



Stream success

Lambert Run, in Harrison County, used to flow red with iron and other metals but DEP cleanup efforts are helping restore the stream.

DEP playing role in restoring 'poison creek'

By Tom Aluise

CLARKSBURG — Steve Garvin had essentially given up on Lambert Run. A Harrison County tributary of the West Fork River, Lambert Run, in Garvin's words, "was a poison creek."

Years of drainage from pre-law mining in the area had turned the stream into an iron-colored, acidic muck of metal-heavy water that snaked its way along county back roads before emptying into the West Fork at Spelter.

As a member of the local watershed group, Guardians of the West Fork, Garvin was skeptical anything could be done to improve the water quality on Lambert Run.

A Harrison County native, Garvin knew the eight miles of stream to be nothing other than lifeless, void



Top, Lou Schmidt, Monongahela Basin coordinator for the DEP, stands in front of one of the wetland cells used for passive treatment. Right, acid mine drainage seeps from a portal.



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Volunteers load tires onto a semi during a REAP-sponsored tire cleanup in Cabell County at the Milton Volunteer Fire Department.

Tired of tires?

DEP stays busy with collections

By Tom Aluise

MILTON — It's a beautiful Saturday morning in November, unseasonably warm and drenched in sunshine — a perfect day to be on the golf course or in the woods for a hike.

The Department of Environmental Protection's Chris Cartwright is spending his day — from 9 a.m. to 4 p.m. — behind the Milton Volunteer Fire Department collecting old tires.

"Just about every collection you're guaranteed about 1,500 tires," said Cartwright, a project manager with REAP's Pollution Prevention and Open Dumps program. "Sometimes you'll go into a county where you don't think you'll collect that many and you end up with 4,000 tires. We did



Close to 2,500 tires were collected in Milton. From there, they were transported to West Virginia Tire Disposal in Summersville, the largest tire-shredding facility in the Mountain State.

10,000 tires in two days one time in Wood County.

"I'm worn out by the end of the day and ready to kill the next guy with tires on his truck."

Cartwright, of course, was joking about "the next guy with tires on his truck." He wasn't kidding, however, about

being worn out.

REAP sponsors roughly 75 tire collection events around the state each year, usually on the weekend. And although they involve hard, physical work and are time-consuming, the collections are a vital component to the REAP objective of making West

"Sometimes you'll go into a county where you don't think you'll collect that many and you end up with 4,000 tires. We did 10,000 tires in two days one time in Wood County."

— Chris Cartwright
Reap project manager

Virginia the country's cleanest state.

Without collection events, old tires often end up in backyards, streams and rivers, or over hillsides. The DEP began hosting tire collection days in 2005. Today, the program brings in about 500,000 tires a year.

"We try to make it into a community effort,"

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Volunteers have to find ways to occupy their time during the occasional lull associated with tire collection events across West Virginia.

TIRES

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said Greg Rote, program manager for REAP. “The more people we have buying into it, the more people we’ll have looking out for tire problems.”

Rote joined Cartwright for the Nov. 14 tire collection here, one of three REAP-sponsored collections that day. Others were held in Jackson and Lewis counties.

Rote and Cartwright helped round up about 2,500 tires in Cabell County. They were joined by a number of volunteers, who spent the day unloading tires off local residents’ vehicles and stuffing them into tractor-trailers owned by West Virginia Tire Disposal, out of Summersville. “We try to make sure we get plenty of help,” Cartwright said.

Volunteers from the Putnam County Humane Society kept logs and checked the IDs of drivers dropping off tires. Only county residents could take advantage

of the collection event.

Rote said the DEP would donate proceeds from rims collected at the event and recycled to the Putnam County organization.

Not long ago, the George Washington Middle School basketball team from Putnam County volunteered at a tire collection event.

“They will end up with about \$1,300 from it and it teaches them about recycling,” Rote said. “It’s a win-win thing.”

West Virginia Tire Disposal is the largest of three tire-shredding facilities in West Virginia.

Owner Ray Kincaid said his operation shreds close to two million tires a year and disposes of the rubber in a specially designed landfill that encompasses 783 acres.

He’s used just nine acres of the property.

Kincaid accepts tires from as far away as San Diego, Calif.

“We can shred 20 tons of tires in 30 minutes,” he said.

Report on state dams issued by DEP office

By Kathy Cosco

The West Virginia Department of Environmental Protection released its report on the condition of the various fly ash impoundment dams and landfills throughout West Virginia.

The report is the final product of a review ordered by Cabinet Secretary Randy Huffman following the failure of a substantial fly ash dam in Tennessee last December.

“Our staff engineers conducted field inspections and aerial surveillance of all jurisdictional fly ash dams, and no imminent danger of fly ash release was observed,” said Brian Long, coordinator for the DEP’s Dam Safety Program.

