

Natural Resources

Climate:

The White Earth Reservation is located in a humid continental zone which results in wide variations in seasonal temperatures. A natural funnel of cold, Arctic air provides some of the nation's coldest temperatures, dropping as low as 50 degrees below zero in the winter. In the summer, warm gulf air increases temperatures, at times to over 100 degrees, with a maximum recorded temperature of 107 degrees. The average summer temperature on the reservation is 65 degrees and the average winter temperature is 11 above zero. July is the hottest month. January is the coldest.

The average annual precipitation on the reservation is 24 inches, about 75 percent of which falls during the growing season. The growing season lasts about 120 days. The snowfall on the reservation averages between 45 and 55 inches annually, with snow cover lasting approximately 130 days each winter.

Soils:

The White Earth Reservation's soils are generally divided in half into a line running north/south through the middle of the reservation. The western most section of the reservation consists of clay soils characteristic of the Red River Valley. These clay soils are of very high fertility.

The eastern section of the reservation has generally sandier soils with low fertility.

The western half of the reservation has tremendous agricultural potential but very little of the land is in tribal ownership. The short growing season and sandy soils make substantial growth in agricultural crops on tribal-owned lands and the remainder of the eastern part of the reservation unlikely.

Forests:

The eastern half of the White Earth Reservation is covered by forest. All total, the reservation has over 400,000 acres of forest.

The reservation is located on the edge of three differing geographic regions which results in a wide variety of tree species. The major forests of the reservation lie in the north central hardwood region (Deciduous Forest) and adjacent to the Northern Pine and Conifer Re-Ion to the east.

Of the 57,000 acres of land that are tribally-owned, 80 percent, or 47,000 acres, are forested. The U.S. Department of Interior, Bureau of Indian Affairs is responsible for the management of the forested acres of tribal-owned lands.

These forested acres have proven to be a valuable and renewable economic tool for the White Earth Reservation. On average, the tribal-owned forest lands produce nearly 5.7 million board feet annually with an average value to the WERTC of approximately \$50,000 per year.

Minerals:

According to the 1978 Bureau of Indian Affairs report, valuable mineral resources on the White Earth Reservation are limited to deposits of sand, gravel and peat. More valuable deposits, in particular metallic deposits, have not been produced on the reservation with little potential for new findings.

The sand and gravel deposits are located in small amounts in each of the three counties included in the reservation. Marl deposits are located primarily in the southern section of the reservation.

Water:

The water resources on the White Earth Reservation, like that of much of north central Minnesota is among the best in all the Midwest. The reservation enjoys both abundant and good quality surface water and adequate groundwater supplies.

The surface waters on the reservation are divided among lakes, streams, rivers and wetlands. The surface water resources include 530 bodies of water encompassing 45,000 acres. In addition, the reservation has over 300 miles of rivers and streams.

The lakes in the southern portion of the reservation have steep slopes and sandy bottoms. They are good lakes for fish habitat. On the other hand, the lakes in the north are generally shallow and are suited for wild rice production. The lakes vary from very good to adequate water quality.

Confined aquifers are the major supply of groundwater on the reservation. Distributed throughout the reservations, the aquifers are generally located between 50 to 300 feet below the surface and are 5 to 25 feet thick. Yields in these aquifers reach up to 100 gallons per minute. With only few exceptions, the groundwater aquifers on the reservation meet drinking water standards set by the U.S. Environmental Protection Agency.

Fish and Wildlife:

The bountiful water resources and forests on the White Earth Reservation provide the natural setting for strong production of both abundant fish and a variety of wildlife.

There are a variety of fish in the some 530 lakes and rivers on the reservation. Types of fish found include walleye, northern pike, large mouth bass, sunfish, and crappies. trout, catfish, sager, and muskellunge are also present. Rough fish, especially carp and suckers, are also present. The most valuable fish on the reservation, both for sportsman and industry, is the walleye.

The White Earth Reservation Tribal Council has operated a Fisheries Program since 1982. The program has constructed four rearing ponds with the capacity to produce 140,000 walleye fingerlings every year. In addition, the program manages 10 to 15 ponds which produce an additional 70,000 fingerlings. The White Earth Fisheries Program has stocked lakes on the reservation since 1982. Since 1983, the program has produced over one half million walleyes.

The White Earth Biology Office actively manages over 6,600 acres of lakes on the reservation. In addition, the Biology Office manages, on a cooperative basis, an additional 14,000 acres with the Minnesota Department of Natural Resources.

Wildlife on the reservation has also proven to be abundant. Deer, grouse, waterfowl, bear and moose all can be found within the reservation boundaries.

Wild Rice:

Wild rice production on the reservation is significant. There are 53 wild rice beds on the lakes in the reservation, totaling over 3,000 acres. A majority of the acreage, some 1,400 acres, is on the Lower Rice Lake. Lower Rice Lake alone is capable of producing nearly 300,000 pounds of green wild rice for harvest. The harvest of wild rice on the reservation currently generates \$600,000 on an annual basis.

Forty of the fifty-three wild rice beds on the reservation, including Lower Rice Lake, are actively managed by the WERTC. Management of wild rice beds include monitoring and regulating water levels, removing beaver dams, cutting aquatic vegetation and reseeding.