PRIORITY CONCERNS SCOPING

DOCUMENT

FOR

KANABEC COUNTY

LOCAL WATER RESOURCE

MANAGEMENT PLAN UPDATE

Environmental Services Department
Fall 2016

WATER PLAN COMMITTEE MEMBERS

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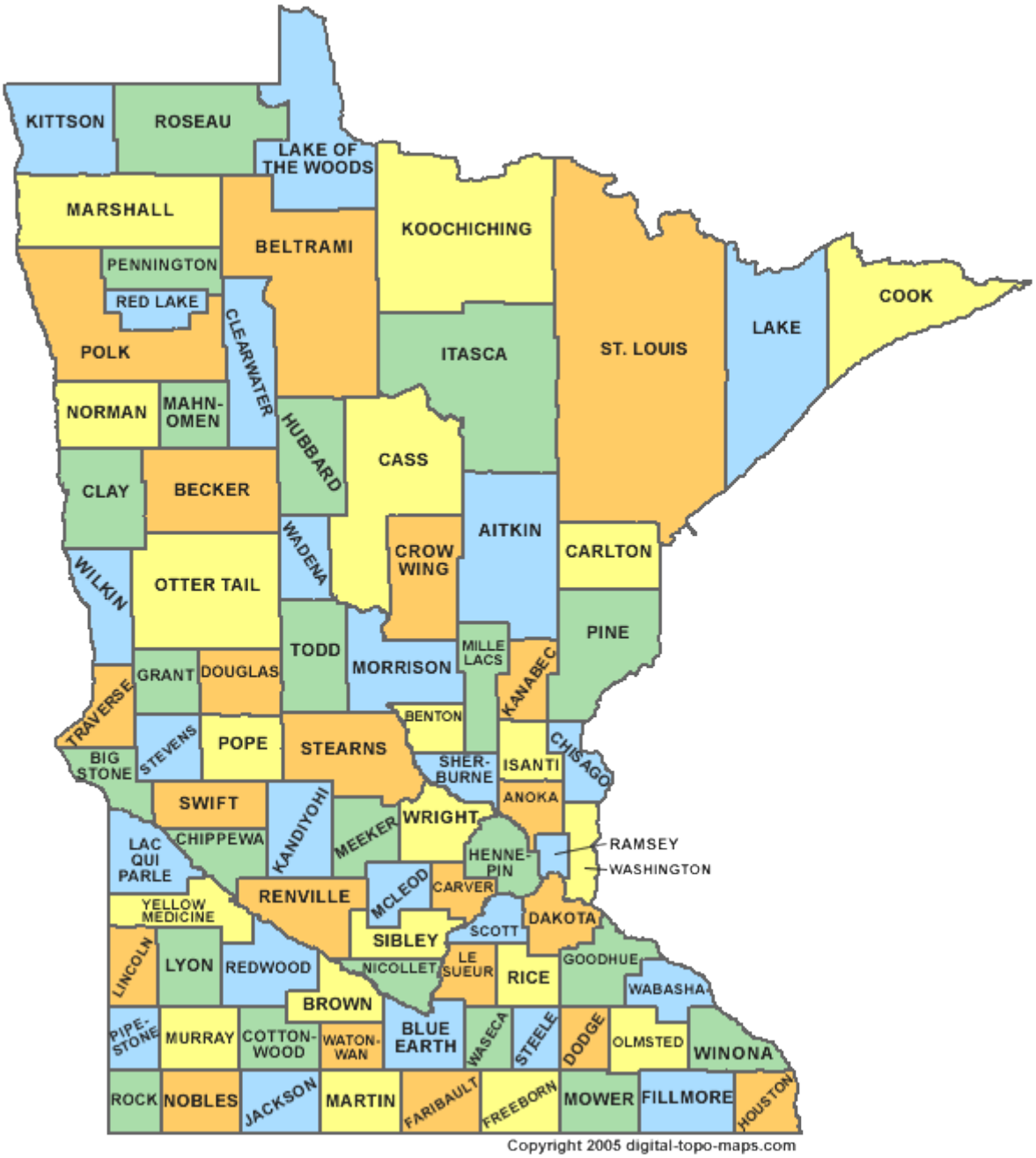
Priority Concerns Scoping Document

INTRODUCTION:
Kanabec County is located in east central Minnesota, approximately 60 miles north of St. Paul, 80 miles southwest of Duluth and 50 miles east of St. Cloud. Kanabec County is bordered by Mille Lacs, Pine, Isanti and Aitkin Counties.

