

1.6 Wetland Setback



Description

A wetland setback is area surrounding an existing or created wetland that is left in or restored to a natural vegetated state. Wetlands provide beneficial stormwater management services including runoff and snowmelt storage, ground water recharge, and pollutant removal in addition to providing essential for nesting and breeding for many aquatic and terrestrial organisms. However, most natural wetlands have been formed under conditions of less stormwater pollution and drainage area imperviousness. A setback helps preserve the wetland's natural hydrology and water level fluctuations; filters suspended solids, nutrients, and other pollutants from incoming stormwater runoff; and provides a buffer from more intensive land uses to reduce the adverse impacts of human disturbance. These are wetland protections that support its stormwater management benefits as well as ecological integrity but are not afforded by state and federal wetland regulations. Note that setback guidelines for wetland mitigation banking and in-lieu fee programs may differ from this practice.

Planning and Feasibility

Wetland setbacks are appropriate on any land surrounding a wetland that receives runoff from urbanization. Wetland setbacks can be utilized in a low impact or conservation development design plan, as part of the regulatory permitting process, or normal site design planning.

Wetland setbacks are applicable where the site designer has the objective of converting concentrated discharge from stormwater practices to diffuse sheet flow before it enters the wetland, mimicking the predevelopment hydrology, reducing the stormwater volume, and maintaining natural features.

For proposals to impact water resources, the U.S. Army Corps of Engineers (Corps) and Ohio EPA both utilize a three-tier approach that consists of avoidance, minimization, and mitigation. Wetland setbacks can be a vital part of these proposals. Establishing wetland setbacks and the associated protection of wetland resources may also be used to demonstrate avoidance of impacts as part of a wetland permitting process.

Wetland setbacks may be applied to ponds, lakes, and water quality ponds but may need to have maintenance access incorporated into the setback area.

Design Criteria

Define the Wetland Boundary

Wetland boundaries are determined by utilizing the delineation protocols acceptable to the Corps at the time. Delineations must be submitted to the Corps for concurrence. Wetland setbacks should be measured in a perpendicular direction from the defined wetland boundary.

Evaluate Wetland Quality Category

Ohio EPA wetland categories are used to determine the width of the wetland setback. These are general characterizations of a wetland's quality determined using the most recent version of the Ohio Rapid Assessment Method as guidance. Ohio EPA wetland categories are defined in the Ohio Administrative Code (OAC) 3745-1-54 as:

- Category 1 - wetlands considered low-quality providing the least public health, habitat, or safety services;
- Category 2 - wetlands of moderately high quality and may be good candidates for wetland enhancement; and
- Category 3 - wetlands considered to be the highest quality.

Category 1 wetlands often provide minimal habitat, hydrologic, and recreational functions. The degradation of these resources is often due to the lack of a setback, thus establishing a setback from these resources may promote the restoration of these wetlands.

Maintain Hydrology

Determine the hydrologic inputs to the wetland, whether overland flow, streams, lakes, or springs. These inputs must either be maintained or substituted for other hydrologic inputs. Incorporating wetland hydrologic sources into the setback may be necessary to protect the integrity of the wetland.

Setback Width

The setback width differs with the functional capacity of the wetland. Table 1.6.1 establishes the width of setback surrounding the wetland given its category.

Note that under Ohio Administrative Code 3745-1-54, upland buffers adjacent to category 2 or category 3 wetlands that are avoided for a project can receive limited mitigation credit. The minimum setback widths in Table 1.4.1 for category 2 or category 3 wetlands will meet or exceed those minimums.

Table 1.6.1

Ohio EPA Category (or equivalent classification)	Minimum Setback Width
Category 1 wetland	25 feet
Category 2 wetland	75 feet
Category 3 wetland	120 feet

Adjustments to the Setback Width

The wetland setback widths given in this practice offer minimum protection and should be considered for expansion if any of the following conditions apply.

