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To: THE RESILIENT REGION PROJECT Contact: Cheryal Lee Hills

From: WILLIAM MITCHELL COMMUNITY DEVELOPMENT CLINIC Marcus Urlaub, Certified Student Attorney Diane Marie Dube, Supervising Attorney

Re: The Watersheds of Region 5: Managing the Region's Water Runoff

Summary

This report presents two recommendations:

- The five counties in the Region 5 Development Commission should coordinate their water management plans and adopt a "one watershed, one plan" approach.
- The counties, townships, and cities in Region 5 should adopt targeted ordinances that address urban water runoff in a comprehensive and sustainable way.

These recommendations are based on research and analysis of watershed planning in Region 5, with a focus on tools already available to Region 5's local units of government to address the issues of agricultural and urban runoff in a comprehensive manner. The purpose of this document is to provide The Resilient Region Project practical analysis and recommendations to enable it to implement the "action steps" it outlined in Theme 4: Natural Resources and Development Patterns, found in "Regional Land Use Practices: How Central Minnesota Can Become More Sustainable; Appendix F-5." Theme 4 has two stated goals:



¹ REGIONAL LAND USE PRACTICES: HOW CENTRAL MINNESOTA CAN BECOME MORE SUSTAINABLE, available at http://www.resilientregion.org/cms/files/F-

^{7%20}Theme%204%20Land%20Use%20&%20Natural%20Resource%20Detail.pdf.

- Natural Resources: Achieve balance by creating healthy, livable affordable communities for humans that are also healthy, livable spaces for other plant and animal life; and
- <u>Water Quality</u>: Water quality/lake clarity improves significantly because the region invests in our lakes. The region needs good water quality to maintain lakeshore property values and to attract tourism.

Consistent with these goals, Theme 4 states that Region 5's goal for watershed planning is to develop comprehensive watershed management plans throughout the region that require consistency between county water plans and applicable watershed plans.²

This memo first provides some background materials and outlines the regulatory structure of water management in Minnesota. Next, the memo defines Region 5's watersheds and current water management structure. Finally, the memo describes two recommendations – adoption of watershed-based planning in Region 5, and encouragement of targeted ordinances to manage urban runoff in a sustainable way—and the reasons for these recommendations.

Background

The five counties in Region 5 possess rich and diverse natural resources. Region 5's lakes, forests, and agricultural lands are the economic engines of Region 5. According to Theme 4, "[i]t is imperative to realize that economic development and natural resources are not opposing worlds; in fact, the two are closely related." The economic vitality of Region 5 is directly impacted by the preservation and utilization of Region 5's lakes, forests, and agricultural resources.

Inherent in the preservation of Region 5's lakes is protection of Region 5's surface water. Agricultural runoff affects Region 5's surface water by contributing various pollutants and other stressors to Region 5's streams, rivers, and lakes. Agricultural runoff contributes soil erosion and sedimentation deposits, excessive nutrients and pesticides, and bacteria such as E. coli; all

² *Id.* at 6.

 $^{^3}$ Id.

leading to water turbidity and other effects that diminish water quality. Particular problems associated with agricultural runoff, such as fertilizers containing nutrients in the form of phosphorous and nitrogen, are not strictly limited to agricultural activities. Maintained landscapes within Region 5's towns and cities contribute similar pollutants and stressors that can enter Region 5's lakes and streams. It is important, therefore, for Region 5 to view "agricultural runoff" in a broad sense by also considering its urban equivalent. In short, agricultural and urban runoff are both nonpoint source pollution that affect water quality in Region 5. This is a congruence that Region 5 can work with to address all forms runoff prevention and management.

Controlling Statutory and Regulatory Structure

As a form of environmental regulation, the prevention, containment, and management of agricultural runoff is governed by a myriad of federal, state, and local statutes, regulations, and ordinances. These regulations are administered by numerous federal, state, regional, and local regulatory bodies. These regulatory bodies include **federal** agencies such as the United States Environmental Protection Agency, **state** agencies such as the Minnesota Pollution Control Agency, Board of Water and Soil Resources, Environmental Quality Board, and Department of Natural Resources, **regional** bodies such as the development commissions, and **local** bodies including watershed districts, soil and water conservation districts, and local governments.⁴

Minnesota State Agencies

The Minnesota Pollution Control Agency (MPCA) is the most comprehensive environmental authority in Minnesota, and has primary responsibility for the state's water quality