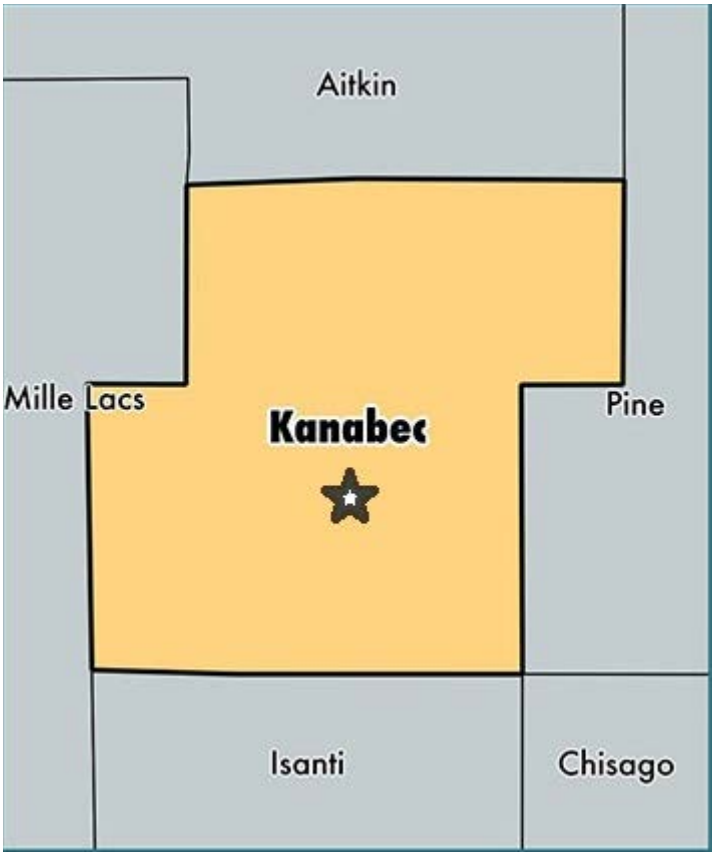


Map Courtesy of Digital-Topo-Maps.com

Kanabec County has a total area of 521.59 square miles, and is divided into 15 townships and 5 cities.

The information below was taken from the 2015 Minnesota State Census Bureau.

Geographic area	Population	Housing units	Area in square miles		
			Total area	Water area	Land area
Kanabec County	15738	6347	533.38	12.10	521.59
TOWNSHIPS					
Ann Lake Township	438	183	32.42	0.93	31.48
Arthur Township	1816	678	30.40	1.38	29.03
Brunswick Township	1314	499	35.45	0.82	34.62
Comfort Township	1042	410	36.02	0.57	35.45
Ford Township	185	84	36.28	0.45	35.83
Grass Lake Township	1027	393	34.82	0.72	34.10
Haybrook Township	235	96	36.36	0.24	36.12
Hillman Township	429	177	37.02	0.44	36.58
Kanabec Township	925	342	36.35	0.46	35.89
Knife Lake Township	1147	459	31.79	1.43	30.37
Kroschel Township	214	90	36.04	1.46	34.58
Peace Township	892	384	38.00	1.98	36.02
Pomroy Township	412	157	37.71	0.42	37.30
South Fork Township	782	285	36.38	0.09	36.29
Whited Township	909	352	30.68	0.40	30.27
CITIES					
Braham (part)	0	0	0.09	0.00	0.09
Grasston	158	54	0.94	0.00	0.93
Mora	3518	1509	5.27	0.27	5.00
Ogilvie	353	156	0.93	0.00	0.93
Quamba	112	39	0.72	0.00	0.72



The county seat of Kanabec County is in the City of Mora (stared).

Kanabec County's estimated population in 2015 totaled 15,738 persons. A total of 4141 persons or 26 percent of the population is located within the four municipalities. The remaining 11,597 persons, or 74 percent, reside in the rural, unincorporated areas of Kanabec County.

The population is unevenly distributed throughout the County. The overall density of Kanabec County is 31.1 persons per square mile. The most densely populated portion of the County (not including municipalities) is the Arthur Township area with a density of 63.5 persons per square mile. The most sparsely populated area of Kanabec County is the northern portion, which has a density of 5 to 6 persons per square mile.

MN Population Projections

	2000	2010	2015	2020	2025	2030	2035	2040
Kanabec	14,996	16,239	16,871	17,512	18,048	18,474	18,814	19,091
Isanti	31,287	37,816	40,340	43,170	45,856	48378	50,777	53,111

MN State Demographic Center

Kanabec County projected trends as compared to Isanti County to the south. Over the span of 40 years the population of Kanabec County is estimated to increase by nearly 30%, where-as Isanti is predicted to increase nearly 70%. This may show the expansion of population, to the north of the Twin-Cities area.

Land Use

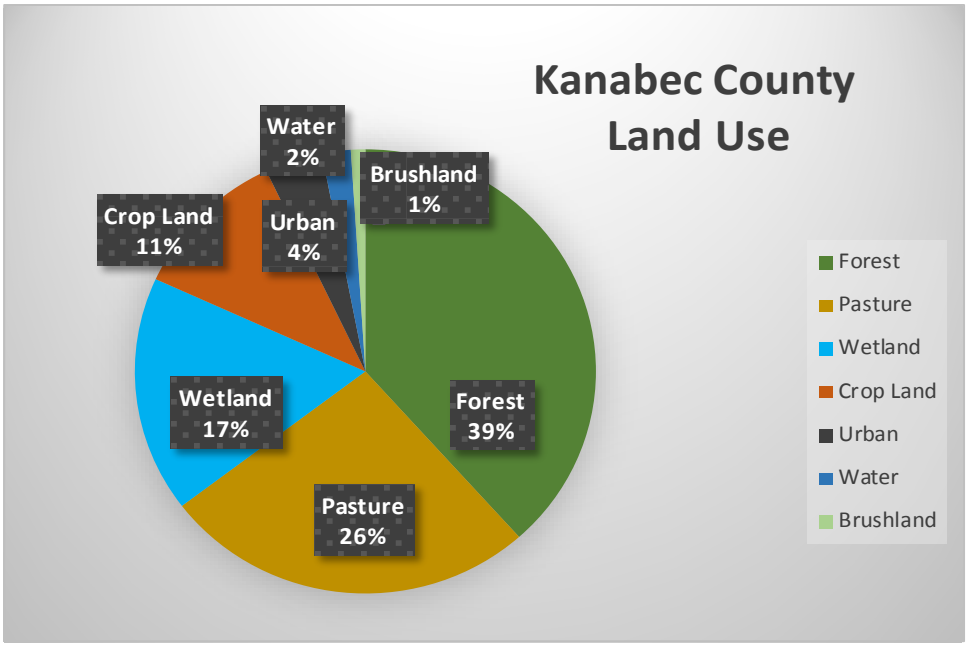
A basic component of Kanabec County's Comprehensive Plan involves a review of existing land uses. In a sense all discussions and recommendations in the Plan are directly related to land use analysis, that is, all factors mentioned in this plan have impacts on either the existing land use or future land use of the County.

