

1. Dry Prairie

This community covers approximately 7% of the Felton area and 5% of the study area (Fig. 8). It dominates the gravelly beach ridges and transitions into mesic prairie on side slopes and where the soils consist of finer particles. Felton Prairie is considered to be the finest example of dry prairie north of the Minnesota River in the state and is significant for the species dependent on it including several that are endangered or threatened. Plants of special concern include red three-awn grass (*Aristida purpurea* var. *longisetata*), plains reed grass (*Calamagrostis montanensis*), blanket flower (*Gaillardia aristata*), Hooker’s wild-oat grass (*Helictotrichon hookeri*), dry sedge (*Carex xerantica*), and clustered broom-rape (*Orobanche fasciculata*). It is critical habitat for Uhler’s arctic and Assiniboia skippers, chestnut-collared longspur, and prairie vole. This community is also used by the Dakota skipper, Powesheik skipperling, Pawnee skipper, and regal fritillary. In a report prepared by DNR on Felton Prairie, the dry prairie is described as, “mid-

height and low bunch grasses and sedges, little bluestem, plains muhly, needle and thread grass, Wilcox’s panic grass, prairie Junegrass, prairie dropseed, and threadleaf sedge are frequent, and three western grasses uncommon to rare in Minnesota, Hooker’s spike oats, red three awn, and plains reed grass are occasional to scarce.” (MN DNR, 1985)



Figure 9: Areas of mesic prairie in dark gray. (Source: MN DNR, CD-ROM, 1997)



Figure 8: Areas of dry prairie in dark gray. (MN DNR, CD-ROM, 1997)

2. Mesic Prairie

Mesic prairie covers 17% of the study area and 8% of the Felton area (Fig. 9). This prairie type covers a wide band of moisture conditions with subtle gradations in plant composition and dominance. Found on ridge side slopes and in swales between the beach ridges, the DNR report describes it this way: “the undisturbed dry mesic phase here was dominated by porcupine grass, little bluestem and perhaps side oats grama....The mesic phase of this community was dominated by tall-grasses, big bluestem, indian grass and switchgrass, with porcupine grass, side oats grama, little bluestem, and prairie dropseed as important secondary components. Only the tallgrasses and prairie dropseed overlapped into the wet mesic phase, whose other major components included prairie cordgrass, northern reedgrass, and several sedges.” (MN DNR, 1985) Species dependent on this community include small white lady slipper, Dakota skipper, Powesheik skipperling, Pawnee skipper, and regal fritillary.

Prairie Resources

3. Wet Prairie

This community dominates in the deep swales between beach ridges and where the western ridges grade into the ancient lake plain. Within the Felton study area small depressions or swales between the dry ridges support prairie cordgrass and sedges, along with bluejoint, northern reedgrass, and various rushes. The federally threatened western prairie fringed orchid may be found in this habitat and several birds including the upland sandpiper, and marbled godwit utilize it for feeding. Wet prairie comprises 24% of the study area and 10% of the Felton area as a whole (Fig. 10).

4. Calcareous Seepage Fens

Calcareous seepage fens are very rare communities. Fewer than 200 are estimated to exist in the 10 states where they have been reported (NatureServe, 2001). Two types are recognized in Minnesota: the boreal and prairie subtypes. The fens at Felton fall under the prairie subtype. They are characterized by the upwelling of alkaline groundwater, low dissolved oxygen, an

accumulation of peat, and several rare plants adapted to the cool, calcium rich environment. Sterile sedge (*Carex sterilis*), whorled nut-rush (*Scleria verticillata*) are state threatened plants found in the fens, while hair-like beak rush (*Rynchospora capillacea*) is a plant of state special concern. In this case the whole complex is much more significant than the rare species it supports. Some scientists believe that the fens are remnants of the ice mass retreat 8,000 years ago (Tufford, 2001). The study area has two fens, one north and a larger 15 acre fen to the south (Fig. 11).

5. Shrub Swamp

This community is found at the base of beach ridges where it grades into the ancient lake bed. Usually groundwater seeps provide the hydrology to these systems. Willows dominate the vegetation matrix but other shrubs such as redosier dogwood and alder may also be present. Grasses and sedges also occur in this community but in poorly defined patches. In the study area, this community may have expanded in the absence of fire. Frequently it is found downslope of a seepage zone like calcareous fens (Fig. 11).

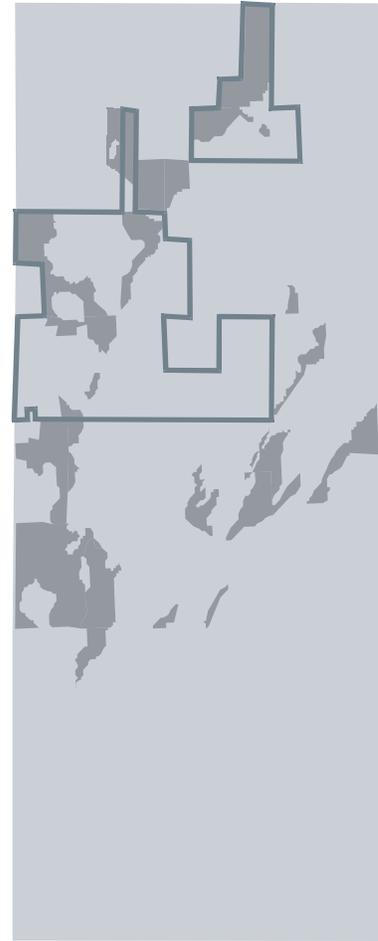


Figure 10: Wet prairie shown in dark gray (MN DNR, CD-ROM, 1997)

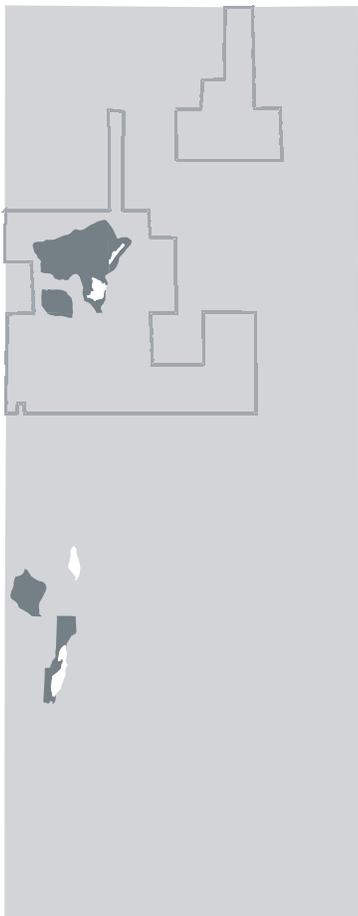


Figure 11: Fens shown in white, shrub swamp in dark gray (MN DNR, CD-ROM, 1997)