⁴ For an overview of the administrative structure of environmental regulation in Minnesota, *See* 25 MINNESOTA PRACTICE SERIES, REAL ESTATE LAW, § 9.2, *Administrative Structure*; James A Payne and James A Mennell, Eileen M. Roberts [hereinafter *Roberts: Administrative Structure*]; *see also* ASSOCIATION OF MINNESOTA COUNTIES, *Understanding Minnesota Public Drainage Law*, *2002 Overview for Decision Makers*, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-414E-99AC-FC56C14C0AC9%7D/uploads/%7BE8F70722-253E-453F-AFD5-97EBF3355241%7D.PDF.

(http://www.pca.state.mn.us/). The MPCA regulates air, water, and noise pollution as well as solid and hazardous waste management. The purpose of the MPCA is "[t]o meet the variety and complexity of problems relating to water, air and land pollution ... and to achieve a reasonable degree of purity of water, air and land resources of the state consistent with the maximum enjoyment and use thereof in furtherance of the welfare of the people of the state."⁵

In addition to the MPCA's broad environmental authority, the Minnesota legislature codified the state's water laws in Minnesota Statutes Chapter 103A-114b (the "Water Laws"). The Water Laws establish Minnesota's water policy and create the various regulatory bodies and infrastructure to enforce the state's water policy. Minnesota Statute 103B is perhaps the most important of the Water Statutes because it establishes the structure for water planning and project implementation.

Of particular importance to the implementation of Minnesota's water policy are the Board of Water and Soil Resources (BWSR) and the Environmental Quality Board (EQB). BWSR is responsible for coordinating local water and soil management, including providing accountability and oversight, resource planning, and coordinating the management activities of counties, soil and water conservation districts, watershed districts, watershed management organizations, and other local units of government (http://www.bwsr.state.mn.us/). In addition, BWSR may intervene in any proceeding under a number of statutes if the proceeding in question involves a question of water policy. While BWSR coordinates local water management agencies, the EQB is responsible for coordinating water resource management, planning, and regulation activities among the various state agencies having jurisdiction in the area

⁵ See Roberts: Administrative Structure citing Minn. Stat § 116.01.

⁶ Minn. Stat. § 103B.101, 102.

⁷ Id. citing Minn. Stat. Ann. §§ 103A.305,103A.311.

(http://www.egb.state.mn.us/). The EQB also coordinates assessments of water resources. develops water priorities and reports, and develops the state water plan.9

In addition to BWSR and EQB, other important state agencies include the Department of Natural Resources (DNR) and the Minnesota Department of Agriculture (MDA). The DNR regulates mining and forest resources, lakes, rivers, wildlife, and certain wetland, floodplains, and shoreland management (http://www.dnr.state.mn.us/index.html). The MDA regulates the of agricultural chemicals use that can impact surface and groundwater (http://www.mda.state.mn.us/). The MDA also manages the environmental review process to ensure agricultural projects will not negatively affect the environment.

Regional Agencies

The various regions of Minnesota have individual regional agencies that oversee a wide variety of environmental and land use issues. Probably the most well known regional agency in Minnesota is the Metropolitan Council (http://metrocouncil.org/). The Metropolitan Council oversees a number of issues that affect the environment within the Twin Cities seven counties, including land use, water resource policy, and solid waste management.

As a regional agency, the Region 5 Development Commission is similar to the Metropolitan Council. Region 5 has statutory authority to "to insure the orderly and harmonious coordination of state, federal and local comprehensive planning and development programs for the solution of economic, social, physical and governmental problems of the state and its citizens." Accordingly, Region 5 has the authority to coordinate the various entities responsible for agricultural runoff management and prevention.

⁸ Minn, Stat. § 103B.151,

⁹MINNESOTA ENVIRONMENTAL QUALITY BOARD, About the Environmental Quality Board, available at http://www.eqb.state.mn.us/resource.html?Id=17968.

¹⁰ Id. citing Minn. Stat. §§ 84.027, 103F.121, 103F.201.

Local Government

Local governmental bodies also have jurisdiction and responsibility for aspects of local water management. The Water Laws outline local water planning, management, and protection in Chapter 103b.301-355. Further, the Water Laws define two local government units crucial to water management in Minnesota—Soil and Water Conservation Districts (SWCD), and Watershed Districts. 11 In addition to County Boards of Commissioners, SWCD's and Watershed Districts are the primary local government bodies with jurisdiction and responsibility for implementing water policy and management at the local level.