Forestlands account for 128,342 acres or 37.6% of the total county area, and dominate in the northern and western portion of the County. Forestlands are categorized as areas dominated by deciduous and evergreen trees generally greater 16 feet tall and greater than 20% of total vegetation cover.

Pasture and open land accounts for 90,263 acres or 26.4% of the County's area. This category includes open and pasture lands not specifically cultivated. Classification description includes areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay vegetation accounts for greater than 20% of total vegetation. Includes areas dominated by gramanoid or herbaceous vegetation, generally greater than 80% of total vegetation. These areas are not subject to intensive management such as tilling, but can be utilized for grazing. A lesser amount of rural residential development currently occurs on these lands.

The cultivated lands make up 11% of the land use category accounting for 37,835 acres in the County. For purposes of this analysis cultivated lands are defined as lands used for the production of annual crops, such as corn, soybeans, vegetables, and also perennial woody crops such as orchards and vineyards. Crop vegetation accounts for greater than 20% of total vegetation. This class also includes all land being actively tilled. Agricultural lands often display the soil characteristics, which also make good home sites: level or gently rolling, well drained, no groundwater or bedrock problems and adequate percolation.

Forested, pasture, and cultivated lands makeup 75% of the land use in Kanabec County. The remainder is divided among wetlands 17.2% or (58,792 acres), open water 1.9% or (6,517 acres), brushland 1.2% or (4,432 acres), urban and non-residential 4.3% or (14,956 acres), and other land uses account for .4% or (145 acres).



Generalized Land Use
Kanabec County

Land Use	Acres (LMIC **2000**)	Percent (LMIC 2000)	Acres (NLCD **2011**)	Percent (NLCD 2011)	**% Change**
Forested	144,948	42.5%	128,342	37.6%	**-4.9%**
Cultivated	69,483	20.4%	37,835	11%	**-9.4%**
Water	6,341	1.9%	6,517	1.9%	**0%**
Wetland	18,995	5.6%	58,792	17.2%	**+11.6%**
Urban	6,432	1.9%	14,956	4.3%	**+2.4%**
Hay/Pasture	67,993	19.9%	90,263	26.4%	**+6.5%**
Brushland	26,563	7.8%	4,432	1.2%	**-6.6%**
Other	540	.2%	145	.4%	**-.2%**
TOTAL	341,195	100%	341,285	100%	

Land Management Information Center (LMIC 2000)
National Land Cover Database (NLCD 2011)

Source: National Land Cover Database 2011 (NLCD2011)

http://www.mrlc.gov/nlcd01_leg.php (2011 Land Use Legend Description Web page)

Land use is changing in Kanabec County, maybe not substantially compared with other counties with greater development pressures. Generally, development pressure is advancing from the south and around the main highways. State highway 65 running north-south and highway 23 from southwest to northeast. We may continue to see increased development around undeveloped lakes and rivers, especially in the northern part of the county. Further development may continue north of Mora and along the highway 65 corridor. The table above shows an 11-year span, with the largest change showing an 11% increase of wetlands and a 9% decrease in cultivated land. This trend may continue, along with the others of lesser extent. Ag. Land may continue to decline with the low land values, poor soils and continued development pressure. Pasture land may change based on market trends. The northern forested land may see more development pressure resulting in fragmented forests.

WATERSHEDS

Kanabec County has three major watersheds within the boundary of the County. They are the Rum River, Snake River, and Kettle River watersheds. The general surface water flow is north to south in the northern part of the County and west to east in the south. Knowing the direction of surface water flow will help locate possible pollution sources as well as downstream water bodies which would be affected by the source.

Below is a list of each major watershed, sub-watersheds, and minor watersheds.

SNAKE RIVER MAJOR WATERSHED

Snake River sub-watershed

The Snake River sub-watershed, which includes the upper, middle, and lower Snake River, is the largest group of sub-watersheds in the basin encompassing 273,301 acres or 43 % of the total Snake River Watershed. The Snake River originates in Aitkin County and flows for a total of 101.3 miles before entering the St. Croix River east of Pine City. The upper Snake River sub-watershed is characterized by areas of steep slopes which can be up to 25%, its relatively low percentage of cultivated land, and its exceptionally high numbers of state-listed rare and endangered wetland plant and animal species. Due to the upper Snake River's susceptibility to erosion and high number of rare and endangered plant and animal species, it is listed as a high priority and should be maintained and protected through the use of wise land stewardship practices. The middle and lower Snake River sub-watersheds have flatter slopes but more intense land uses, much higher percentages of cultivated land, and slightly lower percentage of rare and endangered plant and animal species. The middle and lower Snake River sub-watershed are listed as high priority minor watersheds due to their relatively high intensity land-uses and high number of rare and endangered plant and animal species, and should be a target area for implementation of appropriate best management practices.

