Division of Surface Water

Response to Comments

Project: **National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction Activity Located within Portions of the Olentangy River Watershed (OHCO00001)**

Agency Contacts for this Project

Division Contact: Jason Fyffe, Division of Surface Water, (614) 728-1793, jason.fyffe@epa.state.oh.us
Public Involvement Coordinator: Erin Strouse, (614) 728-0041, erin.strouse@epa.state.oh.us

Ohio EPA held a public hearing and information session on April 30, 2008 regarding the NPDES General Permit for Storm Water Discharges Associated with Construction Activity Located within Portions of the Olentangy River Watershed (OHCO00001). This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on May 7, 2008.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format.

General Comments

Comment 1: **One commenter questioned current County ditch improvement practices. Are there any more modern alternatives to this ditching process that could be employed which would be more effective than ditching and less intrusive to the river's water quality and the landscape?**

Response 1: There are a number of alternatives to the classic trapezoidal ditch design. The Ohio Department of Natural Resources, Division of Soil and Water Conservation has publications and guidance documents available on this subject. A more formal and organized effort to promote effective drainage improvements that align with Clean Water Act goals and

water quality standard requirements is in preparation. Information is available through Ohio DNR ftp://ftp.dnr.state.oh.us/Soil_&_Water_Conservation/Rural_Drainage/ .

Comment 2: **The draft permit's riparian setback requirements, which far exceed those established by the USEPA for state and federal storm water permitting programs, require careful scrutiny in light of Executive Order 2008-04S, which directs state agencies to minimize the impact of new and existing regulatory programs on business in the State of Ohio.**

Response 2: Ohio EPA disagrees because the underlying regulations that the permit is based upon already exist in the Ohio Administrative Code (OAC). The regulations addressing which storm water discharges are to be regulated can be found in OAC 3745-39. The regulations allowing the use of NPDES general permits, and specifically alternative general permits, can be found in OAC 3745-38. The Olentangy general permit is based upon recommendations of the Olentangy River Watershed TMDL which was approved by U.S. EPA on September 19, 2007. TMDL reports identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment with water quality standards.

Comment 3: **One commenter stated that if the draft permit is warranted, it should be implemented to protect all surface waters of the state and not just the scenic areas. It was stated that Ohio State University is about to initiate construction adjacent to the Olentangy River. The draft permit should be applicable in this area. Are the fish downstream from Ohio State University any less valuable?**

Response 3: Draining 543 miles of Central Ohio landscapes, the Olentangy River watershed provides drinking water, recreation, agricultural drainage and other public goods for over 250,000 watershed residents. Its waters and habitats are home to unique and diverse communities of fish, mussels and other aquatic life. Recent studies document declines in its water quality and stream habitat. Among the most visible and widely publicized threats to the Olentangy's water quality and habitats is the conversion of farm and forest acreage to residential and commercial land uses at an exceptionally rapid pace.

The river system drains Ohio's first and sixth most rapidly populating counties – Delaware and Morrow, respectively. Delaware County's most rapidly developing townships – Delaware, Liberty and Orange – overlap the river's State Scenic River section. Areas of the Whetstone Creek subwatershed, located within Morrow County, are designated as Exceptional Warmwater Habitat (EWH) with two tributaries being designated as Cold Water Habitat (CWH). Approximately two miles of the Olentangy River is designated as EWH within Franklin County. This area is currently receiving the greatest pressure for development within Franklin County's portion of the watershed. As a result, the Olentangy River TMDL recommended this alternative general permit for these portions of the watershed.

Comment 4: **It was stated that the draft permit is overly strict, adds burdensome costs to developers and has the potential to stifle development along US 23 and in the Delaware area. It was suggested that current rules and regulations set forth by the statewide general permit in addition to regulations imposed by the local governmental entities and on-going efforts by Watershed Action Plans are sufficient to protect the watershed from construction activities. As such, a permit exclusive to the Olentangy River watershed is not necessary. What effort has been made to evaluate or measure the effectiveness of these efforts prior to the drafting of this permit?**

Response 4: The Olentangy River Total Maximum Daily Load (TMDL) report was approved by U.S. EPA on September 19, 2007. TMDL reports identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment with water quality standards. The TMDL report recommended this general permit.

Comment 5: **What effort has been made to evaluate the economic impact of the proposed permit – both in terms of the direct monetary costs of compliance, as well as the increased costs associated with the time frames for the approval process? The Olentangy watershed includes US Route 23 which is an economic development corridor for the numerous townships, City of Delaware, and the County. Projects such as The Park at Greif, Columbus State Community College and Grady**

Memorial Hospital expansion could be negatively impacted by the current draft permit.

Response 5: Ohio EPA has reviewed all comments received on the general permit in regards to economic impacts. Ohio EPA has revised the riparian setback and mitigation requirements. These revisions are based upon a consideration of the significant investment of infrastructure that has already been made within the watershed and additional research performed on needed setback distances to protect stream functions. Ohio EPA believes the revised setback requirements will be more workable, still satisfy the intent of the general permit and are sufficient to protect the overall integrity of receiving streams and the watershed. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 6: **The City of Delaware is a smart growth community which has fully integrated planning, infrastructure, utilities, land use, open space, transportation, and all other elements of the community. USEPA's publication titled Using Smart Growth Techniques as Stormwater Best Management Practices (2005) suggests that states and localities recognize the inherent benefits to stormwater quality for urban developed areas utilizing smart growth principals, such as the City of Delaware, when crafting regulations promulgated under NPDES. The report indicates that pre-existing municipalities should be treated differently from other areas in a watershed and should be allowed to craft solutions that encourage development in these targeted pre-existing communities.**

Response 6: It is Ohio EPA's intent to rely on local MS4 communities which have developed the necessary legal authority and develop a satisfactory program to enforce the conditions of the upcoming Olentangy general permit. With approval from Ohio EPA, local communities can develop alternative requirements, if equivalent in effectiveness of general permit requirements, and enforce through their local code.

Comment 7: **The Olentangy is different than the Darby (geomorphology/streams/existing infrastructure and planned growth) and the draft permit should reflect this.**

Response 7: The requirements associated with the Olentangy construction storm water general permit are different than

the requirements found within the Big Darby Creek construction storm water general permit.

Comment 8: **The river's State Scenic River designated section is not within the boundaries of the City of Delaware. Thus, different and perhaps, more stringent regulations should be considered for areas within the Scenic Section if that is the primary area of concern.**

Response 8: The TMDL recommended the general permit be developed and enforced within certain subwatersheds of the Olentangy River watershed. As such, the permit will be applicable to the areas recommended by the TMDL.

Comment 9: **The draft permit effectively reduces the overall planned densities of the affected townships. Sewer and treatment plant improvement projects are dependent on the zoning and comprehensive plan population projections that were performed during the projects design phase for overall utilization and project funding. Not realizing the overall planned development as forecasted by the Township's plans significantly erodes the Sewer District's ability to recoup and pay for its infrastructure investment.**

Response 9: As indicated within the Response to Comment # 5, Ohio EPA has reviewed all comments received on the general permit in regards to economic impacts. Ohio EPA has revised the riparian setback and mitigation requirements. These revisions are based upon a consideration of the significant investment of infrastructure that has already been made within the watershed and additional research performed on needed setback distances to protect stream functions. Ohio EPA believes the revised setback requirements will be more workable, still satisfy the intent of the general permit and are sufficient to protect the overall integrity of receiving streams and the watershed. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 10: **It was recommended that the proposed permit be revised to allow for exceptions and/or variances for projects that do not circumvent the intent of the permit or that in their own way are addressing an existing or potential water quality issues.**

Response 10: In regards to riparian setback requirements (Part III.G.2.b), the permit specifically exempts construction activities associated with restoration or recovery of floodplain and channel form characteristics as described in Attachment B of the permit. Also, Part III.G.4 (Exceptions) does allow permittees to request approval from Ohio EPA to use alternative methods to satisfy conditions of the permit if the permittee can demonstrate that the alternative methods are sufficient to protect the overall integrity of receiving streams and the watershed. Alternative methods will be approved or denied on a case-by-case basis.

Comment 11: **Significant development has already occurred within the draft permit area. The draft permit is already too late.**

Response 11: Ohio EPA disagrees with this comment. There has been significant development that has occurred, especially within the Delaware County portion, but there is a need and public responsibility to develop, implement and enforce regulations that will maintain and/or improve surface waters within the watershed.

Comment 12: **A grandfather clause is clearly warranted because the permit as written will have a major impact on many projects that have been "in the pipeline" for months if not years. In particular, the watercourse riparian setback requirements could make the development of some projects infeasible.**

Response 12: The first draft of this general permit was public noticed on March 12, 2007 and the second draft was public noticed on March 14, 2008. As a result, the general intent and conditions of this permit have been known for some time. Although, there is a transition period needed for projects to obtain coverage under this general permit. As was required with the Big Darby Construction Storm Water general permit, this permit will be applicable for all new, initiating ground disturbances as of the effective date of the permit. There is a timeframe between the issuance date and the effective date to allow a transition for the permit.

Comment 13: **In Section I.C.1, no guidance is provided as to what criteria the Director will use to assess when an individual NPDES permit will be required. Ohio EPA should be required to make some sort of determination that the BMPs provided in the proposed permit would be insufficient and to provide the specific reasons for the**

purported insufficiency prior to unilaterally requiring an individual permit.

