**OPERATING AND MAINTAINING** **FLOOD PROTECTION PROJECTS**

**FREQUENTLY ASKED QUESTIONS**

*The purpose of this FAQ is to explain the roles and responsibilities for operation and maintenance of a flood protection project. The information in this guidance is solely advisory and does not represent a legal interpretation by the Department. Nothing in this summary shall affect any statutory requirements.*

1. **Who is responsible for the flood protection project?**

If a community is given protection from damage due to overbank flooding of streams, it is likely that the flood protection project was constructed by the commonwealth through the Department of Environmental Protection (DEP) or its predecessor agencies, or the federal government through the U.S. Army Corps of Engineers or the Natural Resources Conservation Service. Projects are built with local support and involvement and with a local government entity acting as a sponsor. The sponsor signs an agreement with the appropriate agency and agrees to be responsible for monitoring, operating and maintaining the project.

1. **How are flood protection projects operated and/or monitored?**

Flood protection projects are generally designed to function with minimal sponsor involvement. Projects may include a pumping station or road closure that will need to be operated prior to or during a high water event. In addition, the sponsor is required to monitor the project before, during, and after all high water events to ensure that the project will provide protection as intended. Like many engineered structures, each flood protection project has limitations. The sponsor must monitor high water events to determine whether the project will receive more water flow than designed and be ready to implement an evacuation plan.

1. **What needs to be considered to keep a flood protection project in a state of readiness?**

An effective operation and maintenance plan can keep a project ready for the next high water event. Measures to keep a flood protection project in a state of readiness include:

* Removing debris from trash racks;
* Removing sediment from debris basins after each event or when basins are half-filled;
* Making certain that flapgates and sluice gates are operational;
* Maintaining good grass cover without unwanted overgrowth or woody vegetation;
* Maintaining slopes without erosion or animal burrows;
* Keeping channels free from debris, trash, and sediment;
* Ensuring project lands are not impacted by the activities of others;
* Conducting annual exercises and drills that evaluate a sponsor’s readiness for the next high water event including the installation of closure structures; and
* Including the operation plan for the project in the community’s emergency operations plan.
1. **Why is project maintenance important?**

Developing and implementing an effective annual maintenance plan can extend the service life and flood protection benefits to a community of a project. The sponsorship agreements require that funds be allocated for the maintenance of the flood protection project. This allocation must be given as much priority as other public works projects in the community. When maintenance is not completed, the project’s service life is shortened, there is loss of confidence in the project by the community, and a potential for future property damage and loss of life exists.

1. **Are there other project sponsorship responsibilities?**

Flood protection projects include features such as levees, concrete channels and walls, dams and culverts, as well as lands adjacent to the project to allow the sponsor access. These project features and lands must not be altered or encroached upon without approval from DEP or the appropriate federal agency. The sponsor is the caretaker of the project’s features and lands. Through these efforts, the sponsor ensures that the project will provide flood protection for future generations.

1. **What is the role of DEP?**

The relationship between DEP and the sponsor is a long-term partnership. DEP is committed to the successful operation and maintenance of the flood protection project through effective inspection, technical assistance, and outreach programs. A flood protection project is important to a community. An effective community-based monitoring, operation and maintenance program, in partnership with DEP, will ensure these benefits for many years. DEP offers the following assistance:

* Annual inspections of the projects;
* Technical assistance for problem solving, operational situations, and maintenance planning;
* Project manuals, program updates and a semi-annual workshop for sponsors;
* Service life rehabilitation, repair, and replacement assistance; and
* Assistance with developing emergency action plans.
1. **Where can I find additional information?**

For more information on operation and maintenance of flood protection projects, visit [Flood Protection](https://www.dep.pa.gov/Business/Water/Waterways/Flood-Protection/Pages/default.aspx) or [www.dep.pa.gov](http://www.dep.pa.gov) (select “Businesses,” then “Water,” then “Waterways Engineering and Wetlands,” then “Flood Protection”), or contact:

Department of Environmental Protection

Bureau of Waterways Engineering and Wetlands

Division of Project Inspection

P.O. Box 8460

Harrisburg, PA 17105-8460

Telephone: 717-783-1754

FAX: 717-772-0409

**Definitions and Terms**

**Encroachment** - Unauthorized excavations, structures, fills, plantings, bridges, pools, fences, or other obstructions present within the project easement area.

**Exercises and Drills** - The act of operating features of the project such as opening and closing sluice gates at drainage structures, installing closure structures across roads and railroads at levees and floodwalls, and mobilizing sandbag, closure, and monitoring teams for drills.

**Flapgate** - A hinged cover and frame made of cast iron over the opening of a pipe at the outlet of a drainage structure that automatically prevents the backflow of water from the stream through the pipe when the stream is at flood stage.

**Flood Protection** - A structure or work used to separate floodwaters from a protected community.

**Levee** - A trapezoidal-shaped rolled earth embankment generally composed of an impervious mixture of clay, silt, sand, and gravel. Levees are engineered flood protection structures used to separate floodwaters from the protected community.

**Obstruction** - A blockage of a channel, culvert, or bridge caused by sediment, debris, trees, trash, and other materials that would restrict normal and flood flows by reducing the waterway of the structure.

**Sluice Gate** - A gate, normally kept in the full open position, mounted on an inlet structure that opens and closes vertically with the use of a lifting device or gate operator.

**Sponsor** - The borough/township/county responsible for acquiring lands, relocating utilities, and operating and maintaining the project after construction as defined by agreement with DEP.

**Trash Rack** - A structure formed by vertical steel members spaced at regular intervals to trap floating debris, normally located at the entrance to a concrete channel. Also, sloped bars closely spaced at the entrance to the sump of a pumping station to prevent trash and debris from entering the station.