



One Watershed, One Plan

Plan Content Requirements

March 23, 2016



Introduction

This document contains specific content requirements for drafting a comprehensive watershed management plan through the One Watershed, One Plan program. Full operating procedures for developing the plan - including initiating the planning process through review, approval, and adoption - are contained in the *One Watershed, One Plan Operating Procedures* document.

The following [Guiding Principles](#) provided sideboards and direction in the plan content requirements outlined in this document:

- One Watershed, One Plan will result in plans with prioritized, targeted, and measurable implementation actions that meet or exceed current water plan content standards.
- One Watershed, One Plan will strive for a systematic, watershed-wide, science-based approach to watershed management, driven by the participating local governments.
- Plans developed within One Watershed, One Plan should embrace the concept of multiple benefits in the development and prioritization of implementation strategies and actions.
- One Watershed, One Plan planning and implementation efforts will recognize local commitment and contribution.
- One Watershed, One Plan is not intended to be a one-size-fits-all model.

The requirements in this document are also supported by the vision of the Local Government Water Roundtable that future watershed-based plans will have sufficient detail that local government units can, with certainty, indicate a pollutant of concern in a water body, identify the source(s) of the pollutant, and provide detailed projects that address that particular source. This vision also includes a future of limited wholesale updates to watershed-based plans; with a streamlined process to incorporate collected data, trend analysis, changes in land use, and prioritization of resource concerns into the watershed-based plan; and an emphasis on watershed management and implementation through shorter-term work plans and budgeting. This vision includes acknowledging and building off of existing plans and data (including local and state plans and data), as well as existing local government services and capacity.

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NOTE: Operating Procedures for establishing planning boundaries, requirements for participation and formal agreement between local governments within the boundary, and procedures for plan development are provided in a separate document.

I. Overview

The organization of this document includes background information and guidance about the requirements with the specific plan content requirements contained in a shaded box. The primary planning terms used are: priority issues, goals, and actions. These terms are defined within the sections they are used.

Plan development procedures and steps such as: initiating a plan, establishing a planning boundary, requirements for participation and formal agreements between local governments within the boundary, and procedures for formal review and approval can be found in the *One Watershed, One Plan Program Operating Procedures* document. Overall organization and format of the plan is a local decision unless otherwise specified in these requirements.

Planning partners are strongly encouraged to consider the potential for more extreme weather events and their implications for the water and land resources of the watershed in the analysis and prioritization of issues. While these events cannot be predicted with certainty as to time and occurrence, the meteorological record shows increased frequency and severity of extreme weather events, which has a direct effect on issues in local water planning.

Minnesota Statutes, Section 103B.801, subdivision 4 indicates that comprehensive local water plans should consider and discuss several issues as part of the watershed planning process. These issue areas include:

- Surface water and ground water quality protection, restoration, and improvement, including prevention of erosion and soil transport into surface waters.
- Restoration, protection, and improvement of surface water and groundwater storage and retention systems.
- Promotion of groundwater recharge.
- Flood damage reduction, especially to minimize future public expenditures needed to correct flooding problems.
- Wetland enhancement, restoration, and establishment.
- Shoreland and riparian zone management and buffers.
- Protection and enhancement of fish and wildlife habitat and water recreational facilities.

However, the local water planning process is not limited to these issues. Broad issues areas likely to be identified and discussed through the watershed planning process include:

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| ▪ Soil health | ▪ Drought mitigation |
| ▪ Altered hydrology | ▪ Education, outreach and civic engagement |
| ▪ Maintenance of core services; understanding of local capacity | ▪ Contaminants of emerging concern |
| ▪ Water supply (protect, provide and conserve) | ▪ Emerging issues (e.g. land cover, climate change, etc.) |
| ▪ Drinking water supply | ▪ Invasive species prevention and/or management |
| ▪ Drainage system management | |
| ▪ Wastewater management | |

The list above is not all-inclusive. Any land and water related issue could be part of the plan. Further, issues may also include addressing administrative priorities (e.g., establishment of uniform local policies and controls in the watershed) or fiscal challenges (e.g., minimizing public capital expenditures in resolving problems in areas such as flood control or water quality protection).

