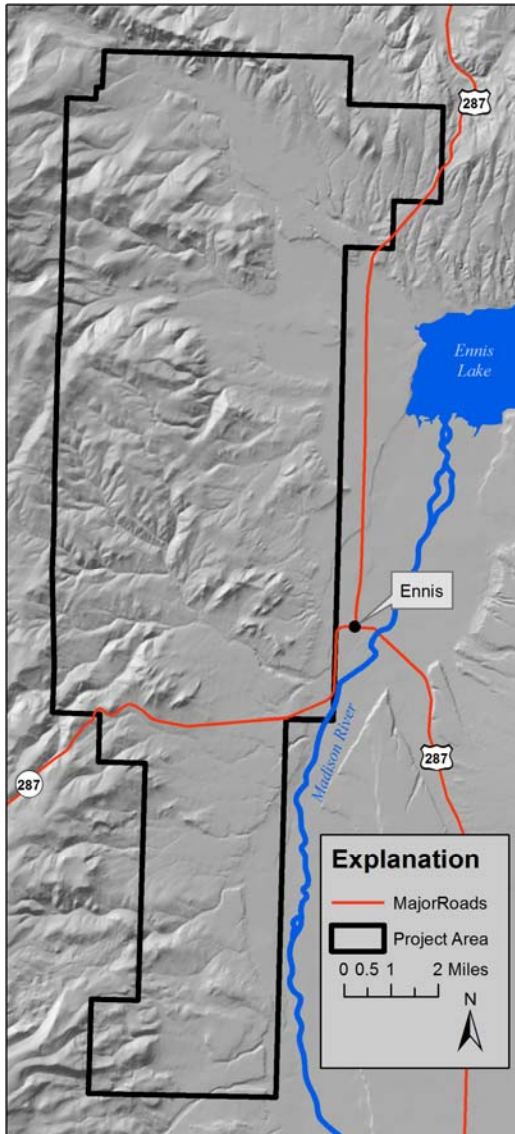


The ***Ground Water Investigation Program (GWIP)*** answers locally identified, site-specific questions prioritized by the Montana Ground Water Steering Committee (MCA 85-2-525). As mandated by the Montana Legislature, GWIP conducts research on the most urgent water issues in the State



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Several subdivisions have been built on the bench west of Ennis. Additional subdivisions will likely be proposed in this area. In much of this area, the only available aquifer is the fractured bedrock. Due to the low productivity of the fractured bedrock there is concern that additional development could cause groundwater levels to decline in existing wells, making them less productive, or potentially unusable.

This project includes the bench area above the floodplain along the west side of the Madison Valley, near Ennis. The project purpose is to assess the likely effects from different intensities of water development in the bedrock aquifer. Effects may include lowered groundwater levels in the bedrock and adjacent unconsolidated aquifers, and changes in groundwater/surface-water interactions.

In this study we will:

- 1) Evaluate groundwater-levels throughout the study area.
- 2) Monitor streams in some areas to measure groundwater/surface-water interactions.
- 3) Define the areas where the fractured bedrock aquifer is the only available groundwater source.
- 4) Estimate bedrock hydraulic conductivity (K) and storativity (S) values by conducting aquifer tests.
- 5) Develop groundwater models to test the effects from different development scenarios.

<http://www.mbm.mtech.edu/gwip/gwip.html>