Knife River sub-watershed

The Knife River sub-watershed is approximately 69,052 acres in size and comprises 11 percent of the total Snake River Watershed. The origin of the Knife River is found in Mille Lacs County near Wahkon. For a distance of 27 miles, the Knife River flows southeasterly until it joins the Snake River near Mora. The width of the Knife River varies from 35 to 70 feet with 1 to 2 foot depths, but extremes of 150-foot width and 12-foot depth also exist. The Knife River sub-watershed has a relatively high percentage of land susceptible to flooding, which indicates that the majority of the sub-watershed is environmentally sensitive to changes in land-use. In addition, the Knife River sub-watershed also drains into Knife Lake, which is one of the eight major lakes in the entire basin that is economically and recreationally important to the surrounding area. For these reasons the Knife River sub-watershed is listed as a high priority area and should be the focus of implementation efforts to protect and improve its water quality.

Ann River sub-watershed

The Ann River sub-watershed is 53,968 acres in size or 8 percent of the total Snake River Watershed. The Ann River originates in Mille Lacs County and flows for 21 miles, through Ann and Fish Lakes. Ann and Fish Lakes are two of the eight major lakes in the Snake River Watershed based on their economic and recreational value to the area. The land-use varies highly throughout this sub-watershed with 30.1 percent of the land being developed around Fish Lake. For these reasons the Ann River sub-watershed is given a high priority ranking for the implementation of best management practices.

Groundhouse River sub-watershed

The Groundhouse River sub-watershed is 88,998 acres and encompasses 14 percent of the Snake River Watershed. A total of four branches of the Groundhouse River originate in Mille Lacs County south of Ogilvie. The Groundhouse joins the Snake River near Brunswick and flows a total of 29 miles. The width of the mainstream of the river ranges between 35 and 40 feet, with an average depth of 1 to 2 feet. Forest cover is found in the upper portion of the Groundhouse River, but the lower reach of the Groundhouse River has some of the highest percentages of developed land in the entire Snake River Watershed, and is predominately used for various forms of Agriculture including forage, pasture and grain production. Water quality data from the Southfork of the Groundhouse River indicates poor water quality compared to the rest of the Snake River Watershed, for these reasons, the Groundhouse River sub-watershed is listed as a high priority and should be targeted for the implementation of appropriate best management practices.

Mud Creek sub-watershed

The Mud Creek sub-watershed has an area of 48,804 acres and is approximately 8 percent of the total Snake River Watershed. Mud Creek originates southeast of Pomroy Lake and flows 23 miles in a southeasterly direction until it joins the Snake River near Grasston. Mud Creek is relatively developed with flat slopes and has a low percentage of wetlands. Mud Creek flows through Quamba (Mud) Lake, which is one of the eight recreationally, and economically important lakes to the Snake River Watershed. For these reasons, the Mud Creek sub-watershed is listed as a high priority area and should be targeted for implementation of best management practices.

RUM RIVER MAJOR WATERSHED

Malone Creek (21003) – The watershed is very flat and marshy as it drains into Mille Lacs Lake.

Bogus Brook (21032) – The watershed is heavily farmed with a flat terrain of 0-2% slope.

Lory Lake & Creek to Ties Creek (21061) – The watershed is relatively flat with slopes of 4-6%. At the south end of Lewis Lake, the slopes increase to 8-10%.

Ties Creek (21062) – This watershed is a heavily farmed area. It consists of ditches and wetlands and has an average slope of 4%.

KETTLE RIVER WATERSHED

Little Pine Creek (35037) – The watershed is flat and marshy with slopes of only 2-4%. Nears the Aitkin County border north of Beauty Lake, the slopes increase to 8-10%.

South Branch of Grindstone River (35038) – Around Lake Five and Long Lakes the topography is very diverse with slopes ranging from 10-25%. Further south it flattens off to marsh land and bogs. It has few rolling hills with slopes of only 2-5% in the southern areas.

North Branch of Grindstone River (35040) – The watershed includes Lake Thirteen and is very flat with slopes of only 3-5%.

West Branch of Grindstone River (35039) – This watershed is flat and marshy with slopes of only 2-4%.

All waters within Kanabec County are priority, with focus due to the majority of the watershed in the county, on the Snake River Watershed.

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AUTHORITY

The authority to prepare comprehensive local water plans was granted to counties in 1986 when the Minnesota Legislature passed the Comprehensive Local Water Management Act. The legislature recognized the need to manage the State's surface and ground waters in a comprehensive manner and determined that water resource planning should occur at the county level as local residents are in the position to recognize problems and identify and carry out needed actions to effectively address local water resource issues.

PLANNING PROCESS

The Kanabec County Board of Commissioners passed a resolution on June 13, 1990, to engage in this water planning process and enter into an agreement with the Minnesota Board of Water and Soil Resources. The Kanabec County Board of Commissioners delegated the task of coordinating water planning to the Kanabec County Water Plan Administrator. In addition, the Water Planning Committee was charged with the task of updating the comprehensive local water plan for Kanabec County. On August 24th, 2005, the Kanabec County Board of Commissioners passed a resolution, indicating their intent to update the 2001 plan. For the second update, on December 16, 2015, Kanabec County Board of Commissioners passed a resolution to update the Kanabec County Water Plan. The current Kanabec County Water Plan 2006 – 2016 will expire in August of 2017.

Current Priority Concerns

The current water plan (2006-2016) indicates the following priority concerns for Kanabec County:

1. **The protection of shore lands and tributaries from erosion, sedimentation and nutrient loading -**
   - Surface Water Quality as it relates to development adjacent to riparian areas.
   - Cropland sedimentation and erosion control.
   - Feedlot runoff of excess nutrients to surface waters.
   - Nutrient management planning to control excess application of nutrients to cropland.
   - Livestock Exclusion from surface water areas.
   - Grazing Management near surface waters.
   - Storm water Runoff – controls for urban areas.
   - Construction site – sedimentation and erosion control measures.
   - Other runoff from impervious areas including residual oils, gas and solvents from vehicles.
   - Runoff controls to wetlands and surface waters as result of timber harvest.

