

**Testimony of
Kelly Heffner, Deputy Secretary for Office of Water Management
Department of Environmental Protection
Before the
House Environmental Resources and Energy Committee
January 29, 2014**

Chairmen Miller and Vitali, and members of the committee, thank you for the opportunity to appear before you to discuss HB 1565 (PN 2114). The Department can be supportive of this legislation given sufficient flexibility is included to ensure projects undertaken remain protective of water quality.

The Commonwealth has an obligation to maintain existing and designated water quality uses; however, there are several ways to adhere to this obligation, one – but not the only – of which is the use of riparian buffers and riparian forested buffers.

Pennsylvania's riparian buffer requirements found in Chapter 102 were developed under the authority of the Clean Streams Law (Act 394 of 1937). These portions of the law not only underscore the inherent obligation to protect water quality as a trustee of the Commonwealth's resources, but also the economic necessity of maintaining clean waters.

Since the Chapter 102 buffer requirements became effective in 2010, DEP has issued approximately 6,337 NPDES Stormwater Construction permits. Of those 6,337 permits, 155 permits (2.4%) included riparian buffers and of that subset of 155 permits, 75 permits (48.3%) qualified for waivers of the riparian buffer requirements.

Riparian buffers are an effective tool in reducing the quantity of nonpoint source pollutants found in stormwater entering streams. Some of the documented benefits of riparian buffers include:

- Reduced effects of storm events – Riparian buffers, particularly riparian forest buffers, can slow the speed and reduce the volume of surface runoff from upland areas, which protects stream channel beds from flash flooding that can scour and erode the stream channel.
- Flood attenuation – Riparian buffers permit precipitation to enter into the soil rather than run-off directly into surface waters. Riparian buffers also allow space for streams to move and floodwaters to spread horizontally. This dissipates stream energy and protects channel stability as well as upland property.
- Ice damage control – Riparian forest buffers trap ice slabs and reduce the potential for jamming at downstream constrictions, such as bridges, which can lead to flooding.
- Infiltration and maintenance of stream flow – Riparian forest buffers slow overland runoff allowing for infiltration of surface water that helps maintain base flow in streams and rivers.
- Filtration of pollutants in runoff – Riparian buffers filter not only sediment, but many other pollutants like nitrogen, phosphorus, pathogens and toxics.

- Pollutant processing – Riparian forest buffers form ecosystems that process pollutants. The leaves that enter a stream serve as a food source for benthic macroinvertebrates, which also process pollutants.
- Channel and shoreline stability – Riparian buffers protect the ground below from storm events. Root networks hold soil particles together and protect streambanks and shorelines.
- Light control and water temperature moderation – Riparian forest buffers limit the amount of light that reaches a water body, reduce algae growth, moderate water temperatures, and increase dissolved oxygen in the water.

Riparian buffers, including riparian forest buffers can be a cost effective means of limiting pollution associated with stormwater runoff. The costs of engineered stormwater best management practices (BMPs) are more expensive (varying between \$500 per acre to \$10,000 per acre to construct), incur annual maintenance costs (for example, stormwater basins have an annual maintenance cost of \$500/acre/year), and typically need to be replaced every 20 to 30 years. Riparian forest buffers, on the other hand, cost between \$0 and \$4,800 per acre to establish, and are relatively cost free to maintain once established.

Although riparian buffer requirements only apply to roughly 31 percent of streams in Pennsylvania, the development of Chapter 102 regulations recognized certain areas of the Commonwealth, such as the northeast, contain substantial numbers of HQ and EV waters.

Section 102.14 of the regulations contains the following nine exemptions to the buffer requirements:

- A project site located greater than 150 feet from a river, stream, creek, lake, pond or reservoir.
- Activities involving less than 1 acre of disturbance.
- Activities when permit coverage is not required under Chapter 102.
- Activities when permit or authorization for earth disturbance was obtained prior to November 19, 2010.
- Road maintenance activities so long as any existing riparian buffer is undisturbed to the extent practicable.
- The repair and maintenance of existing pipelines and utilities so long as any existing riparian buffer is undisturbed to the extent practicable.
- Oil and gas, timber harvesting, or mining activities for which site reclamation or restoration is part of the permit authorization in Chapters 78 and 86 through 90 and Chapter 102 so long as any existing riparian buffer is undisturbed to the extent practicable.
- A single family home that is not part of a larger common plan of development or sale and the parcel was acquired by the applicant prior to November 19, 2010.
- Activities authorized by a DEP permit under another chapter of this title which contains setback requirements, and the activity complies with those setback requirements.

