MRn83

Northern Mixed Cattail Marsh

Emergent marsh communities, typically dominated by cattails. Present on floating mats along shorelines in lakes, ponds, and river backwaters or rooted in mineral soil in shallow wetland basins.

Vegetation Structure & Composition

Description is based on summary of field survey records and vascular plant data from 22 plots (relevés).

• Floating-leaved and submergent aquatic plant cover is sparse, with species such as duckweed (*Lemna* spp.) and greater duckweed (*Spirodela polyrhiza*) frequent, and common bladderwort (*Utricularia vulgaris*) and common coontail (*Ceratophyllum demersum*) occasionally present. Seasonally prolific, floating clones of the liverworts *Riccia fluitans* and *Ricciocarpos natans* may be present, becoming stranded during watertable drawdown.

• Graminoid cover is variable, with lake sedge (*Carex lacustris*) and bristly sedge (*C. comosa*) commonly present.

• Forb cover is strongly dominated by cattails

(*Typha* spp.), usually with > 50% cover. Other common forbs include emergent species such as broad-leaved arrowhead (*Sagittaria latifolia*), marsh skullcap (*Scutellaria galericulata*), small or three-cleft bedstraw (*Galium tinctorium* or *G. trifidum*), and bur marigold and beggarticks (*Bidens* spp.).

• Shrubs are absent or very sparse.

• Notes: Vegetation is often composed of dense stands of cattails interspersed with pools of open water. Associated species are highly variable. MRn83 and other shallow-water wetlands throughout much of the state (particularly the agricultural region) have been invaded by dense stands of the non-native species narrow-leaved cattail (*Typha angustifolia*) and hybrid cattail (*T. x glauca*). Invasion and dominance of marshes by non-native cattail species is likely related to alterations in wetland hydrology, commonly from drain tiling, ditching, and impoundments; high levels of nutrient-rich runoff from agricultural fields; and salt-containing runoff from roads. Marshes dominated by non-native cattail species are considered to be low-quality or disturbed examples of MRn83. Marshes dominated by the native species broad-leaved cattail (*T. latifolia*) are considered higher-quality examples of MRn83 and are increasingly rare in Minnesota.

Landscape Setting & Soils

MRn83 occurs in shallow basins and depressions and along the shores of lakes, ponds, and river backwaters. Substrates range from muck or shallow, well-decomposed peat to floating peaty mats. Substrate surface is usually covered with plant litter, especially dead cattail stalks. MRn83 is often transitional between shallow aquatic communities and wet meadows.

Natural History

MRn83 develops in areas where standing water is present most of the year, providing conditions favorable for hydrophytic plants. Occurrences of the community with plants rooted in muck or peat substrates may succeed to shallow aquatic communities if the water table rises for prolonged periods, or to wet meadows if the water table drops or if silt or sedimentary peat accumulation causes the substrate surface to become elevated above the water surface. Floating mats, which rise and fall with changes in water level, are presumably successionally stable but may be fragmented by strong





winds or beaver activity. Variation in species composition observed in the class is likely due to differences in water depth, the permanence of standing water, and variation in substrate. Fires during severe droughts can remove accumulated peat in fens or wet meadows, effectively lowering the growing surface and creating the wetter conditions that favor marsh over fen or wet meadow vegetation.

Similar Native Plant Community Classes

MRn93 Northern Bulrush-Spikerush Marsh

MRn93 can be similar to MRn83 but occurs in deeper water and tends to be more affected by wave action. MRn93 is dominated by bulrushes (*Scirpus* spp.) and submergent aquatic species such as pondweeds (*Potamogeton* spp.) and water milfoil (*Myriophyllum* spp.), while MRn83 is dominated by cattails, with abundant sedges (*Carex* spp.) and forbs such as tufted loosestrife (*Lysimachia thyrsiflora*) and great water dock (*Rumex orbiculatus*).

MRn83 Indicator Species	(fre MRn83	q%) MRn93	MRn93 Indicator Species	(free MRn83	4%) MRn93
Marsh cinquefoil (Potentilla palustris)	13	-	False nettle (Boehmeria cylindrica)	-	18
Linear-leaved, Marsh, or Downy willow-herb*	21	3	Northern manna grass (Glyceria borealis)	-	15
Common bladderwort (Utricularia vulgaris)	42	9	Common water plantain (Alisma triviale)	4	26
Great water dock (Rumex orbiculatus)	42	12	Three-way sedge (Dulichium arundinaceum)	4	18
Marsh bellflower (Campanula aparinoides)	38	12	Rice cut grass (Leersia oryzoides)	21	71
Northern marsh fern (Thelypteris palustris)	17	6	River bulrush (Scirpus fluviatilis)	13	41
Lake sedge (Carex lacustris)	50	18	Nodding smartweed (Polygonum lapathifolium)	8	24
Tufted loosestrife (Lysimachia thyrsiflora)	50	21	Water smartweed (Polygonum amphibium)	29	68

* Linear-leaved, Marsh, or Downy willow-herb (Epilobium leptophyllum, E. palustre, or E. strictum)

MRp83 Prairie Mixed Cattail Marsh

MRp83 is very similar to MRn83, but by convention the range of MRp83 is limited to the Prairie Parkland Province, and the range of MRn83 is limited to the Eastern Broadleaf Forest and Laurentian Mixed Forest provinces. There are too few detailed records available to identify species differences between the classes. Collection of additional data and further analysis may result in revision of the floristic and geographic relationships between the two classes.