Water Management at the Local Level in Minnesota

Local water management planning is conducted at the county level in accordance with Minnesota Statutes §§ 103.B.311 and 103B.315. Counties are tasked with identifying existing and potential problems and opportunities for protection, management, and development of water resources and related land resources. The county is responsible for preparing, adopting, and assuring implementation of a local water management plan, but may delegate all or part of the preparation of the plan to a local unit of government, a regional development commission, or a resource conservation and development committee. 12 County Boards of Commissioners often delegate authority over their respective water plans to other local units of government agencies such as SWCD's, Watershed Districts, or other local government units. BWSR has oversight authority over the counties' local water plans to ensure they are prepared and coordinated with existing local and state efforts and are implemented effectively.

See Minn. Stat. §§ 103C, 103D.
 Minn. Stat. § 103B.311, subd. 2.

When a watershed is located within one county, jurisdictional authority is generally with the County Board of Commissioners. 13 When a watershed crosses over county lines, it is generally under the jurisdiction of a joint county drainage authority, typically comprised of five county commissioners, with at least one member from each county where property is affected by the watershed. 14 In addition, where an organized watershed district exists, it can become the drainage authority for a drainage system. Because water does not know political boundaries, local governments often transfer jurisdiction over watersheds to watershed districts for practical and political reasons. 15

The Watersheds of Minnesota and Region 5

A watershed is the area of land where all of the water that drains off the land goes into the same place—a river, stream or lake. 16 Each small watershed is part of a larger, more extensive watershed in the vicinity, which in turn is part of even larger drainage network called a basin.¹⁷ Minnesota has 10 basins, some of which include portions of neighboring states or Canada. The largest watersheds within a basin are called major watersheds. 9 Minnesota has 81 major watersheds, comprised of roughly 5,600 minor watersheds.²⁰ Over the last four decades, the U.S. Geological Survey and Minnesota DNR have conducted extensive watershed mapping efforts and documented Minnesota's major and minor watershed boundaries.²¹

¹³ ASSOCIATION OF MINNESOTA COUNTIES, Understanding Minnesota Public Drainage Law, 2002 Overview for Decision Makers, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-414E-99AC-FC56C14C0AC9%7D/uploads/%7BE8F70722-253E-453F-AFD5-97EBF3355241%7D.PDF.

¹⁴ *Id*.

¹⁵ *Id*.

¹⁶ MPCA, What is a Watershed, available at http://www.pca.state.mn.us/index.php/water/water-types-andprograms/surface-water/watershed-approach/what-is-a-watershed.html. ¹⁷ *Id.*

¹⁸ *Id*.

¹⁹ Id.

²⁰ http://files.dnr.state.mn.us/publications/waters/lakeshed_mapping.pdf.

²¹ MINNESOTA DNR, History and Standards of Watershed Delineation in Minnesota, http://www.dnr.state.mn.us/watersheds/history standards.html.

Region 5 falls within a portion of at least 12 of Minnesota's 81 major watersheds. Below is a table of Region 5's watersheds and their corresponding counties:

Table 1: Watersheds of Region 5

Watershed	Counties
Crow Wing River	Cass, Crow Wing, Morrison, Todd, Wadena
Mississippi RiverBrainerd	Cass, Crow Wing, Morrison, Todd
Mississippi RiverSartell	Crow Wing, Morrison, Todd
Long Prairie River	Morrison, Todd, Wadena
Rum River	Crow Wing, Morrison
Redeye River	Todd, Wadena
Pine River	Cass, Crow Wing
Leach Lake River	Cass
Mississippi RiverGrand Rapids	Cass
Mississippi River-St. Cloud	Morrison
Mississippi RiverHeadwaters	Cass
Sauk River	Todd

Water Planning and Management in Region 5: Five Counties, Five Separate Water Management Plans

Region 5 does not have one comprehensive water management plan. Instead, each county produces its own Local Comprehensive Water Plan in accordance with Minnesota Statute §§ 103.B.311 and 103B.315. Below is a table reflecting the effective date of each county's plan and the drafting body for each plan. Appendix 1 contains web addresses for electronic versions of each county's plan.