Response 13: Circumstances in which the Director would require an individual NPDES permit would be on a case-by-case basis and cannot be predetermined. Basis for requiring an individual permit would be based on evidence that the general permit conditions would and/or are not sufficient in protecting the physical, chemical and biological integrity of a receiving stream for a particular project. If this authority would be exercised, the Director would send a written notification that an alternative or individual NPDES permit is required. This notice would include a brief statement of the reasons for this decision, an application form and a statement setting a deadline for the operator to file the application.

Comment 14: **Requiring the NOI and SWP3 to be submitted 45 days prior to initiation of construction activity defeats the goal of a predictable and efficient general permitting program. This could create contradictions in local review and approval versus agency review, create delays and allow little to no room to redesign development plans to meet additional design requirements which may be requested by the agency. It was stated that submittal of the NOI 21 days before construction provides ample time for review and processing and that it is not necessary to submit the full SWP3. This approach is also fully consistent with federal requirements.**

Also, the increased demand of reviewing SWP3s could result in the assignment of unqualified or inexperienced staff by Ohio EPA to monitor activities and complex drainage designs on area developments.

Response 14: These comments were taken into consideration, but no changes to the permit will be made. Ohio EPA will dedicate the necessary resources to perform the review process but 45 days is necessary. Permit coverage will not be considered effective until authorization to discharge has been granted by the Director.

Ohio EPA will be working with local jurisdictions which perform reviews. It is Ohio EPA's intent that once local jurisdictions adequately develop, implement and enforce a program at the local level which satisfies this permit's intent

that Ohio EPA will more heavily rely on that local jurisdiction. Although, applicable construction projects would still be required to obtain NPDES general permit coverage through Ohio EPA.

Comment 15: **The following signature questions were raised: (1)Who is required to sign the SWP3 and what is the intent of the signature? (2)Should the signature be provided by a P.E., contractor or owner? (3)What liability follows the SWP3 signature?**

Response 15: The signature requirements can be found in Part V.G of the general permit. The general permit itself does not require the SWP3 to be signed by a P.E. but State and local law may require a PE signature, specifically with respect to the design of permanent controls such as post-construction practices. Ultimately, Ohio EPA would hold the permittee accountable for the proper development and implementation of the SWPPP.

Comment 16: **Part I.B.2.b seems ambiguous and leaves a lot of responsibility on the Director to make the call on what is or is not a violation. How will the Director keep up with the case load?**

Response 16: This section of the permit simply identifies that the Director has the authority to require an individual NPDES permit for applicable construction activities that has been shown or may reasonably expect to be contributing to a violation of a water quality standard. This is standard permit language found within all storm water general permits.

Comment 17: **Why were communities, located within the watershed, south of I-270 not subject to the permit?**

Response 17: Please see the Response to Comment # 3; whereas, the permit is only applicable to the portions of the watershed which the Olentangy River TMDL recommended.

Comment 18: **The permit will fail to accomplish measurable reductions in silt deposited in the Olentangy River.**

Response 18: Ohio EPA disagrees with the comment. Ohio EPA believes that the general permit will protect streams' physical, chemical and biological characteristics and maintain stream functions. The permit's sediment and erosion control requirements, post-construction requirements and riparian

setback requirements will have a very positive effect in reducing silt deposited in the Olentangy River and other streams from construction activities.

Comment 19: **The general permit fails to establish regulated MS4s as the primary authority for regulating water quality policy, specifically relating to post-construction BMPs. Having multiple agencies addressing post-construction regulations is redundant and an inefficient use of limited State and government resources. Language regarding post-construction should be removed from the permit.**

Response 19: Post-construction NPDES permit requirements originate in USEPA's November 16, 1990 Phase I initial storm water regulations. Ohio EPA believes post-construction requirements are appropriate in the construction general permits for several reasons. First, there is the environmental impact of storm water from post-developed areas in terms of pollutants and the potential impairment on receiving waters from increased flows. It should be remembered that not all construction activity occurs within regulated MS4s. In addition, USEPA is currently developing its "Construction and Development" effluent guidelines that Ohio EPA understands will set prescriptive national requirements addressing construction and post-construction to be included in all NPDES permits. Also, this general permit was sent to USEPA for its review for compliance with federal regulations and it did not object to its issuance. It should also be remembered that Ohio EPA has included post-construction requirements in its construction general permits since 1992.

Federal regulations require that construction projects obtain coverage under an NPDES permit whenever the larger common plan of development or sale is 1 or more acres of land disturbance. Ohio EPA is the only NPDES permitting authority for Ohio. As a result, construction site operators must obtain the Ohio EPA NPDES construction storm water general permit (CGP) applicable for their area. Likewise, the Small MS4 general permit requires that regulated MS4 operators develop ordinances or other regulatory mechanisms to require elements of the applicable CGP at the local level. Ohio EPA's intent is to have a lessened presence within local jurisdictions that develop, implement and enforce requirements of the applicable CGP for their area. This approach will also apply for the Olentangy River Watershed CGP.

Comment 20: **Increased inspections, enforcement and fines by MS4 operators will do far more for advancing water quality than the proposed changes associated with this permit.**

Response 20: This general permit implements many of the basic recommendations regarding the programs, activities and best management practices (BMPs) developed through the TMDL process. Ohio EPA believes implementation of these recommendations is necessary to protect the unique water quality and biological integrity of the Olentangy River watershed. As required by the MS4 program, Ohio EPA believes that local programs implementing (SWPPP reviews, site inspections, enforcement elements) requirements of this general permit will maintain and/or improve water quality of the watershed.

Comment 21: **Part I.B.2(a) specifically excludes "Storm water discharges that originate from the site after construction activities have been completed: yet contains post-construction requirements which have little to do with managing construction activity related runoff. This requirement seems to be outside the original intent of the permit.**

Response 21: Once final stabilization is achieved coverage under the general permit should be terminated. The general permit does require the installation of a permanent structural post-construction best management practices (BMPs) during construction and assurances that it will be maintained, but the discharge from the BMP after general permit coverage is terminated does not require an NPDES permit normally for residential and commercial development. If the site was developed for an industry with a regulated storm water discharge then a different NPDES permit would be required for that discharge. The general permit was modified to help clarify these matters.

Comment 22: **Part I.D is vague and will likely cause confusion. Both commercial and residential development typically involves the transfer of lot ownership to individuals or owners other than the developer of the property during construction activity. Attempting to track ongoing permit responsibilities for multiple owners will become confusing and difficult for property owners, Ohio EPA and local governments. It would be less complex and more effective to require the initial permit holder to maintain responsibility for all property included in the**

initial permit until the site(s) are stabilized. The initial developer and subsequent property owners can maintain separate agreements as necessary regarding the transfer of responsibility of the permit without complex Ohio EPA or other agency involvement.

Response 22: Although Ohio EPA agrees conceptually, the Agency believes its legal ability to require the initial permittee to be responsible for a parcel sold to a builder is limited. We believe requiring the original permittee to maintain the centralized control (e.g., detention pond) is our best alternative.

TMDL Related Comments

Comment 23: **Section 2.4 of the Ohio EPA study suggests that an increase in impervious surface in a watershed "…results in faster runoff and higher volume storm flows". We would agree that the total volume of flow increases, but disagree that the flows will be "faster" with storm water detention in place. Did Ohio EPA study the impacts of currently required storm water detention facilities as they relate to this statement?**

Response 23: Generally, local requirements address detention down to a two year storm event. It has been documented that stream degredation occurs during the more frequent storm events which occur well below the two year storm event. This information was verified through studies conducted by ODNR in concert with Ohio University. Given this information, Ohio EPA requires treatment of the more frequent storms up to a 0.75" rainfall event.

Comment 24: **The TMDL report states that, "…the Ohio EPA recommends that the Delaware Soil and Water Conservation District (SWCD) expand its program to accommodate the rapid development occurring in the Olentangy River watershed…and establish a conservation easement program to facilitate the protection of riparian areas or other lands valuable to the protection of water quality." It also states that, "The Ohio EPA recommends that buffer strips and conservation easements be used where appropriate in the urban and developing areas of the watershed." Yet, the rules being promulgated for riparian setbacks under construction site sediment control auspices seek to simply take randomly-conceived excessive riparian**

setbacks. Why is the Ohio EPA not following its own recommendations?

Response 24: The recommended setbacks were developed with several factors in mind. Setbacks were addressed in direct result with recommendations of the TMDL. In addition, Ohio EPA conducted extensive research with respect to designated setbacks which have been implemented successfully throughout the country. The agency evaluated the intent of setbacks and the corresponding goals concurrent with this research and disagree that the setbacks were randomly conceived.

Comment 25: **In neither the Ohio EPA TMDL study nor the OSU study was there any data that measured the effectiveness of BMPs that were implemented as part of a governmental jurisdiction's NPDES Phase II requirements. Wouldn't this data be critical to determine if additional permit requirements are necessary? In addition, wouldn't this data be necessary to determine if the target TSS loading could even be obtained using current BMP practices?**

Response 25: Ohio EPA is currently working with ODNR to provide additional information and data with respect to the effectiveness of Best Management Practices (BMPs).

