Chapter XIII

DRAINAGE PROBLEMS OF POLK COUNTY

It appears paradoxical that a county with the annual precipitation varying from 19 to 22 inches should have drainage problems, where in other agricultural sections 35 to 45 inches of rainfall are considered necessary for good crop production. After the better drained land along the watercourses had been taken up by the first wave of settlers, succeeding settlers on the open prairie had to deal with the spring run-off from the melting snows. If moderate to heavy snows covered the land and warm temperatures prevailed in April, the run-off from the ridges combined with the run-off of the prairies to fan out over the more level lands of the Red River Valley covering farm lands and running over roads and drives. While the water covering the frozen soil seldom did much damage to the prairie farms, yet the depressions and pot-holes in the fields were filled as the waters drained away, thus presenting the first drainage problem. The last choice of and for the early settlers on the prairie was the land subject to over-flow from the streams. With the exception of the Red Lake River, other streams flowing across the valley from the higher elevations east did not have deep cut valleys and at flood stage spread out over the farm lands. This was also true of the Red River, which marked the western boundary of the county.

The first drainage work of the prairie farmer, after locating his buildings on the highest spot on the farm, was to drain the pot-holes when an easy outlet could be found. The big problem was to find suitable or adequate outlets without dumping water on a neighbors land. A study of the topography of the county showed the general slope of the prairie section of the county to be from the southeast to the northwest, with a general slope of one foot per mile. The study showed also that the banks of the streams had been built up, especially so with the Red Lake River, so that the land sloped away from the river banks and the natural slopes paralleled the river. In order for the drainage water to get into the river, a high head of water was necessary to cut through the banks. The same was true when drainage ditches were run into the Red Lake River. The Sand Hill River was the chief offender of a stream in the county which spread out over the valley and formed what was called the Neilsville Swamp and also flooded nearby land one to several times per year. The unpredictable behavior of the Sand Hill River and the containing of the spring run-off affected the economy of the region to the extent that farmers, businessmen, and railroad officials became aroused to the seriousness of the drainage problem. As a result of the interest in drainage, the first Red River Valley Drainage Convention was held in Crookston on July 2, 1886, with representatives of all whose interests were involved present. An excellent report of this first drainage convention outlining the resulting action on the Sand