



Returning Chillisquaque Creek to a more natural condition



One of the environmental benefits of the scrubbers that will be completed at the Montour power plant actually has nothing to do with air quality. Because of a decision to reuse plant wastewater in the flue gas desulfurization process, water flow in the Chillisquaque Creek will return to a more natural condition.

In wet scrubbers like the ones at Montour, millions of gallons of water are used every day in a process that removes sulfur dioxide from plant emissions. Sulfur dioxide is a byproduct of burning coal that contributes to acid rain.

“We could have asked regulatory agencies for permission to draw more water from the Susquehanna River to supply the water needed for the scrubbers,” said Michael Munroe, Montour plant manager. “But instead it was determined that the best decision was to tap into the water supply from our detention basin, the main outflow for the Chillisquaque Creek.”

When both scrubber units go in service and wastewater from the detention basin is rerouted for that process, the water discharged from the detention basin will

decrease by about 50 percent. Water flow in the creek will be noticeably less. Reducing the amount of constant flow to the stream from the basin helps return some of this natural variability while beneficially reusing wastewater generated at the plant.

“We discussed this plan with the Pennsylvania Department of Environmental Protection. From DEP’s standpoint, this is actually a positive change because streams normally experience substantial flow variability during the year,” Munroe said.

This was true of the Chillisquaque Creek before the plant and the reservoir were built. Since then, PPL has been required to discharge a constant minimum flow to the creek from Lake Chillisquaque.

PPL, in cooperation with the Chillisquaque Limestone Watershed Association, will fund a study to monitor the fish and other wildlife in the creek to look for any changes that may occur when the new environmental system begins operations.

Plant operators receive training on scrubber system

Operators at the Montour power plant have trained for six weeks so they are prepared to run the plant’s new environmental controls, known as scrubbers, when they come on line later this year.

“The Montour team will be the first PPL employees in Pennsylvania

to operate scrubbers,” said Michael Munroe, Montour plant manager. “Having spent more than a year watching the construction of the scrubbers, they’re pretty excited about being able to run them.”

The 25 operators completed

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Montour operators get their first taste of running the scrubbers.

Montour scrubber project in the homestretch

Employees at PPL's Montour power plant ended 2007 poised to start up one of the largest environmental projects in the company's history.

Construction of the plant's new environmental controls, known as scrubbers, is more than 93 percent complete, and the equipment to begin the startup of the system on Unit 2 has been placed in service.

When they come on line later this year the scrubbers will remove 97 percent of the sulfur dioxide from plant emissions. Sulfur dioxide is a byproduct of coal combustion that contributes to the formation of acid rain.

One visible change when the scrubbers go into operation will be white vapor coming out of the new emission stacks. It will look the same as the water vapor that comes out of the cooling towers.

As part of the final phases of the project, both scrubber absorbers have been filled with 2 million gallons of water each.

In wet scrubbers like the ones at Montour, a mixture of water and pulverized limestone is sprayed onto the exhaust gases, created when the plant burns coal to produce electricity, in a large vessel called an absorber.

The result is cleaner air and a byproduct, synthetic gypsum, which will be used to make drywall at a separate manufacturing facility being built by U.S. Gypsum across the road from the power plant. This facility, made possible by PPL's scrubber project, will create 150 new jobs for the community surrounding the plant.

The gypsum and limestone conveyors — about 30-feet high and enclosed — that cross Strawberry Ridge Road are complete and ready for service. They are designed to



An overall view of the scrubbers on Units 1 and 2.

transport the limestone from the handling area to the scrubbers and the gypsum byproduct to the U.S. Gypsum plant.

Other developments:

- All electrical equipment has been energized for the operation of both scrubbers.

- Construction of the wastewater treatment facility is complete and will be tested in February. The facility enables the plant to meet environmental requirements for water discharged from the scrubbers.

By 2010, all of PPL's major coal-fired generation units will have scrubber technology.

State financing to help PPL's environmental projects

Working with state and local authorities, PPL has secured more than \$80 million in tax-exempt financing to support its environmental enhancement projects and eliminate pollutants at its Montour and Brunner Island power plants.

For the Montour power plant, the Montour County Industrial Development Authority joined PPL as a co-applicant for the \$80

million bond issue. That action cleared the way for the project's financing with the Pennsylvania Economic Development Financing Authority, which approved the bonds for PPL in late December.

The state had additional federal funding for environmental projects remaining at the end of 2007, and invited PPL to apply for a portion of those dollars.



More than 1,500 visitors are expected to attend this season's maple sugar program.

From sap to syrup, maple sugar season on tap at PPL Montour Preserve

It soon will be time for maple sugaring programs — one of the area's most popular wintertime attractions — at PPL's Montour Environmental Preserve.

