, P²AD had the great fortune of adding an Emmy award-winning producer to its staff. Becky Marshall comes to P²AD from the DNR Film & Video Unit, and brings with her almost 30 years of expertise in film and video.

Since 1976, she has written, produced and directed educational and promotional films, interactive videotapes, public service announcements, and television productions. Many of her films have been broadcast on public television, the Discovery Channel, and the Learning Channel. Her work is on display in museums and visitor centers throughout the Southeast.

She has received more than 150 national and international awards from organizations such as the Southern Regional Emmys, the National Educational Film & Video Festival, the U.S. Film & Video Festival, and many others. She also was named Conservation Communicator of the Year by the Georgia Wildlife Federation.

Becky began her career in publicity and editing for print publications, and in 1976 she began writing film scripts and producing films for the Georgia DNR.

Becky has a B.A. with high honors in art history from Converse College in Spartanburg, South Carolina, and completed graduate coursework in art history and French at Emory University.

Welcome, Becky!

P²AD joins EPA's *Plug-In To eCycling* campaign as a state partner

Plug-In To eCycling is a consumer electronics campaign working to increase the number of electronic devices collected and safely recycled in the United States. Launched in January 2003, Plug-In To eCycling is one component of EPA's Resource Conservation Challenge, a national effort to find flexible, yet more protective ways to conserve our valuable resources.

Plug-In To eCycling focuses on three major areas:

- Providing the public with information about electronics recycling and increasing opportunities to safely recycle old electronics.
- Facilitating partnerships with communities, electronics manufacturers, and retailers to promote shared responsibility for safe electronics recycling.
- Establishing pilot projects to test innovative approaches to safe electronics recycling.



State and local governments play an integral role in the collection and management of old electronics equipment. Currently, the majority of the responsibility for dealing with end-of-life consumer electronics lies in the hands of state and local governments. They not only have to find the resources to fund collection events and public education efforts, but must also locate vendors to safely recycle the unwanted products.

EPA created the Plug-In To eCycling campaign to foster partnerships between electronics manufacturers, retailers, and governments. EPA also created the campaign as a way to provide governments with the tools and resources necessary to build successful electronics recycling programs.

P²AD is proud to announce that we have endorsed this campaign as a state partner.

More Info

www.epa.gov/epaoswer/osw/conserves/plugin/



City of Atlanta, from page 3

Water efficiency rewards rate payers

P²AD has extensive experience in water efficiency, working with companies and organizations across Georgia to reduce water use and cut costs. Over the last year, P²AD worked with Delta Air Line's plating shop at the Technical Operations Center in Atlanta to implement process changes that reduced water use by more than 22,000 gallons per day and will save the company an estimated \$215,000 per year.

More Info

www.p2ad.org/watereff.html



Understanding the benefits and risks of poultry litter use

AgP² research helps change ingrained agricultural practices

by Julia Gaskin, Byproduct Recovery Specialist, University of Georgia

Have you ever driven down a lovely country road with cows grazing peacefully in pastures and hay ready for cutting? It is an idyllic scene, until, “What’s that smell?” It’s likely that smell is poultry litter, and for a farmer it means a low-cost fertilizer to keep those pastures and hayfields green.

Poultry litter is commonly used as a fertilizer in Georgia. It is a mixture of wood shavings used in poultry houses for bedding and poultry manure. It has been credited with restoring fertility to soils in the Georgia Piedmont that were eroded and depleted by the intensive cotton production during the 1700s to the early 1900s.

Poultry litter contains nutrients you might buy for your garden: nitrogen, phosphorus and some potassium. In addition, it supplies some organic matter to the soil. However, the use of poultry litter has been linked with excess phosphorus in some lakes and ponds, which causes extensive algae blooms and creates problems for fish and other aquatic life. So how do we use this material that some might call a waste and others a resource?

Demonstration project compares pros and cons

The Agricultural Pollution Prevention Program, which is sponsored by P²AD, works extensively with farmers and county extension agents to educate them on

the benefits and risks of using poultry litter as a fertilizer. One of the most successful approaches is a demonstration project supported by both P²AD

and the U.S. Department of Agriculture. This project at the Redbud Farm, which is part of the University of Georgia’s Northwest Research and Education Center, has evaluated both the environmental and agronomic responses of bermudagrass hay to various poultry litter treatments.

