

Dodge County Water Management Plan 2006-2015

Executive Summary

Purpose of the Water Management Plan: Provide a framework and guideline for implementing actions that address priority concerns.

Priority Concerns Addressed in Plan (see Appendix A for Scoping Document):

1. Fertilizers and herbicides from agricultural fields seeping into drinking water
2. Nutrients and chemicals from animal feedlots flowing into rivers and streams
3. Nutrients and chemicals from animal feedlots seeping into drinking water
4. Soil, fertilizers and herbicides from agricultural fields flowing into rivers and streams
5. Loss of natural vegetation and habitat due to urban and rural development
6. Flash flooding or the quick rise and fall of water and stormwater management.
7. Inadequate individual septic systems, municipal sewers, and community systems that drain to field tile, wetlands, streams or rivers.

Water Management Goals: Safe drinking water in all aquifers and pollutant loads in protected waters below state and federal standards including Total Maximum Daily Limits.

Summary of Implementation Actions: “Core Activities” will be completed assuming that the current budget of \$166,000 is available annually with adjustments for inflation. Core activities include enforcement of wetland, feedlot, shoreland, septic system, waste management, and related zoning regulations. Core activities also include on-going water testing programs designed to accurately judge conditions and trends in drinking water and rivers. A basic level of education, technical assistance, and financial assistance will be offered regularly.

“Accessory Activities” can be completed only if new sources of technical or financial assistance become available to the county. Examples of accessory activities include: purchase of aerial photographs, long-term groundwater and surface water monitoring stations, proactive education to promote agricultural best management practices, grants to restore wetlands, and implementation of South Zumbro Watershed Storm Water Capital Improvement Plan.

Consistency with Other Plans: The Water Management Plan is consistent with other local, state, and regional plans and controls. Implementation actions include efforts to work with municipalities to maintain consistency with the County’s plans and controls.

Dodge County Water Management Plan 2006-2015

Priority Concerns, Goals and Objectives:

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1. Fertilizers and herbicides from agricultural fields seeping into drinking water
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Assessment of Priority Concerns (see Appendix B)

Water Management Goals: Safe drinking water in all aquifers and pollutant loads in protected waters below state and federal standards including Total Maximum Daily Limits.

Water Management Plan Objectives:

1. Track water quality trends in local drinking water aquifers and Public Waters.
2. All landowners have easy access to information about land uses and natural resources on their property.
3. All youth will have opportunity to learn about the connection between land use and water quality.
4. All landowners, governments, and businesses comply with applicable regulations.
5. All Farms prepare and follow their Nutrient Management Plan.
6. All Farms follow MN Dept of Agriculture's Best Management Practices for pesticide and herbicide use.
7. All Public Waters and sensitive resources are protected by permanent vegetative buffers
8. All eligible landowners are aware of benefits and opportunities for the conversion of agricultural land to perennial vegetation and the preservation of natural areas.
9. All landowners with highly erodible land manage their land to soil loss tolerance [(T) or (T Value)].
10. Zoning regulations will promote growth near urban areas and encourage cluster development to preserve natural/open areas. (vegetation & habitat corridors)
11. All Municipalities will adopt and enforce DNR's model Shoreland Zoning Regulations
12. All Municipalities will adopt Stormwater Management Plans that address water quality and quantity, and account for projected growth.
13. Reduce runoff, increase water filtration, and depress stream hydrograph on protected waters.
14. All wastewater is properly treated and treatment systems are properly maintained.
15. All Public Water Suppliers develop and implement their Wellhead Protection Plan

Implementation Plan: Priorities, Budget, and Schedule.

Priority Water Resources:

1. With limited local money, groundwater aquifer protection will take priority over surface water protection.
2. With limited local money, protection of the first encountered bedrock aquifer will take priority over lower aquifers.
3. With limited local money, watersheds with documented water quality exceeding state and federal standards will receive priority over watersheds without documented exceedances.

Existing Budget (2006):

1. State Natural Resources Block Grants and County Revenue	\$ Amount
a) Water Management Plan Implementation	\$ 24,000
b) Feedlot Regulation	\$ 63,000
c) Shoreland Regulation	\$ 7,000
d) Wetland Regulation	\$ 37,000
e) Sewage Treatment System Regulation	\$ 35,000
2. Soil and Water Conservation District	\$ Inkind
3. State and Federal Agencies	\$ Inkind
4. Private Contributions	\$ Inkind
5. Environmental Trust Fund	\$100,000
Total	\$ 266,000

Core Activities. The following are actions that can be accomplished annually using existing staff and budget assuming that the Natural Resources Block Grant is awarded annually at the current amount with regular inflationary adjustments:

1. **Inventory and Mapping** (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
 - a) Annually update data and maps in County's Environmental Atlas. Distribute atlas to elected officials, policy makers, and staff. Within 5 years make atlas available on the County's Web Page.
 - b) Regularly update County Well Index by field locating newly drilled wells and wells with construction and water quality information.
2. **Groundwater Monitoring:** (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
 - a) Provide well water testing service to public. Assign lab results to well record in County Well Index.
 - b) Coordinate a network of citizen volunteers to sample their wells over a long period of time to determine trends.
3. **Surface Water Monitoring:** (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):

- a) Maintain network of volunteer stream monitors to collect turbidity tube measurements and macroinvertebrate samples.
 - b) Maintain existing automatic sampling station.
4. Education and Technical Assistance: (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
- a) Annually summarize drinking water quality conditions per aquifer and report to local elected officials, state agencies, and public.
 - b) Annually summarize surface water quality conditions per watershed and report to local elected officials, state agencies, and public.
 - c) Distribute at least 6 "news releases" per year to all local newspapers.
 - d) Support SWCD's long-standing annual "conservation lesson" for middle school students.
 - e) Annually advertise in local newspaper or through direct mailings, a summary of regulations related to water and waste management.
 - f) Annually advertise in local newspaper or through direct mailings, a summary of local services related to water management including technical and financial assistance.
 - g) Provide technical assistance upon request for information related to existing regulation and incentive programs.
 - h) Create, update, and make available to public; brochures and publications related to water management.
 - i) Include information on the County's Web Page.
 - j) Support and encourage enrollment in all land set-aside programs that help implement the objectives of the Water Management Plan including, but not limited to, CRP, CREP, RIM, WRP, CSP, etc....
 - k) Inform all landowners and contractors of the important functions of wetlands. Also provide information and technical assistance that helps landowners recognize wetlands, how to protect them and how to restore them.
5. Financial Assistance: (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
- a) Provide opportunity for landowners to obtain an AgBMP Loan.
 - b) Provide opportunity for landowners to obtain a grant from the County's Environmental Trust Fund for actions that are consistent with the objectives of the Water Management Plan.
 - c) Provide opportunity of well owners to receive a free water testing kit if the well is sensitive to contamination or the well owner is pregnant or has an infant.
6. Regulation, Ordinance, Planning: (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
- a) Implement the County's Water Management Plan, Comprehensive Land Use Plan, and Solid Waste Management Plan and enforce related ordinance. Existing regulations include: individual sewage treatment systems, wetlands, shoreland, floodplains, storm water, waste disposal, recycling, feedlots, contaminated soil,

and land use (zoning). Current enforcement level is primarily reactionary; triggered by permit requests or by complaints.

- b) Regularly update plans and ordinances.
- c) Propose a county-wide policy that defines the county's position and responsibility for stormwater flow management in the context of an entire watershed. In other words, define what the county's role is in reducing impacts of flash floods and sedimentation affecting downstream neighbors.
- d) As time allows, assist local governments implement similar regulations.

7. Administration and Coordination: *(These activities support all "Priority Concerns" and all "Water Management Plan Objectives"):*

- a) The County will carry-out the Local Water Management Plan including annual activity planning, staffing, contracting, and reporting.
- b) The County will collaborate with partners to reach shared goals and objectives. Partners include Federal Agencies, State Agencies, Soil and Water Conservation District, Local Governments, Joint Powers Boards, not for profit organizations, businesses, and individuals. When possible the County will jointly work on "accessory activities" as outlined below:

Accessory Activities: Successful implementation of the following actions is largely dependent on new sources of technical and financial assistance. The county will pursue private, non-profit, and government partners to share in the cost and implementation of accessory activities including:

1. Inventory and Mapping: *(These activities support all "Priority Concerns" and all "Water Management Plan Objectives"):*

- a) Obtain annual aerial photographs at a scale that will improve accuracy of inventories and improve ability to educate public, provide technical assistance and enforce regulations.
- b) Make Environmental Atlas an interactive product on internet that allows user to overlay multiple themes and analyze data.
- c) Seek out and actively participate in research studies which seek to clarify information relating to pollutant transport, ground water sensitivity, surface water conditions and health risk.
- d) Map and Inventory condition of existing buffers on Protected Waters.
- e) Update Feedlot Inventory.
- f) Inventory of unique, rare, and endangered natural habitat.
- g) Compile flood damage information.
- h) Identify primary sources of soil erosion at a sub watershed scale and calculate amount of soil lost to streams.