“However, the inspections did result in the discovery of two fly ash dams that were not in the DEP inventory and were inadvertently constructed large enough for jurisdiction under the Dam Safety Act.”

With the discovery of the additional two dams, a total of 20 dams were inspected in the state. Sixteen are actively being used for fly ash disposal and four are inactive.

Based upon the National Inventory of Dams criteria, of the 20 fly ash dams in West Virginia, eight are in satisfac-

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COMINGS AND GOINGS

Recent DEP hires:

- Laurence Williams, DMR, Nov. 2
- Megan Smith, DWWM, Nov. 2
- Stephen Nestor, DLR, Nov. 2
- Cynthia Monk, DWWM, Nov. 16
- Ken Toler, DMR, Nov. 16
- Stephen McBrayer, AML, Sept. 28

Recent DEP retirees:

- Patricia Karon Workman, DMR, Nov. 1
- Douglas Craig Duckworth, OOG, Nov. 20
- Steve Legge, ITO, Nov. 30



Joe Manchin III

Governor

Randy Huffman

Cabinet Secretary

Kathy Cosco

Communications Director

Tom Aluise

Editor

Public Information Office

601 57th St. S.E.

Charleston, WV 25304

Email: Kathy.Cosco@wv.gov

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of any fish or insects.

So, it was with equal measures of surprise and doubt that he met the ideas of Lou Schmidt and others who wanted to restore Lambert Run.

“When Lou said they were going to clean it up, I said, ‘What?’” Garvin said.

Today, Garvin is a believer.

Two-thirds of the stream now runs clear, unclouded by metals like iron, aluminum and manganese and bolstered by high pH levels that indicate decreased acidity.

“I never thought I’d see this stream cleaned up like this,” Garvin said. “I didn’t think I would see this in my lifetime. If I didn’t see it with my own eyes, I wouldn’t believe it.

“This ought to be on every environmental magazine cover in the country.”

There is still work to be done on Lambert Run, but amazing progress has been made since 2003 when Schmidt, the Department of Environmental Protection’s Monongahela Basin coordinator, set in motion restoration efforts on the stream.

The Guardians of the West Fork and other concerned community members were quick to jump on board.

“My job is to support watershed groups,” Schmidt said. “Some groups are tied into education, while others focus on restoration. The Guardians of the West Fork are really into restoration.”

“It’s pretty impressive what we’ve been able to do with such a small community group,” said Bob Rector, a watershed group member. “Of course, we wouldn’t have been able to do this without Lou.”

Schmidt, a 19-year DEP veteran, grew up in Harrison County and has taken special pride in restoration efforts on Lambert Run which,



This photo captures the difference in water quality on Lambert Run. Clear water mixes with acid mine drainage from a nearby holding pond (below) that is being fed by three portals.

thus far, have included four treatment sites on the stream. Each site uses a passive system that includes wetland cells to treat contaminated mine drainage before it enters Lambert Run.

Throughout the watershed, abandoned mine portals have been feeding the creek a steady dose of metal-laden water for years.

“Everything we could do to make this system work, we did,” Schmidt said. “We didn’t do anything haphazardly.”

The results have been stunning.

“Nobody had seen any minnows in Lambert Run until this year,” Schmidt said. “We’re getting landowners who are saying we haven’t seen minnows here since we’ve lived here. It’s incredible how the aquatic life found its way back to the system. It’s almost like we advertised.”

Said Rector, “We’ve had farmers who have farmed out here all their lives tell us they had never seen fish in these streams until now.”

So far, close to \$1.5 million, including state and federal money, has been spent on bringing Lambert Run back to life.

In 2004, the DEP, Office of Surface Mining and West Virginia University’s National Mine



Brady Gutta (right), project manager with the West Virginia University National Mine Land Reclamation Center, speaks with state, county and local officials during a tour of Lambert Run’s restoration projects. Above, Gutta describes how an open limestone channel treats mine drainage.

Land Reclamation Center came together with the watershed group to begin preparations for restoration work.

A watershed-based plan submitted to the U.S. Environmental Protection Agency in 2005 by the Guardians of the

West Fork secured federal dollars for the project.

The first of four treatment sites — all on private property — was completed in 2006 on land that is leased by

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EPA recognizes efforts

DEP's handling of SRF earns the agency a national award

By Tom Aluise

A few days before the national Council of Infrastructure Financing Authorities' annual meeting, Mike Johnson received a telephone call from an Environmental Protection Agency official.

"The rep told me to make sure I dressed nicely for the Monday morning session at the conference," said Johnson, an assistant director in the West Virginia Department of Environmental Protection's Division of Water and Waste Management.

That piece of advice clued Johnson in on what was in store for West Virginia's Clean Water State Revolving Fund (CWSRF) program, which he manages for the DEP.