- Areas crucial to the hydrology of the wetland (for example springs, floodplains, or streams extend beyond the standard wetland setback) should be considered for incorporation in the setback area. Maintaining the hydrologic support for the wetland is critical to continuing its function.
- The wetland is a rare, sensitive, or high-value wetland. These wetlands need greater buffer widths to ensure protection of the current quality.
- Habitat protection, either of wetland species or species that utilize the wetland, is a major objective. Greater than 100 feet is recommended, but wildlife expertise may be necessary to determine the conditions and width needed for the particular species.
- Areas that are steep or sparsely vegetated will have lower effectiveness in providing water quality protection for adjacent wetlands and therefore should be expanded.

Vegetation

A wetland setback may be forest or herbaceous vegetation, preferably of native species. It may be established from existing or planted vegetation.

Construction Considerations

Establish a wetland setback prior to any soil disturbing activities. The setback area should not be disturbed except for planting or to remove invasive species. Use proper sediment and erosion controls to prevent construction sediment from fouling the setback area.

When planting, use a diverse selection of native species conducive to a transitional and upland landscape and appropriate to the regional climate.

Maintenance Considerations

Preserve a wetland setback in a natural state. Conduct routine inspections to ensure a wetland setback has not been mowed, treated with herbicide (except as used to control invasive species), or developed.

A wetland setback and the wetland it surrounds should be placed in a conservation easement to protect these resources in perpetuity. Easements should be regularly monitored, addressing any easement agreement violations.

Local Implementation Tools

Wetland setbacks can be used to protect water quality and water resources in a local community's NPDES Phase II stormwater program or as part of their land use planning. Maintaining functional wetlands ensures that the natural services provided by wetlands are not lost or transferred out of their watershed through mitigation. Local planning officials should consider how to facilitate wetland setbacks through various tools including wetland identification, landowner assistance, land acquisition, zoning code, and local setback ordinances.

Publicly available resources can help a community produce planning or land use maps that identify where wetlands and wetland setbacks are most likely to be applied. The Natural Resource Conservation Service and the local soil and water conservation district provide soils maps and a list of hydric soils. National Wetlands Inventory (U.S. Fish and Wildlife Service) and Ohio Wetlands Inventory (Ohio DNR) maps may also be useful in finding wetland locations for planning purposes. Note these maps are not appropriate for making wetland delineations. Wetland delineation information is available from Ohio EPA and Corps.

A community can facilitate wetland setbacks and other wetland management by connecting interested landowners to available county, state, and federal conservation services. These organizations can advise landowners on what to plant near wetlands, where to locate soil disturbing activities to minimize short- and long-term damage to these services, and any applicable local, state, or federal regulations that may apply to an activity the landowner wishes to undertake.

A community may seek to acquire properties that include wetlands that providing flood control, erosion control, water quality protection, or habitat services either through direct purchase of land, conservation easements, or some other form of permanent preservation. This approach is appealing to communities because it is non-regulatory and enables direct community control over local wetland resources.

Local zoning for wetland setbacks, unlike landowner assistance or land acquisition, allows communities to directly influence the location of new development and redevelopment. The goal of any zoning code that incorporates wetland setbacks is to ensure lots remain buildable and subdivision lot yields are maintained to the extent possible, while pulling soil disturbing activities back from wetland areas. Thus, zoning setbacks should be flexible to allow variances to other zoning setbacks, such as front and side yard setbacks, to allow site designers to maintain development lot yields. The disadvantages of implementing wetland setbacks through zoning controls are that it is an additional regulation and requires community staff to develop and implement. Local zoning regulations must detail the public health and safety functions of the community's wetlands including flood control, erosion control, and water quality protection, and must be built on technical information supporting these services from the lands being regulated.

Finally protect wetland setbacks and the wetlands they surround by placing these areas under a conservation easement. Note that deed restrictions are much less protective since a judge can abolish them at the request of a landowner without public notice. Regional planning agencies and watershed organizations may also be able to assist in establishing local ordinances and resolutions that maintain wetlands within developing communities.

References

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