Although not required, recommended steps in the planning process include developing an overarching mission or vision statement for the watershed, as well as higher-level guiding principles or purposes. The purpose of establishing a vision, mission, and/or guiding principles is to provide a sense of direction for the plan and participants in the planning process.

An underlying theme within these requirements is the intent for watershed-based plans developed through One Watershed, One Plan to be succinct, with a thorough and science-based process used in development, and an emphasis in the resulting plan on the implementation schedule and implementation programs. For example, the information found in a Land and Water Resources Inventory is extremely valuable to the planning process and ultimate implementation of the actions in the plan; however, the majority of this information can be incorporated into the final plan document by reference.

Finally, through the development of the One Watershed, One Plan program, BWSR partnered with the University of Minnesota to assess tools and models available to assist in plan development. Models and tools were assessed based on: the complexity of the tool, scale at which the tool is best used, ability of scenarios to be evaluated with the tool, ability for the tool to evaluate multiple constituents, and whether the tool has historical use or support in Minnesota. The resulting recommendations will be available on the BWSR website, and assistance with selecting and using models and tools for plan development may be available. More than one tool or model may be used in a planning effort and different tools may be used in subsequent implementation. However, the tools utilized in developing a capital improvements program must be able to demonstrate prioritized, targeted and measurable outcomes

II. Plan Content Requirements

Each watershed-based plan will contain the elements outlined in the following sections.

1. Executive Summary

Each plan will have a section entitled Executive Summary. The purpose of the executive summary is to provide a condensed and concise plain language summary of the contents of the overall plan. A well-written executive summary is beneficial for current and future elected officials, staff, citizens, and stakeholders to achieve an understanding of the plan and its intent.

Plan Content Requirement: Executive Summary

Each plan will have a section entitled Executive Summary. The purpose of the executive summary is to provide a brief look at the contents of the plan. The summary will include:

- A. Purpose, mission, or vision statement if developed;
- B. A general map or description of the planning boundary and smaller planning or management units if used;
- C. A summary of the priority issues and goals that are addressed in the plan;
- D. A summary of the implementation actions and programs;
- E. A brief description of the process used to identify the measurable goals and targeted implementation actions; and
- F. An outline of the responsibilities of participating local governments.

In addition to the Executive Summary, the plan may need a table of acronyms and a definitions section; however, these are not required and may be included in the appendices.

2. Identification and Prioritization of Resources and Issues

This section of the plan is intended to summarize the process that the planning partners used to reach agreement on the watershed resource issues that will be addressed within the lifespan of the plan. Prioritizing is needed because not all identified issues can be addressed in the timeframe of a ten year plan—some will be addressed before others.

The process for considering and prioritizing issues generally has two parts: agreement on priority natural resources, sometimes called geographic targeting, and agreement on priority issues impacting those resources. Examples of priority resources include high quality recreational lakes, the main stem of the primary river in the watershed, or a specific groundwater aquifer that is the primary drinking water source in the watershed. Identifying priority issues goes a step further by describing the issue(s) that impact or threaten the priority resources of the watershed, such as: “high quality recreational lakes showing a downward trend in water quality” or “sedimentation in the main stem of the priority river.”

In general, the process for identifying the priority resources and issues will follow four steps:

1. Aggregate priority resources and issues from: existing local plans, studies, and reports; modeling, data collection, and assessment completed through the WRAPS and/or TMDLs; state plans or studies; feedback received from the initial notifications to the plan review authorities and stakeholders; and comments submitted by citizens at the initial planning meeting(s) held in the watershed (see *One Watershed, One Plan Operating Procedures*).
2. Apply local knowledge and information and consider the following factors to describe potential priority issues:
 - Science and data generated through modeling, data collection, and assessment such as WRAPS, TMDLs, or equivalent;

- Anticipated future impacts or land use changes that may provide an opportunity or escalate a risk if nothing occurs;
 - Understanding of trends and/or tipping points for individual water resources;
 - Understanding of precipitation frequency as per National Oceanic and Atmospheric Administration (NOAA) Atlas 14;
 - Understanding of citizen and local landowner willingness to participate in potential changes to watershed management;
 - Local values which may recognize specific water or landscape resources as a priority.
3. Consider the high-level state priorities identified in the state's Nonpoint Priority Funding Plan for Clean Water Implementation Funding. These are the priorities identified by state agencies for investing Clean Water Fund nonpoint implementation money:
 - Restore those impaired waters that are closest to meeting state water quality standards.
 - Protect those high-quality unimpaired waters at greatest risk of becoming impaired.
 - Restore and protect water resources for public use and public health, including drinking water.
 4. Select priority resources and issues to be addressed in the plan, based on analysis of the sources and factors identified in Steps 1 – 3.

