Montana
General Engineering Planning and Design Guide
for
Planning

	References	✓
DETERMINE OPERATOR OBJECTIVES		
Make an appointment with the cooperator to see the site and discuss the problems. Be prompt, listen, and ask questions (What are his or her goals, problems, conservation needs, available resources, existing system characteristics, etc?). Be sure the cooperator understands the need for appropriate permits.	NPM 506.10	❐ ×
Document important information on the SCS-CPA-6 form in the case file.	NPM 506	❐ ×
RESOURCE INVENTORY (You may use work sheets if available.)	NPM 506.10 MIM Ch. 9	
1. Gather initial topographic information for the service area. This can often be accomplished by study of USGS quadrangles or by taking a few shots with an engineering level or transit.	MSPM Ch. 2	❐ ×
2. Detailed engineering surveys where needed at this stage (see Engineering Surveys section of this guide).		❐
3. Gather information on soils. Dig holes if necessary. Obtain detailed site survey by soil scientist or geologist if necessary.	Local Soil Survey NPM MT506.15	❐ ×
4. Find out about property lines and ownership factors.		❐
5. Determine the user's desires concerning the system.		❐ ×
6. Site considerations:		
▪ Determine factors about the physical site which must be considered in in planning.		❐ ×
▪ Determine location and details of any buried or overhead utilities in in the construction area.	NEH 503.03	❐ ×
▪ Is the site within a flood plain?	NPM MT506.17	❐ ×
▪ Will wetlands be modified or disturbed by installing the project?	NPM MT506.17	❐ ×
▪ Are archaeological or historical resources involved?	NPM MT506.17	❐ ×
7. Find out all you can about detailed characteristics of the existing system.		❐ ×
8. How well does the existing system work? How does it fit in with the overall system or the community system? How does it fit in with the overall conservation plan?		❐ ×

		References	✓
9.	Data concerning water source.		
	▪ Drainage area and characteristics of drainage area.		❒
	▪ Flow characteristics, reliability, scheduling. Measure flow if necessary.		❒ ×
	▪ Quality of water. Test if necessary.		❒
10.	Determine labor availability and skill, and equipment available for operation and maintenance.		❒ ×
11.	Cooperator long range plans which may affect project.		❒ ×
INTERPRETING, ANALYZING, AND EVALUATING			
1.	The project and appurtenances will be planned as an integral part of a Resource Management System (RMS). Work with and educate the landuser to accomplish this.	NPM 506.12	❒ ×
2.	Are there other alternatives to the proposed system?		❒ ×
3.	Are there soil or geologic conditions which will limit the type of system or how it is installed?		❒ ×
4.	Are there labor, economic, management, or physical constraints on the system?		❒ ×
5.	Is water source quality, timing and availability adequate?		❒ ×
6.	Prepare a preliminary analysis of environmental effects and prepare an environmental checklist (MT-EVC-1).	NPM 506.17 MT-EVC-1	❒ ×
7.	Make archaeological investigation if needed.	NPM 506.17	❒

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