Comment 26: **Page 2 of the fact sheet states that "…the two miles of the Olentangy River are designated as EWH within Franklin County. This area is currently receiving the greatest pressure for development within Franklin County's portion of the watershed." This portion of the watershed is nearly completely built out, yet this statement appears to be the basis for implementing the permit.**

Response 26: It is important to note the construction activities upstream from the EWH section in Franklin County will jeopardize the use designation (EWH) within Franklin County. Therefore, the agency felt it was necessary (via the implementation of the general permit) to protect these sensitive areas to provide overall water quality integrity and stream stability for Olentangy Watershed in Franklin as well as Delaware and Morrow Counties.

Comment 27: **It would be helpful to provide a web link to the TMDL in the permit.**

Response 27: A web link to the approved TMDL will be added in the permit.

Legal Comments

Comment 28: **Comments were received that stated the Ohio EPA is authorized to establish standards in the permit to assure that the discharge of storm water during construction (and to a limited extent post-construction) will not degrade the water quality in the watershed. The permit goes far beyond regulating storm water discharges and into areas of land use planning which exceeds the Ohio EPA's statutory authority. Other comments suggested that the permit represents a taking of private property.**

Response 28: The director's sole focus in preparing the Olentangy River Watershed construction storm water general permit is on protecting water quality and the aquatic and other uses of the Olentangy River and its tributaries, not land-use planning. Although other governmental entities may be given independent authority to conduct land-use planning for purposes of protecting the public health, safety and welfare, or to manage land for flood control, those authorities do not prevent the director from satisfying his obligation to impose permit restrictions related to the protection of water quality and water quality uses.

Several provisions of law come into play in the design of the general permit. These provisions both authorize and mandate the director to include in the general permit the types of requirements he has.

First, R.C. 6111.041 requires the director to adopt water quality standards. The standards must "be designed to improve and maintain the quality of such waters. .. To enable the present and planned use of such waters for public waste supplies, industrial and agricultural needs, propogation of fish, aquatic life, and wildlife, and recreational purposes." The director has adopted those standards in Ohio Adm. Code 3745-1-04, and 3745-1-07, et seq. Those water quality standards not only include numerical standards for pollutants in the waters of the state, but also designated uses for those waters. R.C. 6111.041 further provides that the director "shall implement the [water quality] standards . . . in the issuance . . . of permits."

Second, R.C. 6111.12 requires the director to develop an antidegradation policy and include "provisions ensuring that

waters of exceptional recreational or ecological value are maintained as high quality resources for the future generations." R.C. 6111.12(A)(2). The antidegradation rule requires that "existing uses. . . . shall be maintained and protected." Ohio Adm. Code 3745-1-05(C)(1).

Against the backdrop of these mandates to protect water quality and water quality uses, R.C. 6111.03(J)(1) gives the director authority to set terms and conditions of permits. That section broadly provides that the director may "set terms and conditions of permits, including schedules of compliance, where necessary." There is no limitation to only numerical type standards on the discharges.

The United States Supreme Court has recognized that broad language to protect water quality can support requirements other than numerical limits on discharges, such as limitations on water flow minimums. PUD No. 1 of Jefferson County, et al. v. Washington Department of Ecology, 511 U.S. 700 (1994). Moreover, even where limitations are authorized in the form of effluent limitations, the courts have recognized that effluent limitations can include restrictions on the activity creating the discharge, such as "best management practices" (BMPs) and nutrient management plans. Waterkeeper Alliance Inc. v. USEPA, 399 F.3d 486 (2d Cir. 2005). Regarding construction activities, BMPs and storm water pollution prevention plans have long been elements of the basic construction storm water permit.

The setback requirements in the Olentangy general permit are permit terms and conditions necessary to protect water quality and existing and designated coldwater, exceptional warmwater, and warmwater habitat uses in the Olentangy River watershed. The requirements are designed to protect the stream system from damage to the designated uses of the stream, and to address the addition of flow and pollutants to the stream from activity covered by the permit. Information and study resulting from the Olentangy River TMDL investigations shows the watershed is threatened by, among other things, sediments in storm waters, altered flows resulting from development and recommends preserving natural stream function through channel protection. Setback requirements help preserve the natural riparian corridor and corridor's essential pollutant-filtering, shading, and temperature-moderating functions, as well as help preserve habitat for aquatic life that is a gauge of the health of the

stream. Therefore, the setback requirements are a necessary part of the general permit.

The general permit is not a taking of private property without just compensation in violation of the Fifth Amendment of the United States Constitution. Regulatory takings claims require an analysis of the extent to which economically viable uses have been eliminated from a parcel of property by the regulation. No such analysis can even begin until the particular parcel of property at issue is identified. Mitigation provisions in the general permit will provide flexibility and allow a person to disturb acreage within setback areas with conserved or restored setback zones.

Finally, the terms and conditions of the Olentangy general permit must be considered in light of R.C. 6111.035, which gives the director the authority to issue general permits, but only in limited circumstances. It provides that the director *may* issue a general permit for "the discharge of storm water." This section further provides that a "general permit shall not be issued unless the director determines that the discharges authorized by the permit will have *only minimal cumulative adverse effects on the environment when the discharges are considered collectively and individually,* and if, in the opinion of the director, the discharges. . . authorized by the permit are more appropriately authorized by a general permit than by an individual permit." The section further provides that "the director, *at the director's discretion,* may require any person authorized to discharge. . . . under a general permit to apply for and obtain an individual permit for the discharge." The limitations contained in the Olentangy construction storm water general permit, including setback requirements, allow the director to identify a category of construction activity discharges to the environmentally sensitive and threatened Olentangy River and its tributaries that are eligible for a general permit; that is, to identify a category of discharges that will have, as mandated by R.C. 6111.035, "only minimal cumulative adverse effects." If a person wishes to obtain a general permit, the person's construction activity must fall within these defining requirements. Otherwise, the director may choose, in his discretion, to require the person to obtain an individual permit. In an individual permit, there may be more flexibility for the permit applicant to propose a project that protects water quality and existing and designated uses. Should the situation arise that raises constitutional concerns, the

individual permit will also give the director more flexibility to act consistently with any constitutional limitations.

Riparian Setback Requirement Comments

Comment 29: **One commenter indicated that it is warranted that the permit include riparian setback mitigation language for development necessary to occur within the delineated setback. Although, the commenter had concerns when stream restoration activities are required. It was indicated that there are benefits of using overwide channel design, or what is also termed a "self-forming" channel. However, the commenter would also like to see an option for "natural stream design" or restoration where appropriate. With natural stream restoration, constructing the stream to meet the function lost from construction allows for more certain mitigation results. With perpetual protection of the mitigation as a permit condition, the certainty and arguably less maintenance necessary with natural stream restoration, makes it as viable as the overwide channel. It was recommended that both Ohio EPA and the Ohio Department of Natural Resources Division of Soil and Water Conservation develop pilot projects to study the costs and benefits of both these designs.**

Response 29: Attachment B has been revised to include the following: "Restoration shall be accomplished by any naural channel design approach that will lead to a self-maintaining reach able to provide both local habitat and watershed services (e.g., self-purification and valley floodwater storage)."

Comment 30: **Riparian setbacks are typically a post-construction river and first-order stream protection method that is almost exclusively implemented through local Zoning Codes or easement /property purchase programs and state or national level rule making.**

Response 30: The Olentangy general permit is based upon recommendations of the Olentangy River Watershed TMDL which was approved by U.S. EPA on September 19, 2007. Not all communities within the watershed have adopted setback requirements. It is Ohio EPA's intent to have a lessened presence within local jurisdictions that develop, implement and enforce requirements of the Olentangy general permit.

Comment 31: **Have the recent infrastructure projects being completed by the City of Delaware and Delaware County to further control sanitary discharges into the Olentangy River been factored into the draft permit. Centralized sewers and the wastewater treatment plants help preserve the quality of the waters of the State. It is not understood why projects such as these that benefit water quality should be subject to the riparian setback requirements. As such, conservation easements are not obtainable via eminent domain actions.**

It was recommended that the permit allow for exceptions and/or variances for projects that do not circumvent the intent of the rule or that in their own way are addressing an existing or potential water quality issue. Also, exceptions and/or variances should be allowed for government owned public facilities necessary to meet the needs of the general public and passive recreation uses such as hiking, fishing, etc. This would exempt water plants, wastewater treatment plants, recreational facilities such as Mingo Park (the buildings and pool), as well as passive fields and recreational pathways which are commonly located immediately adjacent to waterways. These variances should be clearly defined and not evaluated on a case-by-case basis.

Response 31: Ohio EPA has reviewed all comments received on the general permit in regards to economic impacts. Ohio EPA has revised the riparian setback and mitigation requirements. These revisions are based upon a consideration of the significant investment of infrastructure that has already been made within the watershed and additional research performed on needed setback distances to protect stream functions. Ohio EPA believes the revised setback requirements will be more workable, still satisfy the intent of the general permit and are sufficient to protect the overall integrity of receiving streams and the watershed. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 32: **It was recommended that the riparian setback requirements be removed from the general permit and allow communities to address through local zoning / floodplain protection code. This is a duplication of regulations.**

Response 32: Please see the Response to Comment #30.

