



Brodhead Watershed Association  
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570-839-1120

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5/17/23

## **RE: BWA Supports the Municipal adoption of 150 foot buffers in accordance with Act 167 (PA Stormwater Management Act)**

The Brodhead Watershed Association (BWA) is a non-profit, science based, conservation organization, formed in 1989 to promote and protect the clean and abundant water resources of the 314 square mile Brodhead Watershed. The Brodhead Watershed possesses some of the most pristine waters in the Commonwealth & boasts some of the finest native trout streams in the United States.

On behalf of our Board of Directors, and 400+ members, BWA is writing in support of the Monroe County model Act 167 ordinance. As you know, municipalities are **required** to adopt a stormwater management ordinance that is consistent with the adopted Act 167 plan. To ease the adoption process for municipalities, this model ordinance includes a 150-foot buffer from wetlands, vernal pools, lakes/ponds, and streams. This buffer width is based upon decades of research and is wide enough to address the required functions, values, and benefits identified in the plan. The 150-buffer was suggested by the PA DEP to assist municipalities in adopting an ordinance that is consistent with both Act 167 Plan & PA DEP requirements.

If a Municipality proposes less than the 150 ft buffer, that Municipality must provide a scientific rationale, including justification & research demonstrating how the reduced width will provide the functions, values, and benefits identified in Table V-1 of the Act 167 Plan.

Or, if impacting the buffer is absolutely necessary and cannot be avoided, then equivalency can be used (**Attached**). Following equivalency guidance in the model ordinance, there are regulatory general requirements for sequencing, and alternatives analysis for proposed buffer impacts. Equivalency can be used for regulatory relief to the applicant. So in the end the applicant is providing the functions value and benefits of a 150 foot buffer even if the site plan doesn't have exactly 150 feet of buffer.

BWA believes that the 150-foot buffer proposed in the County model Act 167 ordinance will protect Monroe County's pristine & abundant waters and provide the most efficient means for municipalities to meet their stormwater management



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**Genevieve  
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**Stuart Poppel**  
Paradise  
Township  
**Barb Roberts**  
Barrett Township

obligations. Similar stormwater ordinances have protected Monroe County's watersheds for decades without hindering population growth or economic development. If an adopted Municipal ordinance is not consistent with the Act 167 Plan, in addition to threatening Monroe's special protection waters, consequences may include permit challenges, delays, and potential legal action and inconsistency with other state and federal and regional stormwater management requirements.

BWA strongly encourages all affected Monroe County municipalities to adopt the model ordinance as written, including the 150-foot buffer provisions.

Thank you for your consideration & your commitment to sound municipal planning.

If you have any questions, please contact the Monroe County Conservation District.

Alexander Jackson, PhD

Executive Director, Brodhead Watershed Association

Worksheet 14 – Water Quality Analysis of Pollutant Loading from Disturbance in Buffer Area

|                                        |   |
|----------------------------------------|---|
| Total Disturbed Area (AC)              | 2 |
| Disturbed Area Controlled by BMPs (AC) | 2 |

Existing Condition

|            | Land Cover Classification | Pollutant      |               |                                 | Cover (Acres) | Runoff Volume (AF) | Pollutant Load |            |                       |
|------------|---------------------------|----------------|---------------|---------------------------------|---------------|--------------------|----------------|------------|-----------------------|
|            |                           | TSS EMC (mg/l) | TP EMC (mg/l) | Nitrate-Nitrite EMC (mg/l as N) |               |                    | TSS** (LBS)    | TP** (LBS) | NO <sub>3</sub> (LBS) |
|            | Forest                    | 39             | 0.15          | 0.17                            | 2             | 0.1574             | 16.58          | 0.07       | 0.07                  |
|            | Meadow                    | 47             | 0.19          | 0.3                             |               |                    |                |            |                       |
| TOTAL LOAD |                           |                |               |                                 |               |                    | 16.58          | 0.07       | 0.07                  |

