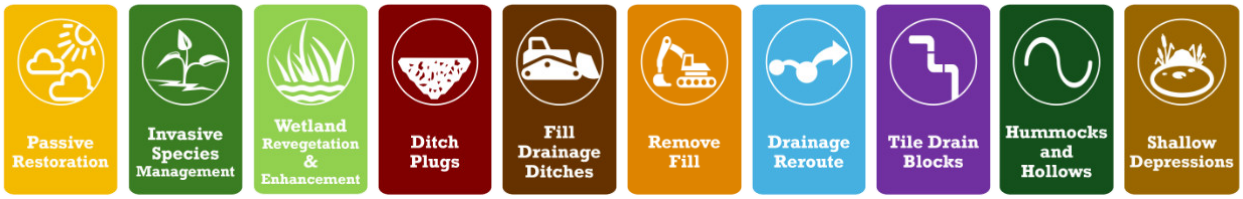
Chapter 3. Wetland Restoration Practices



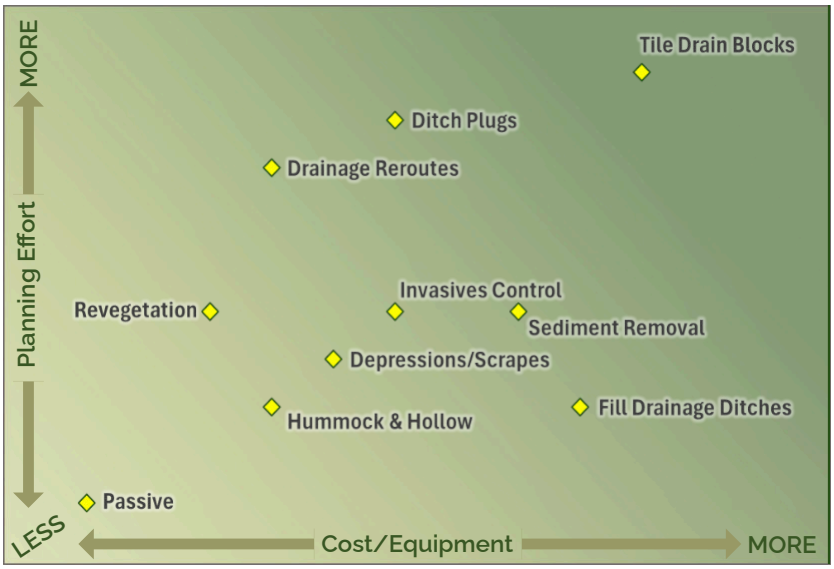
Healthy wetland ecosystems are resilient and self-sustaining, whereas degraded wetlands respond poorly to environmental stress. Wetland restoration strives to reestablish healthy conditions in degraded systems by implementing design practices that promote natural structures, composition, and processes.

Restoration practices can be divided into passive and active practices. Passive wetland restoration involves removing the source of wetland degradation without otherwise intervening. In some cases, this is all that is needed for successful restoration. Active wetland restoration involves physical onsite intervention and is appropriate when simply removing the source of degradation is not sufficient for recovery.

This chapter presents a selection of common restoration practices recognized by regulatory and conservation agencies in Vermont. These practices rely on straightforward, low risk methods and natural materials. Each section provides pre-construction planning and construction sequencing procedures for a particular restoration practice, along with clear details and specifications for implementation.

The chart below provides an estimated range of planning effort and cost for each primary practice on a scale of low, medium and high. In general, passive practices and revegetation require the least amount of planning effort and cost. Hydrologic manipulations, including ditch plugs and tile drain removal, involve the most pre-planning and expense. Practices can be used individually or in combination depending on the source and degree of impact, as well as the available physical and financial resources.

Cost/Planning Matrix



Depending on site conditions and desired outcomes, a wetland restoration project may only use one practice. In other cases, multiple practices may be employed at a single site. Combining practices can increase the time required for planning and implementation, but it can also lead to a more diverse and higher functioning wetland ecosystem. Strategically combining complementary practices (such as those that require excavating soil and depositing soil) can lead to significant cost savings.

Also included in this chapter are supplemental practices that may be appropriate components of a restoration plan, depending on the project. Supplementary practices include site stabilization procedures, woody material additions, beaver dam analogs, and conservation measures.