Table 2: County Water Plans

County	Effective Dates	Drafting Body
Cass	2009 - 2014	Cass County Environmental Services Department
Crow Wing	2008 - 2013*	Crow Wing County Land Services Department
Morrison	2010 - 2020	Morrison County SWCB
Todd	2010 - 2015	Todd County SWCB
Wadena	2006 - 2016	Wadena County SWCB

Crow Wing County is currently in the process of finalizing a new 10-year local comprehensive water plan that will replace the 2008 - 2013, which expires in August 2013. The plan is expected before the county board in July 2013.²²

Two Ideas / Recommendations

Region 5 Should Encourage a "One Watershed, One Plan" Approach

The MPCA and the Minnesota Legislature are encouraging local government units to view water planning as a coordinated and integrated effort based on natural hydrolic boundaries, instead of rigid political boundaries.²³ Water knows no political boundaries, and therefore, it cannot be effectively managed by any one political jurisdiction. A so called "watershed-based" or "one watershed, one plan" approach, views water resource management in a holistic manner by focusing on the needs of individual watersheds. Such an approach would encourage Region 5's jurisdictions to break down county boundaries and work as a region to preserve and improve the quality of the waters within each of Region 5's watersheds.

One tool available to Region 5 to encourage a watershed-based approach is the "Watershed District." A second option is to leverage Crow Wing County's watershed approach to its 2013 – 2023 local comprehensive water plan to encourage watershed based planning and management across Region 5.

About Watershed Districts

Watershed districts are special purpose local units of government with boundaries based on the natural hydrologic boundaries of a watershed and consist of land in which all water flows

²² Crow Wing County Water Plan Moves Forward, BRAINERD DISPATCH, April 24, 2013, available at http://brainerddispatch.com/news/2013-04-24/crow-wing-county-water-plan-moves-forward.

²³ See MPCA, Watershed Approach, available at http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/watershed-approach/index.html. For a contemporary analysis of Minnesota water planning and the trend toward comprehensive watershed management, see Jean L. Coleman and Suzanne Sutro Rhees, Where Land and Water Meet: Opportunities for Integrating Minnesota Water and Land Use Planning Statutes For Water Sustainability, 39 WM. MITCHELL L. REV. 920 (2013).

to one point.²⁴ Their essential purpose is to solve and prevent water-related problems from and within those natural hydrologic boundaries.²⁵ As a water management tool, watershed districts are important because they approach water management on a holistic watershed basis, which allows for uniform and effective controls, not only to correct problems, but to prevent them.²⁶ Watershed districts become particularly relevant when water management becomes greater than one community or city can handle.²⁷

While there are 46 watershed districts in Minnesota, there are only two watershed districts in Region 5, the Thirty Lakes Watershed District (in Crow Wing), and the Sauk River Watershed District (which covers parts of Todd County).²⁸

Establishment of a Watershed District

Watershed districts are authorized by the legislature under Minnesota Statute § 103D, and are formed when citizens, county boards, or cities petition BWSR. To initiate the process, one or more of the following groups must sign an establishment petition:

- (1) one-half or more of the counties within the proposed watershed district;
- (2) counties having 50 percent or more of the area within the proposed watershed district;
- (3) a majority of the cities within the proposed watershed district; or

²⁴ *Id.*; see also Minnesota Association of Watershed Districts, *What is a Watershed District*, available at http://www.mnwatershed.org/index.asp?Type=B_BASIC&SEC={1F1ACEE4-3C71-468E-8830-469FA9E1C8CE}.

²⁵ BWSR, Local Government Units and Partner Agencies, available at http://www.bwsr.state.mn.us/WD/.

²⁶ MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, Why Establish a Watershed District?, available at http://www.mnwatershed.org/index.asp?Type=B_BASIC&SEC={1F1ACEE4-3C71-468E-8830-469FA9E1C8CE}&DE={ECFD26BA-839D-4ECF-A5D6-773784B4678E}.

²⁷ MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, Why Establish a Watershed District?, available at http://www.mnwatershed.org/index.asp?Type=B_BASIC&SEC={1F1ACEE4-3C71-468E-8830-469FA9E1C8CE}&DE={ECFD26BA-839D-4ECF-A5D6-773784B4678E}.

²⁸BWSR, *Minnesota Watershed District Guidebook*, available at http://www.bwsr.state.mn.us/publications/Wateshed District Guidebook.pdf.