Post-Development

|                                 | Land Cover Classification        | Pollutant      |               |                                 | Cover (Acres) | Runoff Volume (AF) | Pollutant Load |            |                       |
|---------------------------------|----------------------------------|----------------|---------------|---------------------------------|---------------|--------------------|----------------|------------|-----------------------|
|                                 |                                  | TSS EMC (mg/l) | TP EMC (mg/l) | Nitrate-Nitrite EMC (mg/l as N) |               |                    | TSS** (LBS)    | TP** (LBS) | NO <sub>3</sub> (LBS) |
| Pervious Surfaces               | Forest                           | 39             | 0.15          | 0.17                            |               |                    |                |            |                       |
|                                 | Meadow                           | 47             | 0.19          | 0.3                             |               |                    |                |            |                       |
|                                 | Fertilized Planting Area         | 55             | 1.34          | 0.73                            |               |                    |                |            |                       |
|                                 | Native Planting Area             | 55             | 0.40          | 0.33                            |               |                    |                |            |                       |
|                                 | Lawn, Low-Input                  | 180            | 0.40          | 0.44                            |               |                    |                |            |                       |
|                                 | Lawn, High-Input                 | 180            | 2.22          | 1.46                            |               |                    |                |            |                       |
|                                 | Golf Course Fairway/Green        | 305            | 1.07          | 1.84                            |               |                    |                |            |                       |
|                                 | Grassed Athletic Field           | 200            | 1.07          | 1.01                            |               |                    |                |            |                       |
| Impervious Surfaces             | Rooftop                          | 21             | 0.13          | 0.32                            |               |                    |                |            |                       |
|                                 | High Traffic Street/Highway      | 261            | 0.40          | 0.83                            |               |                    |                |            |                       |
|                                 | Medium Traffic Street            | 113            | 0.33          | 0.58                            |               |                    |                |            |                       |
|                                 | Low Traffic/Residential Street   | 86             | 0.36          | 0.47                            |               |                    |                |            |                       |
|                                 | Res. Driveway, Play Courts, etc. | 60             | 0.46          | 0.47                            |               |                    |                |            |                       |
|                                 | High Traffic Parking Lot         | 120            | 0.39          | 0.60                            |               |                    |                |            |                       |
|                                 | Low Traffic Parking Lot          | 58             | 0.15          | 0.39                            | 2             | 0.48               | 75.89          | 0.20       | 0.51                  |
| TOTAL LOAD                      |                                  |                |               |                                 |               |                    | 75.89          | 0.20       | 0.51                  |
|                                 |                                  |                |               |                                 |               |                    |                |            |                       |
| Pollutant Load increase (LBS) = |                                  |                |               |                                 |               |                    | 59.31          | 0.13       | 0.44                  |

Pollutant Load increase (LBS) = Post development load – Pre-development load

\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7, Unit Conversion

# Worksheet 15 – Pollutant Reduction Through BMP Applications\*

\*Fill this worksheet out for each BMP type with different pollutant removal efficiencies. Sum pollutant reduction achieved for all BMP types on final sheet.

BMP Type: Capture & Reuse

|                                             |   |
|---------------------------------------------|---|
| Disturbed Area Controlled by this BMPs (AC) | 2 |
|---------------------------------------------|---|

