



July 11, 2017

Pomme de Terre Watershed Planning Group
C/O Stephanie Adams, Watershed Project Coordinator
Pomme de Terre River Association
12 Hwy 28 E, Ste.2
Morris Mn 56267

RE: Response to request for priority issues and plan expectations (One Watershed, One Plan).

Dear Stephanie,

Thank you for the opportunity to provide priority issues and plan expectations for the development of the Pomme de Terre Watershed plan under Minnesota Statutes section 103B.101, Subd. 14. We appreciate the partner's willingness to participate in development of a watershed-based plan. These are locally led, locally owned plans.

The Board of Water and Soil Resources (BWSR) has the following overarching expectations for the plan:

Process

- The planning process must follow the requirements outlined in the One Watershed, One Plan – Operating Procedures document, adopted by the BWSR Board on March 23, 2016 and available on the BWSR website: www.bwsr.state.mn.us/planning/1W1P/index.html. More specifically, the planning process must:
 - Involve a broad range of stakeholders to ensure an integrated approach to watershed management.
 - The state agencies are involved in two primary ways: as members of the local Advisory Committee and as a plan review authority. The state roles are not optional, see relevant laws. Involving state agencies within the Advisory Committee ensures the most recent and applicable information are available while developing the plan and result in closer alliance of local and state priorities.
 - Reassess the established Pomme de Terre River (PDT) Joint Powers Board agreement to ensure continued implementation occurs efficiently and with minimized risk. This step is critical if the plan proposes to continue submitting joint grant applications and/or share services.

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Plan Content

- The plan must meet the requirements outlined in the One Watershed, One Plan – Plan Content Requirements document, adopted by the BWSR Board on March 23, 2016 and available on the BWSR website: www.bwsr.state.mn.us/planning/1W1P/index.html. More specifically, the plan must have:
 - Offer the attached ‘Compiling a Land and Water Resources Inventory Supplement’, July 2017, which provides additional considerations for what types of information to include, where to find the information, and how to use it. The inventory should help explain why the issues exist in the watershed, and ultimately provides the justification for the actions identified in the plan.
 - The selection of priority resources via a thorough analysis of issues, using available science and data, is needed because not all identified resource concerns or identified issues can be addressed in the timeframe of a ten year plan – some will be addressed before others.
 - Sufficient measurable goals to indicate an intended pace of progress for addressing the priority issues.
 - A targeted and comprehensive implementation schedule, sufficient for meeting the identified goals.
 - A thorough description of the programs and activities required to administer, coordinate, and implement the actions in the schedule; including work planning (i.e. shared services, collaborative grant-making, decision making as a watershed group and not separate entities) and evaluation.

BWSR has the following specific priority issues:

- While prioritizing, targeting and measuring please utilize the products of the PTMApp being developed by the PDT via local funds and an Accelerated Implementation Grant and consider the use of DNR’s Zonation Tool/process with the PTMApp.
- The state’s Nonpoint Priority Funding Plan (NPPF) outlines a criteria-based process to prioritize Clean Water Fund investments—if planning partners are intending to pursue Clean Water Fund as a future source of funding, partners are strongly encouraged to consider the high-level state priorities, keys to implementation, and criteria for evaluating proposed activities in the NPPF, available on the BWSR website: <http://bwsr.state.mn.us/planning/nppf/index.html>
- The local drainage authorities within the planning boundary must be included as stakeholders in the plan development process to capture both the extent and the limitations of drainage authority responsibility and authority for participating in the planning and implementation of conservation practices involving public drainage systems and their associated drainage areas.
- Recognizing and acknowledging the strategy of the PDT to address surface water quality by focusing on the PDT’s three predominant land use types (urban, lakeshore and rural/agricultural), and minimizing their impact/effects on surface water quality. BWSR offers the below, some which may help achieve multiple benefits within the watershed:

- Urban Land Use
 - Inventory, and develop city storm water plans (Appleton & Morris are the largest cities) to minimize loadings to the Pomme de Terre River,
 - Drinking water supply protection and improvement via the Minnesota Department of Health's programs and plans which provide implementation recommendations.
- Lakeshore Land Use, predominately in the upper portions of the PDT watershed-
 - Reduce runoff from lands adjacent to lakes, such as rain gardens, maintaining/restoring vegetation other than manicured lawns,
 - Address SSTS, specifically imminent public health threat (IPHT) and failing systems, throughout the watershed but primarily within shoreland management areas will reduce pollutants from entering ditches, streams, rivers, lakes and the groundwater.
- Rural/Agricultural Land Use
 - Improve soil health by increasing organic material in the soil profile– increases infiltration.
 - Implement Drainage Water Management Systems on pattern tiled fields, note MDA has a demonstration site in Wilkin County.
 - Consider projects and activities consistent with multipurpose drainage criteria outlined in Minnesota Statutes §103E.011, and §103E.015. Incremental installation of side water inlets as per §103E.021, Subd. 6, as a means to control erosion and sedimentation, improve water quality, or maintain the efficiency of the drainage system. Note §103E enables public-private funding partnerships involving 103E drainage systems.
 - Minimize livestock animal waste from entering waters.
 - Promote the use of an Irrigation strategy that provides crops sufficient water to prevent plant moisture stress, but also prevents water from percolating below the root zone and leaching nitrogen into the groundwater.
 - Assist landowners/occupiers with the implementation of Best Management Practices to address sheet and rill erosion, example - water and sediment control basins.
 - Enrollment of marginal agricultural land to be set-a-side program, vegetation or wetland restorations.
- Protection and restoration of wetlands provides benefits for water quality, habitat and wildlife, and flood damage reduction. The plan should support the continued implementation of the Wetland Conservation Act and look for opportunities to improve effective and efficient coordination across jurisdictional boundaries.

The plan should also identify high priority areas for wetland restoration and strategically target restoration projects through sound watershed-based prioritization, thus providing the most value to the local residents as well as the state in general. We encourage the planning team to work with BWSR to identify wetland preservation and restoration priorities based on watershed needs, sound land use and other factors important to the watershed. The [Restorable Wetland Prioritization Tool](#) is one resource that to be used to help identify areas for wetland restoration, but other regional tools are being developed that will have greater utility. Lastly, the state is also embarking on a wetland prioritization plan that will guide wetland mitigation in the future. Wetland restoration and preservation priorities you identify in your plan may be eligible for inclusion in this statewide plan in the future.

- The State's Re-Invest in Minnesota (RIM) Reserve easement program considers several site specific and landscape scale factors when funding applications. Though it is dependent on specific program terms, the State does consider local prioritization of areas for easement enrollment.
- Strongly consider using the water quality goals found within the Watershed Restoration and Protection Strategies (WRAPS) or Total Maximum Daily Load (TMDL), as well as the implementation strategies while discussing the 1W1P Implementation schedule.
- Incorporate the Other Water Courses maps or summaries of the local partners.
- Continue to participate in the coordination of data collection and monitoring initiated in 2016/2017 with the state's monitoring agencies.
- 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.

We encourage the plan to reflect the differences between the upper and lower watershed in the selection of priority issues and implementation items. We commend the partners for their participation in the planning effort. We look forward to working with you through the rest of the plan development process and the eventual implementation of the plan. If you have any questions, please feel free to contact me.

Sincerely,

Pete Waller, Board Conservationist, Detroit Lakes

cc: Pomme de Terre Watershed Planning Group (via email)
Camilla Correll, EOR (via email)
Barbara Weisman & Nathan Kestner, MDNR (via email)
Heidi Peterson & Ryan Lemickerson, MDA (via email)
Jenilynn Marchand, MDH (via email)
Juline Holleran & Paul Wymar, PCA (via email)
Ryan Hughes, BWSR (via email)

Attached: One Watershed, One Plan – Compiling a Land and Water Resources Inventory, July 2017



One Watershed, One Plan

Compiling a Land and Water Resources Inventory

Supplement to Section II.6 of 1W1P Plan Content Requirements

July 2017



Purpose: This document supplements section II.6, Plan Appendix – Land and Water Resources Inventory – in the Plan Content Requirements for One Watershed, One Plan. It provides suggestions for compiling the information needed to understand the physical, social, and economic characteristics of the watershed, which sets the context for discussion on the prioritization of resources and issues in the plan. The content of the land and water resources inventory is going to vary by watershed. This guidance document is meant to stimulate ideas about what information to include and potential sources for that information.