Comment 33: **The riparian setback requirements are infeasible. The proposed equation to calculate the widths is unpublished and was derived by Ohio EPA staff from a phone conversation with ODNR staff.**

Response 33: Ohio EPA has revised the riparian setback and mitigation requirements. These revisions are based upon a consideration of the significant investment of infrastructure that has already been made within the watershed and additional research performed on needed setback distances to protect stream functions. Ohio EPA believes the revised setback requirements will be more workable, still satisfy the intent of the general permit and are sufficient to protect the overall integrity of receiving streams and the watershed. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 34: **The stream type methodology, while improved, is still far too complicated, cannot be determined from pre-existing source data, is subject to qualitative interpretation to determine the actual stream type in the field, and continues to treat ditches and man-made conveyances as if they were natural water courses (Attachment B) as opposed to man-made storm water installations.**

Response 34: State law requires the protection of "waters of the state" which in many cases include man-made ditches. Permittees should use National Resources Conservation Service (NRCS) soil survey maps as a starting point to determine streams requiring protection. USGS topographic maps are not as inclusive. Ultimately, field verification should be used to confirm. For smaller streams, permittees should use Ohio EPA's Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, V 1.0 (September 2002), to aid in determining stream type.

Comment 35: **Clarification was requested for the mitigation requirements. This section of the permit still lacks any meaningful definitions and explicit calculations which would enable a reasonable evaluation of what mitigation would cost in land, money or credit. For example, the mitigation requirement notes 'four times the total area disturbed'. Does this mean that a physical area within the HUC unit four times the total area disturbed would**

need to be procured and placed in an easement? Does it mean that if 100 trees are removed from the area one would have to provide 400 trees on this procured site as well?

Response 35: The mitigations requirements are based on the physical area and would not require the mitigation of trees. In follow up with the example, if an area is disturbed within 30 feet of the stream that is within a designated setback, Four times the area of disturbance must be provided in mitigation with in the 14 digit HUC. The mitigation must also be established within 30 feet of the proposed stream subject to mitigation. The general permit has been revised to allow mitigation requirements to be reduced by 50 percent if the mitigation is conducted within the immediate receiving stream where the intrusions take place.

Comment 36: **There is currently 401/404 regulations that are being followed and enforced by the Ohio EPA and Corps of Engineers and the riparian setback corridors established in this permit are going to significantly change those requirements. There appears to be a regulatory overlap with existing permit programs such as ACOE – OEPA 401/404 permits, flood plain regulations, and ODNR – Natural Areas and Preserves, etc. Capital improvement projects should not be subject to such double jeopardy. The draft permit should be tailored to work in conjunction with, and not duplicate the efforts of the existing regulations.**

Response 36: This concern is addressed within the general permit. Please refer to the last paragraph of the "Riparian Setback Mitigation" Section found at Part III.G.2.c.

Comment 37: **Commenter's questioned the methodology by which the mitigation requirements were derived and finds that there is a significant lack of definitions, applicability, method of administration, or other clarity to the section of the permit. The mitigation and replacement area standards are arbitrary and the ability was questioned of a property owner to comply with them both economically and physically given the requirements that mitigation must be accomplished within the same Watershed Assessment Unit (WAU). Questions include:**
(A) What exactly does the term 'mitigated' mean?
(B) What happens when one cannot complete mitigation within the designated WAU or the site is split by a WAU?

Mitigation should be allowed within an adjacent WAU since these areas are small, highly developed and may be difficult to find willing sellers. In addition, by allowing in adjacent WAUs this may offer better mitigation sites.
(C) Does the Ohio EPA have a plan to economize or monetize mitigation requirements in some fashion to allow the buying and selling of credits for example? If not, the agency must provide such a mechanism which is not dissimilar from the way wetland mitigation banks operate today.
(D) These regulations could have the unintended consequence of creating a windfall for the property owners selling credits or granting mitigation rights along water courses – in essence a reverse taking.
(E) Why are these applied to any and all water courses on a site, including man-made ditches, as opposed to utilizing known, mapped water courses such as blue line streams, FEMA designated floodplains, etc. which can be easily ascertained and accounted for in the development review process?
(F) Why would the Ohio EPA not allow for the procurement of easements in 'rural' portions of the watershed (as opposed to mandating the same WAU) to enable development to be concentrated in core municipalities that have already made significant investments in infrastructure? Is the Ohio EPA anti-city and pro-sprawl? This will do far more harm to the watershed ultimately in the long run?

Response 37: (A) Mitigated refers to the area designated and conserved in response to intrusions into the delineated setback.
(B) The Director may consider alternate mitigation based on a case-by-case evaluation.
(C) The agency is currently looking into the mitigation protocols not dissimilar from the operations established by Ohio EPA's 401 Water Quality Section.
(D) The agency appreciates your comment but feels the mitigation requirements are appropriate to meet the intent of protecting the overall water quality integrity of receiving streams.
(E) State law requires the protection "waters of the state" which in many cases include man-made ditches.
(F) The Director may consider alternate mitigation based on a case-by-case evaluation.

Comment 38: **By arbitrarily setting the 100' minimum on the riparian corridor as established does not seem to take into effect the slope or ground conditions of the riparian corridor. How does this take into account grass, slope, woods, undergrowth, etc.?**

Response 38: Ohio EPA has revised the riparian setback and mitigation requirements. These revisions are based upon a consideration of the significant investment of infrastructure that has already been made within the watershed and additional research performed on needed setback distances to protect stream functions. Ohio EPA believes the revised setback requirements will be more workable, still satisfy the intent of the general permit and are sufficient to protect the overall integrity of receiving streams and the watershed. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 39: **Establishment of a minimum 100 foot riparian setback for all "streams" is inappropriate. The Ohio EPA proposes to include all ephemeral and intermittent draining features as streams. Yet these drainage features generally do not have an active floodplain and this riparian setback is unnecessary. The stream type methodology remains draconian for perennial streams in requiring 100 ft. setbacks per side for streamside buffers plus an additional outer buffer equal to the equation given. This treats perennial streams as more important than the mainstem of the Olentangy itself which makes little reasonable common sense.**

Response 39: Please see the Response to Comment #38.

Comment 40: **In the public information session of the public hearing on April 25, 2007 it was stated that there was a process in place to evaluate the minimum setback criteria provided in the draft permit which is the bankfull width plus 100 feet. The draft permit does not include a procedure to provide for variances from this standard where warranted. Although there may be intent to address the feasibility of the setbacks in conjunction with a so-called functional floodplain, the draft permit does not outline such a process. Consequently, the setback formulas appear overly rigid.**

Response 40: An alternative stream buffer setback delineation is provided within the general permit. Please refer to Part III.G.2.b.3.ii under "Site Specific Riparian Setback Delineation."

Comment 41: **Although Ohio EPA stated that farming is permitted within the setback; permitted use(s) within setback areas are not addressed nor spelled out in the draft permit. Clarity should be provided on what is a permitted use and how BMPs (other than temporary site sediment control and post-construction BMPs) fall within the category.**

Response 41: The agency will provide clarification with respect to your comment. However, each use will be evaluated per the individual review of the plan required concurrent with the application submittal.

Comment 42: **Due to the significant topography change within the watershed, the water in the Olentangy River is almost non-existent most of the year except occasional pockets or pools of water with significant stones, bedrock and materials being fully exposed. Also, due to the gradient of the Olentangy River, there is not much floodplain interaction.**

Response 42: Thank you for your comment; however, there are areas within the Olentangy River mainstem where significant interaction with the flood plain occurs.

Comment 43: **The Draft TMDL document applies ODNR's "3-5-10" rule to the determination of riparian widths for different levels of aquatic life use designation (Equations 5.2 – 5.4). The draft permit adopts the most conservative determination of the buffer (10 x bankfull width), which implies all stream channels have either attained or are expected to attain the designation of excellent warm water habitat (EWH). Within the City of Powell, there are several smaller channels that seem unsuitable for this designation. If the riparian setback requirement is intended to apply to all watercourses, whether perennial, ephemeral or intermittent, the determination of the buffer width should be representative of these conditions. Assigning the EWH buffer criteria to all channels seems excessive, even if the downstream receiving watercourse may meet that designation.**

Response 43: The setback requirements have been revised which the agency believes will address this comment. For additional information, please see Part III.G.2.b of the general permit and the attached Figures 1 – 4.

Comment 44: **Comments stated concerns with the reduction in the setback protection from the original draft permit, especially for intermittent and ephemeral streams. It was strongly suggested to change the requirements back to the original draft permit requirements.**

Response 44: Based on the extensive research Ohio EPA conducted of successful setback implementation across the country, the agency feels the revised setback requirements address a water quality benefit. In addition, the general permit mandates the implementation of post-construction water quality best management practices (BMPs) to further provide not only a water quality benefit but a stream erosion protection component. The agency feels the implementation of both setback requirements and post-construction BMPs will facilitate the intent of protecting overall stream integrity.

Comment 45: **The accepted activities within the streamside buffer and the outer area buffer are unclear. What exactly can/cannot be done and what can/cannot be placed in these areas?**

One commenter had the following questions in regards to the streamside 'no disturbance' buffer: (1)How are the slopes treated? (2)Can the width of the streamside buffer be extended to include slopes that are greater than 15 percent and extended to the top of the slope? (3)Can the streamside buffer be extended to include the full extent of the wetland area (plus any setback from the wetland required by a 404 permit) where wetlands protected under federal or state law are located partially within this zone?

Response 45: The agency will provide clarification with respect to your comment. However, each use will be evaluated per the individual review of the storm water pollution prevention plan required concurrent with the application submittal. The applicant may request alternate setbacks based on the "Site Specific Setback Deliniation" of the general permit. If a site specific setback is requested, the agency will evaluate all criteria stated in your comment. Wetlands are protected under the Clean Water Act and would be subject to

mitigation under Army Corps of Engineers and Ohio EPA Water Quality Certification regulations.