Plan Content Requirement: Identification and Prioritization of Resources and Issues

The plan must contain:

1. A summary of the issues and resource concerns identified from all sources for consideration in this section;
2. The steps used to consider and prioritize the identified resources and issues; and
3. A list of the agreed upon priority resources and issues for the watershed and a brief description of why the issue was selected.

Priority issues can be articulated in the plan through both a list/descriptions and map(s). The format and exact planning terminology used in the plan for presenting priority issues may vary as long as the plan covers the three requirements above and the terminology used is defined in the plan (the summary and steps are suggested to be included as appendices). The plan is not expected to address all identified issues; however, it should include a brief explanation as to why certain issues were rejected as priorities for this planning cycle.

In the event that conflicts exist in the interpretation of issues and/or selection of priority issues, consider whether the conflict can be addressed by defining both watershed-wide priorities as well as individual priorities of the participating local governments.

Plans that do not demonstrate a thorough analysis of issues, and that do not use available science and data, will not be approved. BWSR will consider the guidance and recommended tools outlined in *Section 2 Analysis and Prioritization of Issues* in assessing if analysis has been thorough.

3. Establishment of Measurable Goals

The plan must contain measurable goals, sometimes called objectives in planning, to address each of the priority issues. Measurable goals articulate what the planning partners want to achieve and allow for evaluation of progress. A useful method for assessing if a goal is measurable is to ask the question for each goal: “will we be able to measure / show / report that we have been successful in achieving this goal when we assess implementation of the plan in the future?”

The development of measurable goals and the resulting implementation actions will be an iterative process. Goals from existing local water plans and information should be summarized and discussed for potential inclusion as part of this process. WRAPS, TMDLs, and the models used for the prioritization process noted above should all be used in the setting of goals. The implementation programs and schedule for achieving the goals should be considered and goals adjusted to reflect which are achievable within the timeframe of the plan versus goals that may reflect a longer view.

Formatting, terminology, and organization in the plan to meet this requirement can vary. For example, a goal to “maintain clean drinking water for future generations” by itself is too broad to be measurable and may better serve as a guiding principle. However, a broad goal such as this could be acceptable if it is supported by a series of measurable sub-goals or objectives. The plan may contain a blend of goals common to the watershed as a whole, goals individual to a specific local government participant(s) and/or resource, and goals that persist beyond the timeframe of the plan.

Not every goal can be measurable within the timeframe of the plan; however, the aggregate of goals in the plan should together articulate an intended pace of progress. For example, if a water quality standard is unable to be met within the lifespan of the plan, the plan should contain longer-term goals with interim points at which progress can be examined and methods and models to establish the goal can be reevaluated. Ideally, these interim points would use some measure to show attainment of an interim goal.

The timeframe of goals may also need to recognize unique settings and situations across the state. As an example, The Minnesota Geological Survey notes that response time of nitrate concentrations to changes in land use practices in southeast Minnesota will likely vary in different hydrogeologic settings, and may lag behind land use changes by decades. In addition, some water quality or designated use support goals may take decades to achieve (e.g. changes in stream biota or altered base flow hydrology).

Plan Content Requirement: Establishment of Measurable Goals

Each priority issue must have associated measurable goals for addressing the issue. Some goals will be watershed-wide; however, the majority should be focused on a specific subwatershed, natural resource, or local government. Goals for prevention of future water management problems should also be considered.

Plans that do not contain sufficient measurable goals to indicate an intended pace of progress for addressing the priority issues will not be approved.

