



Data collection efforts will occur throughout the study area.

- ✦ The Scratchgravel Hills project area is northwest of Helena. Within this area the Green Meadow temporary controlled ground water area was designated by the DNRC in April of 2008. After two years this temporary designation will be allowed to expire, made permanent, or extended.

Increased subdivisions and declining water levels have been observed in some areas; however a lack of data prevents an evaluation of cause and effect. The shallow geology of the Scratchgravel Hills consists of alluvial deposits on top of faulted granitic bedrock. This investigation will provide more detailed hydrogeologic information in order to better understand the geologic setting of this area, to determine aquifer properties, and to better quantify aquifer recharge and withdrawals. Drilling and coring will be conducted in order to establish lithology; particularly with respect to depth to bedrock. Aquifer tests and water chemistry will be used to define aquifer properties, and will be used to determine the degree to which the alluvial and granitic aquifers are connected. This information would be used to develop a model of the groundwater system. This model will be used to evaluate the effects of pumping wells on groundwater and surface water.

Final products will include a publically available report and several web-based project maps, and the groundwater model. GWIP results will provide land owners and regulatory personnel with scientific information to help make informed water management decisions that provide a balance between further development and protection of water resources.

Current Montana Bureau of Mines and Geology personnel assigned to this project include:

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Montana Bureau of Mines and Geology Ground-Water Investigations Program

The 2007/2008 Water Policy Interim Committee (WPIC) recognized that competition for water resources and the lack of detailed information on groundwater/surface-water interaction has challenged water-resource management and development in Montana. The WPIC found that "continued and expanded study of ground-water resources is vital to shaping statewide policy as well as providing the data necessary for local decisions regarding water."

To that end, the **Ground-Water Investigations Program (GWIP)** was established to provide specific scientific information on important water resource issues, including:

- stream depletion from groundwater development by new withdrawals,
- cumulative effects of existing and proposed water development,
- groundwater/surface-water response to changes in irrigation practices,
- implementation of aquifer storage and recovery (ASR) in Montana, and
- evaluating potential mitigation/offset plans in closed basins.

A typical groundwater investigation will involve the compilation of existing data, drilling of test/monitoring wells, aquifer testing, water quality sampling, stream flow analyses, and extensive modeling of groundwater, surface water, and chemistry

Highlights of HB 52 (61st Legislature):

- Directs the Ground-Water Assessment Steering Committee to prioritize sub-basin investigations based on anticipated growth in housing, agriculture, industry, and commercial activities.
- Directs the Montana Bureau of Mines and Geology to conduct 1 to 3-year focused investigations of groundwater and surface water in the prioritized areas.
- Funding for 5 to 7 investigations each biennium starting July 1, 2009. There are currently 37 potential sites identified (see map on reverse side).

Ground-Water Investigation Program Products:

Each sub-basin investigation product will include:

- A detailed report that describes the hydrogeologic system
- Models that simulate hydrogeologic features and processes
- A comprehensive set of hydrogeologic data available online

Each project will be a focused investigation of groundwater and surface water in a sub-basin of sufficient size to construct models and a detailed report of the investigation. The models, reports, and supporting data will be technical in nature and used directly by scientists and engineers representing agencies, senior water-right holders, new applicants, and other stakeholders.

Ground-Water Assessment Steering Committee

includes:

Four voting members from:

Department of Agriculture
Department of Natural Resources and Conservation
Department of Environmental Quality
State Library, Natural Resource Information System

Ex-officio members from numerous other interested agencies and interests.

For more information, visit the MBMG website:
<http://www.mbmgt.mtech.edu/gwip/gwip.asp>

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