



**Testimony of
Patrick McDonnell, Secretary
Pennsylvania Department of Environmental Protection
Joint Hearing on Flooding and Emergency Response
Senate Environmental Resources & Energy and
Veterans Affairs & Emergency Preparedness Committees
April 25, 2018**

Good morning, Chairman Yaw, Chairman Yudichak, Chairman Vulakovich, Chairman Costa, and members of the committees. On behalf of DEP, I'd like to thank you for the opportunity to discuss the Department of Environmental Protection's role in managing the issues of flooding in Pennsylvania's streams.

Pennsylvania's streams are the lifeblood of the Commonwealth, connecting the surrounding landscape and larger, downstream surface waters. They sustain us with abundant drinking water, fuel agriculture and industry; and provide energy, wildlife habitat, and recreation.

Headwater streams are typically narrow and shallow. Human neighbors to these streams know all too well that the flow of water is never constant. Heavy rain flowing into streams, often combined with saturated ground and drainage modifications, can lead to flooding, which is one of the most common and costly types of natural disasters.

We at DEP understand the severe damage and disruption that flooding can cause to residents, businesses, and municipal governments; and we appreciate the importance of prevention when possible, and rapid recovery when necessary.

Through collaboration with local, state and federal agencies, DEP's headquarters and six regional offices are responsible for the following during, and in the immediate aftermath of, a flood:

- Monitoring of sewage and drinking water treatment facilities
- Spill response
- Oversight of storage tank and HAZMAT concerns, including soil remediation
- Issuance of emergency permits to restore roadways and bridges, clearing of clogged culverts, cleanup of debris, and for stream stabilization and rehabilitation
- Ensuring nearby waste disposal facilities are able to handle anticipated flood waste volumes
- Monitoring operation and maintenance of dams and flood control projects

It should be noted that DEP is not responsible for performing post-flood cleanup.

At DEP, we strive to assist Pennsylvania communities **before** flood events occur. By ensuring that stream work is done in an environmentally responsible manner, the goal is to reduce the likelihood of such future problems and limit impacts to downstream neighbors, rather than causing conditions to worsen in the future.

Recognizing the desire of communities to be more proactive, DEP has two programs to assist when communities are flood prone, or where there is an imminent threat to homes, businesses, and industries following a flood.

- DEP's Flood Protection Program investigates flood problem areas where there are habitable structures and a possibility of loss of life. Program staff determine the feasibility of providing solutions to these flood problems and evaluate long-term structural solutions, such as concrete channels, floodwalls, and levees. Through a sponsorship with the community, DEP will design, construct, and provide annual inspections of these projects. To date, DEP has completed 247 major projects, with many more in various stages of development. This program is funded through the Capital Budget.
- DEP's Stream Improvement Program staff design and construct small projects to restore stream channels damaged by floods, and to stabilize streambanks affected by erosion at sites where there are imminent threats to the structural integrity of homes, businesses, and industries. The primary objective here is to provide increased public safety on a smaller scale than the larger flood protection projects and to reduce high sediment loads from channel bank erosion. The Stream Improvement Program typically completes 15 to 20 projects a year at a cost of about \$500,000 per year, allocated from the Clean Water Fund.
- Adequately maintained commonwealth-built flood protection projects which are operated by municipal sponsors qualify for the federal PL84-99 program funding. PL 84-99 funding covers 80 percent of the repair costs needed to rehabilitate existing Commonwealth built flood protection projects after storm events. DEP provides the 20

percent non-federal cost share required by the US Army Corps of Engineers to rehabilitate these projects through the Clean Water Fund.

To help communities understand how they can mitigate flooding impacts, DEP has a series of fact sheets, including “Emergency Removal of Debris from Streams,” “Advice on Flood Prevention and Management,” and “Permitting Options for Flood-Damaged Bridges and Other Water Obstructions and Encroachments.”

DEP also recently produced the booklet, “Guidelines for Maintaining Streams in your Community,” which uses the green/yellow/red light approach to explain what steps can be taken without DEP involvement; which actions typically require DEP notifications or readily obtained permits and approvals; and what activities require more lengthy permit processes or are prohibited outright.

We have posted these resource materials on our website at: <http://www.dep.pa.gov/Citizens/My-Water/PrivateWells/Pages/Stream-Maintenance.aspx>

As these materials outline, DEP requires permits for activities that change the course current or cross-section of a stream, and evaluates both environmental and engineering details as required under our existing Chapter 105 Rules and Regulations and the Dam Safety and Encroachments Act.

Specifically, persons proposing activities that impact streams such as bridges, culverts, or stream bank stabilization must obtain permit authorization before conducting the activity. The permit authorization also includes maintenance of the hydraulic opening 50 feet upstream and 50 feet downstream of the structure. If the opening is not maintained, woody debris, accumulated sediment and other flood debris can cause a blockage, which can affect the structure and stream

banks, and cause property damage during storm events. Removal is necessary to recover the hydraulic efficiency of the waterway channel.

Many activities do not require DEP notification, pre-approval, or new permits. These activities include:

- Removing manmade material, such as litter and construction debris, from the stream, banks, and riparian areas.
- Removing woody debris, such as trees, logs, or brush, from the stream as long as it is done with hand-held equipment, such as chainsaws.
- Removing woody debris from the stream while on the bank, including heavy equipment, so long as it remains on the bank and is picking out the material and not digging into the streambed.
- Chaining or winching large woody debris and dragging it from the streambank.
- Cutting trees off at the stump.
- Removing gravel and flood debris from in and around bridges and culverts according to the terms of an existing permit.
- Planting trees and other plants on streambanks and in riparian areas.
- Crossing the stream to access your property immediately after a flood emergency as long as conditions are safe.