## Disturbed Area Controlled by this BMPs:

|                                                                       | Land Cover Classification        | Pollutant      |               |                                 | Cover (Acres) | Runoff Volume (AF) | Pollutant Load** |            |                       |
|-----------------------------------------------------------------------|----------------------------------|----------------|---------------|---------------------------------|---------------|--------------------|------------------|------------|-----------------------|
|                                                                       |                                  | TSS EMC (mg/l) | TP EMC (mg/l) | Nitrate-Nitrite EMC (mg/l as N) |               |                    | TSS** (LBS)      | TP** (LBS) | NO <sub>3</sub> (LBS) |
| Pervious Surfaces                                                     | Forest                           | 39             | 0.15          | 0.17                            |               |                    |                  |            |                       |
|                                                                       | Meadow                           | 47             | 0.19          | 0.3                             |               |                    |                  |            |                       |
|                                                                       | Fertilized Planting Area         | 55             | 1.34          | 0.73                            |               |                    |                  |            |                       |
|                                                                       | Native Planting Area             | 55             | 0.40          | 0.33                            |               |                    |                  |            |                       |
|                                                                       | Lawn, Low-Input                  | 180            | 0.40          | 0.44                            |               |                    |                  |            |                       |
|                                                                       | Lawn, High-Input                 | 180            | 2.22          | 1.46                            |               |                    |                  |            |                       |
|                                                                       | Golf Course Fairway/Green        | 305            | 1.07          | 1.84                            |               |                    |                  |            |                       |
|                                                                       | Grassed Athletic Field           | 200            | 1.07          | 1.01                            |               |                    |                  |            |                       |
| Impervious Surfaces                                                   | Rooftop                          | 21             | 0.13          | 0.32                            |               |                    |                  |            |                       |
|                                                                       | High Traffic Street/Highway      | 261            | 0.40          | 0.83                            |               |                    |                  |            |                       |
|                                                                       | Medium Traffic Street            | 113            | 0.33          | 0.58                            |               |                    |                  |            |                       |
|                                                                       | Low Traffic/Residential Street   | 86             | 0.36          | 0.47                            |               |                    |                  |            |                       |
|                                                                       | Res. Driveway, Play Courts, etc. | 60             | 0.46          | 0.47                            |               |                    |                  |            |                       |
|                                                                       | High Traffic Parking Lot         | 120            | 0.39          | 0.60                            |               |                    |                  |            |                       |
|                                                                       | Low Traffic Parking Lot          | 58             | 0.15          | 0.39                            | 2             | 0.48               | 75.89            | 0.20       | 0.51                  |
| TOTAL LOAD TO THIS BMP TYPE                                           |                                  |                |               |                                 |               |                    | 75.89            | 0.20       | 0.51                  |
| POLLUTANT REMOVAL EFFICIENCIES FROM APPENDIX A. STORMWATER MANUAL (%) |                                  |                |               |                                 |               |                    | 100              | 100        | 100                   |
| POLLUTANT REDUCTION ACHIEVED BY THIS BMP TYPE (LBS)                   |                                  |                |               |                                 |               |                    | 75.89            | 0.20       | 0.51                  |
| POLLUTANT REDUCTION ACHIEVED BY ALL BMP TYPES (LBS)                   |                                  |                |               |                                 |               |                    | 75.89            | 0.20       | 0.51                  |
| REQUIRED REDUCTION from WS 14 (LBS)                                   |                                  |                |               |                                 |               |                    | 59.31            | 0.13       | 0.44                  |

\*Pollutant Load = [EMC, mg/l] X [Volume, AF] X [2.7, Unit Conversion]

## Checklist for Functional Equivalency of Riparian Buffers and Riparian Forest Buffers

|                                                                                 | <b>Riparian Buffer</b>   | <b>Riparian Forest Buffer</b> |
|---------------------------------------------------------------------------------|--------------------------|-------------------------------|
| Filtration of pollutants in runoff                                              | <input type="checkbox"/> | <input type="checkbox"/>      |
| Infiltration and maintenance of streamflow                                      | <input type="checkbox"/> | <input type="checkbox"/>      |
| Water quality maintenance                                                       | <input type="checkbox"/> | <input type="checkbox"/>      |
| Habitat for wildlife and vegetation                                             | <input type="checkbox"/> | <input type="checkbox"/>      |
| Flood attenuation                                                               | <input type="checkbox"/> | <input type="checkbox"/>      |
| Light control and water temperature moderation                                  | <input type="checkbox"/> | <input type="checkbox"/>      |
| Travel corridors for migration and dispersal                                    | <input type="checkbox"/> | <input type="checkbox"/>      |
| Ice damage control                                                              | <input type="checkbox"/> | <input type="checkbox"/>      |
| Stream width                                                                    |                          | <input type="checkbox"/>      |
| Food supply                                                                     |                          | <input type="checkbox"/>      |
| Wood debris input                                                               |                          | <input type="checkbox"/>      |
| Support of aquatic food chains and webs as they relate to terrestrial food webs |                          | <input type="checkbox"/>      |
| Channel and shoreline stability/decrease in erosion                             |                          | <input type="checkbox"/>      |
| Reduced effects of storm events                                                 |                          | <input type="checkbox"/>      |
| Instream pollutant processing                                                   |                          | <input type="checkbox"/>      |