

# Plants for Solving Resource Problems

## Alkali Bulrush

**S**pecies: *Schoenoplectus maritimus*

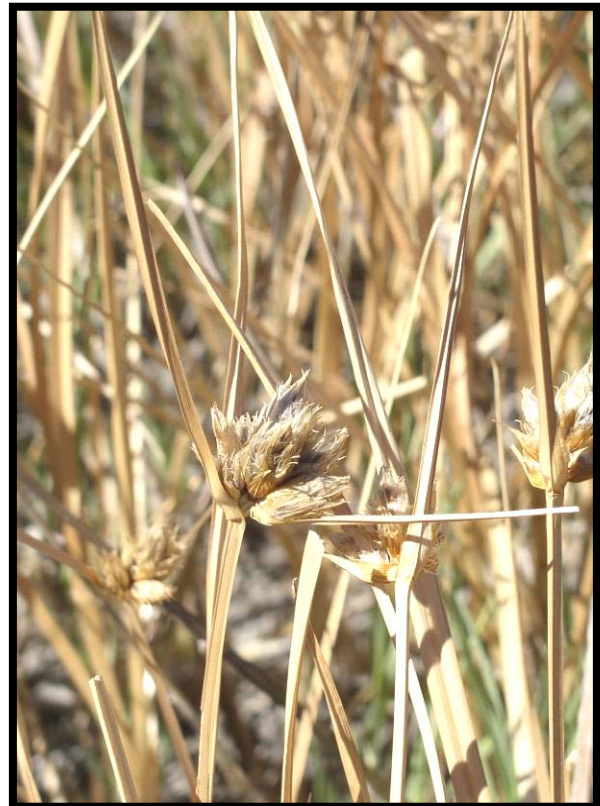
Common Name: Alkali Bulrush

**Plant Symbol:** SCMA8  
**Accession Numbers:** Bear Lake Selection (9067380), Bear River Selection (9067374), Fort Boise Selection (9057579) and Stillwater Selection (9067428)

**Source:** The Aberdeen PMC has released four performance tested ecotypes of alkali bulrush from the PMC service area. The Bear Lake Selection was collected from the Bear Lake National Wildlife Refuge (NWR), south of Montpelier, ID. It was selected for use in Land Resource Region (LRR) B East. The Bear River Selection was selected for use in LRR D South. It was collected from the Bear River Migratory Bird Refuge west of Brigham City, UT. The Fort Boise Selection comes from the Fort Boise Wildlife Management Area, near Apple Valley, ID and was selected for use in LRR B West. The Stillwater Selection was selected for use in LRR D North. The collection site was at the Stillwater National Wildlife Refuge northwest of Fallon, NV.

**Site Information:** Alkali bulrush is a commonly occurring wetland species found throughout western North America.

**Method of Selection:** Fourteen alkali bulrush collections from the Aberdeen PMC Service Area were evaluated from 1991 to 1995. All collections were evaluated for survival, overall growth and spread, vigor, and stability of land ownership. The PMC released one selection from each LRR in the PMC service area.



**Alkali Bulrush**

The released selections are the accessions with the best overall rating against others from within its respective LRR.

**Description:** Alkali Bulrush is a perennial, rhizomatous, wetland obligate. Stems are upright, triangular, and grow up to 1.5 meters (5 ft) tall. The leaves are several, 1 cm (0.4 in) wide, well developed, elongate, flat and distributed along the stem below the middle. Inflorescences consist of 3 to 20 or more blunt spikes, 1.2 to 2 cm (0.5 to 0.75 in) long and 6 to 10 mm thick, all sessile in a compact terminal cluster. The

fruit is a brown lenticular achene from 2 to 4 mm long.

**Use:** Alkali bulrush is suitable for erosion control, constructed wetland system applications, wildlife food and cover, wetland restoration and creation and improvement of plant diversity in wetland and riparian communities. Dense roots make this a good choice for soil stabilization, and the above ground biomass provides protection from erosive wave action and stream currents. Waterfowl feed on the seed and use the stands for nesting. Muskrat and beaver will eat the rootstocks and young shoots. The rhizomes also form a matrix for many beneficial bacteria, making this an excellent choice for wastewater treatment.

**Insect and Disease Problems:** There are no known problems with insects or diseases. If an insect or disease problem is encountered in the greenhouse, treat as you would for any other plant species.

**Environmental Considerations:** These selected class releases are from a species native to the Intermountain West and have no known negative impacts on wild or domestic animals.

**Area of Adaptation:** Alkali bulrush can be found at low to mid elevations in marshes, pond margins, backwaters and transient wet areas. It can survive short periods of total inundation of up to 1 m (3 ft) deep. Alkali bulrush can occur on freshwater sites, but is usually a pioneering species that will be replaced over time with longer lived species. Plants spread by seed and rhizomes.

**Soil Adaptation:** Plants form large dense stands in alkaline or saline sites. Alkali bulrush can grow in soils with a pH of up to 9.0 and soil textures from fine clays to silt loams to sands. It will tolerate high levels of saline conditions (EC<19).

**Planting and Harvesting:** Germination can be enhanced by wet prechilling the seeds in a mixture of water and sphagnum moss at 2°

C (35° F) for 30 days. Seed requires light, moisture and heat for germination. For greenhouse propagation, place seeds on soil surface and press in lightly to assure good soil contact. Do not cover seed. Soil should be kept moist, and the greenhouse should be kept hot, 32 to 38°C (90 to 100° F). Germination should begin within one to two weeks. Maintain soil moisture until transplanting. Plugs should be transplanted at 30 to 45 cm (12 to 18 in) spacing. This allows plants to fill in interspaces within one growing season. Soils should be kept saturated with no more than 5 to 8 cm (2 to 3 in) of standing water during the first growing season. Fluctuating water levels during the establishment year will facilitate spreading. Seed can be collected by hand stripping, clipping with hand shears or by using a gas powered seed stripper.

**Seed Maintenance:** Generation 0 (G0) seed is maintained at Aberdeen PMC. Later generation seed (ie G1) is not produced, maintained or available through the USDA-NRCS Plant Materials Center. To make collections of these alkali bulrush releases, contact the appropriate managing agency to collect from the original collection site.

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