PPL will host a maple sugar open house from noon to 4 p.m. Saturday, Feb. 23, and Sunday, March 2. School programs will be offered Tuesdays through Fridays, Feb. 19 until March 11.

More than 1,500 visitors and students are expected again this year.

"Our maple sugar demonstration is popular because students and the public get a chance to use their senses of smell, touch and taste to experience one of nature's confectionary delights," said Kevin Drewencki, superintendent

of PPL's environmental preserves in Pennsylvania.

"You can smell the wood fire used to fuel the evaporator, taste the sweet syrup and use your hands to tap a sugar maple tree," he said.

PPL's maple sugar demonstrations, a Montour County tradition for more than 30 years, start in the Environmental Education Center auditorium with a talk and film featuring the natural and cultural history of maple sugar making.

Afterward, a short walk through Goose Woods takes visitors to the sugar shack to experience the sights, sounds and scents of maple sugaring.

As part of the experience, visitors

observe a PPL naturalist using a brace and bit to drill into one of the trees in the preserve's sugar maple grove and use a tap to direct the sap into a bucket. When the bucket is filled, it's taken to the sugar shack, where the sap is poured into an evaporator and boiled over an open flame for six to eight hours.

It takes 40 gallons of sap to make one gallon of syrup, and every visitor gets a taste.

"We cover the entire process from sap to syrup," Drewencki said. "Ours is a hands-on activity that comes at the time of year when people and students want to get outside after a long winter. It also takes people back to a much simpler way of life than what we have today."

School groups should call the preserve office at 570-437-3131 to schedule a visit. No reservations are required for the open houses, but visitors should plan to arrive on the hour at noon, 1 p.m., 2 p.m. and 3 p.m. Feb. 23 and March 2 and dress warmly.

The preserve is four miles northeast of Washingtonville. At Washingtonville, turn right as if heading toward Strawberry Ridge. At the first intersection, turn left onto PPL Road. Continue north on PPL Road past the Montour power plant and a group of greenhouses to the intersection with Preserve Road. Turn right onto Preserve Road. Montour Environmental Preserve's office and visitors center will be on the left.

PPL will use the financing to help fund the installation of two scrubbers at Montour and two scrubbers at its Brunner Island power plant in York County on the lower Susquehanna River.

Neither the state nor the county is responsible for repayment of the bonds. PPL is paying the entire cost of the Montour and Brunner Island environmental improvements, which totals \$1.5 billion.

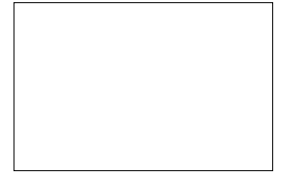
"This funding from the state is an important component of this environmental project and will allow

Montour, and also Brunner Island, to produce clean, reliable electricity for decades to come," said Tom Markowski, project site manager at Montour.

The scrubber system will allow the Montour plant to produce clean, reliable electricity for years to come.



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Training

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coursework that covered the design and operation of the scrubbers and all of their associated equipment. The scrubbers will remove 97 percent of the sulfur dioxide from plant emissions. Sulfur dioxide is a byproduct of coal combustion that contributes to the formation of acid rain.

“Like all PPL employees, our operators share a commitment to being environmentally responsible and are looking forward to their role with reducing sulfur dioxide emissions,” Munroe said. “The scrubbers represent a significant investment by PPL in the long-term future of the Montour plant, the electricity it generates and the jobs it provides.”

Upcoming events at PPL Montour Preserve

All events are free and open to the public.

WOODCOCK WATCH

Friday, March 21, 6-7:30 p.m.

Environmental Education Center

Presented by Jon D. Beam, PPL senior naturalist.

The American woodcock is a unique bird. Not only does it look unusual, but its courtship behavior is also just as odd. Each spring the woodcock repeats a ritual that is thousands of years old, yet few people witness this display. Join us to learn about the natural history of American woodcock and an opportunity to witness its aerial display. Dress for the weather and be prepared to spend some time outdoors.

WILDLIFE ART EXPO

Saturday, March 29

10 a.m. to 4 p.m.

Environmental Education Center

Various artists will share their observations

of nature as portrayed through wildlife art. This one-day spring showing of artwork from some of Pennsylvania’s talented artists promises to be bigger and better than before. New artists will be featured this year as well as some of the mainstays of previous shows.

Directions: Montour Preserve is at 700 Preserve Road in Montour County about four miles northeast of Washingtonville. On Route 54 at Washingtonville, turn right as if heading toward Strawberry Ridge. At the first intersection, turn left onto PPL Road. Continue north on PPL Road past the Montour power plant to the intersection with Preserve Road. Turn right onto Preserve Road. Montour Preserve will be on the left. Information: 1-800-354-8383 or pplpreserves@pplweb.com.