

MEETING RECORD

NAME OF GROUP: PLANNING COMMISSION

DATE, TIME AND PLACE OF MEETING: Wednesday, January 16, 2008, 11:45 a.m.
Mayor's Conference Room, County-City Building, 555 S. 10th Street, Lincoln, Nebraska

MEMBERS IN ATTENDANCE: Gene Carroll, Dick Esseks, Wendy Francis, Leirion Gaylor-Baird, Roger Larson, Robert Moline, Lynn Sunderman and Tommy Taylor. Michael Cornelius absent.

OTHERS IN ATTENDANCE: Paul Zillig, Jesse Korus, and Dan Schulz of the Lower Platte South NRD; Marvin Krout, Ray Hill, Mike DeKalb, Sara Hartzell, Christy Eichorn, Brandon Garrett and Michele Abendroth of the Planning Department; other interested parties.

STATED PURPOSE OF MEETING: **Water Issues in rural Lancaster County**

The meeting was called to order at 11:53 a.m.

DeKalb began with a PowerPoint presentation on groundwater issues. He presented several maps including water table levels, depth to groundwater ratios, saturated thickness of the principal groundwater reservoir, geologic bedrock, alkalinity, boron, chloride, dissolved solids, fluoride, hardness, iron, manganese, phosphorous, selenium, silica, sodium and potassium, sulfate from 1978, as well as water quality, quantity, spatial relationship, aggregate total value and septic tank absorption fields from 2004.

Esseks asked if rural water districts are assessed to provide adequate water. DeKalb responded that these are a community water system but do not provide fire protection.

In summary, DeKalb stated that groundwater is the only source of water for much of Lancaster County, and groundwater is highly variable both in quantity and quality across the country. Quantity generally varies from 1,000 plus gpm irrigation wells primarily in southern Lancaster County to 5 gpm or less.

Korus began by stating that groundwater is water that occurs in small porous spaces. Underground rocks and sediments contain voids or pore-spaces. The aquifer is a permeable underground zone through which groundwater moves. Water moves slowly through these pores. Groundwater is recharged by precipitation that seeps into the ground. Groundwater discharges into rivers, lakes and streams. There are many layers in the aquifer and water flows through the layers. Wells are used to extract water for human use. All wells take away from the recharge/discharge relationship in the system.

Nebraska has several groundwater regions. The LPS NRD is in the glacial drift region. The uppermost layer is a perched or semi-perched aquifer and supplies water to domestic farms and stock wells. The sand and gravel deposits in modern stream valleys supply water to

irrigation wells and municipal wells. The sand and gravel filled paleovalleys supply water to high capacity wells in upland areas. The bedrock aquifer is a secondary source of water and supplies water to domestic wells and some high capacity well. Water quality is poor in many areas.

The groundwater management plan goal is to maintain the quantity and quality of groundwater for any beneficial use in conformance with state standards. The objectives are to protect groundwater from pollutants, monitor groundwater quantity and quality levels, manage groundwater for long-term conservation and utilization, encourage proper development and conservation of groundwater, reduce potential for contamination by pesticides and fertilizers, and work collectively with other agencies to evaluate groundwater quantity and quality data.

The Lower Platte South groundwater management strategy is designed to be proactive so as to identify and address problems before they become serious. They designate areas of management based on best available data, establish monitoring networks for each area of management, establish limit "triggers" to the amount of contamination or groundwater decline allowed, and implement actions to protect and reduce the contamination or decline through different phases of management.

Chess began his presentation by stating that he is going to present the decision process when reviewing on-site wastewater systems. The criteria for on-site wastewater systems include 1000 gallons per day, reviewing soil maps for suitability, reviewing lot size, percolation tests and the number of bedrooms, verifying Health Department and State certification for the installers, and inspection of the system prior to being completed.

Water quality in Lancaster County is not good. Problems include hardness, nitrates, sulfates, chlorides, and sodium. Over the last 25 years, treatment systems have advanced enough to remove most of the water quality issues. Lancaster County is not known for water quantity especially in the northwest part of the county. They recommend that a well produce 5 gallons per minute. Systems can be designed to overcome low production wells. In conclusion, Chess stated that good water quantity and quality are a challenge in Lancaster County.

Esseks asked if there are parts of the county which are designated for acreages where there is too much drawdown and you can't engineer it so there is enough. DeKalb stated that there is not sufficient information to demarcate a no-build zone.

The meeting concluded at 12:50 p.m.

Respectfully submitted,

Michele Abendroth
Planning Department

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