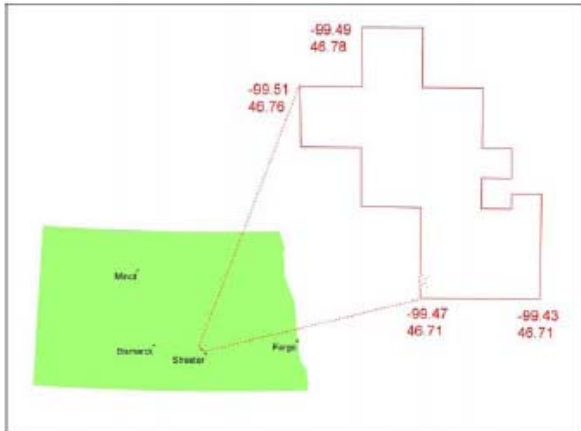


## Central Grasslands Research Extension Center: Northern Plains Domain

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**Location within Domain:** Latitude 46.66 N, Longitude 99.36 W. The site size is 2,147 ha: 1,539 native grasslands and wetlands, and 608 cultivated annual and perennial forage.



**History:** The Central Grasslands Research Extension Center (CGREC) was established in 1977 to conduct rangeland management and ecological research in the Coteau region of North Dakota. The CGREC has an extensive history of research on the wildlife as well as the structure and function of grasslands and wetlands.

**Key Characteristics:** The CGREC is located in the Coteau (Prairie Pothole) region of North Dakota. It consists of 5300 acres of which approximately 3500 acres are native mixed grass prairie and 1300 acres of

cultivated land. The CGREC has been conducting intensive rangeland ecological research since 1989. Numerous studies have evaluated species composition changes, bi-monthly soil moisture measurements, and total above-ground biomass. This Center is also conducting eco-physiological studies including soil carbon exchange and carbon sequestration. The extensive data bases generated by these ecological studies are currently being used for an international scholar exchange program with study sites in Inner Mongolia and Tibet. The prairie pothole region is home to more than 50 percent of North American migratory waterfowl, with many species dependent on the potholes for breeding and feeding. The unique hydrology and climate of this wetland region have a profound influence on the water chemistry, hydroperiod, and ultimately, the biotic communities that inhabit prairie wetlands. The site is near the boundary of a major temperature gradient. To the north, the mean annual temperature ranges from 0-4°C, while to the south, it ranges 4-8°C. It is also near a major isopleth of relative variability in ANPP between favorable and unfavorable years. To the east, the average variability is 30%, while to the west it is 30-50%. The CGREC has cooperative studies with numerous other research institutions including the USDA Agricultural Research Service from Mandan, ND; Lincoln, Nebraska; the USDA, Natural Resources Conservation Service; and the U.S. Fish and Wildlife Service.

**Existing Infrastructure:** The CGREC has had a remote electronic weather observation site (now a part of the NDAWN network) since 1983. The North Unit of the Lake George National Wildlife Refuge is located within the boundaries of the CGREC. An extensive library of infrared imagery of the research sites in the Center is maintained.

**Facilities:** Facilities are equipped with T1 high speed internet connectivity and video conferencing facilities as well as a conference room, laboratory, and dorm room for visiting scholars. The CGREC maintains a shop where research equipment is designed and built, and equipment is repaired. Access is maintained to all the research sites on a 12 month basis. The CGREC is located 11 miles from Interstate 94 and 4 miles from ND Highway 30.