

8420.0528 REPLACEMENT WETLAND CONSTRUCTION STANDARDS.

Subpart 1. **General requirement.** The standards and guidelines in this part must be followed in wetland creation and restoration efforts to ensure adequate replacement of wetland function and value.

In evaluating a proposed replacement or banking plan application, the local government unit must determine that the plan will adequately replace the public value of wetlands lost. If the local government unit determines that the proposed replacement is not likely to result in adequate replacement of function and public value, the local government must either require modifications necessary to obtain adequate replacement or deny the application.

Subp. 2. Design requirements.

A. The standards in this subpart must be met for all replacement wetlands unless the local government unit, with concurrence of the technical evaluation panel, determines that a standard is clearly not appropriate.

B. Water control structures must be constructed using specifications provided in the Minnesota Wetland Restoration Guide or their equivalent. Control structures may be subject to the Department of Natural Resources dam safety regulations.

C. Best management practices must be established and maintained at the replacement site as necessary to protect the replacement wetland and other waterbodies. Erosion control measures must be employed during construction and until permanent ground cover is established.

D. Native, noninvasive vegetation must be established in restored and created wetlands. Each replacement or banking plan must include a vegetation establishment and management plan. The vegetation establishment and management plan must include a goal of, and specific provisions for, establishing plant communities that correspond to the hydrology and landscape position of the replacement site. If the replacement wetland is seeded or planted, the seed or planting stock should be from native, noninvasive species in accordance with the Minnesota Wetland Restoration Guide. In evaluating the vegetation establishment and management plan, the local government unit must determine that implementation of the plan is likely to result in establishment of the appropriate native, noninvasive vegetation within the monitoring period. During the monitoring period, the applicant must take reasonable steps to control invasion by any nonnative or invasive species.

E. The bottom contours of created types 3, 4, and 5 wetlands must provide a variety of water depths, comparable to natural wetlands in the vicinity of the replacement, and be consistent with part 8420.0522, subpart 5.

F. The edge of created or graded wetlands must be comparable to other naturally occurring wetlands of similar hydrologic condition and landscape position in the major

watershed. Sideslopes of created wetlands, graded portions of restored wetlands, and graded buffer strips, must not be steeper than 8:1, eight feet horizontally for every one foot vertically, or flatter, unless the technical evaluation panel concurs that steeper slopes are acceptable based on the surrounding landscape and the characteristics of other naturally occurring wetlands in the vicinity. Sideslopes of 10:1 to 15:1 are preferred.

G. Treatment of runoff before discharge to replacement areas is required to improve sustainability and minimize degradation of the wetland over time. The replacement area must be physically separated from any water quality treatment system. "Treatment of runoff" under this part means:

(1) any part of a storm water treatment system needed to comply with water quality treatment requirements of state or local storm water permits or ordinances, provided the treatment system is physically separated from the replacement wetland; or

(2) when water quality treatment is not required by state or local permits or ordinances, the installation of appropriate best management practices, to the extent practicable and feasible, to protect long-term wetland function.

H. For projects that contain elements that include dams, dikes, or other impoundment features, the construction plans must be designed, overseen, and certified by a registered professional engineer.

Subp. 3. **Design considerations.** The following replacement wetland design elements must be considered for replacement wetlands and incorporated to the extent practicable and feasible:

A. restored wetlands should emulate the hydrology and vegetation of the presettlement wetland condition;

B. expanded buffers should be incorporated into the design of replacement wetlands in areas where there is a high potential for erosion and the buffer will improve slope stability or when necessary to provide wildlife habitat corridor connections with other wetlands or habitats;

C. measures should be taken to manage hydraulic bounce as indicated in the guidance document under part 8420.0112, item N; and

D. for all restored wetlands where the original organic substrate has been stripped away and for all created wetlands, the organic substrate must be sufficient to establish a functioning wetland and to accomplish the goals of the replacement or banking plan. When feasible, organic soil used for backfill should be salvaged from the impacted wetland for utilization in the replacement wetland. Organic soil for backfill from wetlands dominated by nonnative or invasive species should be avoided.

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