On that Monday



From left, Kathy Emery, Mike Johnson and Rose Brodersen display the EPA's PISCES Award, presented to the DEP for outstanding administration of the Clean Water State Revolving Fund.

morning, Nov. 2, West Virginia was one of 10 states to receive a PISCES Award (Performance and Innovation in the SRF Creating Environmental Success) from the EPA for fiscal year 2009. West Virginia was selected out of the EPA's five-state Region 3. Johnson, along with the DWWM's

Rose Brodersen and Kathy Emery, represented the DEP at the CIFA meetings Nov. 1-3 in Seattle.

"I was glad that all three of us got to go to the conference," Johnson said.

Until the phone call came from the EPA, Johnson said he had not even thought about the

conference, much less winning an award.

"We were so wrapped up in all this stimulus money that we had not even thought about the PISCES Award," Johnson said. "I really didn't even think about the conference until I started packing for it."

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the Appalachian Rangers Muzzleloader Club.

Other treatment projects were completed in 2007, 2008 and earlier this year.

Cooperation from land owners affected by Lambert Run restoration efforts has been crucial to the project's success, Schmidt said.

"They signed on and gave us the right to do these projects to improve the quality of water," he said.

"We're seeing some real improvement over a period of time."

Brady Gutta, project manager for WVU's National Mine Land Reclamation Center, engineered the passive treatment systems at each

site.

Although the systems all have different components, depending on the chemistry of the drainage they're treating, their common thread is wetland cells that settle metals out of the water through vegetation and retention time.

Interlocking seawall in the wetlands improves retention time. Water levels in the wetlands are controlled by an Agri-Drain.

Other project sites on Lambert Run feature treatments such as a steel slag leach bed and open limestone channels, which increase alkalinity and raise pH levels.

The most recently completed project on the stream uses a vertical flow reactor (VFR) to treat acid mine drainage before it seeps into Lambert

Run.

The VFR consists of a treatment cell with an underdrained limestone base topped with a layer of organic materials such as yard waste. Water flows down through the compost and limestone, is collected into pipes and discharged into wetland cells. The VFR increases alkalinity in the water, while the wetland cells continue metal removal.

The Guardians of the West Fork recently won an award from the West Virginia Watershed Network for their work on Lambert Run.

And Schmidt said plans are on the table for two more treatment projects on the stream, including one site that continues to be the largest contributor of acid mine drainage.

"This is our 800-pound

gorilla," Schmidt said.

Located on private property, the area includes a collection pond that is being fed AMD from three portals. A small tributary carries water from the pond to Lambert Run.

"There are a lot of ways to tackle this," Schmidt said. "We're trying to work on funding for this."

Schmidt said the site will probably require both active and passive treatment.

"We think it's going to take \$500,000 to complete it and then \$50,000 a year to maintain the site," he said. "We feel like it's doable."

"We couldn't hurt it. It has no aquatic life or bug life."

Folks around here used to say that about all of Lambert Run.

Not anymore.



The Capitol provides a backdrop for two of the state’s new hybrid transit buses, which are on the roads in Huntington and Charleston.

These aren’t your mom and dad’s transit buses

By Tom Aluise

Dennis Dawson remembers his days 30 years ago as a bus driver for the Charleston-based Kanawha Valley Regional Transportation Authority.

Back then, KRT transit buses didn’t have air conditioning. They didn’t have power steering or external mirrors. There were no two-way radios available to drivers or audio-video equipment on board. Buses then weren’t even handicap accessible.

“She may be single-handedly responsible for these buses that are here today.”

— Dennis Dawson,

KRT general manager, on the DEP’s Renu Chakrabarty

“I’ve seen a lot of changes over the years,” said Dawson, who rose from the ranks of driver to become KRT’s general manager.

On Nov. 12, though, Dawson was on hand to introduce a change he thought he’d never see.

West Virginia’s first hybrid diesel-electric transit buses were unveiled during a ceremony at the state Capitol complex. State, county and city officials were on hand to show off two of the environmentally friendly buses, one each from KRT and the Huntington-based Tri-State Transit

Authority.



Renu Chakrabarty, left, air toxics coordinator for the DEP’s Division of Air Quality and DAQ Director John Benedict stand in front of one of KRT’s four hybrid transit buses.

Authority.

Seven hybrid buses, costing \$3.9 million, are now included in public transit fleets serving the Charleston and Huntington areas. Four buses operate in the Kanawha Valley and three in Huntington.

The buses’ green features include improved air

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BUS

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quality (and subsequent public health benefits), through lower emissions and better energy savings through reduced fuel use.

Dawson recalled the early days when KRT buses belched black smoke.

“We’re very excited to get the new hybrid buses into service in the Kanawha Valley as part of an



Coccari



Hammonds

ongoing effort to include the most environmentally friendly, operationally acceptable and efficient public transit vehicles into the Authority’s fleet of buses,” Dawson said.

The hybrids were partially funded by the federal Diesel Emissions Reduction Act (DERA) and stimulus funds through a cooperative effort of the West Virginia Department of Transportation’s Division of Public Transit, West Virginia Department of Environmental Protection, KRT and TTA.

