



# Essential Plant ID

for Rainwater Basin Wetland Landowners





# Rainwater Basin Wetland Plants

There are more than 240 species of plants that grow in and adjacent to Rainwater Basin wetlands. These plants form communities that can be varied and dynamic. The communities are influenced by the interactions of a number of factors, including soil type, water depth, duration of ponding, weather and climate (deluge and drought), fire, grazing, human alterations to the wetland and the watershed, and many other factors. Moist-soil dominated wetland plant communities are desirable because of the large amount of seeds produced, which are a high quality waterfowl food. Some common moist-soil plants include smartweed, barnyard grass, spikerush, plains coreopsis, and beggarticks. Bare soil, which may include mudflats and/or shallow open water areas, is also desirable.

There are several species of plants in the Rainwater Basin that are considered to be invasive and can greatly alter the plant communities. The most prevalent and harmful invasive species include reed canarygrass, hybrid cattail, river bulrush, and phragmites. These undesirable plant species provide fewer seeds for waterfowl to feed on, and they encroach on open water areas that are needed for waterfowl roosting and loafing. Different tree species can also be considered undesirable plant species if they are left unmanaged. Wetland management decisions are primarily driven by the presence of these invasive species. While management is mostly determined by these undesirable plant species, there are several desirable plant species that are also managed for. These species include smartweed, rice cutgrass, and barnyard grass. Therefore, we feel that it is necessary for every wetland landowner in the Rainwater Basin to be able to identify these seven species: smartweed, rice cut grass, barnyard grass, reed canarygrass, hybrid cattail, river bulrush, and phragmites.

## Management Tools

A wide array of management tools is available to manipulate Rainwater Basin wetland vegetation communities, including grazing, prescribed fire, herbicide application, disking, rototilling, haying/shredding/mowing, and water level manipulation. If you have identified large populations of reed canarygrass, hybrid cattail, river bulrush, and/or phragmites on your wetlands, you can find detailed information on how to manage those invasives by reviewing the following resources listed on the Wetland Management Tools for Landowners website:

- Wetland Management BMPs
- Using Grazing to Manage Your Wetlands
  - o Grazing Rainwater Basin Wetlands UNL Extension Article
  - o Grazing Calculator
  - o Integrating Agriculture into Rainwater Basin Wetland Management

Cost-share programs are available to assist with wetland management within the Rainwater Basin. Please contact the Rainwater Basin Joint Venture for more information.

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# DESIRABLE PLANT SPECIES

## Smartweed - *Persicaria amphibia*

### Distribution and Establishment

Smartweed is found across Nebraska and inhabits still or slow moving marshes, swamps, and wetlands. It can grow underwater, float, or be emergent.

### Characteristics

**Plant Height:** 12 - 36 inches  
**Flowers:** Bright pink in color  
**Leaf Blades:** flat oblong leaves, with a blunt tip  
**Stems:** smooth





## Rice Cut Grass - *Leersia oryzoides*

### Distribution and Establishment

Rice cutgrass is a native cool season grass that develops slowly in spring, becoming more productive during the summer. Rice cutgrass is widespread across Nebraska.

### Characteristics

**Leaf Blades:** sharp, coarse upper surface  
**Stems:** yellowish green, hollow  
**Inflorescence:** open panicle  
**Leaves:** alternate along the stem



## Barnyard Grass - *Echinochloa crus-galli*

### Distribution and Establishment

It is an annual, warm season grass that grows in waste places and moist disturbed areas. It is a summer annual grass that germinates from late winter or early spring through the summer.

### Characteristics

**Leaf Blades:** flat (16 inches long)  
**Stems:** lying along the ground, ascending (47 inches tall)  
**Inflorescence:** panicle (10 inches long)  
**Flowers:** branches of densely clustered, knotlike flowers





# UNDESIRABLE PLANT SPECIES

## Reed Canarygrass - *Phalaris arundinacea*

### Distribution and Establishment

Reed canarygrass is native to most parts of Nebraska. The introduced plants are more aggressive and can become a dominant, problematic weed. It grows best in moist sites along river banks and drainage ditches.

### Characteristics

- Leaf Blades:** flat or slightly keeled (18 inches long)
- Rhizomes:** large rhizomes growing in bunches
- Inflorescence:** compact, narrow panicle
- Flowers:** densely clustered single florets ranging from green to purple



## River Bulrush - *Bolboschoenus fluviatilis*

### Distribution and Establishment

River bulrush is native to Nebraska and present across the state. It prefers marshes, wetlands, and wet meadows. It is often found in shallow water and can form large, dense stands.

### Characteristics

- Leaf Blades:** flat or folded (12 inches long)
- Rootstalks:** creeping and horizontal
- Stems:** sharply triangular
- Inflorescence:** clusters of 1-4 spikelets





# Hybrid Cattail - *Typha x glauca*

## Distribution and Establishment

Hybrid cattail can be found across Nebraska. It prefers wet meadows, marshes, wetlands, and ditches. It is a perennial wetland plant that can reach 5-10 feet tall.

## Characteristics

- Leaf Blades:** flat and linear (36 inches long)
- Flowers:** Numerous tiny flowers packed into a cylindrical spike
- Seeds:** tiny seeds, wind dispersed
- Roots:** reproduce vegetatively by underground rhizomes



# Phragmites - *Phragmites americanus*

## Distribution and Establishment

Phragmites is found across Nebraska and forms dense patches in wet soil conditions. It grows along river banks and in wetlands, wet meadows, and ditches. It spreads rapidly and is classified as a noxious weed in Nebraska.

## Characteristics

- Leaf Blades:** flat, pointed (23 inches long)
- Rhizomes:** extensive and stout
- Stems:** round, hollow (9 feet tall)
- Inflorescence:** panicle, densely flowered (20 inches long)





# Glossary

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**Annual** - Within one year; applied to plants which do not live more than one year

**Cool-season** - A category of plants that grow best during the cool portions of the year

**Creeping** - Continually spreading

**Disturbance** - Alteration or destruction of the vegetative cover

**Disturbed sites** - Areas on which vegetative cover has been altered or destroyed

**Dominant** - A species of plant that controls the character of the vegetation

**Florets** - one of the small flowers making up a composite flower head.

**Inflorescence** - The complete flower head of a plant: arrangement of flowers on a plant

**Introduced** - Not native to North America

**Keeled** - Sharp fold or ridge at the back of a sheath or blade

**Moist Soil Plants** – Plants that require saturated but not ponded soils to germinate.

**Native** - occurring in North America before settlement

**Noxious Weed** - a legal term used to denote a destructive or harmful weed for the purpose of regulation.

**Panicle** - Inflorescence with a main axis and rebranched branches

**Perennial** - Lasting more than two years; applied to plants which live more than two years

**Rhizome** - an underground stem with nodes

**Spikelet** - The unit of florescence in grasses

**Sprawling** - Matting, spreading or used to form a solid low cover.

**Stem** - The portion of the plant bearing nodes, leaves, and buds

**Warm-season** - A category of plants with optimal growth during the warmer portions of the year



Product of the Rainwater Basin Joint Venture Private Lands Workgroup.  
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## PARTNERS

