MANAGEMENT RECOMMENDATIONS

Shallow Wetlands

RiverEdge West
RESTORE + CONNECT + INNOVATE

Prepared for Landowners | By Christa Brown | 2024

This document is intended to provide general management recommendations with associated references.
It is not exhaustive or intended to be prescriptive.

SITE GOALS

- Provide foraging and migration habitat for ducks during spring and fall migration.
- Create a moist soil management area utilizing prescribed flooding and drawdowns to develop diverse plant communities.
- Create a wetland that produces habitat and food resources for wildlife.
- If applicable, provide waterfowl hunting opportunities.

WETLAND CREATION

Creating a shallow wetland adds a substantial ecological value to the community. These riparian areas provide habitat by encouraging a large diversity of plant species and wildlife back into these areas. This is a big project to take on but RiversEdge West is an available resource for helping with wetland creation.

This process begins with planning the site project area depending on the soil type and topography, water availability, and costs of the project. There is no designated required size for wetlands, so these can be large or small-scale projects. However, the general depth of the wetland during construction is about 2 feet. This provides the opportunity to fill the wetland at appropriate depths for diverse vegetation management. Western Colorado has not historically had abundant wetland areas so the design must be accurate to this environment for success.

Next, the management strategy will need to include manipulating the water regime with irrigation to promote a diverse annual grass, forb, and sedge community. Once the wetland is established, seasonal management will focus on providing migratory waterfowl with suitable foraging habitat and growing habitat for many other diverse species including mammals, amphibians, and reptiles.

Photo by Pamela Beane/Unsplash

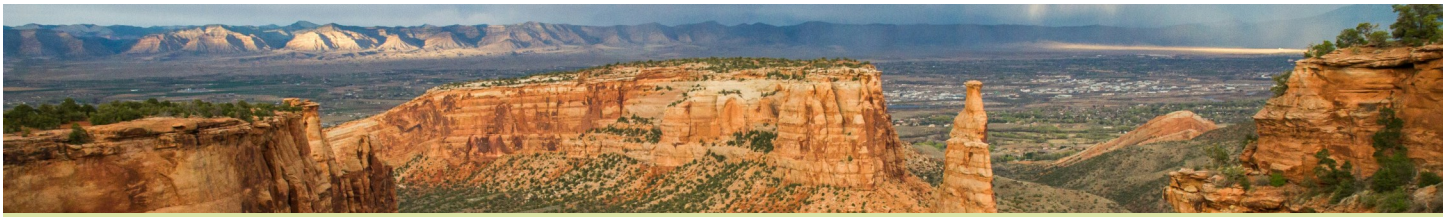


Photo by Holly Mandarich/Unsplash

HYDROLOGY MANAGEMENT

1. Spring season management:

- By March or April, refill the wetland to an average depth of 6-12 inches. Maintain this depth until the beginning of May.
- At the start of May, begin lowering the depth of the wetland slowly until all moist soil cells are completely dry which should happen around mid-May.

2. Summer season management:

- Disk the wetland bottom as soon as it is dry to create bare soil and promote annual wetland vegetation. Plant supplement grain crops if there is low native seedling germination.
- Once per month, irrigate the wetland to establish moist soil vegetation and then dry back out completely within about a week.

3. Fall season management:

- Around late August, begin to fill the wetland to an average depth of 6 inches and not to exceed 18 inches.
- By mid-September, maintain the average depth of the wetland until freeze-up in the winter to provide for duck foraging.

4. Winter season management:

- After freeze-up occurs, typically in late January, drain the wetland to a dead pool resulting in a depth of less than 6 inches. Maintain this depth until the water percolates out in early spring.

Note: All dates are approximate and will shift according to seasonal variability. Please use dates as general targets given some general information above has been provided from CPW and REW recommendations for a previous wetland project. Not all wetland projects will have the same specifications.