Renu Chakrabarty, air toxics coordinator for the DEP’s Division of Air Quality, was particularly instrumental in making the buses a reality for West Virginia. The DAQ’s Gene Coccari and Stephanie Hammonds worked closely with Chakrabarty.

“We couldn’t have done this without the help of the DEP and Renu Chakrabarty,” said Paul Davis, TTA’s general manager. “The DEP is fortunate to have Renu.”

Dawson said Chakrabarty is a “go-getter.”

“She may be single-handedly responsible for these buses that are here today,” Dawson said.

Manufactured by Gillig Corp., of Hayward, Calif., the hybrids feature both a combustion engine, powered by diesel fuel, and



DEP Cabinet Secretary Randy Huffman speaks during the hybrid bus ceremony at the State Capitol on Nov. 12. To his right are the Department of Transportation’s Randy Damron; DOT Cabinet Secretary Paul Mattox Jr.; KRT General Manager Dennis Dawson and TTA General Manager Paul Davis.

an electric motor. Both power sources have direct, independent connections to the transmission. The combustion engine provides power at high, constant speeds, while the electric motor is the source of power during stops and low speeds.

A regenerative braking system recovers energy normally lost as heat during braking and stores it in batteries for use by the electric motor.

The hybrid design also allows for reductions in transmission and brake maintenance.

TTA’s standard diesel-powered bus, for example, requires brake maintenance about every 20,000 miles, Davis said.

The hybrid diesel-electric model can go close to 100,000 miles before new brakes are needed, Davis said.

In terms of fuel efficiency, Davis said his buses now get close to five miles to the gallon. The new hybrid version could get close to nine miles to the gallon. Hybrids are also smoother, provide quicker acceleration and create less engine noise.

“This is a great opportunity for TTA to go green,” Davis said.

“And this partnership with the DEP really came along at the most opportune time for us. We had new buses coming in and this was the perfect opportunity for us to upgrade to something environmentally friendly.”

Randy Huffman, cabinet secretary of the DEP, said the hybrid bus project gave the DEP the chance to partner with state and local agencies on a project that not only reduces air pollution, but helps with public access to green transportation and helps lead the way to more sustainable communities.

The state contributed more than \$200,000 per bus to help pay for the hybrid technology.

“Cleaner public transit vehicles help to not only improve air quality, they also use less fuel and help lead to more energy independence,” Huffman said.

New York City currently has the largest fleet of hybrid diesel transit buses at close to 1,700. In a recent review of New York’s buses, the U.S. Department of Energy’s National Renewable Energy Lab found the diesel hybrids were 22 percent more fuel efficient than conventional buses.

Haught outlines REAP’s role in Potomac Watershed

REAP Director Danny Haught represented West Virginia at the Alice Ferguson Foundation’s fourth annual Potomac Watershed Trash Summit in Washington, D.C., on Oct. 28.

Haught joined a gathering of 300 key stakeholders to discuss strategies that officials hope will

lead to a trash-free Potomac Watershed by 2013. The summit provided a venue for Congressional, state and local officials, as well as citizens and youth leadership, to collaborate on a plan to eliminate trash from waterways, communi-



REAP Director Danny Haught speaks during the Potomac Watershed Trash Summit in Washington.

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tory condition, seven are in fair, three are in poor and two are in unsatisfactory condition.

“We were able to identify stability issues along some embankment slopes, but largely the problems we noted involved control of animals and vegetation,” Long said.

“The agency is requiring the owners to address any issues found at their sites to bring them into satisfactory condition.

In addition, we issued an Administrative Order to AEP for the two dams that were discovered during the DEP inspec-

tions to compel compliance with current dam safety standards.”

In addition to inspection by the Dam Safety engineers, staff from the Division of Mining and Reclamation reviewed the potential for breakthrough into underground mines.

Five dams have mining under the dam or reservoir, but according to documents submitted by the owners and reviewed by the DMR staff, the mining activity is at a sufficient depth to prevent potential breakthrough.

The remaining facilities are in areas without documented underground mining.

Hazard potential clas-

sifications, which do not reflect the condition of a dam, but rather the damage that could potentially occur downstream if a dam were to fail, are also listed in the report.

In addition to field inspections, Dam Safety engineers reviewed documentation of current embankment stability provided by engineers secured by the owners.

In addition to inspecting the dams, 15 permitted dry coal combustion by-product landfills were inspected.

These inspections, conducted by Environmental Enforcement staff, resulted in one Administrative Order,

three Notices of Violation and one warning. Six coal combustion by-product impoundments were also inspected and one warning was issued as a result of those inspections.

In addition to monitoring the dams to ensure the requirements are met, the Dam Safety Program will review applications and associated engineering documents to ensure that proposed modifications meet safety standards.

