

Outline of Existing Planning Elements
Missouri Guidelines for Source Water Protection Plans (MOSWPP),
Missouri Watershed Management Planning Grants (319), and the
AWWA Source Water Plan Standard (AWWA)
April 13, 2011

1. Vision for plan and goal(s) (MOSWPP, AWWA, 319)
 - a. Introduction/purpose (MOSWPP)
 - b. Vision (AWWA)
 - c. Goals and/or plan objectives (generally MOSWPP):
 - i. Achieving water quality standards (319)
 - ii. Protecting public health and addressing aesthetic concerns (AWWA)
 - iii. May also include biological diversity, equity, etc. (AWWA)

2. Source water characterization
 - a. Delineation of source water area (MOSWPP, AWWA)
 - i. Include description of geology; method of delineation; maps; total acreage; listing of ponds, lakes, rivers, streams, wells, etc; confirmation that the Division of Geology and Land Survey has been contacted, (see also 2c and 2d) (MOSWPP)
 - b. Water quality and water quantity data summary (AWWA)
 - i. Include information on background sources, evaluation of raw water quality, history of current raw water source, description of treatment process, assessment of current finished water and an analysis of sufficiency of current removal treatment requirements. (MOSWPP)
 - c. Land use (generally AWWA)
 - i. Description of land uses and acreage amounts in source water area (MOSWPP)
 - ii. identification of current agricultural practices within source water area (MOSWPP)
 - iii. identification of wastewater discharges and sludge application (MOSWPP)
 - d. Security planning and implementation (AWWA) ;
 - i. identification of security issues needing addressing (MOSWPP)
 - e. Emergency preparedness and response (MOSWPP, AWWA)
 - f. Health and safety management (AWWA)
 - g. Stakeholder identification, including Source Water Protection Committee members (MOSWPP, AWWA)
 - h. Contact information for the water supply (MOSWPP)
 - i. Definitions (MOSWPP)

3. Identification of potential and actual source of contamination
 - a. Contaminates list (list, number, and types) (MOSWPP)
 - b. Identify causes of pollution (319, AWWA)
 - c. Identify sources of pollution (319, AWWA)
 - d. Select critical areas for protection and/or restoration (319)

4. Identify risks and impacts of sources; estimate necessary pollutant reductions

- a. Identify difference between water quality goal (in #1) and current pollutant levels; calculate load reductions necessary: (319)
 - b. Conduct a risk assessment analysis of the susceptibility of the source water to potential contamination (AWWA)
 - i. Describe associated risk and potential impact of each listed contaminant in the source water area (MOSWPP)
 - c. Ascertain if supply is currently in compliance with Public Drinking Water Program regulations, or striving to be (MOSWPP)
5. Action plan (generally MOSWPP, generally AWWA)
- a. Protection
 - i. Describe existing or planned Source Water Protection Ordinance(s). If planned, identify opportunities and obstacles for implementation. (MOSWPP, NOT required but strongly recommended)
 - ii. Description of current management measures for contaminant sources (MOSWPP)
 - b. Restoration
 - i. Describe critical areas for restoration (identified in 3c) and describe the nonpoint source management measures to be implemented. (319)
 - ii. Identification of planned management of contaminant sources and “very specific” information on best management practices to be installed. (MOSWPP)
 - c. Both protection and restoration
 - i. Estimate necessary financial assistance (319, MOSWPP) (also (generally AWWA))
 - ii. Estimate necessary technical assistance (319, (also (generally AWWA))
 - iii. Develop outreach plan, aka education and information to support work (319)
 - 1. Confirm inclusion of plan information in CCR (MOSWPP)
 - iv. Signatures of those who will implement the plan (MOSWPP)
6. Milestones (generally AWWA)
- a. Identify specific, measurable outcomes (319)
7. Timeline (MOSWPP, generally AWWA)
- a. Identify factors affecting timing, such as seasonal limitations, funding cycles, permit timing, etc. (319)
 - b. Develop schedule for all phases of planning, implementation, monitoring and revisions. (319)
8. Monitoring and surveillance
- a. Identify suite of measurable indicators tied to milestones (6) and goals (1). (319)
 - b. Develop specific action plan for monitoring (319)
 - i. Analysis and procedures
 - ii. Baseline information
 - iii. Approved labs and other QAQC
 - iv. Information/education data
 - v. Monitoring plan
 - vi. Implementation schedule/timeline

9. Procedures for reviewing and revising plan (AWWA)
 - a. Identify criteria for measuring progress (319)
 - b. Establish procedures for evaluating source water plan/adaptive management process (MOSWPP, generally AWWA)
 - c. Identify specific means to update information pertaining to risks from listed contaminant sources (MOSWPP)
 - d. Describe future surveillance and frequency; future management approaches (MOSWPP)
 - e. Establish process for future public participation (MOSWPP)

Outliers from MOSWPP

MOSWPP is written at a level of detail quite different from the other documents, and has some pieces that are more of a challenge to fit in. They can be fit in as we write, but it will take some additional work.

- “Provisions implemented for reduction of Total Organic Carbon, disinfection byproducts, Trihalomethanes and taste and odor.”
- “future surveillance and frequency”
- “future management approaches”

Supporting documents

Documents used as basis for each (please note: EPA’s 319 Nine Critical Elements piece contains, in some cases, more specific information than the Missouri piece, so we may need to discuss this):

Missouri Guidelines for Source Water Protection Plan (MOSWPP): Missouri Department of Natural Resources, Division of Environmental Quality, Water Protection Program, Public Drinking Water Branch, Source water Protection Program: Guidelines for Developing a Source Water Protection Plan. Undated.

Missouri 319 Nine Critical Elements (319): Missouri Department of Natural Resources, Heartland Regional Water Coordination Initiative, University of Missouri Extension, U.S. Environmental Protection Agency: Nine Element Watershed Management Planning Handbook. January 8, 2010.

New AWWA Source Water Plan Standard (AWWA): Chi Ho Sham of The Cadmus Group, Inc: PowerPoint presentation “AWWA SWP Standard.” Undated. (Note: we don’t have the detailed standard, just the PowerPoint.)