The 1W1P Plan Content Requirements (1W1P PCR) outlines the minimum requirements for the Land and Water Resources Inventory (Inventory). The following provides additional considerations for what types of information to include, where to find the information, and how to effectively use it.

The Land and Water Resources Inventory, at least in draft format, should be completed before - and used to inform - the identification and prioritization of resources and issues (1W1P PCR Section II.2). The Inventory should help explain why issues exist in the watershed, and ultimately provides the justification for the actions identified in the plan.

The Importance of Telling the Watershed Story

Even though the Land and Water Resources Inventory is recommended to be included in the plan appendix, it is a critical component of the plan and the planning process because it sets the context for the other plan elements. Therefore, the Inventory should paint a clear picture of watershed characteristics using a narrative description, maps, and tables.

Every watershed has a story – its long geological history and its location determine the native soils, vegetation, and natural abundance and quality of lakes, streams, and groundwater. Historical and recent land use changes and hydrologic alterations determine the watershed’s current characteristics, while social and economic factors can give clues about the watershed’s future. It’s also important to acknowledge the watershed’s context within the broader basin because actions in upstream watersheds affect downstream neighbors.

Effectively “telling” the watershed story will establish a common understanding among planning participants, help planning groups identify and prioritize issues, and support the plan’s strategies and actions.

Content Considerations and Sources

There are multiple reports, plans, and studies that already contain most, if not all, of the pieces of information you include in your Inventory, but they may not be organized by your planning boundary. The plan must contain sufficient land and water resource information to inform the planning process. Specifically, the plan must include a general description of the available land and water resource information, and where to find that information.

Some types of information are critical to supporting priorities and actions of the plan and may need to be described more thoroughly. For example, a description of trend analysis results may need more in-depth coverage to support a priority issue in the plan, but the data used in the analysis does not need to be included (it 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.

Physical characteristics

Table 1 (page 3) lists information types and sources to consider for each required element of the Land and Water Resources Inventory. Some items on this list may not be available or applicable in your watershed, and there may be additional items important to your watershed that are not included. This is simply meant to stimulate ideas on what items to include in the Inventory. The information sources below are good starting points to gather information on your watershed’s physical characteristics.

- Existing local water plans
- [Minnesota Nutrient Planning Portal](#)
- [WRAPS reports \(MPCA\)](#)
- [GRAPS reports \(MDH\)](#)
- [DNR Watershed Health Assessment Framework Context reports](#)
- [NRCS Rapid Watershed Assessments](#)
- [Minnesota Geospatial Commons](#)
- [Minnesota Forest Resources Council Landscape Stewardship Plans](#)

Socioeconomic characteristics

Knowing about the people that live and work in the watershed is crucial to the success of your planning effort. This is a critical, but often overlooked, body of information - it can help you begin to think about the values and motivations of the people in your watershed. **Table 2** (page 4) lists additional characteristics that you may want to consider, and the list below gives some ideas about where to start gathering information.

- [US Census American Fact Finder](#)
- [MN State Demographic Center](#)
- [USDA Economic Research Service](#)

Getting to a quality plan

At the end of this process, you should have a detailed description of the watershed and its story, giving the reader a clear picture of the characteristics that make the watershed unique. This description should also explain why the issues and actions identified in the plan are relevant and necessary. More detailed inventory information will allow you to be more accurate as you prioritize and target implementation.

The watershed story should explain the watershed’s context – the geology, climate, and position in the basin. The main focus should be the major land uses, the people who are responsible for managing the land use, and the economy as a result. This information should appear in the appendix at a minimum, and could also be included in the executive summary and plan introduction sections. Include maps that support the story.

Supplements to 1W1P Plan Content Requirements

This is the first in a series of supplemental documents to guide 1W1P planning partnerships.



