

**Definition:** Moist-soil management is the drawdown of water to promote germination of native plants on exposed mudflats and the subsequent reflooding of same areas.

**Purpose:** Native plants favored by moist-soil management provide valuable food and cover for wetland wildlife species. Seasonally flooded moist-soil areas also provide an abundance of aquatic invertebrates used by wildlife. This practice provides food and habitat for waterfowl, wading and shorebirds, reptiles, amphibians, and other wetland species.

**Management:** The most important factor when managing moist-soil areas is the timing of the annual drawdown. Early season drawdowns occur within the first 45 days of the growing season, generally between March 15 and May 1 in Mississippi. Mid season drawdowns occur during the second 45 days of growing season, May 1 to July 15 in Mississippi. Late season drawdowns occur after July 15 in Mississippi. Early season drawdowns generally result in the most seed production. Mid to late season drawdowns tend to favor desirable grasses.

Length of drawdown can also affect vegetation response. Slow (2-6 weeks) drawdowns will produce a greater diversity of plants and can be achieved by removing one board from the water control structure every 4 to 10 days. Fast drawdowns typically produce stands of similar vegetation and are achieved by pulling all boards at once.

Moist-soil areas do not have to be completely drained. A partial drawdown (1/4 to 1/2 boards) of the area will provide moist-soil benefits while retaining late spring and summer habitat for wildlife. The remaining water may evaporate and provide conditions favorable for the continued germination of preferred moist-soil plants. A remnant pool may provide water for early migrants, such as teal, in late summer and early fall.

On properties with multiple moist-soil areas being managed, different drawdown rates and dates can provide maximum wildlife benefits. Because every site is different, it is important to keep records of drawdown dates and plant responses so that conditions produced one year can be reproduced or improved in subsequent years.

Timing of reflooding is important to assure habitat use. To provide habitat for teal and other early migrants, a few boards should be replaced between August 15 and September 15 in an effort to shallowly flood up to 25% of a moist-soil area. Between October 15 and December 15 the remainder of the boards should be replaced, one board every 7-10 days. This will allow new food and habitat to become available slowly. When multiple moist-soil units are available, some units should be flooded early and some should be flooded between October 15 and December 15 to provide continued food and habitat. When enough units are available, a unit can be reserved and flooded one board at a time between December 1 and January 1.

**Maintenance:** Moist-soil areas should be inspected weekly during the growing season for weed competition. Undesirables such as cocklebur and sesbania can quickly invade the area. When undesirable broadleaves cover 50% or more of the area they should be controlled by approved herbicide, disking, shredding, prescribed burning, and/or flooding. Contact the local NRCS or County Extension office for weed control recommendations.

Desirable seed producing plants tend to decrease each year an area is managed for moist-soil plants and the soil is undisturbed. Therefore, moist-soil areas should be disturbed by disking or prescribed burning every 2-3 years. This will also help to control the encroachment of undesired woody plants.

**Considerations:**

- A water control structure is needed for manipulation of water levels.
- Low permeability soils will inhibit subsurface water loss and assure proper water control.
- All federal and state laws shall be followed when managing moist-soil areas. When constructing a moist-soil area, NRCS and local Army Corps of Engineers District should be contacted for permit information.
- Rainfall is generally adequate, but a reliable water supply for flooding is desirable.

**Some Characteristics of Selected Moist-Soil Plants**

Plant	Germination			Best Seed Production			Moisture			Wildlife Value	
	Early	Mid	Late	Early	Mid	Late	Dry	Moist	Wet	Food	Habitat
Sprangletop			X			X		X		X	X
Crabgrass		X			X	X	X			X	X
Panicum grasses	X	X	X		X	X	X			X	X
Barnyardgrass	X		X		X	X		X		X	X
Spikerush	X	X	X	X	X	X	X			X	
Beakrush			X			X		X	X	X	X
Common rush			X	X				X	X		X
Redroot sedge			X			X			X	X	X
Common burhead		X						X	X	X	X
Penn. Smartweed	X		X	X				X		X	X
Curltop ladysthumb	X		X	X				X		X	X
Dock	X		X	X			X			X	
Marshpurslane	X				X	X		X	X	X	
Beggarticks		X	X		X	X	X	X		X	
Swamp milkweed			X			X		X			X
Morningglory		X	X		X	X	X	X		X	
Buttonbush						X			X	X	X
Black willow	X			X				X			
Green ash	X							X		X	
Common ragweed		X	X		X		X			X	
Cocklebur		X	X		X	X		X			X
Sneezeweed		X	X		X	X	X	X			
Sesbania		X	X		X	X		X			

**Note:** MS-ECS-646-01(SS) "Moist-Soil Management Specification Sheet" should be used when planning moist-soil areas.

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.