BWSR will consider Minnesota Statutes §103B.801, Subd. 4 (2), and the balance of broad versus focused goals and shorter-term versus longer-term goals and detail in the targeted implementation schedule to assess whether goals are sufficient. Additionally, the pace of progress towards achieving goals will be used in determinations of the extent or depth of future ten year plan revisions. BWSR may consider issuing findings when a plan and associated implementation is sufficient that a complete revision will not be required.

Specific Goal Requirements:

- Consistent with the Clean Water Council policy, these plans must establish water storage goals, expressed in acre-feet, and standards for water storage, retention, and infiltration.

4. Targeted Implementation Schedule

Targeting takes a closer look at the priority issues and identifies cost-effective, targeted, and measurable actions necessary to achieve the goals. These actions are included in the plan in consideration of available technical skills and capabilities, knowledge of landowner willingness, funding resources available, implementation items or projects from existing local water plans, and information and the Strategies and Actions table from the WRAPS. Actions are entered into a schedule or table that provides the details of:

- A brief description of each action;
- Location targeting where the action will occur;
- Identification of roles and who is responsible for the action;
- An estimate of cost and potential sources of funding for implementing the action;
- An estimate of when the implementation will occur within the ten year timeframe of the plan; and
- How the action will be measured.

The purposes of the implementation schedule are to: clearly indicate an intended pace of progress for achieving the goals; support development of shorter term work plans and budgets for the planning partners; and to support budget requests to the state through BWSR's Biennial Budget Request (BBR). The schedule should be supported by maps indicating the location(s) of the targeted activities.

The development of a targeted implementation schedule and associated actions is an iterative process. Additionally, BWSR recognizes that some actions may require a prior feasibility study to refine a potential implementation strategy.

The depth and specificity of targeted actions identified in the plan will vary. For example, capital improvement projects and best management practices to be implemented on public land can generally be specifically located and identified in the plan. By contrast, conservation practices proposed for private lands may be specifically identified through the use of models and tools for purposes of developing measurable goals and the targeted implementation schedule, but those locations are only generally described in the plan itself. For these private lands, the plan must overtly describe actions to work with landowners in these critical areas and tailor conservation practices.

Plan Content Requirement: Targeted Implementation Schedule

Each plan will have a targeted implementation schedule for achieving the goals with:

1. A brief description of each action;
2. Location targeting where the action will occur;
3. Identification of roles and the responsible government unit for the action;
4. An estimate of cost and potential sources of funding for implementing the action;
5. An estimate of when the implementation will occur within the ten year timeframe of the plan; and
6. How the outcomes of the action will be measured.

The schedule must clearly identify the actions the planning partners will undertake with available local funds versus the actions that will be implemented only if other sources of funds become available, and should be supported by maps indicating the location(s) of the targeted activities.

5. Implementation Programs

The implementation programs described below support the targeted implementation schedule by describing the overarching program(s) that will be used to implement actions identified in the schedule and how these programs will be coordinated between the local water management responsibilities. In addition, partners must decide what organizational structures are best suited to administer the various programs. In some cases new arrangements may be needed or desired. All programs described in this section must be included in the plan.

A. **Plan Administration and Coordination:** The plan must describe the following administration and coordination programs.

- i. **Decision-making and Staffing:** Describe how the partners will transition from a planning partnership to implementation of a watershed-based plan through descriptions of roles and responsibilities of participating local governments.
 - a. **Policy Committee** (decision-making): Describe if the policy committee created to develop the plan will continue through plan implementation, or clearly outline an alternative method to provide oversight and maintain accountability throughout plan implementation.
 - b. **Advisory Committee** (advising): Describe if the advisory committee(s) created for plan development will continue through plan implementation and/or describe alternative methods to ensure: a dependable forum to exchange information and knowledge about the watershed and implementation of the plan, and meet the statutory requirements for ongoing advisory committees of counties (Minnesota Statutes §103B.301-103B.3355) and watershed districts (Minnesota Statutes §103D.331-103D.337).

The plan should also establish procedures for engaging state agencies, and describe the ongoing role and commitments of the state agencies for plan implementation.