Table 1. Information types and sources to consider for plan content requirements for the Land and Water Resources Inventory

Plan Content Requirements	Potential Information to Include	Potential Sources
Topography, Soils, General Geology	Topography: LiDAR Elevations, Slope; Soils: Soil Texture (percent sand, silt, and clay), Crop Productivity Index, Forest Productivity, Hydric Rating, Wind Erodibility; General Geology: Bedrock, Surficial Geology, Karst Features, Mineral Deposits, Ecological Classifications	MN Geospatial Commons, NRCS Web Soil Survey, United States Geological Survey, MN Geological Survey
Precipitation	Normal Annual Precipitation and Temperature, Precipitation and Temperature Trends, Runoff Rates	MN Climatology Office, National Weather Service, NOAA Atlas 14, Modeling (HSPF)
Surface water resources, including streams, lakes, wetlands, public waters and public ditches	Streams (perennial, seasonal), Lakes, Wetlands (current, historical), Public Waters, Public Ditches, Altered Watercourses, Hydrologic Position Index	MN Geospatial Commons, MN Department of Natural Resources, Drainage Authorities
Groundwater resources, including groundwater and surface water connections if known	Groundwater Vulnerability, Springs, Recharge Areas, Depth to Water Table, Well Locations and Depths, Nitrate Levels, Aquifer Properties and Boundaries, Aquifer Water Level Trends, Direction of Groundwater Flow, Water Chemistry	County Geologic Atlas, Regional Hydrogeologic Assessment, MN Geospatial Commons, MN Department of Agriculture Township Testing Program, MN Geological Survey, MN Department of Natural Resources, MN Department of Health
Water quality and quantity, including trends of key locations and 100-year flood levels and discharges, regulated pollutant sources and permitted wastewater discharges	Water Quality: Impairments, Stressors, Trend Information, Regulated Pollutant Sources, Wastewater Treatment Plants; Water Quantity: 100-year Floodplain, Known Damages	Watershed Restoration and Protection Strategies (and associated reports), MN Pollution Control Agency, MN Department of Natural Resources, Federal Emergency Management Agency
Stormwater systems, drainage systems and control structures	Stormwater Systems, Drainage Systems, Dams, Impoundments, Drain Tile Systems	MN Department of Natural Resources, Watershed Districts, Counties, US Army Corps of Engineers, Cities
Water-based recreation areas	Parks, Public Accesses, State Water Trails, Public Beaches, Fishing Piers, Wildlife Management Areas, Waterfowl Production Areas	MN Geospatial Commons, MN Department of Natural Resources, US Fish and Wildlife Service, Cities, Counties
Fish and wildlife habitat, rare and endangered species	Conservation Lands (public conservation lands, easements, etc.), Native Prairie, Important Wild Rice Areas, Tullibee Lakes, Designated Trout Streams, Rare and Endangered Species	MN Geospatial Commons, MN Department of Natural Resources, US Fish and Wildlife Service
Existing land uses and proposed development	Land Cover (present and pre-settlement), Crop Data (types, average yields, irrigated/non-irrigated), Feedlots (type, animal units), Road Network, Impervious Surfaces, Landfills (active, closed), Subsurface Sewage Treatment Systems, Proposed Development	MN Geospatial Commons, USDA Ag Census, MN Department of Natural Resources, MN Pollution Control Agency, MN Department of Agriculture, Counties, Cities

Table 2. Socioeconomic information that can be useful in the Land and Water Resources Inventory.

		Source(s)
People	Population	Population size, U.S. Census Bureau, Population Estimates Program. Point-in-time estimate, as of July 1st
	Age distribution	Sex by age, 2011-2015 American Community Survey 5-year estimates
	Educational attainment	Educational Attainment: population 25 years and older (U.S. Census Bureau)
	Employment by industry	Industry by occupation for civilian employed population 16 years and over, 2011-2015 American Community Survey 5-year estimates
	Income	Per capita income, 2011-2015. U.S. Census Bureau, American Community Survey
Economy	County economic base	U.S. Department of Agriculture, Economic Research Service, County Typology Codes, using data from the Bureau of Economic Analysis and the U.S. Census Bureau
	Land ownership	Minnesota Geospatial Information Office, County recorders, assessor's, or land surveyor's offices. Some Minnesota counties provide their parcel data sets online.