



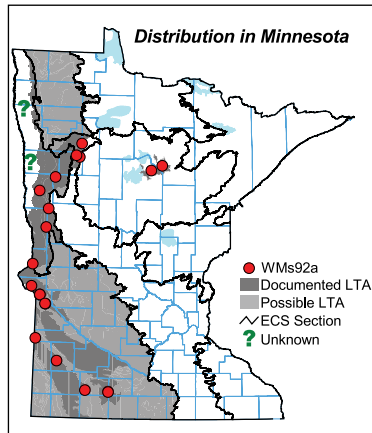
Southern Basin Wet Meadow/Carr

Open wetlands dominated by dense cover of broad-leaved sedges. Typically present in small, closed, shallow basins isolated from groundwater inputs.

Vegetation Structure & Composition

Description is based on summary of vegetation data from 28 plots (relevés).

- **Mosses** are typically absent or sparse, although the weedy and shade-tolerant species *Drepanocladus aduncus* is commonly present beneath dense sedge tussocks
- **Graminoid** cover is continuous (75–100%); typically dominated by slough sedge (*Carex atherodes*), sometimes with whitetop (*Scolochloa festucacea*), bluejoint (*Calamagrostis canadensis*), prairie cordgrass (*Spartina pectinata*), red-stalked spikerush (*Eleocharis palustris*), or lake sedge (*Carex lacustris*).
- **Forb** cover is variable, ranging from absent to sparse (< 25%); common species include water smartweed (*Polygonum amphibium*), cattails (*Typha* spp.), common mint (*Mentha arvensis*), rough bugleweed (*Lycopus asper*), water parsnip (*Sium suave*), and swamp milkweed (*Asclepias incarnata*).
- **Shrub** cover is sparse; pussy willow (*Salix discolor*), slender willow (*S. petiolaris*), and red-osier dogwood (*Cornus sericea*) may be present.
- **Note:** WMs92 has become uncommon across much of its range as a result of invasion by non-native species, especially reed canary grass (*Phalaris arundinacea*), following alterations in wetland hydrology.



Landscape Setting & Soils

WMs92 occurs primarily in shallow wetland basins and rarely along shores of lakes and rivers. Surface water is derived from rainfall and surface flow; in general, sites are isolated from lateral groundwater flow. Water chemistry is basic (pH > 7) because of influence of calcareous soils. Relatively low precipitation in the prairie region and high rates of evaporation result in higher salinity in this community compared with other Wet Meadow/Carr communities in Minnesota. Soils are predominantly mineral or muck, but sapric peat of variable depth can also occur.

Natural History

WMs92 is subjected to moderate inundation following spring runoff and heavy rains and to periodic drawdowns during summer. Peak water levels are high and persistent enough to prevent trees (and usually shrubs) from becoming established, although standing water may be absent by the end of the growing season. As a result of water-level fluctuations, surface substrates alternate between aerobic and anaerobic conditions. Organic matter that accumulates over time on the substrate surface is usually oxidized during drought-influenced drawdowns or is removed by fire during periods of severe drought. The fluctuating water levels needed for development of this community typically occur in areas transitional between wet prairies and marshes. The diagnostic dominant species of WMs92—slough sedge (*Carex atherodes*) and whitetop—have a competitive advantage over other wet meadow sedges in wetland basins with relatively high salinity. These species may also be favored by high fire frequency, as WMs92 tends to occur in fire-prone landscapes. Frequent fire during periodic droughts eliminates or greatly reduces the presence of shrubs in WMs92 and also reduces peat accumulation.

Similar Native Plant Community Classes

- **WMs83 Southern Seepage Meadow/Carr**

WMs83 can be similar to WMs92 but occurs along streams, on sloping terraces, and at



bases of slopes in areas influenced by lateral groundwater flow. WMS83 is more likely to have abundant willows and other shrubs. WMS92 is more likely to have slough sedge (*Carex atherodes*) as a dominant graminoid species.

WMS92 Indicator Species	(freq%)	
	WMS92	WMS83
Slough sedge (<i>Carex atherodes</i>)	93	-
Whitetop (<i>Scolochloa festucacea</i>)	41	-
River bulrush (<i>Scirpus fluvialis</i>)	14	-
Giant bur reed (<i>Sparganium eurycarpum</i>)	14	3
Water smartweed (<i>Polygonum amphibium</i>)	79	22
Water parsnip (<i>Sium suave</i>)	31	10
Germander (<i>Teucrium canadense</i>)	21	6
Beaked sedge (<i>Carex utriculata</i>)	21	8

WMS83 Indicator Species	(freq%)	
	WMS92	WMS83
Prairie sedge (<i>Carex prairiea</i>)	-	33
Flat-topped aster (<i>Aster umbellatus</i>)	-	32
Virginia mountain mint (<i>Pycnanthemum virginianum</i>)	-	30
Northern marsh fern (<i>Thelypteris palustris</i>)	-	30
Dwarf raspberry (<i>Rubus pubescens</i>)	-	27
Porcupine sedge (<i>Carex hystericina</i>)	-	25
Common boneset (<i>Eupatorium perfoliatum</i>)	3	51
Northern bugweed (<i>Lycopus uniflorus</i>)	3	44

• WMP73 Prairie Wet Meadow/Carr

WMP73 and WMS92 occur in similar landscape settings, but WMP73 is generally present on sites where the water table is below the rooting zone for longer periods of time. As a result, shrubs are more common in WMP73. WMS92 is more likely to have lake sedge (*Carex lacustris*) and slough sedge (*C. atherodes*) as dominant graminoids.