2. **Drainage Ditch Maintenance -**
   - Maintain existing drainage ditches (including judicial ditches) where possible and feasible, for agricultural purposes.
   - Maintain ditch systems on new road projects. Example Hwy 47 Road Improvement Project resulted in excess runoff into farm fields and private properties.

3. **Ground Water Concerns –**
   - Homes with new babies/nitrate level in drinking water
   - Unsealed abandoned wells
   - Septic contamination from non-compliant systems

4. **Ground and Surface Water –**
   - Emergency spill contamination
   - Hazardous waste
   - Solid waste

Future Priority Concerns
The future water plan (2017-2027) indicates the following priority concerns for Kanabec County:

On August 17, 2016, the Water Plan Committee reviewed public and agency input received regarding focus of the revised water plan and selected the following priority concerns for the updated water plan:

1. **Surface Water Quality and Quantity**
   'Protection and restoration of Kanabec County surface water quality and quantity'
2. **Ground Water Quality and Quantity**
   'Protect groundwater resources from impairments and develop a sustainable framework for groundwater users'
3. **Land Use**
   'Promote land use management beneficial to the county's natural resources'

All the compiled and submitted priority concerns identified through the Priority Concerns Scoping Document process are identified and captured within the above listed three broader priority concerns.

Priority Concerns Identification and Selection:

Priority concerns were identified through a series of public and agency input opportunities. These opportunities are summarized below.

- December 16, 2015, Kanabec County Board of Commissioners passed a resolution to update the Kanabec County Water Plan.

- April 1, 2016 the Environmental Services Department sent out notification of intent to update the Kanabec County Water Plan to local units of government, surrounding counties and state review agencies with a request to send concerns for input into the proposed plan with an end date of May 15, 2016

- July 14, 2016, a public notice was published in the Kanabec County Times, to inform all interested parties of the intent to update the Kanabec County Water Plan and to request public input.

- July 20, 2016 a public hearing was held for Water Plan input at the Kanabec County Courthouse. In attendance at the public hearing were the Kanabec County Commissioners; Gene Anderson, Kathi Ellis, Kim Smith, Les Nielson & Dennis McNally; 2 staff from the Kanabec SWCD; Deanna Pomije & Jacque Olson and 2 board supervisors of the Kanabec SWCD; Paul Hoppe & Mike Johnson. Two comments were submitted via. e-mail prior to this meeting. The comments have been compiled on page 42 of appendix A.

- July 27-31, 2016 Public Comment requested through the Kanabec County Fair

Water Plan Committee Meetings:

- May 24, 2016 – The Water Plan Committee met and reviewed all in put received from the April notifications. The Water Plan Committee discussed ongoing workshops with interest groups (lake associations, cities and townships) and reviewed a draft of proposed priority concerns.
- June 29, 2016
- August 17, 2016
- September 8, 2016

The Water Plan Committee considered all input received during the meetings listed above when selecting priority concerns. They agreed to select 3-5 topics which encompass the most pressing water resource concerns over the next 10 years. The committee found many of the concerns most frequently discussed could be grouped into the three priority concerns. No priority concerns were excluded during the review process.

Some examples of tentative goals are listed below under the priority concerns. These proposed goals will need further refinement and exploration as they are incorporated into the final Water Plan.

- **Surface Water Quality and Quantity**
  - Promotion and installation of Conservation Best Management Practices for the restoration and protection of surface waters
  - Promote and install vegetative buffers along public waters, wetlands and drainage ditches
  - Promote septic compliance to address high levels of fecal coliform/E coli
  - Need for increased capacity on part of the Kanabec Soil & Water Conservation District for the implementation of the Water Plan.
  - Maintain existing public drainage ditches (including judicial ditches) where possible and feasible, for agricultural purposes
  - Drainage Water Management conservation practices, including water storage options
  - Lake Water Quality concerns – promote and install best management practices to restore and protect water quality
  - Continued support of the Aquatic Invasive Species control and prevention in the County
  - Prevent and control runoff of excess nutrients, hazardous and solid waste into surface waters
  - Promote soil health best management practices, such as cover crops, residue management and perennial vegetation for good upland cropland treatment
  - Wetland retention, restoration and protection
  - Plan for extreme weather events-plan for more upland treatments-soil health resiliency.
  - Targeting best management practices, aligned with local plans and reports
  - Preservation and management of wildlife habitat with a focus on wildlife species of concern (including rare, threatened and endangered species)
  - Conservation easement protection of land
  - Promotion of Forestry Best Management Practices

- **Ground Water Quality and Quantity**
  - Homes with new babies/nitrate level in drinking water
  - Unsealed abandoned wells
  - Unused manure storage – potential leaks or breaches
  - Septic contamination from non-compliant systems
  - Cities well-head protection and areas for special concern
  - Highly sensitive land in sand plains aquifer-special consideration to prevent aquifer contamination or where bed rock is shallow or other sensitive features
  - Contamination from emergency spills, lead, arsenic and other contaminants
  - Gravel pits – reclamation or new development
  - Prudent development of shore land areas to promote good water quality
  - Storm water runoff best management practices - controls for filtration and/or storage

- **Land Use**
  - County and Township ordinance development for prudent development of the county
  - Promote tourism & residency
  - Preserve the counties aesthetic quality

The priorities and concerns established in the scoping document will establish guidelines for the Water Plan Committee and help to meet goals to achieve protection for the waters of Kanabec County. This will be done by reviewing plans and proposals brought before the Water Plan Committee and referring projects to appropriate federal, state and local agencies for assistance.