Comment 46: **Given that there is a big difference in the setback requirements for perennial, intermittent and ephemeral streams, clarification was requested on the process by which currently unclassified streams will be classified (how data will be collected and who will be making the determination).**

Permittees should have the option to use a USGS topographic map to identify whether a stream is perennial (solid blue line) or intermittent (dashed blue line). The presence of the stream should still be verified in the field. This would be the best option for permittees to quickly and more accurately obtain this information rather than trying to determine whether a stream stops flowing for greater than or less than three months of a year.

At a minimum, the permit should adopt terminology for stream types already used by Ohio EPA in Table 2 of the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, V 1.0 (September 2002). Table 2 provides much more detail on the hydrology of small streams in Ohio instead of focusing solely on the flow condition of a stream. Perennial streams described in Table 2 have "water that flows <u>permanently</u> in a stream channel", while the permit conflicts with this statement by declaring perennial streams flow at least nine months of a typical climate year. Perennial streams should be defined in the permit as flowing 12 months (not nine months) of a typical climate year. Also, intermittent streams should be defined as flowing less than 12 months (not less than nine months) of a typical climate year. These changes are consistent with approaches by other OEPA programs and provide a simpler method for the regulated community to implement.

Response 46: Permittees should use National Resources Conservation Service (NRCS) soil survey maps as a starting point to determine streams requiring protection. USGS topographic maps are not as inclusive. Ultimately, field verification should be used to confirm. For smaller streams, permittees should use Ohio EPA's Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, V 1.0 (September 2002), to aid in determining stream type. Ohio EPA agrees

with the comment about adopting the terminology for stream types in the manual and the permit language will be revised to better mirror the manual.

Comment 47: **It was requested that the streamside buffer be a minimum of 120' on the mainstem, to be consistent with the ODNR "Scenic River" designation. Also, in areas where the natural floodplain boundary has previously been altered, it was requested to require that the outer area be a minimum of 100' from the streamside buffer.**

Response 47: The final general permit's revised setback requirements will require a 100' streamside buffer and an outer buffer sized to the 100 year flood plain. In most cases the total required riparian setback will exceed 120'.

Comment 48: **It was suggested that the mitigation requirements are not sufficient to discourage encroachment into the setbacks. At a minimum, Zone 1 should extend to 50' from the top of bank (rather than 25' from the stream edge). Others questioned the mitigation ratios and requested documentation for their justification. Without justification, a replacement ratio of two to four times the amount of riparian corridor impacted could appear arbitrary. A replacement ratio of 1:1 (no net loss), or perhaps 1:5:1 (to offset temporal losses), would be much more justified.**

Response 48: The agency recognizes the areas closer to a stream provide more water quality functions not to mention more of a stream stability function; therefore, zones were established with respect to mitigation. The respective zones and associated mitigation was geared to discourage intrusions and protect the intended function of each zone. The mitigation ratios were taken from established protocols noted in the Ohio EPA Water Quality Section to offset for mitigation losses. It is important to note that mitigation ratios may be reduced by 50 percent provided the mitigated areas are established within the watershed of the immediate receiving stream associated with the setback intrusion.

Comment 49: **It was requested to provide clarification on the requirements associated with a Site Specific Riparian Setback Delineation.**

Response 49: In certain cases the setbacks required by the permit may include an area which serves no water quality benefit or stream stability benefit. Therefore, the agency has included language to evaluate alternate setbacks on a case-by-case evaluation to determine an appropriate setback for the site.

Comment 50: **It was requested to provide clarification on the requirements for redevelopment projects in regards to riparian setback requirements. Redevelopment projects should be exempt from the riparian setback requirements completely. The consequence of not completely exempting these projects will be urban sprawl.**

Response 50: As stated within the general permit, redevelopment projects (i.e., developments on previously developed property) located within the delineated setback boundary are exempt from riparian setback mitigation provided the project does not further intrude the delineated setback boundary.

Comment 51: **For public transportation projects, mitigation requirements for setback intrusions into existing right of way are extreme based on the previous impacts to vegetation, ground plane and soil permeability. At a minimum, for the construction of new roads and roadway improvement projects by public entities (i.e., the state, counties, townships, cities, and/or villages), riparian setback mitigation should only be required for areas of new construction outside existing public roadside right of way.**

Response 51: This would fit the definition of redevelopment and would be exempt from setbacks provided the existing right of way includes areas which have not been developed.

Comment 52: **Regarding the statement "Streams requiring protection under this section have a defined bed, bank or channel…", this sentence should be changed to read "…have a defined bed and bank or channel." This change would be consistent with the OEPA 401 stream mitigation document (March 2004) and with the Primary Headwater Habitat (PHWH) stream definition listed in the Field Evaluation Manual for Ohio's Primary Headwater Habitat Streams, V 1.0 (Ohio EPA, September 2002), which describes a feature without a defined bed and bank as a "non-stream waterway" in Table 1. A regulatory definition of the word "stream" is being**

proposed for inclusion in the OAC by Ohio EPA – NEDO – DSW staff. This proposed definition is very similar (if not identical) to the definition presented in the Draft Compensatory Mitigation Requirements for Stream Impacts in the State of Ohio, Revision 4.0, and should be adhered to by all other sections and divisions in Ohio EPA for consistency purposes.

Response 52: Ohio EPA agrees and the permit language will be changed to mirror the manual.

Sediment & Erosion Control Comments

Comment 53: **The fact sheet associated with this draft permit states that "sediment runoff rates from construction sites are typically 10 to 20 times greater than those of agricultural lands…" Does this refer to construction activities that don't have proper erosion controls in place during construction? The context of the comparison is necessary in order to understand the impacts. What studies have been done to justify this statement? This is an instance, in our opinion, where this statement has been carried forth through the years from the days before any erosion control measures were ever used on construction sites, and is still presented as "fact" though it is clearly outdated.**

Response 53: This statement was taken from USEPA storm water documents and is referring to storm water runoff from sites without sediment and erosion control in place. The factsheet associated with the most current draft permit was revised to include "Untreated sediment runoff rates…" to more accurately illustrate the statement.

Comment 54: **It was requested to provide where Ohio EPA determined the effectiveness of silt fence and sediment basins as included within the fact sheet.**

Response 54: This information was taken in consultation with Ohio Department of Natural Resources in conjunction with the development of the Rainwater and Land Development Manual. In addition, silt fence is much more labor intensive to install and maintain during construction. Since the inception of the storm water program, Ohio EPA inspectors have noted the lack of proper installation and maintenance with respect to silt fence. Based on this information, the agency wanted to ensure a more economical, higher efficient

and lower maintenance Best Management Practices which led to the establishment of a centralized basin/trap.

Comment 55: **Why was the sediment settling pond design criteria included within the first draft permit changed to the design criteria found within the most current edition of Ohio's Rainwater and Land Development manual?**

Response 55: The pond design was changed given the information provided by the Rainwater and Land Development manual as evaluated and found more effective in removing suspended solids by a consortium of sediment and erosion professional throughout the state of Ohio.

Comment 56: **As long as storm water is being directed to a structural sediment control, temporary stabilization requirements are unnecessary and wasteful. It is further impractical, considering Ohio's climate, to consider any permanent or temporary seeding activity during cold and dormant months.**

Response 56: Structural practices are limited in removing suspended solids from storm water run-off. The most effective means to reduce sediment loadings to streams from construction is stabilization. Please keep in mind, if weather conditions prohibit the establishment of a vegetative stand sufficient to control erosion, alternatives such as crimp mulching, mulch with tackfier, mulch with netting…etc, may be considered.

Comment 57: **It is impractical to require a separate sediment storage zone because this zone impacts the size of the basin at a ratio of six feet of additional width for every additional foot of depth based on a maximum 3:1 slope. The size of the basin will create challenges for smaller sites.**

Response 57: The pond design included a dewatering zone given the information provided by the Rainwater and Land Development manual as evaluated and found to be more effective in removing suspended solids by a consortium of sediment and erosion professionals throughout the state of Ohio. Historically, based on inspections conducted by Ohio EPA, Storm Water Staff, in addition to information collected from various erosion control regulators on a local level, the sediment pond without a dewatering zone, in significant cases resulted in "muddy water in" and "muddy water out" of the basin. The inclusion of a dewatering zone will ensure ample retention time to remove suspended solids and

provide ample sediment storage between typical rain events. Please keep in mind the permit does allow for alternatives with respect to the sediment and erosion control conditions in the permit based on site constraints. Alternatives would be based on a case-by-case evaluation by Ohio EPA.

Comment 58: **It is impractical to require sediment settling ponds for all projects with "concentrated storm water runoff", i.e., from a pipe or ditch and for all sites greater than 5 acres in size. As is, basins will be required on every site which could be infeasible and/or create safety hazards. In such cases, other construction BMPs should be permitted. Ohio EPA has stated that they will evaluate alternative BMPs on a case-by-case basis. It was requested that Ohio EPA provide a list of acceptable waivers from this requirement and provide detail within the permit regarding the method of application for a waiver.**

Response 58: Please keep in mind the permit does allow for alternatives with respect to the sediment and erosion control conditions in the permit, based on site constraints or safety hazards. Alternatives would be based on a case-by-case evaluation by Ohio EPA. It is difficult to pre-approve a list of acceptable alternatives given, the alternatives are very site specific. Alternatives which have proven effective in the past would be an accelerated erosion control plan with respect to temporary and/or permanent cover, onsite grade controls to manage storm water, the location and surrounding conditions of a site, and alternate onsite storm water containment measures. Given the applicability of each alternative is site specific. It is necessary to evaluate the alternative BMP's on a case-by-case basis. Please keep in mind the general permit will require individual reviews where these alternatives could be readily evaluated.