(4) 50 or more resident owners residing in the proposed watershed district, excluding resident owners within the corporate limits of a city if the city has signed the petition.²⁹

Petitioners must file a copy of the establishment petition with the auditors of the counties affected by the proposed watershed district, the commissioner, and the director.³⁰ In addition, the original establishment petition, with a signed statement of delivery or receipt for each of the establishment petitions submitted to the auditors of affected counties, the commissioners, and the directors, must be filed with BWSR.³¹ BWSR has the authority after the filing of an establishment petition to establish a watershed district, define the boundaries of the watershed district, and appoint the first board of managers of a watershed district.³²

Management of a Watershed District

Watershed districts are governed by a Board of Managers appointed by the Boards of Commissioners of the counties that fall within the geographic scope of the district.³³ If more than one county is affected by a watershed district, BWSR appoints initial watershed district managers distributed by residence among the counties affected by the watershed district.³⁴ If a watershed district affects more than five counties, BWSR distributes the managers by identifying the manager areas within the watershed district and selecting the county board of commissioners for each manager's area to appoint a manager.³⁵

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²⁹ Minn. Stat. § 103D.205, subd. 3. For a guide to establishing a watershed district, see BWSR, Procedure for Establishing a Watershed District, available at http://www.bwsr.state.mn.us/planning/WD establishment.pdf.

³⁰ Minn. Stat. § 103D.205, subd. 4.

³¹ Minn. Stat. § 103D.205, subd. 4.

³² Minn. Stat. § 103D.101, subd. 1.

³³ MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, *What is a Watershed District?*, available at http://www.mnwatershed.org/index.asp?Type=B_BASIC&SEC={1F1ACEE4-3C71-468E-8830-469FA9E1C8CE}.

³⁴ Minn. Stat. § 103D.301, subd 1.

³⁵ Minn. Stat. § 103D.301, subd 2.

When the terms of the first managers appointed by BWSR expire, the county commissioners of each county represented by the watershed district appoint successor managers. In addition, the watershed district managers must appoint an advisory committee on an annual basis to advise, assist, and make recommendations to the managers on matters affecting the watershed.³⁷ This advisory committee consists of at least five members, and these members should include a representative from each soil and water conservation district, a representative of each county, a member of a sporting organization, and a member of a farm organization.³⁸

Watershed District and Managers' Powers

A watershed district has the power, to the extent necessary for lawful conservation purposes:

- (1) to sue and be sued;
- (2) to incur debts, liabilities, and obligations;
- (3) to exercise the power of eminent domain;
- (4) to provide for assessments and to issue certificates, warrants, and bonds; and
- (5) to perform all acts expressly authorized, and all other acts necessary and proper for the watershed district to carry out and exercise the powers expressly vested in it.³⁹

Watershed districts have the authority to adopt rules regulating, conserving, and controlling the use of water resources within the district, and work as partners in water planning and management with the state, counties, cities, and soil and water conservation districts. 40

³⁶ Minn. Stat. § 103D.311, subd 2.

³⁷ Minn. Stat. § 103D.331, subd 1.

³⁸ Minn. Stat. § 103D.331, subd 2.

³⁹ Minn. Stat. § 103D.355.

⁴⁰MINNESOTA ASSOCIATION OF WATERSHED DISTRICTS, Facts about Watershed Districts in Minnesota, available at http://www.mnwatershed.org/index.asp?Type=B BASIC&SEC={1F1ACEE4-3C71-468E-8830-469FA9E1C8CE}&DE={ACBC7CF8-03F4-43C4-ADF5-56A85CA63735}.

Watershed Management Plan

A key difference between water management by an individual county and water management by a watershed district is that watershed district managers must adopt a water plan focused on the particular watershed represented by the district. This "Watershed Management Plan" reflects the needs of the geographical area comprising the watershed, not the geographic area comprising the county's borders. The watershed management plan must give a narrative description of existing water and water-related problems within the watershed district, possible solutions to the problems, and the general objectives of the watershed district; and it must conform closely with watershed management plan guidelines as set forth by BWSR. Because all counties in Minnesota produce a water plan, watershed district plans and county plans must be consistent with each other.

