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. It supports the wetland's stormwater management benefits as well as ecological integrity, but it is not a protection afforded by state and federal wetland regulations. The natural functions of a wetland, which determine its quality and utility to stormwater, depend on a complex relationship with its upland drainage area. When the upland drainage area becomes developed with more intensive land uses, a setback helps preserve a wetland's natural hydrology and water level fluctuations; filters suspended solids, nutrients, and other pollutants from incoming stormwater runoff; and buffers the adverse impacts of human disturbance within the drainage area.

Planning and Feasibility

This practice is 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 with traditional site design planning.

Where a stormwater management practice discharges to a natural wetland, a setback helps mimic the wetland's predevelopment hydroperiod and hydrodynamics. A setback is an integral part of converting concentrated inflow to diffuse flow and reducing the stormwater volume before it enters the wetland.

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. Note that setback guidelines for wetland mitigation banking and in-lieu fee programs may differ from this practice.

Wetland setback criteria may also be applied to ponds and lakes but may need to incorporate maintenance access.

Design Criteria

The Wetland Boundary

Wetland boundaries are determined by utilizing delineation protocols acceptable to the Corps and must be submitted to the Corps for concurrence. Measure a wetland setback perpendicular to the defined wetland boundary.

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 Wetland Hydrology

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

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 1.6.1 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 Table 1.6.1 offer minimum protection. Consider extending the standard wetland setback where any of the following conditions apply:

- areas vital to the hydrology of the wetland and continuing its function (for example springs, floodplains, or streams) that extend beyond;
- the wetland is rare, sensitive, or of high value;
- habitat protection, either of wetland species or species that utilize the wetland, is a major objective (greater than 100 feet is recommended, but consult wildlife experts to determine the conditions and width appropriate for the species of interest); or
- steep or sparsely vegetated buffer area which will be less effective in providing water quality protection.

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 the 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 with any easement agreement violations promptly addressed.

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 the 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 providing critical 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. Regional planning agencies and watershed organizations may be able to assist in establishing local ordinances and resolutions.

References

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