2. Groundwater Monitoring: *(These activities support all "Priority Concerns" and all "Water Management Plan Objectives"):*

- a) Regularly obtain (and pay for) groundwater samples from a network of drinking water wells to provide baseline and long-term trends of water quality in primary aquifers.
 - b) Seek out and actively participate in research studies which seek to clarify information relating to pollutant transport, ground water sensitivity, and health risk.
 - c) Gain more information about potential risks from manure storage basins; earthen and concrete construction.
 - d) Study soil sampling protocol to help define opportunities for improving use of soil testing data by landowners.
3. Surface Water Monitoring: *(These activities support all "Priority Concerns" and all "Water Management Plan Objectives"):*
- a) Continue to monitor Salem Creek (impaired water) for fecal coliform bacteria and assist landowners in evaluating options to reduce fecal contributions including feedlot runoff, manure land spreading, and septic systems.
 - b) Expand the number volunteer stream monitors to accurately judge conditions of all sub watersheds.
 - c) Install and operate continuous flow meters on primary river segments.
 - d) Expand the sampling program to a point when one or two water quality parameters can be recognized by the general public as indicators of water quality and the conditions that lead to said quality.
 - e) Seek out and actively participate in research studies which seek to clarify information relating to pollutant transport, surface water conditions, and health risk.
 - f) Demonstrate soil erosion control features at farm scale.
4. Education and Technical Assistance: *(These activities support all "Priority Concerns" and all "Water Management Plan Objectives"):*
- a) Support cooperative education efforts to promote Agricultural BMP's including, but not limited to: nutrient management (including reduction in fall application of nitrogen), buffers for protected waters and sensitive features like sinkholes, soil testing, pesticide application, etc...
 - b) Inform all citizens of the importance of sealing unused wells.
 - c) Demonstrate options for treatment of milkhouse waste.
 - d) Assist municipalities to develop and enforce a Shoreland Overlay Zoning District, Stormwater Management Plans, and Wellhead Protection Plans.
 - e) Lead the effort to write a plan with goal to repair all failing septic systems. Part of the plan should be education and incentives to encourage homeowners to voluntarily repair their failing septic systems. Education should include information about the risks of a failing system, how to recognize a failing system, how to repair it, and where to get financial assistance. The education should include a comparison of the "facts vs. myths" regarding mound type individual sewage treatment systems.

- f) Lead a demonstration of Stormwater Management techniques, conducted on a “farm scale” or construction site, that illustrate methods to retain and treat storm water runoff including wetland restoration.
5. Financial Assistance: (*These activities support all “Priority Concerns” and all “Water Management Plan Objectives”*):
 In addition to existing grant and loan programs, seek opportunities for financial assistance for activities such as:
- a) Grants to feedlot owners to fix physical conditions that pose a pollution potential.
 - b) Low interest loans for replacing septic systems. The loan payback system should include an option for a special assessment payable on the property tax statement.
 - c) Grants to landowner who seek to restore wetlands
6. Regulation, Ordinance, Planning: (*These activities support all “Priority Concerns” and all “Water Management Plan Objectives”*):
- a) Implement the South Zumbro Watershed Storm Water and Capital Improvement Plan.
 - b) Adopt a policy and process that supports full enforcement of MN Rule 7020 including: regularly verifying that Manure Management Plans are properly implemented, regularly inspecting feedlots for compliance, and enforcing Open Lot Agreements. Inspections should occur on 20% of the feedlots each year. Enforcement policy should include easily administered penalties for violations.
 - c) Adopt a policy and process that supports full enforcement of stormwater management and erosion control standards including standards found in the Zoning Ordinance and construction stormwater permits.
 - d) Encourage growth in or near the cities, utilizing city services. Discourage expansion of the designated Urban Expansion District (2005 Zoning Ordinance) prior to completion or full development within the current boundary.
 - e) Discourage large-lot rural housing outside the Urban Expansion District. Encourage cluster, low impact development with associated open space where rural subdivisions are allowed.
 - f) Support efforts to protect unique natural resources and open space.
 - g) Support efforts to sunset old plats in rural areas that have not been developed (see Goodhue Co. as example).
 - h) Lead in the implementation of a system that tracks compliance with septic system maintenance standards and regularly notifies the owner when maintenance is due.
 - i) Evaluate the pros and cons of a “soil loss ordinance”; consider options for implementation in the county.
 - j) Require landowners to be in compliance with all regulations as a condition of approval of any zoning permit (even regulations unrelated to the permit request; for example....proof of compliance with shoreland buffer standards on all land before a zoning permit for a structure is approved.)

7. Administration and Coordination: (*These activities support all "Priority Concerns" and all "Water Management Plan Objectives"*):
- a) The County will collaborate with partners to reach shared goals and objectives. Partners include Soil and Water Conservation District Federal Agencies, State Agencies, Local Governments, Joint Powers Boards, not for profit organizations, businesses, and individuals.
 - b) The county, when practical, will develop work plans for completing accessory actions and apply for grants to complete the work plans.