

CONSTRUCTED WETLAND

PRACTICE INTRODUCTION

USDA, Natural Resources Conservation Service—Practice Code 656



CONSTRUCTED WETLAND

A constructed wetland is an artificial ecosystem consisting of a shallow basin established with hydrophytic vegetation that is constructed to intersect and treat the flow of a waste stream or contaminated runoff.

PRACTICE INFORMATION

Constructed wetlands are used to treat wastewater and contaminated runoff from agricultural processing, livestock, and aquaculture facilities or for improving the quality of storm water or other water flows lacking specific water quality discharge criteria.

For the constructed wetland to work properly, inlet control is provided to prevent debris from entering the wetland, and outlet control is provided to maintain appropriate water depths for wetland vegetation and the design hydraulic retention time.

The constructing wetland is a discharging practice, and therefore, the discharge must either be captured elsewhere in the wastewater treatment system or discharged to the ecosystem in a manner consistent with discharge permit requirements.

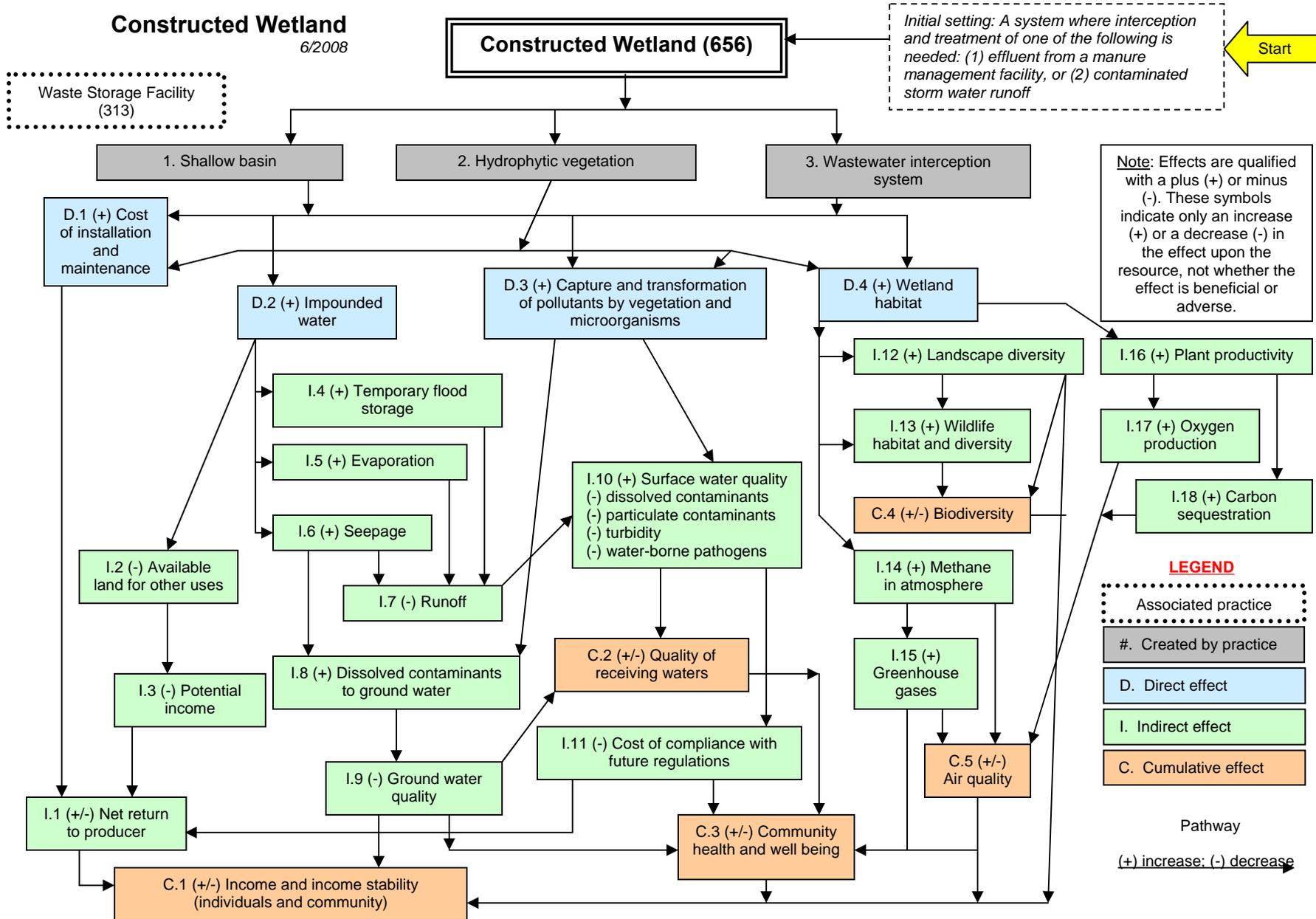
Wetland plants are established that are suitable for local climatic conditions and tolerant of the contaminated flow the wetland is designed to attenuate. Invasive or nonnative species that could become a problem in the native habitat are not used.

COMMON ASSOCIATED PRACTICES

A constructed wetland is commonly planned as part of a Conservation Management System with Waste Storage Facility (313), Waste Utilization (633), Critical Area Planting (342), Nutrient Management (590), Solid/Liquid Separation Facility (632), and other conservation practices.

For further information, refer to the practice standard in the local Field Office Technical Guide and associated job sheets.

The following page identifies the effects expected to occur when this practice is applied. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowners and are presumed to have been obtained. Users are cautioned that these effects are estimates that may or may not apply to a specific site.



The diagram above identifies the effects expected to occur when this practice is applied according to NRCS practice standards and specifications. These effects are subjective and somewhat dependent on variables such as climate, terrain, soil, etc. All appropriate local, State, Tribal, and Federal permits and approvals are the responsibility of the landowner and are presumed to have been obtained. All income changes are partially dependent upon market fluctuations which are independent of the conservation practices. Users are cautioned that these effects are estimates that may or may not apply to a specific site.