Funding of Watershed District and Projects

Financing operations and projects are determined by the project's type or category.⁴⁴ Chapter 103D specifies different establishment criteria for the various types of projects. The various mechanisms available to fund watershed districts are complex. For a detailed description of watershed district financing, see the Watershed District Handbook created by the Minnesota Association of Watershed Districts.⁴⁵ As a general matter, watershed districts are funded by ad valorem taxes on properties within the district as well as various grants, such as the Clean Water

⁴¹ Minn. Stat. § 103D.401, subd. 1.

⁴² Minn. Stat. § 103D.401, subd. 1.

⁴³ Watershed District Handbook, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-

⁴¹⁴E-99AC-FC56C14C0AC9%7D/uploads/MAWD_Handbook_Update_clean_copy_11-18-11.pdf.

⁴⁴ Watershed District Handbook, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-

⁴¹⁴E-99AC-FC56C14C0AC9%7D/uploads/MAWD Handbook Update clean copy 11-18-11.pdf.

⁴⁵ Watershed District Handbook, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-414E-99AC-FC56C14C0AC9%7D/uploads/MAWD_Handbook_Update_clean_copy_11-18-11.pdf.

Fund Competitive Grants.⁴⁶ Particular watershed districts levies include an annual levy for a general fund to support general administrative expenses and construction, implementation, and management of projects for the common benefit, as well as a survey and data acquisition funding levy, and levies for emergency projects funding.⁴⁷

Resources to Get Started

The Minnesota Association of Watershed Districts (MAWD) is an organization that provides training and education to watershed district management in Minnesota, and could be a useful resource. Its website includes general information about MAWD, a calendar of events, legislative updates, information for watershed district managers, district information including maps, and other links to more sites on water quality protection and legislation (http://www.mnwatershed.org/).

Possibilities to Encourage Watershed Based Planning Beyond Watershed Districts

In conjunction with encouraging the establishment of additional watershed districts in Region 5, it could also encourage the drafters of the five county local water plans to coordinate their water management plans based on a watershed approach, taking the watersheds of the whole Region 5 into account, and adopting the same effective date for each plan.

The timing of the new Crow Wing County plan provides an opportunity for Region 5 to embrace a watershed-based approach to water planning and management. The new Crow Wing water plan is a watershed-based model that is among the first of its kind in the state.⁴⁸ The plan focuses on each of Crow Wing County's five major watersheds: the Pine River, Crow Wing

⁴⁶ Watershed District Handbook, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-414E-99AC-FC56C14C0AC9%7D/uploads/MAWD Handbook Update clean copy 11-18-11.pdf.

⁴⁷ Watershed District Handbook, available at http://www.mnwatershed.org/vertical/sites/%7B8075FBF0-4136-

 $[\]underline{414E-99AC-FC56C14C0AC9\%7D/uploads/MAWD_Handbook_Update_clean_copy_11-18-11.pdf.}$

⁴⁸ Brainerd Dispatch, *Water Plan Goes to the People*, March 26, 2013, available at http://brainerddispatch.com/news/2013-03-26/water-plan-goes-people.

River, Mississippi River-Brainerd, Rum River and the Mississippi River-Sartell. The plan uses a watershed-based land protection model, which includes analysis and maps of all 5 major watersheds and all 125 minor watersheds in the county. Crow Wing's water plan is in line with the watershed-based model being implemented by the MPCA, as recommended by the Clean Water Council and directed by the Minnesota Legislature. Crow Wing's 2013 – 2023 water plan is likely to be adopted by the county this summer. Region 5 could leverage the insights gained by the drafters of Crow Wing's water plan to encourage watershed based planning throughout Region 5.

Targeted Ordinances to Address Runoff in a Comprehensive Way

A comprehensive agricultural runoff ordinance at the county or city level is unlikely to be effective in Region 5 because most agricultural water management regulation occurs at the federal or state level, and the individual localities of Region 5 do not have the resources necessary to enforce such an ordinance. However, small-scale targeted ordinances are a practical means to prevent and manage agricultural and similar runoff originating from maintained landscapes.

A Comprehensive Storm Water Runoff Ordinance

Storm water runoff from any parcel of land share similarities to and have differences from agricultural runoff. The chemicals from agricultural lands are similar to those used on residential properties, albeit in different quantities, and both contribute to poor water quality. The counties, townships, and cities in Region 5 could adopt a comprehensive ordinance to address all forms of storm water runoff. This ordinance can include the provisions suggested in Shannon Sobeck's memo about commercial landscape ordinances and incorporate best practices

⁴⁹ MPCA, *Watershed Approach*, http://www.pca.state.mn.us/index.php/water/water-types-and-programs/surface-water/watershed-approach/index.html.

for the handling of agricultural runoff and provisions from model sustainable landscaping ordinances.