The demonstration approach allows farmers to better understand how the use of poultry litter affects both water quality and the quality of their crop. The applied research has shown that overapplication of poultry litter increased average growth by 20%, but also increased the nitrate content of the hay to levels that would be poisonous to cattle. Overapplication also increased the phosphorus in the soil to very high levels within two years and three times more phosphorus was lost in the runoff compared to a commercial fertilizer application. Applications of poultry litter at the recommended rate did not create the same problems with hay quality



Poultry litter being spread as a fertilizer on a hayfield.

had much smaller increases in phosphorus in the soil and runoff water. This data illustrates the importance of careful management.

The Redbud Farm demonstration has been the site of two multi-state workshops and one in-state workshop on best management practices in forage production reaching over 200 agricultural professionals and farmers. Data from this project have been used at Cattlemen’s Association meetings throughout north and central Georgia reaching hundreds of farmers. This type of data is not “cutting edge science,” but is crucial to help farmers understand why long-standing farm practices need to be changed. Most farmers are good stewards of the land, and once they understand the problems, they are receptive to modifying management practices to address them.

More Info

www.engr.uga.edu/service/extension/agp2/



Discussion emphasizes role of open space

for good health and good economies, or one that created “a strip mall from Birmingham to Boston.”

He also pointed out that much of Georgia would have limited water supplies by 2025. According to Sawyer, TPL spent \$107 million in the last six years buying 70 miles of Chattahoochee River frontage – preserving riverbanks is one of the cheapest and easiest ways to protect our water supply, he said.

Sawyer said the most pressing reason for preserving land boiled down to simple economics. He referenced a World Resources Institute study recently commissioned by TPL to quantify the economic return of investing in open space, which said that spending an average of \$2,000 an acre on open space would mean a \$13,000 return that year and every year thereafter.

Parks also serve as economic engines, according to Sawyer, who pointed to the \$2 billion in investment since 1996 around Centennial Olympic Park and the booming residential and commercial community in Midtown.

Clay Long spoke of the critical need for a dedicated source of funding for land conservation in Georgia, and pointed to the fact that while Georgia has spent about \$10 million or \$11 million annually on parkland since 1974, Florida just allocated \$300 million a year for the next 10 years. He urged audience members to push for the creation of a green space authority in Georgia, which would better have the power to leverage resources for land conservation than a commission.

Motivating change

Long stated that we must elevate environmental issues in Georgia to a level with public health, safety and education. “It has to be something that our politicians will not cut out of the budget because we will not tolerate it,” he said.

When asked what would motivate people to change, Dr. Frumkin pointed to the role of religion, saying that self-sacrifice is ultimately necessary, and people are most likely to come to sacrifices through their faith. He raised the question of how we motivate church leadership to take on the issue.

Christopher Sawyer added that though many Christian denominations currently preached that belonging to a particular faith was the key to a better life, they needed to shift to preaching that values and action lead to an improved quality of life.

Smith also pointed to the role of art to inspire and provoke people to action.

Though they came from very different backgrounds, roles, and viewpoints, all panelists shared the opinion that the conversation about sustainability for Georgia needed to continue beyond the *Visions* event.

No alternative to sustainability, says Couch

Dr. Carol Couch, EPD Director, shared her thoughts on the many complex issues facing us, particularly insuring responsible use of our state’s natural resources while supporting economic growth. She declared simply, “there is no alternative to sustainability.”

She also made it clear that regulation is only one tool for achieving sustainability, and that a non-regulatory approach like P²AD’s is an important component of the state’s overall environmental strategy.

Dr. Couch noted that 50% of the pollutants in Georgia’s air and water come from non-point sources, and can largely be traced back to the automobile: CO₂, SO₂, and NO_x in our air, and oil and other vehicle fluid runoff in our water and soils. To truly tackle environmental impacts of our vehicles, we must integrate transportation policy and land conservation planning into environmental policy. We need to connect our air quality modeling with transportation planning.

Regulatory incentives for beyond compliance environmental performance

A part of the sustainability solution

by Suzanne Burnes, Pollution Prevention Specialist



Panelists Mary Beth Schwefel, John Gray, Roger Lee, Chad Carbone, Marlin Gottschalk, and Susan Kidd discuss the issues surrounding regulatory incentives for P²AD Partners.

The *Visions* event afternoon panel explored issues relating to the P²AD Partnership Program's regulatory incentives for the highest levels of the program.