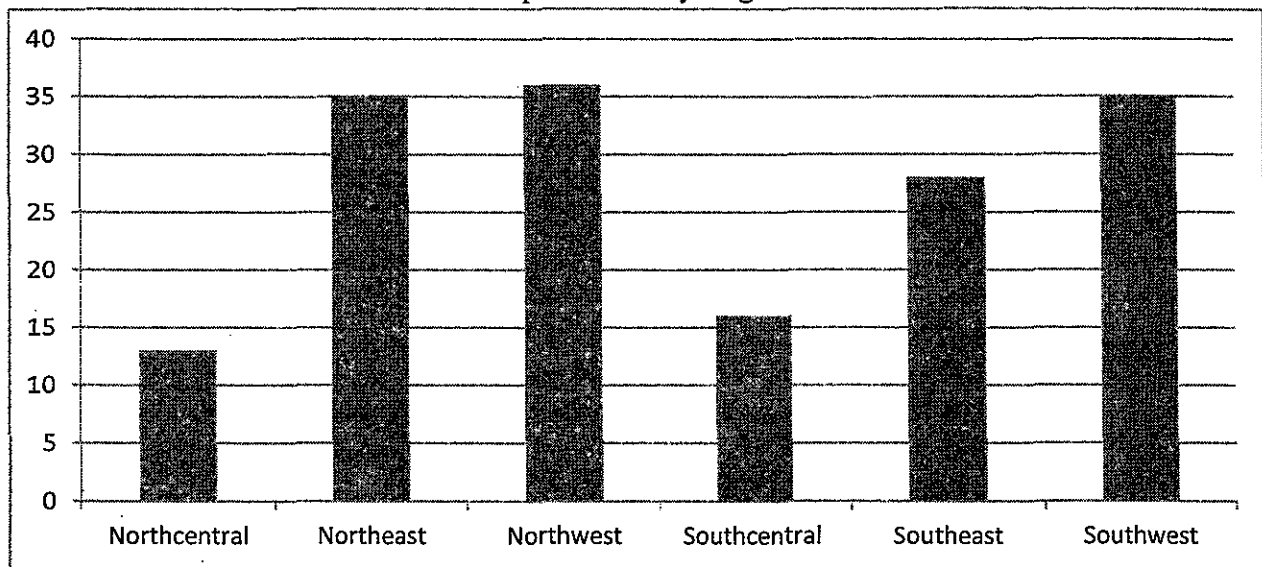
Further, if a development project is unable to qualify for one of the nine exemptions listed above, Chapter 102 also contains six waiver provisions that may be secured in order to allow the project

to continue. If an applicant can demonstrate that there are reasonable alternatives for compliance with the riparian buffer requirements of Chapter 102 -and so long as any existing riparian buffer is undisturbed to the extent practicable - the following waivers may be granted:

- The project is necessary to abate a substantial threat to the public health or safety.
- Linear projects which may include pipelines, public roadways, rail lines or utility lines.
- Abandoned mine reclamation activities that are conducted under DEP authorization or permit.
- Projects of a temporary nature where the site will be fully restored to its preexisting condition during the term of the permit under Chapter 102.
- Redevelopment projects which may include brownfields or use of other vacant land and property within a developed area for further construction or development.
- Projects for which compliance with general requirements for riparian buffers or riparian forest buffers is not appropriate or feasible due to site characteristics, or existing structures at the project site.

As described above, Chapter 102 contains a number of exemptions and waivers to allow for environmentally responsible development along special protection waters, and DEP's internal permitting data bear this out. DEP analyzed NPDES Stormwater Construction permit data from November 19, 2010 (the effective date of the Chapter 102 buffer requirements) to date. During this time period, statewide a total of 155 permits were issued – or applied for – that were impacted by the riparian buffer requirements as a result of being located in an HQ or EV watershed. As indicated in in Figure 1, these 155 permits were spread uniformly between the eastern and western areas of the Commonwealth, with fewer projects in the central part of the state.

Figure 1. NPDES Stormwater Construction Permit Projects Impacted by Riparian Buffer Requirements by Region



Many applicants assumed riparian buffer waivers would be required; however, upon further investigation of their projects, frequently riparian buffer waivers were unnecessary. Fifty nine of the 155 projects¹ (38.0%) of projects did not need to apply for riparian buffer waivers. This was due to a number of factors, including limiting the disturbance for the project to areas 150 feet or farther from a water body, the project including an allowable activity such as a bridge or stream crossing, or the project qualifying for one of the nine exemptions listed in Section 102.14.

Conclusion

The Commonwealth has an obligation to maintain existing and designated water quality uses; however, there are several ways to adhere to this obligation, one of which is the use of riparian buffers and riparian forested buffers.

The department should be authorized, on a case by case basis, to require riparian buffers or riparian forested buffers if the department determines that doing so is necessary to protect water quality.

DEP again thanks the committee for the opportunity to present testimony.

¹ This number is underestimated as some regions did not report projects that avoided the riparian buffer requirements by staying outside the 150 foot area closest to the water body.