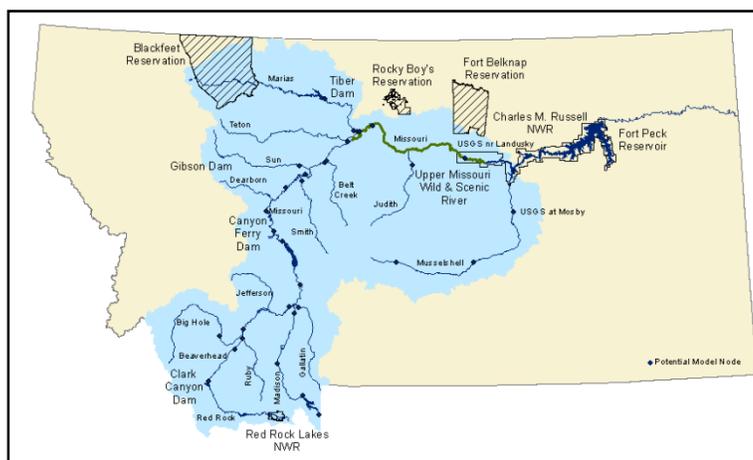


## Missouri Headwater Basin Study

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The Basin Study Program, as part of the U.S. Department of Interior’s WaterSMART Program, addresses 21<sup>st</sup> century water supply challenges and climate change. In 2014, through the Basin Study Program, the Upper Missouri River Basin Study (Basin Study) was competitively selected and is co-funded by the State of Montana’s Department of Natural Resource and Conservation and the U.S. Bureau of Reclamation.

The Upper Missouri Basin area encompasses the Missouri and Musselshell Rivers and tributaries in the State of Montana above the Fort Peck Reservoir, an area of approximately 49,000 square miles. (GIS Location Map??) The Upper Missouri Basin water provides a multitude of benefits including roughly 1 million acres of irrigation, world-class trout fisheries and other fish and wildlife resources including those for threatened and endangered species, nearly 400 Megawatts of hydropower generation, lake and river recreation, and municipal and industrial uses. The basin contains six Reclamation projects including Canyon Ferry (2,000,000 acre-feet) and Tiber Reservoir (925,000 acre-feet), and six state-owned water storage projects.



Water supply and demand imbalances already exist in some geographically areas with insufficient flow during many years to fully supply both agricultural and instream use. Recent droughts experienced in the Upper Missouri Basin have had impacts to all water user entities and those droughts are projected to occur into the future. This Basin Study will assist in addressing these and many other concerns by:

- Projecting future supply and demand, including the impacts of climate change.
- Develop a daily time-step simulation model of the basin, including all the major reservoirs and other water infrastructure.
- Analyze how the basin’s existing water and power operations and infrastructure will perform in the face of changing water realities.
- Develop adaptation and mitigation strategies to meet current and future water demands.
- Perform a trade-off analysis of adaptation and mitigation strategies identified.

DNRC and Reclamation are working with all interested parties throughout the Upper Missouri Basin and is targeting to complete the Basin Study in 2017. The total estimated study cost is \$870,000 with Reclamation providing 48 percent (\$440,000) and the State of Montana providing 52 percent (\$455,000) of the funding.

