

Montana Engineering Practice Planning and Design Guide for Monitoring Well

	<u>References</u>	✓
RESOURCE INVENTORY	NPM 506.10	
1. Review legal requirements: Administrative Rules of Montana at: http://www.mtrules.org/gateway/ChapterHome.asp?Chapter=36%2E21 and, Montana Codes Annotated at: http://data.opi.mt.gov/bills/mca_toc/37_43.htm	Title 36, Chapter 21 ARM	<input type="checkbox"/>
2. Determine the area to be monitored. Consider:	Title 37, Chapter 43 MCA	
▪ location of all the facilities in the area. ▪ the depth and orientation of the water table being monitored		
3. Consider location, reliability and quality of groundwater supplies.		<input type="checkbox"/> ✕
4. Select proposed monitoring well sites. Consider:		<input type="checkbox"/> ✕
▪ topographic position with respect to streams and drainage divides, ▪ animal and vehicle traffic patterns, ▪ geologic conditions if known, ▪ other wells drilled in area, ▪ underground and overhead utilities, ▪ site accessibility, including future maintenance and repair, ▪ location within floodplain--the top of the watertight casing shall extend at least three feet above the regional flood of record, ▪ location of potential sources of contamination, follow NRCS setback requirements.	ARM 36.21.8 Monitoring Well (353) Standard	
5. Document important information in the case file.	NPPH 600.3	<input type="checkbox"/> ✕
INTERPRETING, ANALYZING AND EVALUATING	NPPH 600.3	
1. Submit request for geologic report to:		
▪ Geological Services Unit State Geologist USDA Natural Resources Conservation Service 10 East Babcock Street Bozeman, Montana 59715		
2. Requests for geologic assistance require:		<input type="checkbox"/> ✕
▪ name of owner, ▪ legal description of site, ▪ location of proposed site on USGS quad sheet (not photos), ▪ purpose requirements, ▪ description of other wells in area if known, ▪ history of existing contaminant sources, ▪ map showing location of area of cooperation unit, access route, power lines, and pipeline route, if applicable.		

✕ This activity or documentation is usually required on each job.

ARM--Administrative Rules of Montana published by Board of Water Well Contractors

Monitoring Well

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DEVELOPING AND EVALUATING ALTERNATIVES		
1. Document important information in the case file.	NPPH 600.3	
IMPLEMENTING DECISIONS	NPPH 600.3	
1. Prepare contract package. It should include:		<input type="checkbox"/> ✕
▪ Location map,		
▪ Geology report,		
▪ Construction Specification for Monitoring Well		
2. Requirement to submit a copy of the Montana Well Log Report, DNRC Form 603 R2-04 , to the NRCS field office before payment is authorized.		
3. Copy of completed Montana Well Log Report, DNRC Form to the producer.		
4. Copy of completed Montana Well Log Report, DNRC Form 603 R2-04 to be sent by the Licensed Monitoring Well Contractor to the Montana Bureau of Mines and Geology, 1300 West Park Street, Main Hall #322, Butte, Montana 59701-8997 (not required by tribal members on tribal land).		
5. The well driller must submit three copies of the Montana Well Log Report, DNRC Form 603 R2-04 , one copy to the well owner, one copy to the Montana Bureau of Mines and Geology, and one copy to the NRCS Field Office <i>within 60 days</i> of completion of the well.		<input type="checkbox"/> ✕
6. Test water quality in laboratory which uses EPA-approved methods.	MT Tech Note Environment #13	<input type="checkbox"/> ✕
7. Develop Operation and Maintenance plan with landowner. O&M plans will maximize the useful life of every monitoring well.	NRCS MT O&M Manual	<input type="checkbox"/> ✕

✕ This activity or documentation is usually required on each job.
 MBMG--Montana Bureau of Mines and Geology

DNRC--State of Montana Department of Natural Resources and Conservation

Further information on monitoring wells is listed in these Selected References:
[Hydrogeology Field Manual](#) by Willis D. Weight;
[Groundwater and Wells](#), Fletcher G. Driscoll, Johnson Division,
 St. Paul, Minnesota 55112, 1986.