Various reports are consulted such as the Snake River WRAPS, where data is available to address water concerns within Kanabec County. The data will help to address priority areas and concerns.

The Kanabec County Water Plan Committee, through the scoping document process, will now continue updating the Kanabec County Water Plan with goals to address the priority concerns stated in this document. Agencies will be identified to achieve the goals.

Appendix A – Index
Input Received for the Selection of Priority Concerns

[ML1]

April 26, 2016

Minnesota Board of Water & Soil Resources

Teresa Wickeham, Water Plan Coordinator
Kanabec County
903 Forest Ave E
Mora, MN 55051

RE: Response to invitation to submit priority concerns for the Kanabec County Priority Concerns Scoping Document for the Local Water Management Plan Update

Dear Kanabec County Commissioners:

Thank you for providing the opportunity to provide priority issues and plan expectations for the update and revision of the Kanabec Comprehensive Local Water Management Plan, as authorized under the Comprehensive Local Water Management Act, Minnesota Statutes, §103B.301.

The Board of Water and Soil Resources (BWSR) has the following specific priority issues:

- The county is strongly encouraged to include the drainage authority as a stakeholder in the plan update process as well as include projects and activities consistent with multipurpose drainage criteria outlined in Minnesota Statutes §103E.015, Subd. 1.
- The state's Nonpoint Priority Funding Plan (NPFP) outlines a criteria-based process to prioritize Clean Water Fund investments—if the county is intending to pursue Clean Water Fund dollars 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 NPFP.
- The Watershed Restoration and Protection Strategies Report for the Snake River identified fecal coliform/*E coli.*, nutrients, stream, channel sedimentation, low dissolved oxygen, and lack of connectivity as the primary stressors; therefore implementation actions to address these issues are critical.
- Ordinance development and enforcement is split between the county and the townships, with many of the townships administering their own development ordinances. Some of these ordinances are coming up on their ten-year anniversary and may be in need of review and revision. A review and integration of the county and township ordinances should enhance development while protecting the county's water resources.

- The county is 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.
- As identified in the 2002 County Comprehensive Plan, Kanabec County lies within the potential metropolitan development area, particularly along Highway 65. One of the important resources identified within the comprehensive plan is the 40%+ area of the county covered by forests. The management and protection of these areas will be vital to ensuring that water quality is maintained around these forested regions. The County should consider ways to enhance the protection of these forested areas through participation in the Sustainable Forestry Incentives Act, the acquisition of easements, and other forest protection systems.
- There are 33 Public Water Sources identified by the Minnesota Department of Health. Many of these groundwater sources are rated as highly sensitivity because of potential for contamination due to the local geographic setting. The County should include a discussion of ways to protect these water sources including the development of source water protection plans and abandoned well sealings.

We look forward to working with you through the rest of the plan development process. If you have any questions, please feel free to contact Jason Weinerman at 320-223-7072 or jason.weinerman@state.mn.us.

Sincerely,

Name
Board Conservationist
Minnesota Board of Water and Soil Resources

cc: **enter appropriate name from review roster**, MDA (via email)
enter appropriate name from review roster, MDH (via email)
enter appropriate name from review roster, DNR (via email)
enter appropriate name from review roster, MPCA (via email)
enter appropriate name from review roster, BWSR Regional Manager (via email)

Deanna and Teresa,

Attached are some numbers and findings of forest management/SFIA, Wild Rice Lakes, and RIM Reserve Easements. I pulled some of the context from the 2002 plan and tried to relate it to priority concern goal(s). I am meeting with someone more GIS savvy this month and could potentially have maps to correlate with some of the numbers and figures I found. Let me know if you have questions regarding some of this.

Have a good weekend!

Mitch Lundeen
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2016-2017 Kanabec County Water Plan/Forestry Update

The Sustainable Forest Incentive Act (SFIA), passed in 2001, allows annual payments from the Minnesota Department of Revenue (MN DOR) to enrolled owners of forested land as an incentive to practice long-term sustainable forest management.
Minnesota Laws 2008, Chapter 366 (House File 3149), created a new property tax classification—2c Managed Forest Land. Its 0.65 percent class rate for 2008 is lower than other classifications in which forest land may be placed, except Class 2a Agricultural Homestead (0.50 percent).
General Qualifications:

SFIA	Class 2c
20-acre minimum	20-acre minimum
No maximum acreage enrolled	1,920 acres maximum enrolled
Public access required if > 1,920 acres enrolled	Public access not required
Exclude 3-acre minimum for building	Exclude 10-acre minimum for building
8-year minimum enrollment; 4 years to end agreement	1 year minimum enrollment
Pay usual property tax, class rate varies from 0.50% to 1.25% depending on class and property's value. Get $7.00/acre/year minimum incentive payment ($8.61 actual payment in 2008)	Pay 0.65% Property Tax Class Rate
Property tax qualifies for itemized deduction on federal income tax return, but SFIA payment is taxable income	Property tax qualifies for itemized deduction on federal income tax return

(April 2016)

Kanabec County has approximately 21,000 acres enrolled in SFIA (As of May 2016).
Kanabec County has approximately 52,000 acres of MN DNR Registered Woodland Stewardship Plans. The first Woodland Stewardship Plan was registered in 1968 in Kanabec County, since then 366 plans have been registered within the county by the MN DNR. About 18% of Privately owned land has or had a woodland stewardship plan completed within the County.
52,000 ac. / 280,533 acres = 18%
(SFIA) (Private Land)

LAND USE
The table below indicates the percentage and acreage of existing land use, determined by LMIC, based on dominant land use of 40 acre cells (Figure 14B).

