

BROOKINGS COUNTY DRAINAGE PLAN

Laketon	Preston	Eureka	Argo	Oaklake	Lake Hendricks
Winsor	Oakwood	Sterling	Afton	Sherman	
Bangor	Volga	Brookings	Aurora	Alton	Richland
Lake Sinai	Oslo	Medary	Trenton	Parnell	Elkton

Brookings County, South Dakota

Date: July 21, 2009

BROOKINGS COUNTY DRAINAGE PLAN

Brookings County is located in east central South Dakota and is bounded by the state of Minnesota to the east, Lake and Moody Counties on the south, Kingsbury County to the west and Hamlin and Deuel Counties to the north. The county is composed of 9 municipalities and 23 townships. According to the 2000 census, there were 28,220 people in the 794 square miles of Brookings County. The great majority of the unincorporated portions of the county are dedicated to agricultural uses.

The shape of the land surface in Brookings County is largely the result of numerous advances into the region by glaciers over the past 2 million years, as well as the intervening non-glacial periods. While glaciers have at times covered the entire county, during the most recent glacial action only the western portion and northeast corner were covered. In those areas covered by earlier glaciers, the land surface drains well, with an integrated network of streams feeding the Big Sioux River. In the more recently glaciated western and northeastern parts of the county, there has not been sufficient geologic time to develop a well-defined drainage pattern, and the landscape is characterized by generally poor drainage and numerous wetlands and small lakes.

Brookings County lies within two major watersheds. In the northeastern part of the county, an area of about 50 square miles is part of the headwaters of the Lac qui Parle River, a tributary that drains northeast to the Minnesota River. The remainder of the county falls within the Big Sioux River watershed, with the river cutting across the county from north to south. The area east of the river is characterized by a well integrated network of tributary streams flowing from the northeast to southwest. To the west of the river, drainage is not nearly as efficient, but water eventually reaches the main channel.

Throughout the history of Brookings County, farmers have commonly drained wet areas on their land. Draining enhances that farmer's productivity; however, it almost always has some adverse impact on adjoining lands. Drainage law in South Dakota has always attempted to balance the benefits of drainage with the risks it may have on other lands.

State law recognizes that any rural land which drains onto other rural land has a right to continue such drainage if:

- (1) The land receiving the drainage remains rural in character;
- (2) The land being drained is used in a reasonable manner;
- (3) The drainage creates no unreasonable hardship or injury to the owner of the land receiving the drainage;
- (4) The drainage is natural and occurs by means of a natural water course or established water course;
- (5) The owner of the land being drained does not substantially alter on a

- permanent basis the course of flow, the amount of flow or the time of flow from that which would occur; and
- (6) No other feasible alternative drainage system is available that will produce less harm without substantially greater cost to the owner of the land being drained.

The law also notes that such provisions do not necessarily apply within municipalities, but if a municipality drains water onto rural lands lying outside the boundaries of the municipality, the municipality is subject to the above provisions, if adopted by the county.

In 1985, the South Dakota Legislature assigned counties the responsibility for drainage matters. South Dakota Codified Law 46A-10A authorized county commissions to develop drainage plans and implement regulatory measures. Therefore, The Brookings County Commission has prepared this plan for the purpose of enhancing and promoting physical, economic and environmental management of the county; protecting the tax base; preventing inordinate harmful impacts on downstream properties; encouraging land utilization that will facilitate economical and adequate productivity of all types of land; lessening governmental expenditure; and developing and conserving natural resources.

In the following document, the definition of “wetlands” will be adopted from the U.S. Army Corps of Engineers (Corps). The definition is taken from Section 404 of the Clean Water Act: “Wetlands are areas that are inundated or saturated by the surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.” - Definition as used by the Corps and the U.S. Environmental Protection Agency (EPA) since the 1970s for regulatory purposes. (<http://www.epa.gov/wetlands/sec404.html>)

Drainage Board

State law proclaims that a county drainage commission may be appointed as a board of resolution to address drainage disputes. State law declares that any decision of a drainage commission can be appealed to the county commission. Since most drainage disputes have the potential to become contentious, it is likely that many disputes may be appealed to the county commission. Therefore, the creation of a drainage commission may result in merely a prolongation of the process.

Policy

The Brookings County Commission shall serve as the drainage board/commission, until such a time may come that the County

Commission may not have sufficient time to spend on drainage issues.

Drainage Permits

The state drainage law (SDCL 46A-10A) also allows a county to adopt a drainage permit system. Brookings County zoning officials realize that any drainage project has the potential for impacting downstream properties. However, smaller drainage projects, particularly those with watershed areas of less than twenty acres, generally have little potential for adverse impacts provided that it isn't a wetland area being drained or altered.