<u>Post-Construction Requirement Comments</u>

Comment 59: **What scientific studies were done to justify prohibiting dry detention basins within the first draft permit? The fact that this prohibition was tied to "….Ohio EPA's concern that the dry basins, including underground extended detention manufactured systems, results in the re-suspension of sediments…." rather than a scientific study makes the defense of this requirement difficult. We believe that it is important to maintain the flexibility to use a variety of tools to manage storm**

water. For the current draft permit, please explain why dry basins are restricted to sites greater than five acres.

The inclusion of micropools and forebays for dry detention basins will result in undesirable traits such as mosquito and tick infestation with little proven value for improved water quality.

Response 59: In regards to dry basins, the general permit will mirror the statewide construction storm water general permit requirements. Dry basins must include a forebay and micropool each sized at 10% of the WQv. Ohio EPA believes the 20 percent requirement is essential to ensure a point of removal for the accumulation of sediments resulting from extended detention; otherwise, there is a potential for settled sediment to re-suspend and discharge during the following precipitation event. In addition this would reduce the potential of clogging of the water quality orifice which would result in a direct bypass of the WQv. MS4s can limit which post-construction structural BMPs from Table 2 it will allow within its jurisdiction. Ohio EPA highly recommends utilizing the design criteria in the Rainwater and Land Development Manual which addresses the concerns stated in this comment.

Comment 60: **Requiring redevelopment sites to meet post-construction requirements is impractical. Redevelopment sites that do not increase impervious area should be exempt from the requirements of installing post-construction BMPs that reduce the property available for development, and instead, be encouraged to utilize manufactured units to help reduce TSS and oils from parking areas.**

Response 60: Ohio EPA recognizes the impacts from developed sites which existed prior to the storm water regulations. In order to mitigate for this impact, the regulations require 20 percent treatment of the WQv or 20 percent reduction in impervious area (or any combination of the two). The use of manufactured systems may be considered as an alternative BMP.

Comment 61: **The draft permit currently does not have a distinction between small and large projects (other than residential), specifically in terms of minimum design criteria for post-construction BMPs. This requirement**

could create considerable hardship for smaller infill projects.

As indicated at the April 30, 2008 public hearing, it is our understanding that the Olentangy permit will mirror the new statewide construction general permit and have a distinction between small and large sites for post-construction requirements. Please clarify.

Response 61: As stated in the comment, the Olentangy permit will mirror the new statewide construction general permit and have a distinction between small and large sites for post-construction requirements.

Comment 62: **The draft permit states that alternative BMPs may be tested using the TARP protocol or through the USEPA's Environmental Technology Verification Program. However, these programs do not offer "approved" alternative BMPs, nor do they address non-manufactured BMPs like green roofs and permeable pavement. Please provide guidance on what criteria will be used to evaluate alternative BMPs.**

Response 62: Ohio EPA encourages the use of the structural post-construction BMPs listed in Table 2 of the general permit because those BMPs have a proven performance history of improving water quality and reducing hydrologic impacts to receiving streams. Also, maintenance procedures are readily available and relatively straight forward to perform. In order to use alternative BMPs the permittee must first evaluate the feasibility of implementing the Table 2 BMPs on their individual project. If the permittee believes the Table 2 BMPs are infeasible for a particular project, the permittee may propose alternative controls to Ohio EPA for approval.

Ohio EPA is first requiring that claims regarding the effectiveness of alternative BMPs be verified through The Technology Acceptance Reciprocity Partnership (TARP) protocol for Stormwater Best Management Practices Demonstrations. TARP sets standards for testing of storm water practices to insure a consistent and meaningful evaluation. The process was developed by several states working in conjunction with one another and has been officially endorsed by California, Massachusetts, Maryland, New Jersey, Pennsylvania and Virginia. Once a TARP verification of 80% Total Suspended Solids removal has been documented Ohio EPA will accept use of the practice

for pollutant removal purposes. In most cases these types of practices do not address hydrologic issues and that may need to be addressed by a second BMP.

In regards to green roofs and pervious pavement, Ohio EPA currently does not have sufficient data to establish relationships between WQv and green roofs or pervious pavement. Although, reductions in the runoff coefficient for a site can be addressed thereby reducing the WQv for the site and the size of a structural BMP. It is important to note that green roofs or pervious pavement only address a portion of a site and not the entire site. The general permit would allow the use of green roofs and/or pervious pavement to satisfy the redevelopment criteria on a 1:1 area basis.

Comment 63: **Other states offer design criteria for BMPs, including those listed as "alternative". Why not Ohio?**

Response 63: Ohio EPA plans to develop a list of approved BMPs as alternative controls are verified through acceptable protocols. Ohio EPA does, however, recognize that site specific restrictions will apply.

Comment 64: **The general permit requires studies to be performed if storm water will discharge to wetlands. Many wetlands in central Ohio are small, isolated areas, often no larger than a tenth of an acre. Will discharges potentially affecting all wetlands be subject to additional study?**

Response 64: Part III.G.2.h of the general permit mirrors the statewide construction storm water general permit. This section is applicable for concentrated storm water runoff from BMPs to all natural wetlands.

Comment 65: **Comments were opposed to the draft permit language requiring that permittees demonstrate that a maintenance agreement is in place to ensure all post-construction BMPs are adequately maintained in perpetuity. Permittees can prepare maintenance plans and assure that the next operator is fully aware of the procedures, but it is impractical for the permittee to ensure that BMP actually gets maintained.**

Response 65: The general permit has been revised to clarify who is responsible for BMP maintenance after permit coverage has been terminated. The original language was meant to say that the original permit holder is not responsible for post-

construction BMP maintenance once coverage is terminated, but the permittee is responsible for ensuring a system is in place to ensure that maintenance will be performed after permit coverage is terminated. The permittee is required to establish a stand alone document with appropriate maintenance criteria, which is legally binding, and turn it over to the entity who will be responsible for future, after termination of general permit coverage, maintenance of the BMP.

Comment 66: **It is essential that the final permit specifically identify all requirements to allow the building industry to evaluate projects. For example, at the April 30, 2008 public hearing it was stated that for areas such as runoff from backs of lots an undefined "slope factor" may be applied to riparian setback areas to aid in satisfying post-construction requirements. Yet, this slope factor is not mentioned in the draft permit.**

Response 66: This alternative BMP will be added to Ohio EPA's Post-Construction Question & Answer document on our website: http://www.epa.state.oh.us/dsw/storm/CGP-PC-Q&A.html

Comment 67: **What is "infeasible" to allow off-site mitigation? Is this based strictly on a case-by-case basis, and if so, how will the agency keep up with requests?**

Response 67: The intent is to evaluate the potential for offsite mitigation on a case-by-case basis given the site specific nature of each site. Given the general permit requires the submittal and approval of all Storm Water Pollution Prevention Plans; these requests could be readily evaluated.

Comment 68: **This permit seems to make experimenting with any innovative techniques for post-construction storm water management cumbersome. This will likely deter anyone from using innovative techniques.**

Response 68: Ohio EPA encourages the use of the structural post-construction BMPs listed in Table 2 of the general permit because those BMPs have a proven performance history of improving water quality and reducing hydrologic impacts to receiving streams. Also, maintenance procedures are readily available and relatively straight forward to perform. In order to use alternative BMPs the permittee must first evaluate the feasibility of implementing the Table 2 BMPs on their individual project. If the permittee believes the Table 2

BMPs are infeasible for a particular project, the permittee may propose alternate controls to Ohio EPA for approval.

Ohio EPA is first requiring that claims regarding the effectiveness of alternative BMPs be verified through The Technology Acceptance Reciprocity Partnership (TARP) protocol for Stormwater Best Management Practices Demonstrations. TARP sets standards for testing of storm water practices to insure a consistent and meaningful evaluation. The process was developed by several states working in conjunction with one another and has been officially endorsed by California, Massachusetts, Maryland, New Jersey, Pennsylvania and Virginia. Once a TARP verification of 80% Total Suspended Solids removal has been documented Ohio EPA will accept use of the practice for pollutant removal purposes. In most cases these type of practices do not address hydrologic issues and that may need to be addressed by a second BMP.

Comment 69: **It was suggested that the combination of impervious area reduction and water quality treatment equal 50% (instead of 20%).**

Response 69: This comment was evaluated but no changes to the general permit will be made.

Comment 70: **The post-construction requirements contradicts the implied importance of managing all storm water discharge from construction activity by allowing Ohio EPA to selectively disregard the direct discharge of storm water from certain sites in exchange for mitigation efforts on other sites within the same tributary area.**

Response 70: Mitigation will be reviewed on an individual basis to determine the appropriateness of the mitigation alternative. It is important to note the permittee must demonstrate on-site BMPs are not feasible.

