



SUMMARY OF KEY HABITAT DESIGN STANDARDS FOR THE CONSTRUCTION AND IMPROVEMENT OF WETLANDS WITH CAPABILITIES FOR TRUMPETER SWAN PRODUCTION

WETLAND SIZE AND WATER DEPTHS

Provide at least 5 acres of shallow wetland water with depth ranges of 6-42 inches. Open water areas of 8-15 surface acres in size as one water body or in an inter-connected complex are preferred.

SHORELINE CONFIGURATION AND CHARACTERISTICS

Provide irregular shaped shorelines and peninsulas and bays. The larger the open water wetland area, the more irregularity can be designed into the shoreline. All slopes should be designed and constructed with gradual slopes of at least 5:1. Islands and impoundment structures that may be influenced by wave action and erosion should be protected by cobble rock riprap or sod removed during excavation.

DESIRED SUBSTRATES (BOTTOM SOILS) AND ASSOCIATED SUBMERGENT AQUATIC PLANTS

Soft substrates with 6 inches or greater depth are preferred. Cobble or gravel bottoms are not conducive to aquatic plant growth, and if present should be covered with at least 6 inches of soil. Before inundation disturb sod-bound soils and soils with excessive litter accumulation by disking or rototilling to provide a bare soil site more conducive for occupancy by rooted, submerged aquatic vegetation. In colder water environments with an over water covering, it takes a considerably long time for sods and coarse plant materials to decompose and provide a substrate conducive to submerged aquatic plant growth. Sago pondweed, muskgrass and Elodea are preferred submerged aquatic food species for trumpeter swans and also found throughout Wyoming.

WATER LEVEL MANAGEMENT AND WETLAND VEGETATION

Flow-through systems with some degree of water level control are preferred. Sufficient water should be available throughout the ice-free period to maintain relatively stable water levels and prevent summer stagnation. Natural over winter partial draw-downs in water level of a foot or less are acceptable, and in some cases complete over-winter draw-downs may be necessary.

NESTING AND LOAFING ISLANDS

Construct at least two low profile island sites with gradual contours of at least 5:1 slope, and a 100 square foot surface area two feet above the highest water line. Each island should be located no less than 50 feet from any land mass.

FLIGHT CORRIDOR SAFETY

Do not locate wetlands for swans and other water birds beneath overhead power lines or in wetlands crossed by fence lines. Power lines and fence lines located in or adjacent to probable flight corridors should be relocated if possible or made visible with markers.

Patla, S. and Lockman, D., 2004. Considerations and Prescriptions for the Design, Construction, and Management of Shallow Water Wetlands for Spring Through Fall Use by Trumpeter Swans (*Cygnus buccinator*) in Western Wyoming. Wyoming Game & Fish Department, Nongame.