The report can be found on the DEP’s Web site on the Environmental Enforcement page under the General Information heading on the right side of the page.

EPA

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The 10 state award winners were nominated by their regional offices based on the following criteria for the last fiscal year: minimum cumulative pace level of 80 percent (how quickly funds were distributed for projects) and financial integrity.

Also, each nominee had to demonstrate outstanding performance and leadership in two or more of the following areas: innovative partnerships, effective outreach, leveraging practices, watershed approach and exceeding requirements of the American Recovery and Reinvestment Act (stimulus bill).

“Specifically mentioned about us was our continued success in the non-point source funding arena, where

we doubled our funding assistance in one year,” Johnson said.

“Our relationship with the West Virginia Housing Development Fund in implementing our Onsite Loan program for correcting failing septic systems was also mentioned.

“Finally, our long-established partnership with the State Infrastructure Council was noted as a premier example for coordinating state and federal funding for infrastructure projects.

“The primary purpose of the Infrastructure Council is to bring all state and federal funding agencies to the table once a month to use resources more effectively to fund sewer and water projects.”

The DEP is a voting member on the council and the EPA said:

“Participation in the council provides a co-

ordinated approach that ensures that the most appropriate funding sources are provided to wastewater infrastructure and other water quality projects.”

Johnson said about 98 percent of West Virginia’s CWSRF monies are used for municipal wastewater projects.

The remainder goes toward funding non-point source pollution projects such as the Onsite Systems Loan Program.

Under the Onsite Loan Program in fiscal year 2009, the DEP transferred \$350,000 from the CWSRF to the West Virginia Housing Development Fund and Safe Housing and Economic Development Inc., which, in turn, offered low-interest loans to homeowners for the repair or replacement of failing onsite sewage disposal systems, such as sep-

tic tanks.

In fiscal year 2009, 46 loans were issued totaling \$245,213.

West Virginia’s CWSRF also is used to help fund the Agriculture Water Quality Loan Program (AgWQLP), which offers low-interest loans for the financing of best management practices to reduce non-point source impacts on water quality from the agricultural community.

The AgWQLP is a cooperative effort among the DEP, other state agencies and local banking institutions.

In fiscal year 2009, \$310,860 in loans was made under the AgWQLP. Over the last 10 years, West Virginia’s CWSRF has contributed \$16.6 million to non-point source pollution projects in the Mountain State.

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ties, streets and public lands.

Eight West Virginia counties in the Eastern Panhandle are in the Potomac Watershed.

In addressing the summit, Haught talked about what REAP is doing to tackle litter and illegal dumping problems in the Potomac Watershed and Chesapeake Bay.

Haught described REAP’s three-pronged focus for the watershed: community cleanups, public outreach and education and enforcement.

He also offered statistics on REAP cleanup efforts in the Eastern Panhandle for the fiscal year 2009: 13,132 pounds of litter; 231 volunteers; and 10 miles of stream.

Bottle caps needed

Collection has begun for a recycling art project for the REAP Earth Day Event.

Items needed are all types of bottle lids up to coffee lid size.

Items should be clean. You can drop these off in Room 1070A.

Chaudhry noted for innovation

By Colleen O'Neill

Did you know there are DEP Rich Internet applications that let you see data in a geospatial format, like a map?

To access this application, the address gisonline.dep.wv.gov/fogm/ must be entered.

The only requirement is a Flashplayer, a program that can be downloaded for free from the Web.

This innovative technology was honored with the statewide award for application of new technologies by the West Virginia Office of Technology.

Zahid Chaudhry, of the Technical Applications GIS section of the DEP's Office of Information Technology, was the software developer who created the application.

In this world of visual stimulation, being able to see the data is a definite plus.

"Being able to see what happened on screen and then print a PDF to take into the field was a significant improvement over trying to look at damages with no way to prioritize where to look first," Larry Evans, supervisor of TAGIS, said.

He and Jerry Forren,



The DEP's Zahid Chaudhry received an award from the state Office of Technology for his work with geospatial technologies.

chief of ITO, nominated Chaudhry.

"Zahid was nominated because he so quickly adapted ArcGIS Server and Adobe Flex technologies into very useful, easy to use applications that extend geospatial technologies to a much broader array of users," Evans said.

"The reason for his nomination was about 75 percent for what he's accomplished and the timeline he did it in and 25 percent to make a broader audience aware of Server and Flex's potential in their world."

In fact, Chaudhry developed it as a response to a potential problem.

"The Office of Oil and Gas and the Division of Mining and Reclamation realized the potential for loss of life and property damage if they didn't better understand where each other's operations were on the ground," Evans said.

"There is always a need for geospatial applications because it's hard for every employee to learn and use ArcGIS," Chaudhry said.

"It is very expensive to buy that many licenses for the software, too.

"Geospatial applications let everyone complete simple GIS tasks from a Web browser. It's cost and time efficient."