Comment 71: **Table 2 excludes manufactured storm water treatment systems. These devices are critical for developing the small 1 to 5 acre projects. In combination with a MS4 operator's operation and maintenance program, these units are a practical and effective means to address post-construction water quality treatment.**

Response 71: In regards to post-construction requirements, the Olentangy general permit mirrors the requirements of the Statewide construction storm water general permit. When establishing post-construction BMP requirements, Ohio EPA did draw a distinction between small construction sites and large construction sites, however, this does not mean that structural post-construction BMPs are inappropriate for small construction sites. In fact, several structural post-construction BMPs such as sand filters, bioretention cells and infiltration trenches are designed to control drainage areas no larger than 5 acres.

The distinction between "small" and "large" construction sites was made to allow more flexibility in BMP selection for small sites. Small construction sites are defined as those where the larger common plan of development or sale is from 1 to 5 acres of earth disturbance. Large construction projects are those that result in disturbances of 5 or more acres in the larger common plan of development or sale. Structural post-construction BMPs are required on all large construction projects and will also be used on most small construction projects as well.

Post-construction BMPs are required on small construction sites. The post-construction BMPs that will be installed must still address the anticipated impacts on the channel and floodplain morphology, hydrology and water quality. BMPs should be selected to treat the pollutants and storm water concerns associated with the proposed land use. Ohio EPA believes that this goal is best reached by implementing the BMPs listed in Table 2 of the general permit. However, because Ohio EPA does not explicitly require that BMPs selected for small construction sites be designed to treat the WQv and drain it down over a prescribed time period, alternative BMPs may be selected for use on these sites.

In some instances, a strictly non-structural approach may be appropriate. This allows the SWP3 designer greater flexibility in selecting BMPs. However, if the BMP selected for use on a small site is one found in Table 2 of the general permit, the WQv and drain down criteria should still be applied to the design of the BMP to assure proper operation. Velocity dissipation devices must be placed at discharge locations and along the length of any outfall channel to provide non-erosive flow velocities from the site. Examples of BMPs that may be suitable for small construction sites include conservation easements, riparian setbacks, vegetative filter

strips, preservation of green spaces, grassy swales, infiltration trenches, sand filters, bioretention cells, rain barrels, use of permeable pavements, roof gardens, catch basin inserts, hydrodynamic separators, and/or media filters.

Comment 72: **Variables such as soil type greatly impact the ability to use some of the suggested measures. Infiltration basins are an impractical technology to include as a primary BMP for many Ohio areas under development where impermeable clay soils are not conducive for this design.**

Response 72: Ohio EPA believes in the situation described amendable soils could be used in conjunction with an underdrain system making infiltration BMPs a viable option.

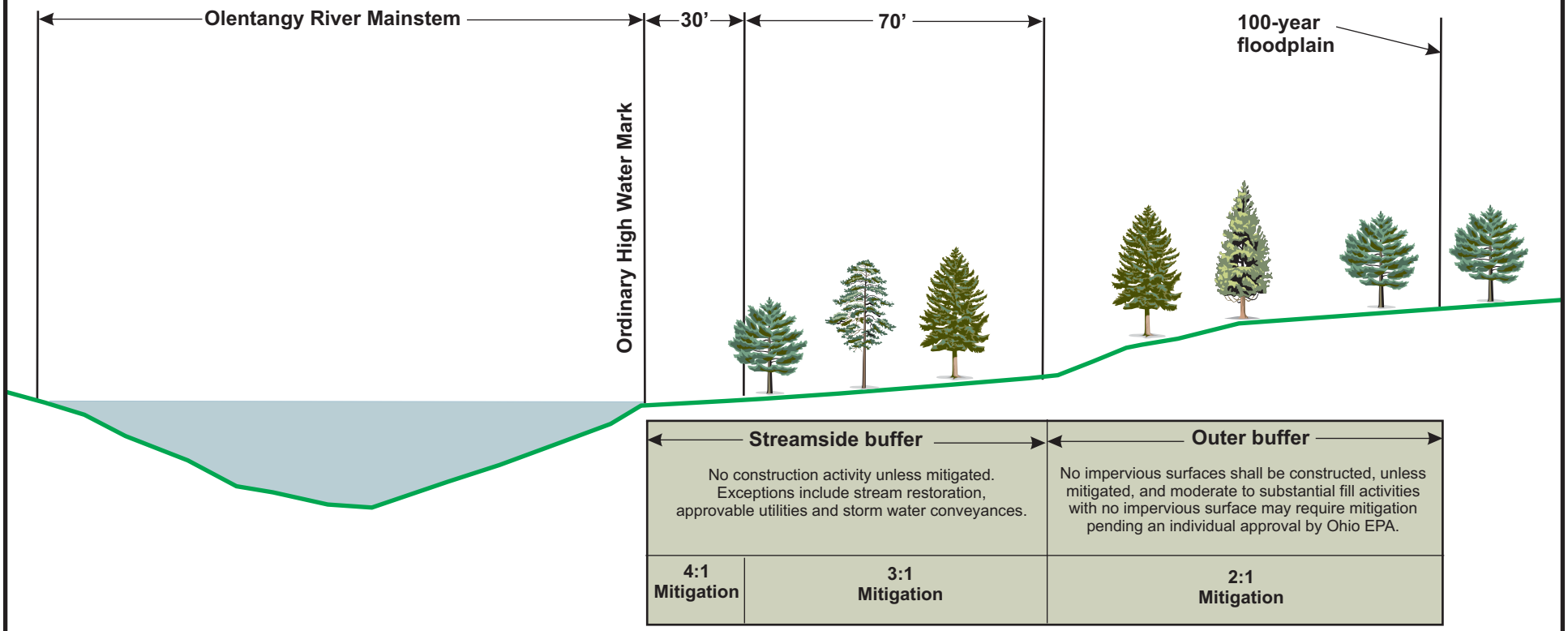
Comment 73: **FAA requirements discourage the use of wet basins near airports. How will the permit account for this?**

Response 73: Alternative BMPs will be considered on a case-by-case basis.

Comment 74: **It was suggested that the permit will limit BMPs to mostly wetland type structures. The question is whether or not these man-made wetlands can then by disturbed for maintenance, road projects or relocation without extensive permitting and mitigation.**

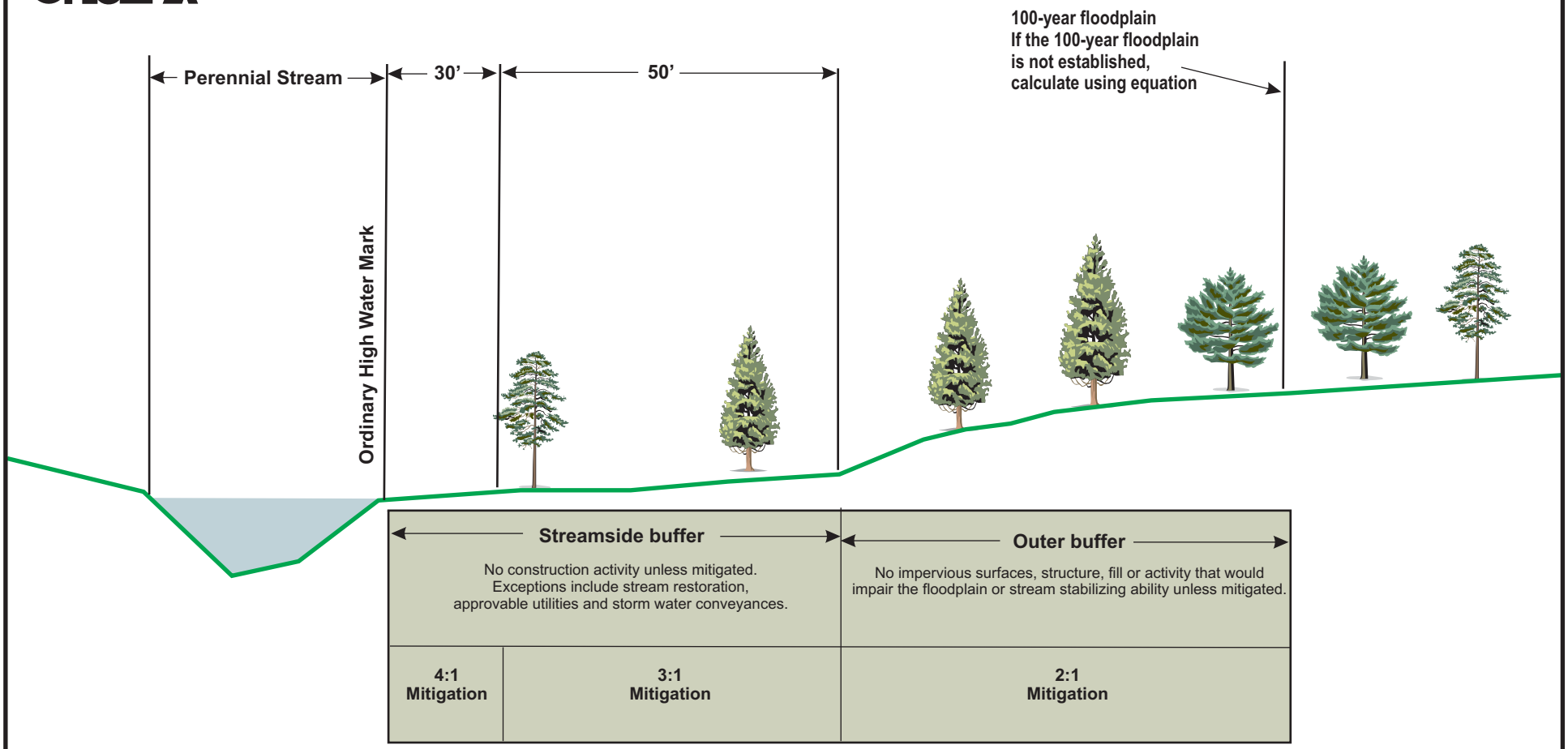
Response 74: If the man-made storm water wetland is design and built as a post-construction water quality practice, it would not be subject to mitigation in the event of maintenance, relocation, or replacement.