WMS92 Indicator Species	(freq%)	
	WMS92	WMP73
Whitetop (<i>Scolochloa festucacea</i>)	43	-
Lake sedge (<i>Carex lacustris</i>)	29	-
Marsh skullcap (<i>Scutellaria galericulata</i>)	25	-
Lesser-duckweed (<i>Lemna minor</i>)	21	-
Beaked sedge (<i>Carex utriculata</i>)	21	-
Slough sedge (<i>Carex atherodes</i>)	93	8
Water parsnip (<i>Sium suave</i>)	32	8
Cattails (<i>Typha</i> spp.)	43	13

WMP73 Indicator Species	(freq%)	
	WMS92	WMP73
Prairie loosestrife (<i>Lysimachia quadriflora</i>)	-	42
Dark green or Pale bulrush*	-	38
Silverweed (<i>Potentilla anserina</i>)	-	33
Buxbaum's sedge (<i>Carex buxbaumii</i>)	-	33
Grass-leaved goldenrod (<i>Euthamia graminifolia</i>)	-	29
Sartwell's sedge (<i>Carex sartwellii</i>)	4	71
Narrow reedgrass (<i>Calamagrostis stricta</i>)	7	88
Woolly sedge (<i>Carex pellita</i>)	7	71

*Dark green or Pale bulrush (*Scirpus atrovirens* or *S. pallidus*)

• WMn82 Northern Wet Meadow/Carr

WMn82 can be similar to WMS92 and the ranges of the two classes overlap in the northern MIM, central MDL, and likely in the northern CGP. WMn82 is more likely to occur along streams or drainageways or in small isolated basins surrounded by forest (rather than prairie) vegetation and is more likely to have significant shrub cover.

WMS92 Indicator Species	(freq%)	
	WMS92	WMn82
Whitetop (<i>Scolochloa festucacea</i>)	43	1
Prairie cordgrass (<i>Spartina pectinata</i>)	36	1
Germander (<i>Teucrium canadense</i>)	21	1
Slough sedge (<i>Carex atherodes</i>)	93	5
Rough bugleweed (<i>Lycopus asper</i>)	36	4
Red-stalked spikerush (<i>Eleocharis palustris</i>)	32	6
Water parsnip (<i>Sium suave</i>)	32	6
Water smartweed (<i>Polygonum amphibium</i>)	82	42

WMn82 Indicator Species	(freq%)	
	WMS92	WMn82
Northern marsh fern (<i>Thelypteris palustris</i>)	-	41
Marsh cinquefoil (<i>Potentilla palustris</i>)	-	39
Arrow-leaved tearthumb (<i>Polygonum sagittatum</i>)	-	28
Crested fern (<i>Dryopteris cristata</i>)	-	24
Speckled alder (<i>Alnus incana</i>)	-	24
Northern bugleweed (<i>Lycopus uniflorus</i>)	4	45
Bulb-bearing water hemlock (<i>Cicuta bulbifera</i>)	7	46
Marsh bellflower (<i>Campanula aparinoides</i>)	11	58

• WPs54 Southern Wet Prairie

WPs54 and WMS92 occur in similar settings, but WPs54 is present on soils only briefly saturated in late spring rather than throughout the summer. As a result, WMS92 is more likely to have species tolerant of long periods of inundation and saturated soils.

WMS92 Indicator Species	(freq%)	
	WMS92	WPs54
Slough sedge (<i>Carex atherodes</i>)	93	-
Whitetop (<i>Scolochloa festucacea</i>)	43	-
Common mint (<i>Mentha arvensis</i>)	32	-
Water parsnip (<i>Sium suave</i>)	32	-
Tufted loosestrife (<i>Lysimachia thysiflora</i>)	25	-
Marsh skullcap (<i>Scutellaria galericulata</i>)	25	-
Great water dock (<i>Rumex orbiculatus</i>)	18	-
Lake sedge (<i>Carex lacustris</i>)	29	2