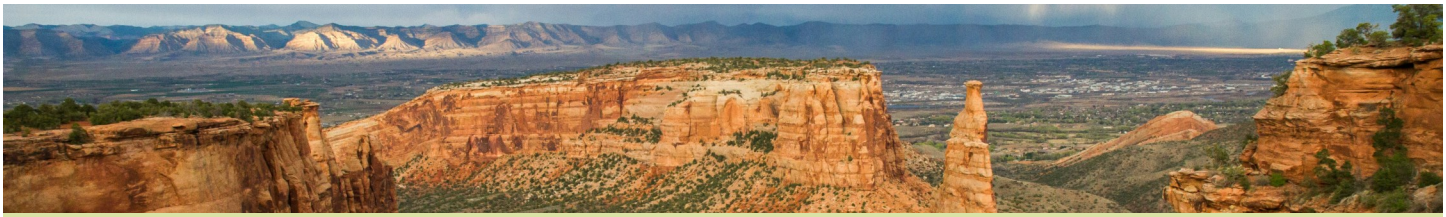


Photo by Holly Mandarich/Unsplash

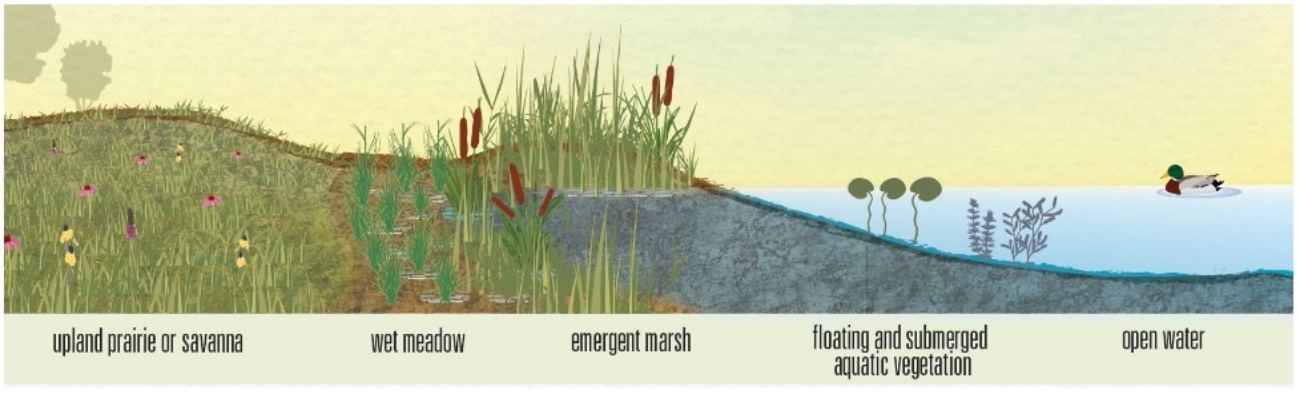
WETLAND VEGETATION

High-value moist-soil vegetation for shallow wetlands:

- **Barnyard Grass/Millet** *(Echinochloa spp.)*
- **Chufa/Yellow Nutsedge** *(Cyperus esculentes)*
- **Smartweed** *(Polygonum spp. Or Persicaria spp.)*
- **Sprangletop** *(Leptochloa fasicularis)*
- **Curly Dock** *(Rumex crispus)*
- **Cocklebur** *(Xanthium strumarium)*

Other vegetation layers that can grow near the wetland:

- **Grasses**
  - Saltgrass, sedges, wheatgrass, alkali muhly, cattails, rush, switchgrass
- **Forbes**
  - Aster, milkweed, sunflower, primrose, goldentop, yellowcress
- **Trees/shrubs**
  - Wood's rose, saltbush, blue elderberry, coyote willow, boxelder, thinleaf alder



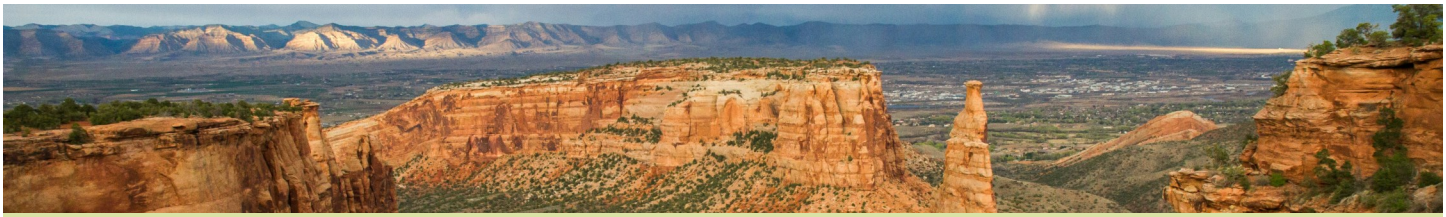


Photo by Holly Mandarich/Unsplash

REFERENCES

Culver, D. R. (2018) *Common Wetland Plants of Colorado's Western Slope.* Colorado Natural Heritage Program. https://hermes.cde.state.co.us

Richardson et al. (2022) *A functional definition to distinguish ponds from lakes and wetlands*. Scientific Reports, 12, 10472. https://nature.com/articles

Shulse et al. (2012) *Testing wetland features to increase amphibian reproductive success and species richness for mitigation and restoration.* Ecological Applications, 22, 1675-1688.

Stefanik, K. (2023) *Is that a pond or a wetland? How to tell ponds and wetlands apart and why the correct name matters.* https://iowalearningfarms.wordpress.com

USDA NRCS. (2008) *National Engineering Handbook* (Title 210), Part 650, Chapter 13, Wetland Restoration, Enhancement, or Creation. Washington, D.C. https://directives.sc.egov.usda.gov