- c. **Identification and Coordination of Shared Services** (staffing): Describe specialized and shared service areas that will be used in the watershed to implement the actions identified in the schedule and achieve greater efficiencies in service delivery. This may include shared services for program management, such as if a plan action requires forest resource management technical assistance, but the local government where the action is occurring does not have a staff forester. The watershed plan and associated formal agreements should describe how the service will be shared and/or the need met. Or the plan may include project management. For example if one county has history and experience implementing a large-scale multipurpose drainage project, another county in the watershed may want to contract for services with staff from the experienced county to implement a similar project. Shared services may also include partnership with non-governmental organizations.
 - ii. **Collaboration with other Units of Government:** Describe relationships with other units of government not part of the formal agreement for plan development, including the drainage authorities within the planning boundary. For example, cities and townships are not required participants. However, recognition and inclusion of cities and townships is important and especially critical to recognize for actions involving waste water treatment plants, source water and wellhead protection for population centers, and MS4s, for example. Additionally, federal government partners are not required participants. However, federal programs and partnerships are very important resources in watershed management.
 - iii. **Funding:** Describe how actions in the implementation schedule will be funded. Both the state and local governments have responsibility for funding water management. All funding methods currently available to

participants remain available to the participants and/or to the organization as a whole through the participants.

- a. **Local Funding:** The local government planning partners have variable methods and options for generating funds to implement watershed management and to leverage state and other funding. The funding sources and commitments of participants must be clearly outlined in the plan.
 - b. **State Funding:** Describe state funding needed for implementation of the plan. This can be achieved through separation in the targeted implementation schedule of locally funded projects versus projects that will proceed only with state funds.
 - c. **Collaborative Grants:** Describe the intended approach to coordinated submittal of state grant applications. Collaborative funding and implementation is a goal of One Watershed, One Plan.
 - d. **Federal Funding:** Federal sources of funds can be important to watershed management. The plan should describe what type of federal funding resources may be pursued to implement the plan.
 - e. **Other Funding Sources:** Other sources of funds, such as from non-governmental organizations and private landowner funding, can be important to watershed management. The plan should describe what other types of funding may be pursued to implement the plan.
- iv. **Work Planning:** Describe how the targeted implementation schedule and the implementation programs will be used for work planning. For example, describe if a collaborative work plan for the watershed, individual work plans for each local government participant, or some combination of work planning will be used; and describe how the work plan will be finalized and approved.
- a. **Local Work Plan Purpose:** Include a frequency, method, decision-making, and local purposes for work planning. Frequency is suggested to be annual in order to be incorporated into local budgeting and staffing decisions related to implementation of the plan. Purposes depend on the extent of collaboration intended in the implementation schedule, programs, and subsequent agreements, as well as the extent of collaborative grant-making intended.
 - b. **State Work Plan Purpose:** Describe a biennial commitment to collaboratively review and submit a BWSR biennial budget request (BBR) from the watershed. Future BBRs should be generated from the Targeted Implementation Schedule.
- v. **Assessment and Evaluation:** Describe the frequency, method(s), purposes, decision-making, and procedures for periodic assessment and evaluation of plan implementation. Periodic understanding of accomplishments—based on the targeted implementation schedule—is needed to measure progress, drive the work plan, and provide accountability. If a Watershed Restoration and Protection Strategies report is completed within the planning area after the plan is complete, this report must be considered at the next scheduled evaluation.
- a. **Annual Evaluation:** Describe an annual commitment to collaboratively review and submit to BWSR's Level I [Performance Review and Assistance Program](#) (PRAP) plans and reports for each local government in the partnership. Additionally, describe sufficient baseline local evaluation of previous years' work to support generation of the local work plan in iv.a above (if an annual local work plan is being used) and reporting requirements in v.d below.
 - b. **Biennial Evaluation:** If the partnership chooses a biennial work plan, a biennial evaluation must be described to evaluate the previous years' work and support the work plan. It is recommended that this baseline evaluation is tied to the requirement for measurability in the targeted implementation schedule and that a method for tracking implementation consistently across the watershed be described.