USE	ACRES (1969)	% (1969)	ACRES (Known as of 2000)	%	% (As of 2000)
Forested	166,160	48.9	144,948	42.5	(13)
Cultivated	52,040	15.3	69,483	20.4	34
Water	4,120	1.2	6,341	1.9	54
Marsh (wetland)	9,160	2.7	18,955	5.6	107
Urban Res/Non-Res.	4,240	1.3	6,432	1.9	52
Hayland/Pasture	104,120	30.6	67,933	19.9	(35)
Brushland	unknown	unknown	26,563	7.8	
Mining	unknown	unknown	540	.2	
Total	339,840	100	341,195	100%	

The northern half of Kanabec County is predominately forested. The southern half of the County is mostly in agricultural use, either cultivated or in pasture. Areas with significant development include the cities of Mora, Ogilvie, Quamba, Grasston, and around Fish Lake, Ann Lake, Knife Lake, Lewis Lake, and Quamba Lake.

In the early 1900's approximately 80% of Kanabec County was forested. Presently, the amount of forested land is about 45%, nearly half of what it was 80 years ago. Much of the southern part of the County was covered formerly with Maple-Basswood forests. Many of those forested areas are gone due to extensive logging and is now agricultural land. The northern half of the county is still heavily forested; however, much of the original vegetation has disappeared due to logging. The regrowth has been mainly Aspen.

Kanabec County has lost nearly half of its' forested areas within the last 80 years. In those areas where regrowth has occurred, much of the original vegetation is gone. These issues are being addressed in the East Central Landscape Forest Resources Plan.

Eighty-nine percent of the land in the county is privately owned. The remaining 11% is public land.
There are various public land acquisitions that have taken place within the county but at this time the acreage has not been calculated. These acquisitions have been brought about through the Clean Water Fund tax dollars. *Conservation easements are a critical component of the state's efforts to improve water quality by reducing soil erosion, phosphorus and nitrogen loading, and improving wildlife habitat and flood attenuation on private lands. Easements protect the state's water and soil resources by permanently restoring wetlands, adjacent native grassland wildlife habitat complexes and permanent riparian buffers. In cooperation with county Soil & Water Conservation Districts (SWCDs), BWSR's easement programs compensate landowners for granting conservation easements and establishing native vegetation habitat on economically marginal, flood-prone, environmentally sensitive or highly erodible lands.*

There are seven active State Funded RIM Reserve Easements covering approximately 444 acres located within Kanabec County. (MN Geospatial Commons, August 2015)

Priority Concern 1 Goal:

The protection of shoreland and tributaries from erosion sedimentation and nutrient loading-
This will be addressed through on-going "Best Management Practices" established through eight (8) forestry plans within the next 3-4 year period, soil testing of seventy-two (72) samples within riparian areas to assess phosphorus levels within the shoreland areas, soil testing to aid farmers in developing twelve (12) nutrient management plans.

Wild Rice:

Minnesota is well known for its ecological, cultural, and economical presence of Wild Rice (Zizania aquatic). Wild rice provides an abundance of benefits to wildlife habitat and aesthetic beauty to Minnesota lakes and rivers. According to the MN DNR wild rice is a substantial food crop worth at least $2 million to the state's economy each year.

Wild rice shoreland encompasses a complex of shallow lakes, rivers, and shallow bays of deeper lakes that support rice and provide some of the most important habitat for wetland-dependent wildlife species in Minnesota. Wild rice habitat is especially important to Minnesota's migrating and breeding waterfowl and provides Minnesotans with unique recreation opportunities: hunting waterfowl and harvesting the rice itself for food. Wild rice is also spiritually important to Native Americans and is a part of Minnesota's rich natural and cultural heritage.

Historically, wild rice occurred throughout Minnesota and extended into northern Iowa. Wild rice has since been extirpated from most of its southern range due to human impacts including changes to water quality and chemistry, sedimentation, landscape drainage, flow alteration, boat traffic and competition from introduced aquatic invasive species.

Kanabec County has over twelve wild rice lakes encompassing over thirty-five miles of shoreline identified by the MN DNR.

Hi there~

From today's meeting. This is the information for 2015.

All crops reported – 45,471 acres
Corn – 14,565 acres (32%)
Soybeans – 13,091 acres (28.8%)
Oats – 1189 acres (2.6%)

The balance would be mainly forages.

Hope this helps!

Ryan M. Brunn
USDA Farm Service Agency
County Executive Director
Kanabec/Pine County Office
2008 Mahogany Street, Suite 1
Mora, MN 55051
Phone: 320-679-2080 EXT 105
Fax: 855-765-7524
Monday – Friday 8:00 AM – 4:30 PM

Carlton/So. St. Louis/No. St. Louis/Lake/Cook County Office
4850 Miller Trunk Highway
Duluth, MN 55811
Phone: 218-720-5353
Fax: 855-765-7524
Monday – Friday 8:00 AM – 4:30 PM

Afternoon

We may have spoken previously about the Kanabec County Water Plan, currently under revision and seeking your input. We are still in the early stages of the rewrite. Below and attached are a brief description of what the water plan is and what comments we are seeking. The first attachment is a list of priority concerns for the county. Feel free to review and rank them and list any concerns of yours not already listed.

