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Potter County, Pa.

## Water Protection Starts Here!

*(Jim Clark, retired educator with Penn State Extension, detailed the impressive work of TDWC and other area agencies in this article, which recently appeared in an Extension newsletter.)*

**P**otter County takes the protection of its public drinking water very seriously. It was the first county in Pennsylvania to pull together approved sourcewater protection plans, approved by the Pa. Dept. of Environmental Protection, for all the public water supplies in the county and this has been paying benefits.

Potter County's public water supply operators have been implementing their Sourcewater Protection Plans. They formed the Triple Divide Watershed Coalition to bring together operators and water system managers. Among the goals were to communicate, seek grants, and improve efficiencies.

Through the entire process, county government leaders

and agencies have been at the table cooperating – all with the common goal of protecting the county's water resources.

Sourcewater Protection Plans create hydrogeological "zones" for specific attention. TDWC has been a key partner with similar organizations now in place throughout northcentral Pennsylvania.

Education is a key element. These groups seek to raise the awareness of the importance of protecting these critical areas. Additionally, TDWC and its partners have conferred with the Pa. Dept. of Environmental Protection to support policies that will consider the location of protection zones during DEP's permitting process for certain activities near public drinking water sources. Purpose is not to deny all permits in a sourcewater protection zone, but rather to flag permits in these zones for extra consideration and insistence on best management practices.

Potter and Tioga counties are also the first in the state to implement an emergency management 911 call system so that water operators are notified of any spills or accidents that occur in a sourcewater protection zone. Also, Potter County has amended its Subdivision and Land Development Ordinance so that public water system operators are informed of any proposed development within a protection zone.

Because Potter County holds the headwaters for the Allegheny, Susquehanna, and Genesee river sys-

tems, leaders in the county recognize the importance of protecting water resources. The entire state will benefit because of their efforts.



### Thank you, Jim Clark

Jim Clark brought a master's degrees from Cornell University, a passion for education, and a dedication to protecting the environment to his job more than a quarter-century ago. As an educator and water resources expert serving with Penn State Extension, he has left his mark on the region. Last month, Clark quietly slipped into retirement without any fanfare. In Potter County, he served with the Triple Divide Watershed Coalition, Water Quality Work Group, and Natural Gas Resource Center. Across multiple counties, Clark offered practical advice and public education on sourcewater protection, private water supplies, pond management, keeping pesticides out of groundwater, roadside springs, battling aquatic invasives, protecting riparian buffers, safe disposal of unwanted medicine and other topics. TDWC members and affiliates will surely miss Jim and we want to express our deepest gratitude for all his support.

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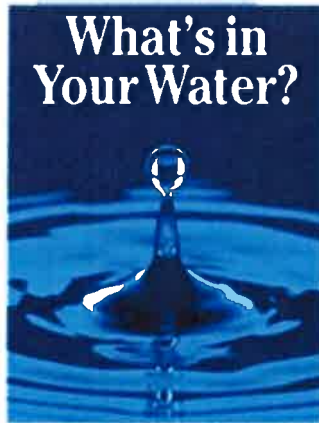
## Historic Groundwater Study Moving Forward

Potter County's historic study of its groundwater has moved a step closer to liftoff. A state grant has been approved to cover the bulk of expenses.

Overarching goal is to measure the natural characteristics of local groundwater and provide a baseline of water quality, while better understanding the location and movement of groundwater.

A secondary goal will be to measure any potential impact from land uses such as agriculture, mining, sewage/septic systems, natural gas drilling and other earth disturbance activities. The information will be invaluable for public policy-makers, certain industries, regulatory agencies and many others.

Through the testing of upwards of 50 water wells in strategic loca-



tions, the U.S. Geological Survey (USGS) will be able to amass and share detailed data. Results will be assembled and analyzed in a cumulative fashion, with the identity of individual well owners protected. Confidential findings from the analysis will be provided to each owner.

Groundwater can contain a varie-

ty of suspended and dissolved substances such as bacteria, minerals and gases. These substances are often naturally occurring, but can also be influenced by activities occurring on the land surface. A comprehensive list of water quality parameters will be analyzed for each well.

Testing will be conducted in collaboration with the Potter County Department of Planning, Pa. Dept. of Environmental Protection (DEP), and other local partners.

USGS has conducted similar studies in Lycoming, Wayne, Pike and Bradford counties, and plans are underway to assess groundwater in Clinton County. All cumulative results will be online at the USGS National Water Information System website.