- c. **Five Year Evaluation:** Include a schedule for a thorough five year assessment and potential revision to implementation schedule. The purpose of this evaluation is to determine progress and consider whether staying the course or resetting direction is necessary. It may also include revisions to models and considerations of new monitoring data. If a WRAPS has been completed or revised since the plan was originally adopted, this evaluation must include an assessment of any changes necessary due to the WRAPS. BWSR involvement in this evaluation may include Level II PRAP.
 - d. **Reporting:** Describe collaborative approaches to provide accountability to stakeholders and to meet annual reporting requirements of local governments, grant reporting requirements, and specific program and financial reporting requirements. Information on required annual reporting can be found on the BWSR website: www.bwsr.state.mn.us/grants/reporting/reporting.html. Consider a periodic 'state of the watershed report,' or individualized 'waterbody report cards' or other methods to provide accountability and demonstrate outcomes locally. See also the Education and Information requirements below.
 - vi. **Plan Amendments:** Describe procedures for considering plan amendments, who can propose amendments, what criteria will be used in considering amendments, and who makes the decision to proceed with amendments.
 - vii. **Organizational Structures or Formal Agreements:** List and briefly describe the organizational structures or entities that will be used to implement the plan's projects and programs. Indicate whether these are existing entities or new ones. In either case, indicate any formal agreements between local governments that are needed and whether these will be modifications of existing agreements or new agreements. For example, prior to completion of the plan, the Memorandum of Agreement (MOA) between partners for planning purposes could be revised for on-going coordination among entities responsible for plan implementation. . Consultation with Minnesota Counties Intergovernmental Trust (MCIT) and legal counsel is recommended. MCIT may recommend revising the planning agreement, establishing separate agreements or contracts for specific services or actions and/or developing a broader, watershed-wide agreement for ongoing partnership.
- B. **Plan Implementation Programs:** Describe the following programs to support the targeted implementation schedule, including necessary feasibility studies.
 - i. **Incentive Programs:** Describe local voluntary cost share or grant programs necessary to achieve the goals, including the general purpose and scope, criteria that will be used to select projects/disperse funds, actions to work with landowners in these critical areas to tailor conservation practices, and how the program(s) will be implemented across the watershed to provide consistency and achieve goals. Incentive programs may be targeted to specific issues, e.g. grants for sealing abandoned wells, or specific areas, e.g. a watershed of priority lakes.
 - ii. **Capital Improvements:** Describe opportunities for watershed-wide collaboration (e.g. sharing of specialized services and/or lessons learned on these large-scale projects) on capital improvements (physical/structural improvement with an extended life) identified in the targeted implementation schedule. Consider including opportunities for improved water management associated with county and township roads and within drainage systems managed through Drainage Law.
 - a. **Drainage:** Describe opportunities for enabling large-scale, multi-purpose projects on a watershed basis and for engaging drainage authorities and drainage inspectors in implementation of the watershed plan. Describe local procedures for ensuring future drainage projects are not inconsistent with the goals of the plan
 - b. **Capital Improvement Programs (CIPs) for Watershed Districts:** CIPs are required in the plan when a watershed district is included, consistent with the requirements of Minnesota Statutes §103B and

103D. A CIP is an itemized program for at least a five-year prospective period, and any amendments to it, subject to at least biennial review, that sets forth the schedule, timing, and details of specific contemplated capital improvements by year, and, together with their estimated cost, the need for each improvement, financial sources, and the financial effect that the improvements will have on the local government unit or watershed management organization. This requirement can be incorporated into the targeted implementation schedule if the specific requirements of Minnesota statutes §103B and 103D are clearly met.