The removal of flood debris from a stream channel should not be confused with dredging. Debris removal does not normally include the removal of deposited sediment, unless the sediment

presents a major blockage at bridges or culverts that promotes additional scouring or erosion around piers and abutments, or significantly reduces the waterway opening of the structure.

Non-engineered and random dredging, deepening, or widening of stream channels has been proven to be an ineffective tool to prevent nuisance flooding. These types of activities often result in rapid deposition of sediment in the channel, and can lead to channel instability, bank erosion, and further damage to the aquatic environments.

However, carefully planned, engineered, and constructed channel and stream restoration projects can significantly reduce flooding to adjacent properties, and restore the aquatic environments in the stream channel. DEP promotes stream restoration projects, and is committed to working with stakeholders to facilitate the issuance of the required authorizations necessary for stream restoration projects.

When there is an imminent threat to public health, safety or the environment which requires immediate remedial action, DEP authorizes emergency Chapter 105 permits, in writing, for work on streams, bridges, culverts, and other infrastructure. Typically, DEP issues these permits either in the field or at a regional office based on the emergency and threat.

The permits are valid for 60 days unless extended in writing by DEP. The authorization for the excavation or removal of debris, sand, gravel, bedrock material, deposited or collected in and along the floodway can be addressed using the existing emergency permit. Large-scale post-flood cleanup projects that are dependent on flood recovery funding can be authorized by emergency permits when funding has been secured.

Any activity that results in the discharge of dredged or fill material into waters of the United States, including streams and wetlands, requires a federal Clean Water Act, Section 404

authorization from the US Army Corps of Engineers. These activities involving less than one acre of impact to waters of the United States are generally eligible for federal authorization under the Pennsylvania State Programmatic General Permit (PASPGP).

To provide permit applicants a one-stop process to meet both state and federal requirements under the PASPGP process, DEP's Chapter 105 program and the Army Corps' Section 404 Program have now coordinated requirements. Under this agreement, the Army Corps allows DEP to issue both state and federal authorizations.

Some activities will require individual review by the Army Corps. DEP can still authorize the state Chapter 105 permits to the applicant, but no work can begin under that permit until the Army Corps issues a federal authorization.

Two flood events in recent years offer helpful examples of how the emergency permit process works.

- In the several months following Tropical Storm Lee in 2011, DEP's North-central Regional Office (NCRO) issued more than 700 emergency permits. A member of the NCRO Waterways and Wetlands Program was temporarily stationed in a PennDOT office in the affected area to efficiently review requests and issue emergency permits to PennDOT.
- In July 2017, the northeast portion of Bradford County incurred a significant flash flooding event. DEP responded with the issuance of more than 86 emergency permits to address the restoration of affected waterways. Sixty of those emergency permits were issued to municipalities and the general public, while 26 were issued to PennDOT.

I would like to reference the unique conditions in Bradford County and other counties in the glaciated northern tier of Pennsylvania. Bradford County Conservation District has determined that more than 1.5 million feet of stream banks are excessively eroding as a result of unstable channels, resulting in an average of 1 million tons of excessive gravel. The causes of this excess material are both natural and human-caused: geology and soils, topography, weather, alteration of riparian areas, debris jams, historic stream channel alterations, and past land use.

The resulting environmental impacts are many, including disruption of stream flow, damage to fish species and the aquatic food chain, accelerated filling in of dams and reservoirs, and a downstream change in the water composition in the Chesapeake Bay and other estuaries. The economic and social impacts include loss of property, failure of culvert and bridge structures, threats to homes and businesses, and potential threats to public safety.

DEP and other state and federal resource agencies met with the county conservation district to discuss the district's proposed stream-channel recovery program and its intent to provide approval for stream-channel recovery work at the county level; and the necessary applicable state and federal authorizations, including a DEP-approved environment assessment.

The proposed stream channel recovery program is intended to achieve the following:

- Allow stream maintenance activities to move forward in a timely and environmentally sensitive manner
- Aid landowners and regulatory authorities in identifying the scope of maintenance needs and remedial actions

- Provide county-specific criteria for regulators and emergency response agencies to identify the scope of work needed to restore channel dimensions in emergency and post flood conditions
- Begin restoration of channel stability through reconnection of channels to a stable form and to their floodplains as part of any channel maintenance activities.

The next step is for the county to submit an environmental assessment for the proposed program to DEP, which DEP and the county discussed earlier this week. DEP will coordinate its review of the environmental assessment with the environmental review committee, consisting of state and federal resource agency staff focusing on existing permitting requirements, environmental concerns, and available options.

We recognize the varied geology across our state, and are continuing to work with local and federal partners to create appropriate processes that acknowledges the conditions while protecting public safety and our environment.

As I said at the outset of my testimony, staff at DEP work hard, and collaboratively, to determine how we can avoid environmental problems. We all believe that if we can proactively reduce the cause, we will spend less time on managing the impacts after the fact.

Thank you again for inviting DEP to testify before the committees on this important topic. We look forward to continuing to work with the legislature to address these issues. I thank you for your time, and I am available to respond to any questions you may have.