## Lycoming Groundwater Findings

Testing of 75 private drinking water wells was conducted in Lycoming County during 2014 as part of the USGS partnership. Many of the wells contained concentrations of radon that exceeded a non-binding health standard for drinking water. Smaller percentages contained concentrations of arsenic or methane that exceed existing drinking water standards.

USGS scientist Eliza Gross put the results in perspective: "The variations in water quality can generally be explained by natural processes. In some instances, human activities may play a role. For example, we found a wide range of levels of chloride, from less than 1 milligram to nearly 1,000 milligrams per liter. These levels could be from road de-icing salts." Some of the wells were located near shale gas production sites where hydraulic fracturing was used. USGS reported that the Lycoming County findings were similar to those of an earlier study in Wayne County, where unconventional gas drilling is not permitted.

Radon, arsenic, and methane carry potential health risks, but property owners can test and treat their wells to control these risks. Pennsylvania does not regulate private wells. DEP and Penn State Extension provide testing and treatment guidance for well owners. USGS researchers analyzed samples for arsenic, radon, methane, and more than 170 other constituents, including dissolved salts; metals and trace elements; and bacteria. Among substances with potential health risks, the most commonly found one was radon-222, a radioactive gas that occurs naturally in some types of rock, and can seep into basements and is dissolved in some groundwater supplies. Radon-222 in indoor air is a leading cause of lung cancer. Two-thirds of the samples contained levels of radon-222 that exceeded the proposed drinking-water standard. USGS said these levels are consistent with those found in groundwater tests statewide, and may indicate naturally occurring radon.

Nine samples contained arsenic concentrations higher than the EPA's maximum contaminant level -- the highest level allowed in public drinking water supplies -- of 10 micrograms per liter. When people drink water containing high concentrations of arsenic over many years, they may experience health effects. Two of the 75 samples had methane concentrations exceeding the DEP action level of 7 milligrams per liter for methane in well water. DEP recommends corrective action such as venting.





## Busy Agenda For TDWC

New regulations drafted to protect public drinking water sources have been implemented by Potter County officials, according to information reported at the most recent Triple Divide Watershed Coalition meeting.

The rules incorporated in the Potter County Subdivision and Land Development Ordinance require anyone who is planning a land development within a designated water recharge zone to notify system operators and gain their consent.

In another matter, TDWC members reviewed proposals from companies interested in providing 24/7 monitors on the 16 wells, springs and surface sources used by public water suppliers in Potter County. Campbell Scientific was selected from among three bidders.

Current plans call for TDWC to acquire 16 in-pipe sensors to measure conductivity and two surface water monitoring systems. Water systems committing to install the monitors include Genesee, Coudersport, Ulysses, Cole Memorial Hospital, Roulette, Galeton, Austin and Northern Tier Children's Home.

In other business, TDWC:

- elected Charlie Tuttle of the Potter County Planning/ GIS Dept. as chair, succeeding John McLaughlin.

- introduced the new newsletter, *TDWC Currents*, designed to keep members up to date on developments with the coalition and related topics.
- welcomed Mark Accettulla, sanitarian with the Pa. Dept. of Environmental Protection. His region consists of Potter and Tioga counties.

Attending were John McLaughlin, Jim Clark, Will Hunt, Charlie Tuttle, Mark Accettulla, Darrell Davis and Dale Steadman (Genesee Water), Commissioners Doug Morley and Paul Heimel, Gareth Gockley (Coudersport Water), Tony Adami (Galeton Water), Danielle Roslevich (Pa. Rural Water Assn.), Tina Bennett (Gaines Township Water), Bev Morris (Coudersport Borough), Jason Childs and Jared Dickerson from Potter County Conservation District, and Fern Burdick (Northern Tier Children's Home).



Charlie Tuttle (right) has succeeded John McLaughlin as chair of TDWC. At the coalition's most recent meeting, she introduced the new newsletter, *TDWC Currents*.

### Water contamination has its cost

Communities, states, and consumers bear the economic burden when drinking water sources are contaminated. Preventing sourcewater contamination can be less costly than remedying its effects, such as: lost wages; medical expenses; paying for alternative or emergency water supplies; adding more water treatment; finding new water sources; decreased property values; loss of tax base; and loss of citizens' confidence in their drinking water, public utilities, and community leaders

Protecting sources of drinking water can also help federal programs, states, and communities meet other environmental and social goals, such as green space conservation, stormwater planning, and management of nonpoint source pollution (such as runoff from agricultural lands). Partnerships between local businesses, industries and communities are the most effective way to promote and sustain sourcewater protection. Some examples are: using landscaping to help protect against runoff; reducing or eliminating pesticide, insecticide and herbicide use; and replacing impervious surfaces.