WPs54 Indicator Species	(freq%)	
	WMS92	WPs54
Big bluestem (<i>Andropogon gerardii</i>)	-	80
Heath aster (<i>Aster ericoides</i>)	-	67
Virginia mountain mint (<i>Pycnanthemum virginianum</i>)	-	57
Great blazing star (<i>Liatris pycnostachya</i>)	-	53
Indian grass (<i>Sorghastrum nutans</i>)	-	51
Golden alexanders (<i>Zizia aurea</i>)	-	49
Switchgrass (<i>Panicum virgatum</i>)	-	47
Golden or False golden ragwort*	-	43

*Golden or False golden ragwort (*Senecio aureus* or *S. pseudoaureus*)

Native Plant Community Types in Class

• WMS92a Basin Meadow/Carr

WMS92a is the only community type recognized in this class at the present.



photo by R.P. Dana MN DNR

Kettledrummer Prairie, Wilkin County, MN



WMS92 Southern Basin Wet Meadow/Carr — Species Frequency & Cover

	freq %	cover		freq %	cover
Grazes & Sedges					
Slough sedge (<i>Carex atherodes</i>)	93	●●●●	Great water dock (<i>Rumex obtusifolius</i>)	17	●
Bluejoint (<i>Calamagrostis canadensis</i>)	45	●●●●	Linear-leaved Marsh, or Downy willow-herb*	17	●
Whittop (<i>Scalochia festucacea</i>)	41	●●●●	Giant bur reed (<i>Spartanium eurycarpum</i>)	14	●●
Prairie cordgrass (<i>Spartina pectinata</i>)	34	●●	Woundwort (<i>Stachys palustris</i>)	14	●●
Red-stalked spikerush (<i>Eleocharis palustris</i>)	31	●●●	Marsh veitching (<i>Lathyrus palustris</i>)	14	●
Lake sedge (<i>Carex lascuris</i>)	31	●●●	Clasping dogbane (<i>Apocynum sibiricum</i>)	14	●
Beaked sedge (<i>Carex utriculata</i>)	21	●●●●	Canada goldenrod (<i>Solidago canadensis</i>)	14	●●
Aquatic sedge (<i>Carex aquatilis</i>)	21	●●	Marsh bellflower (<i>Campanula aparinoides</i>)	14	●
Tussock sedge (<i>Carex stricta</i>)	21	●●	Bur margold and Beggaricks (<i>Bidens</i> spp.)	14	●
Tall manna grass (<i>Glyceria grandis</i>)	14	●●●	Red-stemmed aster (<i>Aster puniceus</i>)	10	●
River bulrush (<i>Scirpus fluvialis</i>)	14	●●●	Bulb-bearing water hemlock (<i>Cicuta bulbifera</i>)	10	●
Common reed grass (<i>Phragmites australis</i>)	10	●●	Sweet flag (<i>Acorus calamus</i>)	10	●
Woolly sedge (<i>Carex pellita</i>)	7	●	Touch-me-not (<i>Impatiens</i> spp.)	10	●●
Fowl bluegrass (<i>Poa palustris</i>)	7	●	Stinging nettle (<i>Urtica dioica</i>)	10	●
Soft stem bulrush (<i>Scirpus validus</i>)	7	●	Large yellow water crowfoot (<i>Ranunculus flabellaris</i>)	10	●
Small-fruited bulrush (<i>Scirpus microcarpus</i>)	7	●	Bog aster (<i>Aster borealis</i>)	10	●
Foobs, Ferns & Fern Allies					
Water smartweed (<i>Polypogon amphibiaum</i>)	79	●●	Spotted water hemlock (<i>Cicuta maculata</i>)	10	●
Rough bugleweed (<i>Lycopus asper</i>)	34	●	Bristly buttercup (<i>Ranunculus pensylvanicus</i>)	7	●
Common mint (<i> Mentha arvensis</i>)	34	●	Arrow-leaved sweet coltsfoot (<i>Petasites sagittatus</i>)	7	●●
Water parsnip (<i>Sium suave</i>)	31	●	Arrow-leaved arrowhead (<i>Sagittaria cuneata</i>)	7	●
Swamp milkweed (<i>Asclepias incarnata</i>)	28	●	Spring water starwort (<i>Callitriche palustris</i>)	7	●
Tufted loosestrife (<i>Lysimachia thysiflora</i>)	24	●	Giant goldenrod (<i>Solidago gigantea</i>)	7	●
Marsh skullcap (<i>Scutellaria galericulata</i>)	24	●	Common marsh marigold (<i>Caltha palustris</i>)	7	●
Germander (<i>Teucrium canadense</i>)	21	●	Tall Shrubs		
Spotted Joe eye weed (<i>Eupatorium maculatum</i>)	21	●	Pussy willow (<i>Salix discolor</i>)	17	●
Eastern panicled aster (<i>Aster lanceolatus</i>)	21	●	Red-osier dogwood (<i>Cornus sericea</i>)	14	●
Cut-leaved bugleweed (<i>Lycopus americanus</i>)	17	●	Slender willow (<i>Salix petiolaris</i>)	10	●●●
			Prickly wild rose (<i>Rosa acicularis</i>)	7	●

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