Policy

Brookings County will implement a drainage ordinance which includes a permit system for drainage projects.

Brookings County zoning officials also realize that any drainage project has the potential for impacting downstream properties, making registration of all drainage projects important.

Policy

Brookings County will implement a drainage ordinance which includes a registration and/or recording requirement for all drainage projects involving drain tiling.

Vested Drainage Rights

SDCL 46A-10A also required landowners with existing drainage improvements on their property to record the location of such drainage with the Register of Deeds by July 1, 1992 in order for the drainage to be considered vested. Many drainage works were never filed; therefore, this drainage is not vested. Drainage work performed within a county, municipality or township road right-of-way was exempted from the recording requirement.

Policy

Brookings County will recognize vested drainage rights and consider all non-vested drainage to be the same as new drainage.

Rights of Landowners of Dominant or Servient Estate

The balance of rights between the landowner of the dominant (upstream) estate and the landowner of the servient (downstream) estate has always been a controversial issue. The Board acknowledges that judicial law in South Dakota has generally affirmed a landowner's right to direct drainage waters across a servient property when the waters are confined to a natural watercourse and do not spread across the servient property. However, the input of the downstream landowners is crucial in determining whether the receiving water course is of sufficient capacity to contain the waters from the proposed drainage. Brookings County acknowledges that while there may be many areas with adequate downstream watercourses, the only areas where it is likely that there will always be sufficient downstream watercourses are those in which the drainage will outlet into named streams delineated on the USGS topographical maps. State law also requires that directly affected landowners be notified when an individual proposes to change the drainage restrictions on property.

Policy

Brookings County will require notification to downstream landowners and will encourage input from such landowners when drainage is proposed which would outlet in any location other than a natural watercourse of sufficient capacity to handle the additional water flows. Those proposing moving water from their land to that of others shall be able to demonstrate that the drainage would not be a burden on servient property owners. The county should assess the current condition of the area to be drained in the county before issuance of a drainage permit. This shall be done as a precaution for liability as the issuing authority along with the project sponsor, may be held responsible for problems arising on servient lands.

Drainage Across Watershed Boundaries

It is recognized that the transfer of drainage waters from one watershed into another may result in an inequitable burden on a property which did not previously receive any water from the first watershed.

Policy

Brookings County will carefully assess the result of a transfer of drainage waters from one drainage basin to another, before issuing a permit to do so, as to reduce the County's liability due to unintended detrimental consequences.

Value of Wetlands

Draining wetlands for agricultural and development purposes has been a common practice for decades. Wetlands are perceived by some property owners as a liability but their destruction can result in a negative impact at both the local and regional level. Wetlands are valuable for their part in flood reduction, erosion control, water quality enhancement, and as fish and wildlife habitat.

Wetlands serve as natural water treatment plants. Vegetation and bacterial action within the wetland purifies water by holding and/or breaking down nutrients, sediments and pollutants before they percolate into the soil or are released into surface waters such as lakes and streams. Wetlands also serve as a major source of groundwater recharge by retaining precipitation so it can drain into the water table. By storing runoff water wetlands help prevent soil erosion by reducing the velocity of runoff water.

The storage capacity of wetlands also helps reduce downstream flooding. Wetland buffers reduce the rate at which storm water reaches streams or lakes and decrease the total water volume reaching these surface features. When extensive drainage occurs within a watershed, flood levels and the frequency of flood events increase, and flood waters rise much more rapidly. Small individual projects may not have a destructive effect on drainage but the cumulative impact of many actions can produce catastrophic events. All wetlands in a watershed assist in flood reduction but those within the flood plains are most critical in providing storage capacity for flood waters. Flood plain wetlands are also important to the recharge of shallow aquifers in Brookings County.

There are also many benefits for wildlife habitat and recreation from wetlands. The areas provide food, cover and water for a variety of wildlife. Research has shown that wetland areas have a great amount of biodiversity and 35 percent of threatened or endangered species depend on wetlands for their survival. Wetlands also provide recreational opportunities for hunting, fishing, bird-watching and other activities.

Policy

The Brookings County Drainage Board will analyze the drainage of any wetlands to ensure that it is necessary to drain. The County shall take all aspects of a wetland into consideration before permitting such drainage.

Coordinated Drainage Districts

State law provides a mechanism for landowners to submit a petition to create a new coordinated drainage area. State law also allows property owners to petition the county for repairs and provides that the county assess the benefited owners to pay for the costs of improvements, although Brookings County does not assess landowners as of yet. The creation of larger-scale drainage projects could result in potential liability exposure for the county due to the greater volume of water which may be drained.

Policy

Brookings County shall move very cautiously in dealing with existing or proposed drainage projects, carefully identifying coordinated drainage areas and working with landowners to assess the costs, benefits and potential liabilities of drainage improvements.