Federal funding sources have been critical to state and/or local partnerships to protect drinking water. Through the Safe Drinking Water Act and the Drinking Water State Revolving Fund, the U.S. Environmental Protection Agency has supported local efforts.

Nonpoint source (NPS) pollution is a threat to many drinking water sources. NPS pollution results from land runoff, precipitation, atmospheric deposition, drainage, seepage or hydrologic modification. Under the Clean Water Act, states are responsible for nonpoint source pollution management activities.

A wide variety of information on federal programs, state responsibilities and partnership opportunities can be found on the EPS website [epa.gov](http://epa.gov) (click on Sourcewater Protection).

## Battle against invasives heating up

Potter County's Water Quality Work Group members recently reviewed progress in the ongoing attack against invasive species which continue to flourish along many waterways, choking out native vegetation and destroying habitat.

Upper Allegheny Watershed Assn. volunteers are gearing up for round two of an aggressive battle plan against Japanese knotweed along Mill Creek, an Allegheny tributary. Chemical treatment with herbicides and cutting of individual plants are planned. Meanwhile, the Genesee Headwaters Watershed Association will be applying herbicides to kill Japanese knotweed patches near the Genesee Community Park and other areas.

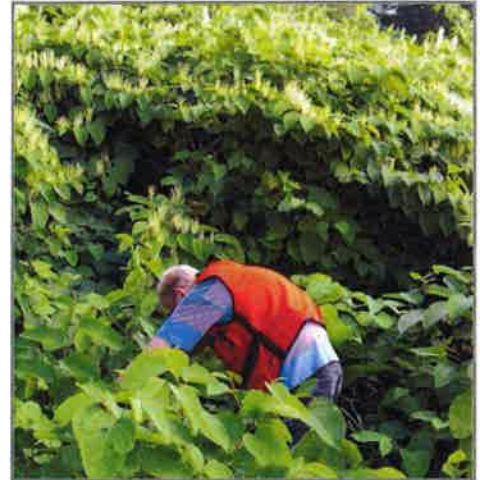
Another invader is also bearing in on Potter County. Jared Dickerson, watershed technician with the Potter County Conservation District, said the hemlock woolly adelgid is working its way up the Pine Creek Valley and will even-

tually reach the upper branches in Potter County. Hemlock trees provide important environmental benefits -- from shading of waterways to wildlife habitat -- but they are no match for the insect once it gains a foothold. Dickerson said strategic plantings of hemlock seedlings are starting in some sections of the Pine Creek Valley to establish a new generation for future decades.

Jason Childs, manager of the Potter County Conservation District, summarized ongoing projects geared toward protecting water quality and enhancing public education. Childs also briefed the group on legislative proposals to impose a per-gallon fee on water withdrawals from rivers and lakes/ponds to establish a dedicated funding source for water protection activities in Pennsylvania.

Attendees were Frank Weeks, Will Hunt, Earl Brown, Jason Childs, Charlie Tuttle, Jared Dickerson, Darrell Davis, Pete Ryan, John McLaughlin and Commis-

sioners Doug Morley and Paul Heimel. Next meeting will be held at 8 am on April 17 at the Gunzburger Building.



Chemical treatments, cutting and root removal are weapons being deployed to fight back against Japanese knotweed infestations that are spreading along many of Potter County's waterways.

## Webinars for water system operators



Free monthly webinars are being held for operators of public water systems, with content geared toward those who serve fewer than 5,000 customers. "Challenges and Treatment Solutions for Small Water Systems" is a series presented by EPA's Office of Research and Development and Office of Water.

These are two-way sessions that allow EPA to communicate directly with system operators while accepting input from those in the field. Input gained from the webinars will aid EPA in modifying its approach and research activities to address real-world problems that small systems are experiencing.

Sessions are held at 2 pm until 3 pm, with an optional question-and-answer session to follow. Current schedule includes: March 28, Sourcewater Protection; April 25, Water Security and Resiliency; May 30, Water System Partnerships.

Details can be found online at [epa.gov/water-research/small-systems-monthly-webinar-series](http://epa.gov/water-research/small-systems-monthly-webinar-series).



TDWC Currents is the official newsletter of the Triple Divide Watershed Coalition.



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