- c. **Permanent Protection:** Describe opportunities for permanent land protection necessary to meet the resource needs and achieve the goals for the watershed.
- iii. **Operation and Maintenance:** Include a description of who is responsible for inspection, operation and maintenance of capital projects, stormwater infrastructure, public works, facilities, and natural and artificial watercourses. Specify any new programs or revisions to existing programs needed to accomplish the goals or that may benefit from watershed-wide collaboration.
- iv. **Regulation and Enforcement:** Describe existing regulations, controls, and authorities relevant to water management for the purposes of highlighting areas of duplication, gaps, and opportunities. Use this analysis to identify areas to maximize effectiveness and build efficiencies through improved coordination and consistent application of regulations, and/or to develop new regulation or enforcement in support of meeting plan goals. Consider also opportunities for efficiencies in required annual reports related to regulation, and enforcement and connections to possible data gaps. Include a description of drainage authorities and responsibilities and local implementation of the buffer law, passed in the 2015 1st Special Session. Regulatory areas to consider include, but are not limited to: shoreland, floodplain, septic, Wetland Conservation Act, Protected Waters Inventory, erosion control, municipal wastewater, Minimum Impact Design Standards ([MIDS](#)), land use, aggregate mining, feedlots, hazard mitigation, buffers, and prescription drug drop off locations.
 - a. **Regulation and Enforcement for Watershed Districts:** Describe the rules and associated permit programs of watershed districts in the watershed, consistent with and as necessary to meet the requirements of Minnesota statutes §103B.337-103D.345.
 - b. **Comprehensive or land use plans:** Describe the land use authorities within the watershed as well as potential opportunities to achieve goals through, or potential conflicts with, comprehensive land use plans.
- v. **Data Collection and Monitoring:** Describe data collection and monitoring activities necessary to support the targeted implementation schedule and reasonably assess and evaluate plan progress.
 - a. **Inventory:** Describe additional inventories needed in the watershed to address any gaps in the land and water resources inventory support actions in the targeted implementation schedule.
 - b. **Monitoring:** Describe the locations, frequency, and parameters of existing water quality, quantity and other monitoring programs in the watershed. Describe if these established monitoring programs are capable of producing an accurate evaluation of the progress being made toward the goals, including improved calibration of model(s), and any new monitoring needed to improve understanding of the watershed baseline or assess particular resources. State agencies are available to assist with identification of state monitoring activities.

Include a requirement for periodic analysis of the data, a commitment to collect data consistent with state compatibility guidelines, and a commitment to submit locally collected data to the appropriate state agency for entry into public databases.

- vi. **Information, Outreach, and Education Programs:** The plan must describe information, outreach, and education program(s); specifically, opportunities where there are benefits from watershed-wide collaborations and areas where focused or targeted actions will support the priority issues and goals of the plan. At a minimum, include the purpose, targeted audiences, and a description of the actions or methods. Consider development of an education plan for the overall watershed using an approach currently successfully used in Minnesota, an adaptation of the U.S. Environmental Protection Agency guidance “Getting in Step: A Guide for Conducting Watershed Outreach Campaigns” available at: www.epa.gov/owow/watershed/outreach/documents/getnstep.pdf.

6. Plan Appendix - Land and Water Resources Inventory

A land and water resource inventory is simply an account of the water resources and physical factors affecting the water resources within the watershed. In most cases, adequate data, inventories, and general analysis of land and water resources already exist; new information does not necessarily need to be generated and the majority of resource information can be incorporated by reference with a brief general description. At a minimum, the plan should acknowledge the resource information from existing local water plans and the Watershed Restoration and Protection Strategies Report (WRAPS) and NOAA Atlas 14 data. This information is important not just to understand the historic status of the watershed, but is useful in considering the future.

Going forward, wholesale updates and/or revisions to land and water resource inventories should be limited. Instead greater flexibility and a streamlined process for more frequent updates to incorporate collected data, updated trends analysis, and changes in land use typically associated with land and water resource inventories are envisioned.

Plan Content Requirement: Land and Water Resources Inventory

The plan must contain sufficient land and water resources information to inform the planning process and support actions in the plan. Specifically, the plan must include a brief general description of—and reference where to find—the typical and available land and water resource information. This information includes, but is not limited to:

- Topography, soils, general geology;
- Precipitation;
- Water Resources
 - Surface water resources, including streams, lakes, wetlands, public waters and public ditches;
 - Groundwater resources, including groundwater and surface water connections if known;
 - Water quality and quantity, including trends of key locations and 100-year flood levels and discharges, regulated pollutant sources and permitted wastewater discharges;
 - Stormwater systems, drainage systems and control structures;
 - Water-based recreation areas;
- Fish and wildlife habitat, rare and endangered species; and
- Existing land uses and proposed development.

Inventory information critical to supporting the priorities and actions of the plan may need to be more thoroughly described. For example, a description of results of trend analysis may need more in-depth description to support a priority issue in the plan; however, the data behind the analysis can be referenced.

If gaps in inventory information are identified through the plan development process, consider implementation action(s) to fill the gap rather than delaying the planning process to generate new data.