Still others came

about because of discussions with folks like Terry Polen, the DEP's small business ombudsman, who saw some of Zahid's efforts and became interested in what Server and Flex might do for their areas of interest.

Other applications have been a collaboration between Chaudhry and Michael Shank, a TAGIS co-worker, in response to natural disasters, like the May '09 flooding in southern West Virginia.

The award ceremony was on Nov. 5 at the statewide West Virginia Information Technology Summit 2009.

Chaudhry wasn't planning on attending the event and didn't register.

The conference planning committee jumped into action. "I didn't know that I had been nominated," Chaudhry said.

"I received a phone call from Ken Shaw, the chief of the state Office of Technology, inviting me to attend the ceremony because I had won an award.

"It was nice to hear from Ken Shaw," Chaudhry said. "It was big recognition for my work."

State's point man for ITRC honored

By Colleen O'Neill

Sharing is a lesson that is instilled in us by our mothers.

The DEP's Pasupathy Ramanan, or "Ram" for short, has taken this lesson to heart.

His involvement with the Interstate Technology Regulatory Council, his sharing of its message and technology, has earned him the outstanding service award.

ITRC's technical team delivers guidance documents and offers free Internet-based training sessions to assist the environmental community on different topics like brownfields, ecological land reuse, risk assessment resources,



Ramanan

vapor intrusion, sampling/characterization/monitoring, In Situ Chemical Oxidation, bioremediation, remediation process optimization, alternative landfill technologies and bioreactors, unexploded ordinance, radionuclides, arsenic in groundwater, LNAPL, and DNAPL, mining waste.

To view these documents, and to learn more about ITRC participation, go to: www.itrcweb.org.

"I am a chemical engineer and like to apply technologies for cleanups," said Ramanan, who

works out of Fairmont, in the Office of Environmental Remediation.

"Since my work in the Office of Environmental Remediation involves using technologies for site remediations, I was nominated by Don Martin and Ken Ellison to be the West Virginia state point of contact for ITRC. A POC representative from each state is a requirement to participate in ITRC."

Ramanan has been the POC for the ITRC for the past five years. His job is to encourage the DEP's variety of experts to share their resources and knowledge

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This doc won't make house calls

After four years of work, DEP's Polen earns doctorate

By Tom Aluise

He drove a car to extinction, wore out several pairs of reading glasses and lost more sleep than a night security guard.

In the end, though, it was all worth it for Terry Polen.

Today, he has a doctorate in management from the University of Maryland.

The years of hard work and sacrifice dedicated toward earning the prestigious degree helped Polen realize a lifelong dream.

"It was something I wanted to do most of my life — it was just a goal," said Polen, the Department of Environmental Protection's ombudsman. "It was also very interesting. It makes you think."

Already armed with a bachelor's degree in mechanical engineering from West Virginia University and a master's in business administration from Marshall Univer-



Terry Polen, ombudsman for the DEP, displays his doctorate from the University of Maryland. Polen made frequent trips to Maryland's campus and worked via the Internet to earn the degree.

sity, Polen embarked on his quest for a doctorate in 2005. He had the degree in hand by August 2009.

Polen's dissertation topic was titled "A strategic analysis of the effectiveness of Small Business Environmental Assistance Programs."

It fell right in line with what he does for the DEP, which is assist businesses of all shapes and sizes in comprehensive environmental is-

ssues — helping those businesses understand environmental laws and what steps must be taken to comply with those standards.

"The background and training I got from working on my doctorate certainly allowed me to look at things in different ways," said the 47-year-old Polen, who became the DEP's ombudsman in 2002 after working as the assistant director for permitting in the Divi-

sion of Air Quality.

A Moundsville native, Polen joined the DEP in 1991 as a regional environmental engineer in the DAQ.

"I go all over the state having fun and talking to people about environmental issues," Polen said.

"Fun" didn't come into play much during Polen's four-year journey toward his doctorate.

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with other states. ITRC, a state-led, national coalition that works with industry and stakeholders to achieve regulatory acceptance of environmental technologies, provides the forum for this sharing.

ITRC consists of 50 states, the District of Columbia, multiple federal partners, industry participants, and other stakeholders. They cooperate to break down barriers and reduce noncompliance. Ramanan has done much to make it easier to use new technologies, and help states maximize resources.

ITRC accomplishes its mission in two ways: it develops guidance documents and training courses to meet the needs of both regulators and environmental consultants, and it works with state representatives to ensure that ITRC products and services have maximum impact among state environmental agencies and technology users.

"I believe whole heartedly in the ITRC," Ramanan said.

"One of the benefits of the ITRC is networking and sharing technological values from ITRC and the other states with the environmental community.

"You learn what

other states have tried and if it was successful. Between the sharing of knowledge from other states and the technical documents prepared by the ITRC and the Internet-based training it offers, membership to the ITRC benefits the agency and ultimately the environment."

