

## **UPDATE: DNR HOLDS PROJECT ADVISORY TEAM MEETING**

The Project Advisory Team (PAT) for the Straight River Groundwater Management Area (GWMA) met on Thursday, June 19, 2014 in Park Rapids.

**Project Background:** The Minnesota Department of Natural Resources (DNR) will be establishing a Groundwater Management Area in the Park Rapids area to enhance its ability to make better decisions on groundwater appropriation permits. The DNR shares responsibility for managing groundwater resources with public sector partners, as well as with individuals and businesses that use groundwater. The DNR is responsible for permitting high volume groundwater users, for collecting information on groundwater resources, and for providing technical assistance that supports groundwater conservation.

### **AGENDA TOPICS:**

#### **Legislative Update**

New legislation requires the PAT to have a majority of members who hold water appropriation permits in the project area. DNR will consult with League of Minnesota Cities (LMC), Minnesota Association of Watershed Districts, Association of Minnesota Counties and Minnesota Association of Townships to identify additional PAT members from local governmental units. DNR will ask current members of the PAT for their suggestions on additions to the team as well.

#### **Luke Stuewe—Minnesota Department of Ag (MDA) Update**

The Minnesota Agricultural Water Quality Certification Program (MAWQCP) is a voluntary program designed to accelerate adoption of on-farm practices that protect Minnesota's lakes and rivers. Producers who implement and maintain approved farm management practices will be certified and in turn obtain regulatory "certainty" for a period of 10 years.

"Certainty" is an assurance that producers who voluntarily implement conservation practices consistent with the state's water quality goals will be officially recognized for their effort. The program will help address existing concerns about changing regulatory requirements from multiple state and federal agencies. The program is being piloted in four areas of the state. The pilot process will last for a period of three years. A statewide program is planned following the pilots.

#### **Steve Thompson—DNR Presentation on Groundwater Management Strategy 2**

Steve Thompson, Hydro-Geo Groundwater Unit Supervisor presented on Strategy 2: *Improve information available for groundwater management decisions*. He identified several challenges facing the DNR and its partners in maintaining sustainable use of groundwater, for example: how to define sustainability thresholds for aquifers; and, how to define adverse impacts to surface water features from groundwater use.

Thompson suggested that aquifer sustainability thresholds are different for unconfined aquifers (such as the water table aquifer) and for confined aquifers. The concept of watershed budgets (comprised of inflow, storage, and outflow/use) may be useful in understanding sustainability thresholds for water table aquifers. DNR is creating groundwater and surface water monitoring networks and data management systems to help identify watershed budgets within groundwater management areas.

Confined aquifers require a different type of measurement for sustainability thresholds. DNR doesn't want to see water levels drop below the top of a confined aquifer, because this can cause permanent changes to the aquifer and affect long-term water storage and yield.

In some places, groundwater use can have negative impacts on surface water features such as streams, lakes, and wetlands. Groundwater and surface water often have a direct connection. DNR is working on methods to identify negative impacts from groundwater use on surface water features. The GWMA plan will discuss in more detail the methods DNR will use to determine negative impacts, as well as focused research to refine those methods. As an example of focused research, the US Geological Survey is developing state-wide stream flow and recharge estimates that will inform DNR groundwater work.

### **Advisory Team Discussion**

Following the presentation on Strategy 2, the PAT broke into smaller discussion groups to share issues, concerns, and ideas on sub-strategy 2a: *Develop better information on MN's groundwater resources including identifying sustainability thresholds for aquifers, developing guidelines for adverse impacts on surface water features and improving the statewide monitoring network.*

The small groups offered a variety of ideas and concerns, including the following: 1. we need good definitions for sustainability and adverse impacts; 2. we need to define what to measure to determine sustainability thresholds; 3. we need more timely data that will assist good decision making, for example, real time data on precipitation; 4. we need to recognize the property value and tax implications associated with a reduction in water use allocations.

The small groups shared creative ideas for management strategies, data collection and dissemination. Information from the County Geologic Atlas will be useful and the survey is underway, but it is a multi-year process. Could they focus on completing the Straight River watershed first? A suggestion was made to create rules that have different tiers like a shoreland ordinance. For example, could there be specific best management practices (BMPs) near the river and different BMPs farther away? Other ideas included correlating weather and precipitation data with the SR GWMA data; correlating climatic variables and seasonal thresholds for water use; and an incentive for flow meter installation through a rebate program.

### **Doug Kingsley—DNR Fisheries Presentation**

Doug's presentation focused on groundwater-dependent resources in the SR GWMA. Fish health depends on habitat features like water level, temperature and quality. The Straight River and Straight Lake are outstanding trout fisheries. Lower Straight River is a brown trout stream; other areas are brook and brown trout fisheries. DNR has gathered long term data on the size of the trout population through fishing tournament records from 1924-1990 and stream surveys and sampling since 1991-2013. These data show a decline of brook trout, leaving only brown trout populations.

There is an increasing trend of permits for water use in the Straight River area. Impacts of higher water use include reduced stream flows and increased water temperatures. Maximum, minimum and average water temperatures have been increasing during last decade. There may be a relationship between annual water use and stream water temperatures. Warm water holds less dissolved oxygen than cool

water. The Straight River was listed as impaired in 2010, because it didn't meet the dissolved oxygen level suitable for cold water fish.

### **NEXT MEETING OF THE PROJECT ADVISORY TEAM (PAT)**

The next meeting is scheduled for July 17 at 9:00am-12:00pm at the Hubbard Community Center in Hubbard, MN. Please note the change of place. Directions to the Hubbard Community Center:

From Park Rapids: Travel south on Co. Rd. 6 (Henrietta Ave) to Hwy 87. Turn east on Hwy 87 and continue to the intersection of Co. Rd. 6 in the town of Hubbard. Turn right (south) on Co Rd 6 and go about 4 blocks (just before curve). The Hubbard Community Center is on the right.

From the south (Wadena): From Hwy 71 turn east on Hwy 87 and continue to the intersection of Co. Rd. 6 in the town of Hubbard. Turn right (south) on Co. Rd. 6 and go about 4 blocks (just before curve). The Hubbard Community Center is on right.

The Advisory Team meetings are open to the public and time is provided for attendees to offer comments and ideas. The tentative topics for the July meeting are monitoring associated with **Strategy 2** – *Improve information available for groundwater management decisions*, and **Strategy 3** – *Improve the management of groundwater appropriation permits*.

### CONTACT INFORMATION

For more information on this project, please contact Tim Crocker – DNR Project Manager at 320-616-2450, ext. 232, [tim.crocker@state.mn.us](mailto:tim.crocker@state.mn.us). You can also [visit the DNR webpage](#).