End of Response to Comments



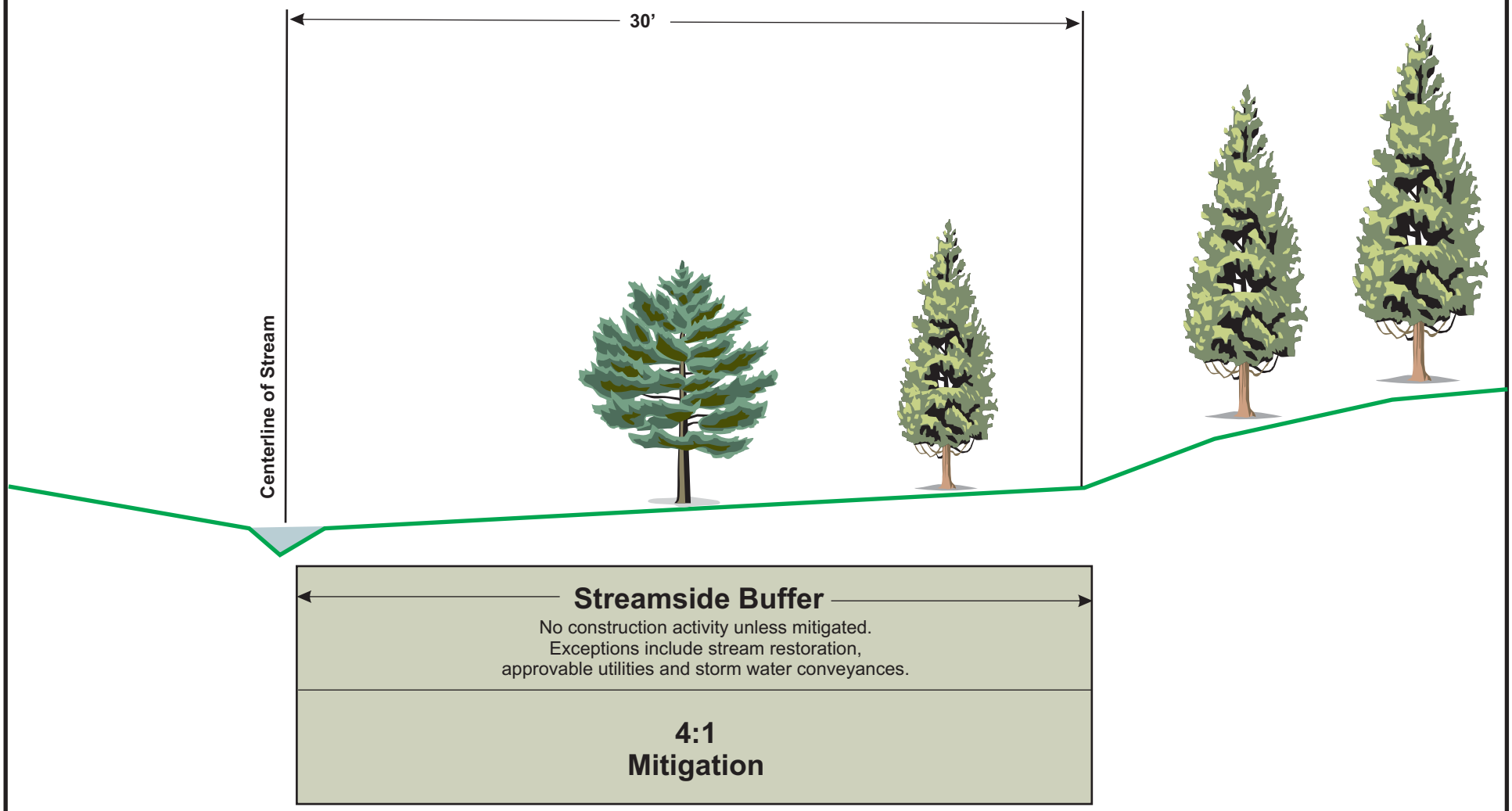
- Mitigation required within same Watershed Assessment Unit (14-digit HUC scale).
- Mitigation can be reduced by 50 percent if within the watershed of the immediate receiving stream and the entire setback is protected.

Figure 1: Olentangy River Mainstem Riparian Setback



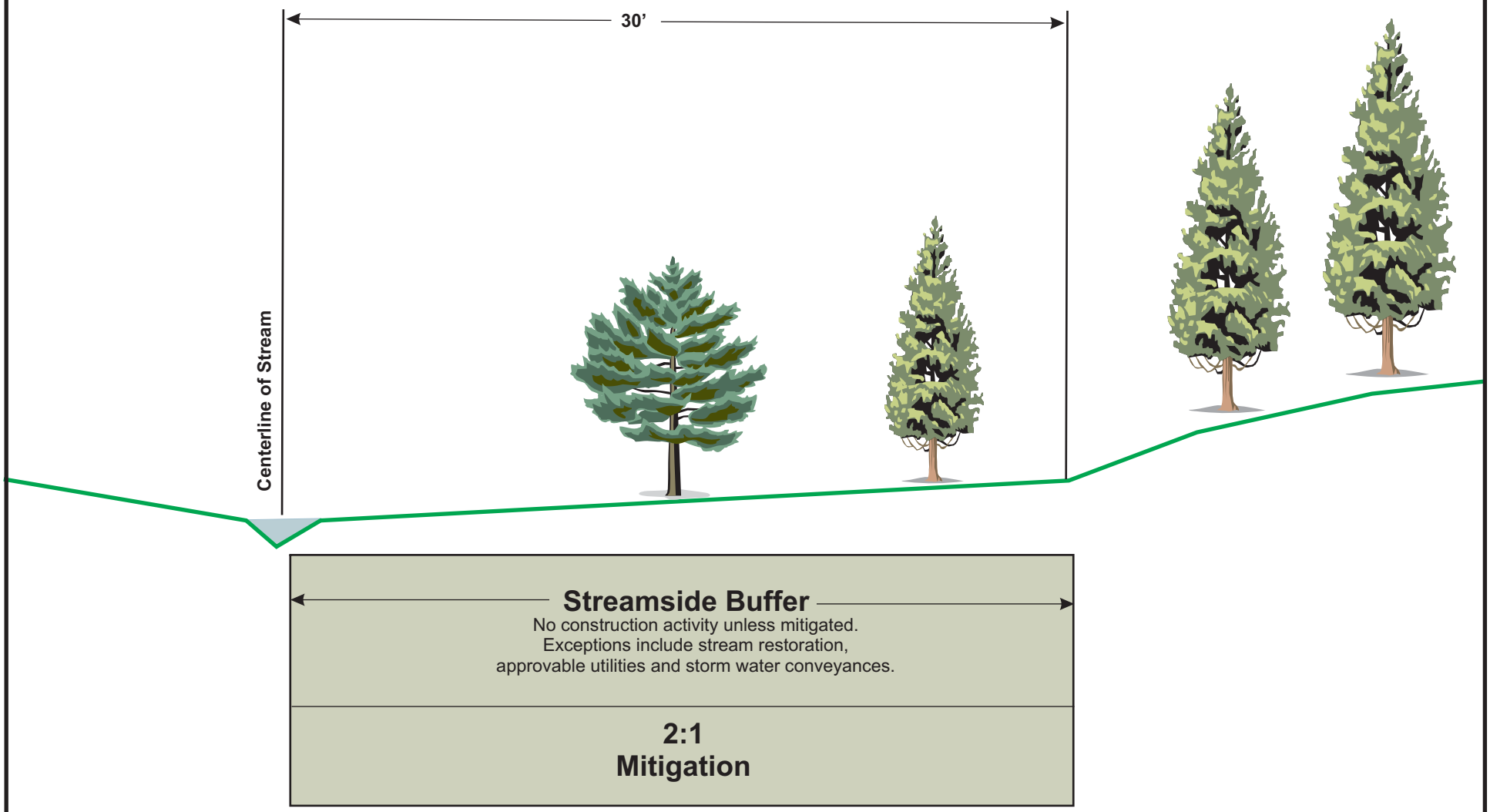
- Perennial streams have continuous flow on either the surface of the stream bed or under the surface of the stream bed.
- Mitigation required within same Watershed Assessment Unit (14-digit HUC scale).
- Mitigation can be reduced by 50 percent if within the watershed of the immediate receiving stream and the entire setback is protected.

Figure 2: Perennial Streams Riparian Setback



- Intermittent streams flow for extended periods of time, seasonally of a typical climate year.
- Mitigation required within same Watershed Assessment Unit (14-digit HUC scale).
- Mitigation can be reduced by 50 percent if within the watershed of the immediate receiving stream and the entire setback is protected.

Figure 3: Intermittent Streams Riparian Setback



- Ephemeral streams are normally dry and only flow during and after precipitation runoff (episodic flow)
- Mitigation required within same Watershed Assessment Unit (14-digit HUC scale).
- Mitigation can be reduced by 50 percent if within the watershed of the immediate receiving stream and the entire setback is protected.

Figure 4: Ephemeral Streams Riparian Setback