

Benton County Water Resources Advisory Committee
Minutes
Tuesday, June 22, 2010 - 1:30 PM
Benton County Commissioners Room - Foley, MN 56329

The Benton County Water Resources Advisory Committee meeting was called to order by Chairman Duane Cekalla at 1:30 p.m. at the Benton County Commissioners Room on Tuesday, June 22, 2010.

Voting members present: Duane Cekalla – Little Rock Lake Association, Craig Gondeck – At-Large, Ken Nodo - At-large, Brian Kaschmitter – Elk River Association, John Bemboom – Township Officers Association, Joe Wollack- Commissioner, Guy Spence – Watab Township, Craig Gondeck – Watab Township.

Voting members absent: Wade Bastian – Benton SWCD Supervisor, Warren Peschl – Benton County Commissioners, John Bemboom – Benton County Township Officer, Jim Moshier – Municipalities Representative

Voting members excused: Warren Peschl, John Bemboom

Others present: Katie Winkelman – Benton SWCD Water Plan Coordinator, Gerry Maciej – Benton SWCD, Tiffany Determan – Elk River Watershed Coordinator, Dan Martens – U of M Extension, Barb Zeroth, Benton NRCS, Phil Votruba – MPCA, Dale Setterholm – Minnesota Geological Survey, Mark Wettlaufer - MN Dept of Health.

(Three Priority Issues in Comprehensive Water Plan: 1) Groundwater quantity and quality, 2) Development, 3) Feedlots and Nutrient Management.)

1. Welcome and Introductions

2. Review / Approve Minutes. Motion by Craig Ken Nodo to approve the January 26, 2010 minutes. Second by Craig Gondeck and Carried.

3. Agenda. Motion by Guy Spence, second by Craig Gondeck to approve the agenda. Motion Carried.

4. Reports

a. New Hires/Introductions

Katie Winkelman is the new Water Plan Coordinator. She grew up in Stearns County and graduated from St. Cloud State University. Nate Sanoski has been hired as a new SWCD District Technician. Nate graduated from St. Cloud State University with a major in Environmental Studies and minor in GIS.

b. Little Rock Creek TMDL project update

Waiting for contract from MPCA for extension. Should know by end of June.

c. Little Rock Lake TMDL update –

Deadline extended to June 30, 2011. Contractor is being held up by Florida Everglade issues. New deadline for conclusion of consultant work is November 30.

There was a virus kill of fish in the lake this spring.

Little Rock Lake Association Meeting in near future. There will be a July 27 stakeholders meeting to provide background information, and to share information about design of implementation. There is a Nemo project that explains how a watershed works.

Lake is green, but not blue. Duane Cekalla said the bigger part of the lake is clear.

d. Elk River Watershed Association TMDL – Tiffany Determan

There are some modeling results. Information was provided. To meet a goal of 40 ug/l would require a 78% reduction. Mayhew Lake has a large watershed area in proportion to the size of the lake. The watershed contributes 78% of “load.” Land use practices are a key issue. Majority of input to lake is due to spring run-off. An interim goal will likely be set.

Big Elk Lake is a shallow lake and the goal is 60 ug/l, requiring a 60% reduction. It also is a very large watershed related to the size of the lake.

Improvement in these two lakes is important to the turbidity issues in the Elk River below Big Elk Lake.

The Elk River goal for E. Coli is 126 colony forming units and would require a reduction of 73%.

Strategies will focus on riparian areas immediately adjacent to water channels and application of Best Management Practices.

Public meetings will be held. It will be important to get good public attendance: July 21 in Mayhew Lake Watershed - 1:30 and 6:30 at night at Annuciation Church. July 22 at Palmer Town Hall at 6:30.

e. WRAC Members Report

Traut Unlimited is doing a fresh layering project just north of County Road 40. DNR has an easement there. Cut cedar trees of a property and put the cedar in the stream banks. It looks like its narrowing the stream channel and getting enough flow to clean out sand and to get some of the gravel bottom exposed.

5. Action Items

a. Clean Water Fund Grants

Did receive: 1 grant with 3 practices, feedlot projects \$229,000 of cost share, pay for some of administration and engineering costs, \$50,000 for administration. 4 feedlot projects are in process now. Could do 1 or 2 projects more depending on scope of projects.

Must show that practices are identified in water plan. Reduce and minimize negative impact of manure on surface and groundwater. Implement practices to comply with 7020 rules and best nutrient management practices.