Targeted Sustainable Landscapes Ordinances

In addition to local storm water management ordinances, communities may also find the adoption of commercial landscape and sustainable landscape ordinances helpful for combating the problems associated with agricultural and urban runoff. Sustainable landscape ordinances are becoming more prevalent as communities understand the environmental stressors created by maintained landscapes. Sustainable landscape ordinances are a tool Region 5's towns and cities can use to target specific environmentally sensitive areas. In addition, communities can use such ordinances to link areas such as wetlands, lakes, shoreland, and land enrolled in a conservation reserve program. Communities may also create an inventory of areas practicing sustainable landscaping and other environmentally protective measures, and coordinate these sets of data and GIS mapping layers for planning and management purposes. Finally, communities may leverage grant programs available through SWCD's and Watershed Districts to implement sustainable landscaping projects such as rain gardens, native plantings, and rain barrel programs.

A Few Common Sustainable Landscaping Ideas

Sustainable landscaping ordinances and practices share several common themes including:

- Encouraging water efficient landscaping through the use of native plants;
- Reducing turf management and encouraging inorganic fertilizer, pesticides, and herbicides;
- Encouraging water conservation through root zone watering and water reclamation practices; and

Encouraging sustainable infrastructure such as bioretention (rain gardens),
 permeable pavement, and modified curbs and gutters.

In addition, many communities focus on educating community members about sustainable land use practices and increasing access to information about the planning process and alternative land use patterns. When possible, cost-share programs for rain barrels, rain gardens, and native plants are all beneficial ways to raise awareness about sustainable land use practices and get community members actively participating in managing and protecting water quality.

Additional resources and examples of sustainable landscaping ordinances can be found at:

- http://www.crplanning.com/pdfs/susdo6 09/landscaping.pdf
- http://www.cityofirvine.us/downloads/Sustainable_Landscape_Guidelines_Ordina
 nce_90-12.pdf
- http://www.ci.irvine.ca.us/civica/filebank/blobdload.asp?BlobID=10400
- http://edis.ifas.ufl.edu/uw253

Next Steps

- Analyze the five county water plans in Region 5.
- Monitor passage and implementation of Crow Wing County's watershed-based local water plan.
- Review the Clean Water Accountability Act, which the Minnesota Legislature is likely to pass in 2013.
- Evaluate the feasibility of a sustainable landscaping ordinance in Region 5 and draft such an ordinance if practical.
- Share this memo with the staff of the two watershed districts and discuss the advisability and feasibility of establishing additional watershed districts in Region 5.

Appendix 1 (County Water Plans)

Todd County

- Name: Todd County Comprehensive Local Water Management Plan
- Effective Date: 2010--2015
- Drafted By: Todd County Soil and Water Conservation Board
- http://www.co.todd.mn.us/sites/default/files/soil_water/Publications/Misc/2010% 20Water%20Plan.pdf

Morrison County

- Name: Morrison County Comprehensive Water Plan
- Effective Date: 2010--2020
- Drafted By: Morrison Soil Water and Conservation District
- http://morrisonswcd.org/wp-content/uploads/2011/12/2010-Draft-LWP-Revised-Update.pdf

Cass County

- Name: Cass County Comprehensive Local Water Management Plan
- Effective Date: 2009--2014
- Drafted By: Cass County Environmental Services Department (ESD)
- http://www.co.cass.mn.us/esd/pdfs/comp_plan_water.pdf

Crow Wing County

- Name: Crow Wing Local Comprehensive Water Management Plan
- 2008--2013* (the 2013--2023 water plan in will be available in summer 2013)
- Drafted By: Crow Wing Land Services Department
- http://crowwing.us/DocumentCenter/Home/View/2297
- 2013 Water Plan Available at: http://crowwing.us/index.aspx?NID=241

Wadena County

- Name: Wadena County Local Water Resource Management Plan
- Effective Date: 2006--2016
- Drafted By: Wadena County Soil and Water Conservation District
- http://www.wadenaswcd.org/Wadena%20County%20Local%20Water%20Management%20PlanAmended5.3.20112006_2016.pdf