Using ITRC products and being a cheerleader for ITRC were two of the reasons for Ramanan's award.

Some other winning characteristics were providing West Virginia state priorities for ITRC use; consistent and active participation in ITRC meetings and conference calls; building

Internet-based training participation during his tenure as POC, including the promotion of ITRC's training to West Virginia's licensed remediation specialist certification program; advocating for ITRC and use of ITRC products; and providing West Virginia's input on proposals and overall priorities to assist ITRC with understanding state priorities and emerging issues.

Ramanan's wife Roopa, and children Priya and Anand, would be proud. For information about the ITRC, please contact Ramanan at the Fairmont Office at 304-368-2000 ext. 3730.



George Mitchell spoke with Capital High School students about his military experiences under a program called Take a Veteran to School, started by Sen. Rockefeller.

DEP staffer shares stories with students

By Colleen O'Neill

The Department of Environmental Protection's George Mitchell took part in an event where he shared his military experiences with today's young adults.

The Take a Veteran to School program was started last year by Sen. Rockefeller in an attempt to link veterans with today's young people.

"I went to Capital High School, where I sat on a panel with five other veterans," Mitchell said.

"The students asked us questions about our military and war time experience."

The questions varied, but some were:

"If you had the chance, would you go back into the military?"

"Where's some of the places you were

stationed?"

"Did you miss your family?"

Mitchell learned about the Take a Veteran to School program through his involvement with the American Legion. He is the vice commander for the state of West Virginia.

"I heard about this program and thought it would be a great opportunity for me to tell my story to others besides my family members," said Mitchell, who was in the Army from 1987 to 1997 and in the West Virginia Army National Guard from 2001 to 2004.

"I took part in the program because I'm a proud veteran from West Virginia who served my country and will do it again," Mitchell said.

The program, in its

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Periodically, he drove to the University of Maryland's campus just outside of Washington, D.C., for two full days of classes on Friday and Saturday. The rest of his course work was done via the Internet.

"There was lots and lots and lots of driving," said Polen, who, like most of the candidates in his class, continued to work full time while he pursued a doctorate. "I didn't realize how much stinkin' work it would be," he said.

Polen usually spent his hours away from the DEP with his nose in a book or writing papers. One challenge was making sure he didn't take time away from his wife, Lisa, and daughter, Rachel.

"I just took time away from sleep," Polen said. "I didn't want to take away from Lisa and Rachel unless I had to. And they're cool enough that I want to hang out with them anyway."

"My wife and daughter are amazing. My daughter has now decided she doesn't want to get a doctorate."

That decision might have been cemented in Rachel's mind after watching her dad, in 2007, complete a grueling comprehensive exam that would determine whether he advanced from doctoral student to doctoral candidate.

The in-home exam included a 24-hour deadline to complete. Polen needed 22 hours to finish the test.

"I would eat and work," Polen said. "I didn't sleep. I didn't have time. It was a miserable experience."

Polen now proudly keeps in his office a copy of the email he received informing him of his passing grade on the exam. "When I got that email," he said, "I just dropped to my knees and thanked God."

Literally, Polen fell to his knees in his DEP office.

"The floors here are hard," he said. "That hurt."

These days, Polen hears the occasional "hi, Dr. Polen," but is a tad uncomfortable with the title before his name.

"Oh, I love hearing it," he said, "but I don't want anyone to feel like they have to use it, or even that they should."

As for what's next on his academic plate, Polen isn't sure. "My wife asked me that," he said. "I don't really know. It's just wherever God leads me. That's the biggest thing."



It's that time!

DEP employees David Kersey, Elaine Ranson, Kim Akers and Debbie Martin decorate the agency headquarters' Christmas tree.



Tim Craddock, coordinator for the Department of Environmental Protection’s Save Our Streams program, says the favorite part of his job is working with kids and teaching them how to keep our streams and rivers healthy.

DEP Save Our Streams program is going strong

By Colleen O’Neill

Tim Craddock would say that his job is the best because it allows him to play in creeks.

As coordinator of the Department of Environmental Protection’s Save Our Streams program, Craddock teaches citizen volunteers how to measure the health of their neighborhood wadeable waters.

The program uses a bio-assessment approach, which involves the collection and assessment of the benthic macroinvertebrates (creek bugs) as an evaluation of the physical and chemical conditions. The biological integrity is assessed by

calculating a variety of metrics, which are used to assign a score and rating to a monitoring station.

“A healthy stream will have certain kinds of macroinvertebrates living and thriving there,” Craddock said. “Bugs are a good thing; they’re storytellers, they tell us a lot about the health of a stream.”

“Because of the presence or absence of certain kinds, you can understand what’s been happening in the past and present life of the stream.”

In relation to documentation, “we have a volunteer assessment database (VAD) where the information from

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CRADDOCK & CREEKS



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second year, took place in 13 schools across West Virginia.