Manure Management test plots. Mike has about 18 planned this year. Target is dairy and poultry manure and areas of highest concerns.

Funds include \$1500 to start work in Little Rock Water Shed - looking at impact of irrigation water use by doing sprinkler systems application testing with cans for measuring the amount of water applied.

Funding not received: An application through the Elk River Watershed aimed at non-traditional small farm operators with pasture management issues. The other half of the application had to do with storm water issues.

b. Top 10 items

This will be a task at the next meeting. One question is working as large group or as subgroups.

6. County Geological Survey – Dale Setterholm University of Minnesota

Local partnership and effort is very significant. Chelle Benson provided significant help and Annie Felix made some of the original contacts.

Computer files are available from U of M Geological Survey Website.

Dale gave an overview of the water cycle related to landscape, from the sky to the land surface, water infiltrates into the ground and there is also surface movement. We have to manage both surface and groundwater in order to manage either one of them effectively. All rivers in Minnesota flow out of the state. None flow in. So rainfall is the critical water input.

A map shows Benton County has 4-8 inches of general rainfall that recharges groundwater. The rest is taken up by plants, leaves in rivers, or evaporates from surface water.

At the water table, the soil material is saturated. Water can move through the soil. This is different for sand than for clay. There can be porous space in sandstone, or you can have a granite type rock that will only have water in cracks and crevices.

Glaciers were a key to grinding bedrock into pieces from rock flour to large fragments. Glacial till is a mixture. There is always melting at the front of the glacier. It carries finer material out of the glacial till depending on velocity of the water.

Glacial till takes water in very slowly and more quickly over sand. Rates of movement can vary by a million fold. The longer the water spends in the active soil zone, the more time there is for plants to use the water or for the water to be "filtered." Once it gets past the soil area, it is what it is. The trip from a land surface through a stream can be years or days. Through some confining layers, it can take centuries.

As we move water from deeper aquifers, it increases the rate of water moving back down.

Ground water use: 67% irrigation based on 2005 figures, 9% domestic wells, 10% municipal (domestic uses), 6% to other municipal uses, 2% golf courses, ~6% livestock.

Irrigation wells highly correlated with sand and gravel. This is where the need is greatest and often where water is most readily available.

Data base plate is critical information. Well drilling records are used extensively. They establish location of wells and elevations. The MGS people drilled 5 wells. Data set for individual wells is tracked by unique well number where they have been reported. There are over 3000 wells used in the Geological Survey process.

Most glacial aquifers are not named. There are too many of them.

Dale talked about the two most common ones in Benton County. Aquifers can be confined or contiguous with water at the land surface.

The Bedrock Geology Plate is another piece of important information.

Many wells do not go all the way to bedrock. Denser material has more magnetic pull and maps are created accordingly. There are also quarry locations and bedrock outcropping.

Surface Geology: Soil scientists map down to 60 inches. The MGS process starts generally where the parent material starts, usually about 3 feet down. You can simply start by identifying where it is clay and where it is sand. The clay area is the glacial till. The sand is the outwash. And there is bedrock outcropping. The largest portion of the recharge is rain landing on sand areas. This helps you to know where different kinds of projects are likely to have the greatest impact.

Quaternary Stratigraphy deals with the area between the surface material and the bedrock. This is based largely on log well data.

Aquifers are mapped horizontally and vertically. This is not a perfect process. Several glaciers make a real "hodge-podge" of materials.

Question: Who determines whether water in an aquifer is being sustained or depleted? DNR is responsible for water appropriations.

Aquifers are like a savings account. You want to put in as fast or faster than you take out.

Depth to bedrock. Where it is deeper to bedrock, there may be more opportunity to find an aquifer.

Arc Scene is a software that demonstrates concept related to layers.

The goal is to use information that might help to answer questions: Where are recharge areas? Where are aquifers? Where are there no aquifers? Where are unmapped areas that might be sites for aquifers? Where are major contaminate sources? How are surface water resources connected to ground water resources?

7. Announcements

8. Next meeting:

July 27, 2010, 1:30 at the Benton County Commissioner's room.

9. Adjournment. Motion by Guy Spence. Second by Ken Nodo. Motion Carried. Adjourned at 3:30 p.m.

Respectfully Submitted,
Dan Martens, Secretary

Approved by:

Signature: _____ Date: _____
WRAC Board Chairperson