MRu94 Lake Superior Coastal Marsh

MRu94 is similar to MRn83 but is restricted to estuaries and embayments near the mouths of rivers flowing into Lake Superior, where seiches cause regular fluctuations in water level. MRu94 generally has higher species diversity, while MRn83 is more likely to be strongly dominated by cattails.

Native Plant Community Types in Class

Although MRn83 has not been thoroughly sampled across its range in Minnesota, vegetation plot data and field observations indicate that the class can be divided into two community types based on dominant species.

MRn83a Cattail - Sedge Marsh (Northern)

Emergent marshes typically dominated by cattails but with a significant component of graminoids including sedges (*Carex* spp.), woolgrass (*Scirpus cyperinus*), and bluejoint (*Calamagrostis canadensis*). MRn83a is more likely than MRn83b to be dominated by the native species broad-leaved cattail and is uncommon.

MRn83b Cattail Marsh (Northern)

Emergent marshes dominated by nearly pure stands of cattails. If sedges and grasses are present, they are minor components. MRn83b is the most common of the two community types in this class and often is dominated by the non-native species narrow-leaved and hybrid cattail. Marshes dominated by pure stands of the native species broad-leaved cattail were likely more common in the past but are now rare across much of the range of the community.





Kandiyohi County, MN

Cover	
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Frequency	cover
Species	frea%
ll Marsh	
Cattai	
Mixed	
Northern	
Rn83	

MRn83 Northern Mixed Cattail Marsh – Species F	requ	ency & Cover		
freq%	cover		freq%	cover
Grasses & Sedges		Unbranched bur reed (Sparganium emersum)	6	•
Lake sedge (Carex lacustris) 45	•	mergent Forbs		
Bristly sedge (Carex comosa) 41	:	Broad-leaved arrowhead (Sagittaria latifolia)	64	٠
Red-stalked spikerush (Eleocharis palustris) 32	•	Marsh skullcap (Scutellaria galericulata)	64	•
Bluejoint (Calamagrostis canadensis) 27	:	Three-cleft or small bedstraw (Galium trifidum or G. tinctorium)	59	٠
Rice cut grass (Leersia oryzoides) 23	•	Bur marigold and Beggarticks (Bidens spp.)	50	•
Tall manna grass (Glyceria grandis) 23	•	Tufted loosestrife (Lysimachia thyrsiflora)	45	•
Soft stem bulrush (Scirpus validus) 18	:	Bulb-bearing water hemlock (Cicuta bulbifera)	41	:
Fen wiregrass sedge (Carex lasiocarpa) 14	•	Great water dock (Rumex orbiculatus)	41	•
Wild rice (Zizania palustris) 14	:	Marsh bellflower (Campanula aparinoides)	41	•
Common reed grass (Phragmites australis) 14	•	Clearweed (Pilea spp.)	36	•
Tussock sedge (Carex stricta) 14	•	Northern bugleweed (Lycopus uniflorus)	83	•
Cyperus sedge (Carex pseudocyperus) 14	:	Broad-leaved cattail (Typha latifolia)	32	i
River bulrush (Scirpus fluviatilis) 14	:	Touch-me-not (Impatiens spp.)	32	•
Beaked sedge (Carex utriculata) 14	:	Giant bur reed (Sparganium eurycarpum)	27	:
Ovoid spikerush (Eleocharis ovata) 9	٠	Water parsnip (Sium suave)	27	•
Lesser-panicled sedge (Carex diandra) 9	•	Linear-leaved, Marsh, or Downy willow-herb*	53	•
Aquatic sedge (Carex aquatilis) 9	:	Spotted water hemlock (Cicuta maculata)	53	•
Fragrant cyperus (Cyperus odoratus) 9	•	Dotted smartweed (Polygonum punctatum)	18	•
Porcupine sedge (Carex hystericina) 9	:	Sweet flag (Acorus calamus)	18	:
Woolgrass (Scirpus cyperinus) 9	•	Swamp milkweed (Asclepias incarnata)	18	•
Floating-Leaved & Submergent Forbs		Northern marsh fern (Thelypteris palustris)	18	•
Star-duckweed (Lemna trisculata) 64	:	Cut-leaved bugleweed (Lycopus americanus)	18	•
Lesser-duckweed (Lemna minor) 59	:	Marsh cinquefoil (Potentilla palustris)	14	•
Greater duckweed (Spirodela polyrhiza) 55	•	Spotted Joe pye weed (Eupatorium maculatum)	14	•
Common bladderwort (Utricularia vulgaris) 45	:	Marsh horsetail (Equisetum palustre)	6	•
Common coontail (Ceratophyllum demersum) 36	:	Common mint (Mentha arvensis)	6	•
Water smartweed (Polygonum amphibium) 32	•	Stinging nettle (Urtica dioica)	6	•
Flat-stemmed pondweed (Potamogeton zosteriformis) 14	•	Nodding smartweed (Polygonum lapathifolium)	6	•
Common white water-lily (Nymphaea odorata) 14	•	Lady's thumb (Polygonum persicaria)	6	•
Straight-leaved pondweed (Potamogeton strictifolius) 9	•	Common water plantain (Alisma triviale)	5	•
Intermediate bladderwort (Utricularia intermedia) 9	•	hrubs		
Yellow pond lily (Nuphar variegata)	•	Red-osier dogwood (Cornus sericea)	6	:
*Linear-Jeaved March or Downy willow-herb (Enilohium Jentonhullum E naturati	ц . С	strictum)		

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