

WSDOT Guidance on Wetland Mitigation Site Evaluation Matrix

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Physical Setting Criteria

Proximity to impact area: Identify where the mitigation site is located within relation to the impact area(s). Mitigation sites that are near the impact area are typically more desirable.

Ability to satisfy mitigation area needs: This criterion rates the site's ability to adequately provide sufficient mitigation area. For projects requiring a single mitigation site, identify the site's potential to provide adequate and additional mitigation area. This criterion is not applicable if the project requires more than one mitigation site to meet its permitting needs.

Ability to provide same HGM classification: Enter score as described. Note: The score for this criterion is "not applicable" for projects with impacts to "slope" or "flat" HGM class wetlands, or projects proposing out of kind mitigation.

Biological/Watershed Criteria

Proximity to highway or major road: This criterion will identify the relative location of existing roads to the mitigation site. Since highways located near the mitigation site can have detrimental affects on wetland functions, these sites will score lower. This is a variable scoring criterion requiring the biologist to assess the level of disturbance.

Adjacent land use: This identifies potential disturbance to the mitigation site from adjacent land uses. The scoring is somewhat variable, e.g., multifamily residential may score lower whereas residential with 1 dwelling per 5 acres may score higher.

Landscape position: Identify the site location within the watershed. Sites lower in the watershed have the ability to provide greater hydrologic functions than those at higher locations.

Connectivity to Category I or II wetlands: This identifies connectivity to highly rated wetlands. Use the same guidance found in the Ecology Wetland Rating Form to determine the scoring.

Connectivity to watercourses: This identifies connectivity to drainages, streams, and other watercourses. Sites that are located near watercourses typically have the opportunity to provide higher functions and may have more reliable sources of hydrology. However, sites receiving floodwaters from fish-bearing streams need to be designed so that fish entrapment does not occur.

Buffer vegetation present: Sites possessing a more complex vegetated buffer community typically provide higher buffer functions and can increase some wetland wildlife habitat functions sooner than those with less complex communities. The mature buffer vegetation may also provide a seed source for

the wetland area. Evaluate the quality of the buffer vegetation and multiply it by the buffer width factor to determine the score.

Ability to provide flood storage: This variable score criterion identifies the site's ability to provide flood storage functions. Use your judgment to assess the site's ability to perform this function.

Site Success/Risk Criteria

Mitigation type available: This criterion identifies risk and cost by mitigation type. Wetland re-establishment is the most successful type and is generally less costly to construct and maintain and, therefore, scores higher than other types of mitigation.

Hydrology source: This criterion rates potential hydrologic sources available for the mitigation site. Sites that have access to multiple hydrologic sources including groundwater are generally more successful and stable than those with fewer and no groundwater sources. Sites relying on precipitation and/or surface flows exclusively typically involve more risk since these sources of hydrology are less reliable.

Soil type suitable to support plant growth: A variable scoring criterion that is dependent on the existing soils and its ability to support vegetation. For example, sites with gravelly soils will score lower than sites possessing loam soils.

Hydric soils present: Sites with existing hydric soils indicate that hydrology was present in the past and that the site was probably wetland. Verify by on-site observation.

Presence of invasive species on adjacent property or upstream: Vegetation establishment on sites with invasive species present on adjacent or upstream properties may be more difficult than sites without. The presence of invasive species will also increase site management costs. This is a variable scoring criterion. Use best professional judgment to determine the level of risk. For sites with a stream component, identify upstream sites with invasive species. Invasive species noted include reed canarygrass (*Phalaris arundinacea*), blackberry (*Rubus* spp.), Scot's broom (*Cytisus scoparis*), thistle (*Cirsium* spp.), Japanese knotweed (*Polygonum cuspidatum*), purple loosestrife (*Lythrum salicaria*), and other invasive species that require control.

Presence of invasive species on-site: Vegetation establishment on sites with invasive species present may be more difficult than sites without. The presence of invasive species will also increase site management costs. Identify approximate coverage of reed canarygrass, blackberry, Scot's broom, thistle, Japanese knotweed, purple loosestrife, and other invasive species that require control.

Site Constructability/Cost Criteria

Construction access: Mitigation sites need a permanent vehicular access. Identify the relative ease of access by construction, maintenance, and monitoring vehicles and equipment.

Excavation required to establish wetland hydrology: Sites requiring extensive excavation are more expensive to construct. To make this determination, rely on water levels in on-site wetlands and streams, pothole information, groundwater monitoring data, or soil moisture observations obtained with bucket auger.

Level of buffer enhancement required: Sites without established buffer vegetation will be more expensive to develop. Determine the level of enhancement required for the full buffer width around the entire site.

Buffer area to wetland mitigation area ratio: Mitigation site buffer vegetation can be more expensive to establish than wetland vegetation. Also, higher buffer to wetland area ratios are more expensive to develop. Using one mitigation site for multiple projects is more cost effective requiring a smaller mitigation area footprint than that required for multiple mitigation sites.

Do existing soils support intended hydrologic source?: Evaluate the existing soil conditions in relation to the intended source of hydrology. On sites that possess difficult soil conditions in relation to the intended hydrologic source, a low score is appropriate. For example, a site which possesses deep sandy and/or gravelly soils and relies on surface water flows as a hydrologic source to establish a depressional wetland would score low. A site like this would likely require a clay liner to retain hydrology to support wetland conditions.

Potential Wetland Functions

Identify the potential wetland functions available on the mitigation site. If an on-site wetland exists, evaluate the existing wetland functions. If no wetland exists, identify the potential wetlands functions and potential value of the functions. Use the BPJ as guidance for both existing and gain. If the site is chosen, a more complete functional assessment will need to be completed using the Ecology Rating Form. Refer to the WSDOT Wetland Mitigation Process and Wetland and Stream Mitigation Report Template for guidance.

Comments

Insert any comments about the mitigation site, such as existing site conditions, vegetation, adjacent land use, invasive species, site structures, etc. If the site has been potholed or soils data collected by bucket auger, include data here or on additional sheets.