The panel, which was composed of representatives from EPD, businesses and environmental organizations, provided their thoughts on the wide array of regulatory incentives now available to the red and blue ribbon levels of the Partnership Program. These panelists had served on a program subcommittee, which spent several months arriving at consensus on acceptable regulatory incentives for Georgia's environmental leaders.

The program was applauded by EPD assistant director David Word, who said it allows EPD to focus its limited resources on businesses that aren't doing well. He assured the audience that though Partners would get better attention at EPD,

they would be required to meet the same environmental requirements as other businesses.

Following a presentation by P²AD's Colin Kiefer on specific regulatory incentives offered in the program (see sidebar, page 14), panelists responded to questions from session participants, and provided their views on the program.

Non-profit perspective: transparency critical

Susan Kidd of The Georgia Conservancy remarked on the rare opportunity to have so many environmental groups in the same room with business. The initial years of the program will be a test, in her opinion, as to whether the program results in environmental improvement by Partners, and whether environmental challenges can truly be solved through incentives. She was encouraged though, that if

Partners have common goals, can shift their mindsets, and the program can maintain transparency, it is sure to be successful.

Other panelists and participants later echoed the importance of transparency for the program to be a success.

The Upper Chattahoochee Riverkeeper's Betsy Nicholas was excited about the program and said that it had potential to make a huge difference in the responsible use of resources in Georgia. She also noted the importance of identifying environmental "bad actors" and ensuring that they can be eliminated from the program if needed.

Other critical concerns voiced by nongovernmental organizations relating to the program include impact on the environment, impact on public right to know, and impact on public participation.

See Regulatory, page 14

Industry excitement: incentives will have positive impact

John Gray, a consultant formerly with Vulcan Materials, noted the positive aspects of the program for industry. He stated that regulatory incentives will allow higher environmental performance at a lower cost, and allow EPA and EPD to focus on facilities with real problems, not those that are going beyond compliance. He pointed to one benefit – longer storage times for hazardous waste – and explained that this will allow more time for businesses to search for recycling opportunities.

Metcam, Inc. has worked closely with P²AD through the Metal Finishing Initiative, and its Environmental, Health and Safety Manager, Mary Beth Schwefel, has been a long time champion of environmental management systems. “The P²AD Partnership Program lets environmental managers be the good guys for a change by saving their company money, rather than always costing them money,” she said.

Schwefel also noted that Metcam expects the program will allow them to go from being a large quantity generator to a conditionally exempt generator, and put them in a cooperative rather than adversarial relationship with regulators and stakeholders. “This program is changing the dynamic between the regulated and non-regulated community,” according to Schwefel.

Roger Lee of Lockheed Martin noted that with the Partnership Program, P²AD was taking a giant step forward in the way the state of

Georgia deals with industry. He said that the regulatory incentives offered through the program are very meaningful to his company, but the main driver for getting in the program is that it is the right thing to do, and it’s nice to be appreciated for positive environmental efforts.

Other program concerns voiced by industry stakeholders include cost and time savings potential from participating in the program.

Win-win for regulators

Marlin Gottschalk, senior policy advisor for EPD said that EPD considers this program to be a first step in providing rewards to businesses that are serving as environmental leaders in Georgia. He concluded that additional incentives are still on the table, and encouraged input from the audience on future incentives.

Representing EPA’s Performance Track Program, Chad Carbone stated that Georgia is going down the right road, and added that better state revolving funds loan rates might be available for Partners that also qualified to be Performance Track members.

Stan Meiburg, EPA Deputy Regional Administrator, concluded the conference with a show of strong support for the P²AD Partnership Program. He emphasized that EPA was able to meet its goals of improving the environment best by recognizing and incentivizing superior environmental performance

Highlighted regulatory benefits for red and blue level partners



Better Access to State Regulators

- Priority response for issue resolution
- Agency single point of contact

Administrative Relief & Flexibility

- Expedited permit review
- Lower state inspection priority
- Performance Track rule (dual membership)

Pilot Project Opportunities

- Innovative approaches to regulatory compliance
- Eliminate duplicative regulatory requirements

Lower Hazardous Waste Fees

and increased social responsibility. For audience members questioning the impact of the upcoming election, he reassured that EPA’s emphasis on Performance Track and support of state programs will continue regardless of the election outcome. Meiburg closed with the underlying philosophy of the P²AD Partnership Program and Performance Track: what is good for the environment and the community is also good for the bottom line.

More Info

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