“Each year, they pick different high schools to take the program to,”

Mitchell said. “I will take part in the program again next year because I will be able to tell my story to another school.”

The veterans’ stories are being preserved for future generations to

read and learn from.

“Concord University video recorded all the stories for the Library of Congress and History Channel. The History Channel will air some of these stories in December,” Mitchell said.

“Uniforms can only be worn by those who are still serving in the military,” Mitchell said. “So when I spoke to the students at Capital High School, I wore dress clothes, but I had on my American Legion hat.”



The DEP's Teresa Koon, left, helps volunteers during registration for Watershed Celebration Day at Blackwater Falls.



DEP Southern Basin Coordinator Jennifer DuPree organizes a GPS scavenger hunt during Celebration Day festivities.



Tim Craddock, DEP Save Our Streams coordinator, conducts an acid mine drainage experiment.

Celebrating watersheds

The West Virginia Department of Environmental Protection was among the many sponsors of this year's Watershed Celebration Day at Blackwater Falls State Park in Davis.

The two-day event in November honored some of the state's best and most environmentally active watershed associations.

More than 125 volunteers representing 26 watershed groups attended the gathering and were treated to tours of area watershed projects. Other festivities included information about and tips on how to use social media; a GPS scavenger hunt; and an acid mine drainage experiment.

"We were pleased with the celebration's turnout," said Teresa Koon, of the DEP's Division of Water and Waste Management. "I am always amazed by the hard work put in by these volunteers. The projects show their dedication to improving the environment. It's awe-inspiring."

The winner of the coveted 2009 Watershed Association of the Year award, which included a \$5,000 cash prize, was the St. Albans-based Coal River Group.

See page 14 for a complete list of award winners, as chosen by the West Virginia Watershed Network.

— Colleen O'Neill



A representative from the state Department of Agriculture works with youth on making "Dirt Heads." The models promote grass growth and help explain the importance of grass in preventing pollution and soil erosion.

Left, a U.S. Fish and Wildlife Service representative explains a watershed model during a tour of the Canaan Valley National Wildlife Refuge. Right, the DEP's Jennifer Pauer speaks during the Watershed Celebration Day's awards ceremony.

Photos by Alvan Gale



2009 Watershed Association Awards

Partnerships

- Baker Run Conservation Society, Hardy County
- Elks Run Study Committee, Jefferson County
- Friends of Deckers Creek, Monongalia County
- Upper Guyandotte Watershed Association, Wyoming

- County
- Warm Springs Watershed Association, Morgan County

Project implementation

- Guardians of the West Fork, Harrison County
- Morris Creek Watershed Association, Kanawha County

Outreach and education

- Plateau Action

- Network, Fayette County
- Buckhannon River Watershed Association, Upshur County
- Sleepy Creek Watershed Association, Morgan County

Monitoring

- Opequon Creek Watershed Association, Berkeley

County
New watershed association of the year

- Meadow River Watershed Association, Greenbrier County
 - Potomac Valley CommuniTree Chapter, Hardy County
- Guiding light**
- Bill Thorne, Monongalia County



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stream surveys is entered,” Craddock said. “It was created about four years ago with the help of an intern, a college student at Georgetown University and resident of Boone County.

“Eventually, volunteer groups can enter their own surveys, however the data is always evaluated and must be approved before it can be included in the VAD.

“Having this database allows citizens the ability to check their water body, compare it to others or to get an overall picture of the state’s water health.”

Persons interested in monitoring their local

stream can get involved by participating in a workshop.

Once the necessary skills are established and certification testing completed, the program supplies the citizen volunteers with most of the basic equipment needed to perform a streamside bio-assessment survey.

Craddock checks in with the volunteers periodically and conducts follow-up training and recertification as needed.

Another aspect of Craddock’s job involves giving a variety of presentations and demonstrations related to stream ecology.

One of the major focuses of the program is as an outreach and educational tool, providing volunteers and

others with first-hand knowledge about how to keep the water and our surrounding environment healthy.

He gives demonstrations for 4-H groups, Girl Scouts and Boy Scouts, schools, colleges and universities, community groups and watershed groups.

Some examples of ongoing training include partnerships with the Mountain Institute’s Appalachian Stream Monitors Program, Cacapon Institute’s Stream Scholars Program, the Envirothon and the Eastern Coal Regional Roundtable’s Stream Practicum, “just to name a few” Craddock said.

“However, by far, my favorite presentations are to our young scientists,” he added. “They

just love the bugs. I will let a large hellgrammite crawl on my open hand and help the kids understand the animal, and teach them not to be afraid, if handled carefully.”

Craddock has been working with Save Our Streams for 11 years and has been a citizen volunteer for more than 25 years.

“Water is life and its importance is often taken for granted,” he said.

“Everything needs water to survive. Keeping our streams, rivers and wetlands healthy is important, and although the many professionals at DEP work to protect our environment, the help of citizens is always needed and greatly appreciated.”