This coming Wed. 7/20, there will be a public comment period for the water plan in conjunction with the County Board meeting at 10 am in the Kanabec County Courthouse in Mora. Feel free to attend and have your comments heard or send your comments to myself or Teresa Wickeham, contact information below. Also at the meeting will be a presentation on the newly completed Geological Survey of Kanabec County, a new asset to the County.

(2nd attachment copied below)
Thank You for your Comments and Concerns

Deanna Pomije, Kanabec Soil & Water Conservation District
2008 Mahogany St. Ste 3
Mora MN 55051
(320) 679-3781 x113 *www.kanabeccounty.org*

Water Plan – current plan expires Aug. 2017
Seeking Public Comments: Kanabec County

July 20, 2016 County Board Meeting – Seeking Public Comment to Prioritize our County Resource Concerns for the Water Plan

County Water Planning consists of the following:

- Planning and implementation efforts that recognize local commitment and contribution.
- A plan which prioritizes, targets, and includes measurable implementation actions that work towards meeting the current water quality standards.
- **A well thought out water plan can help bring in essential grant funding needed to address the water concerns and clean up or protect our waters in Kanabec County.**
- Be based upon systematic, science based principles of sound hydrologic management of water, effective environmental protection, and efficient management.
- Plan development embraces the concept of prioritizing implementation strategies and actions.

Seeking comments such as:

- What are your water concerns in your area, for example erosion, groundwater quality, poor lake water quality or failing septics? What are your priorities and why?
- What goals do you have that you'd like to accomplish over the next 10 years? All homes to have clean drinking water. All lakes to meet the water quality standards for safe fishable and swimmable.
- What steps will we take to meet these goals over the next 10 years? Hook up the remaining homes/cabins around Quamba Lake onto the waste water treatment line running to Mora. Install storm-water management practices in the City of Mora to keep more nutrients out of the Snake River. Assist with excluding cattle from sites within the Groundhouse River to reduce nutrient runoff.

Together we can come up with a plan to address our concerns and keep water here in Kanabec County from becoming headline news. Let's be proactive.

Submit comments on the Water Plan or call with questions to either of the following:

Deanna Pomije, Kanabec Soil & Water Conservation District
2008 Mahogany St NW Ste 3 (320) 679-3781 x113
Mora MN 55051
deanna.pomije@mn.nacdnet.net

Teresa Wickeham, Environmental Services (320) 679-6456
903 Forest Ave E
Mora MN 55051
teresa.wickeham@co.kanabec.mn.us

Kanabec County - 2016 Priority Concerns for Scoping Document
Listed by Land Use & Categories

Please Rank the Categories in order of importance (#1 highest priority)
Also add below any concern of yours not listed

_____Surface Water Quality-

- Surface Water Quality as it relates to development adjacent to riparian areas, emergency spill contamination, soil erosion, hazardous waste and solid waste
- Feedlot runoff control to prevent excess nutrients into surface waters
- Grazing Best Management Practices such as use exclusion in sensitive areas and rotational grazing
- Reduce sedimentation / erosion
- Promote and install vegetative buffers along public waters, wetlands and drainage ditches
- Address high levels of fecal coliform/E coli through the promotion of septic compliance
- Nutrient management planning to control excess application of nutrients to cropland
- Erosion control on road construction, account for drainage
-

_____Protection of Shore Lands-

- Surface Water Quality as it relates to development adjacent to riparian areas, emergency spill contamination, soil erosion, hazardous waste and solid waste
- Prevent Feedlot Runoff of excess nutrients to surface waters
- Livestock Exclusion and Grazing Management near surface water areas
- The prudent development of shore land areas to promote the use or preservation of native vegetation and avoid adverse soil erosion
-

_____Ground water concerns –

- Homes with new babies/nitrate level in drinking water
- Unsealed abandoned wells
- Unused manure storage – potential leaks or breaches
- Septic contamination from non-compliant systems
- Cities well-head protection areas for special concern
- Highly sensitive land in sand plains aquifer-special consideration to prevent aquifer contamination
-

_____Development pressures-

- County and Township ordinance development
- Hwy 65 potential development – prevent over development, which deters tourism and residency
- Promote tourism
- Preserve the counties aesthetic quality by controlling excessive signage
-

_____Lake Water Quality-

- Control and prevention of Aquatic Invasive Species
- Excess algae / weed growth, the result of excess nutrients
- Lakeshore Erosion
- Unfavorable boating activities

- Prioritizing lake protection efforts within the County (Crow Wing Cty.)
- Wild rice preservation and restoration efforts
-

_____Agricultural Land-

- Erosion control practices for water and wind erosion
- Promote soil health best management practices, such as cover crops, residue management and perennial vegetation for good upland cropland treatment
- Encourage good livestock and manure management practices, for better water quality
- Feedlot runoff control to prevent excess nutrient runoff
- Grazing Best Management Practices such as use exclusion in sensitive areas and rotational grazing
- Nutrient management planning to control excess application of nutrients to cropland. Promote the 4 R's on Nutrient Management: the right source, the right timing, the right placement and the right rate on nutrient applications.
- Promote wide-span use of good conservation upland treatments that reduce soil erosion and promote sustainability
- Wetland retention
- Protect the ground and surface water from Ag. chemical and nutrient runoff
- Plan for extreme weather events-plan for more upland treatments-soil health resiliency.
- Targeting best management practices, aligned with local plans and reports
- Engage the agriculture sector into planning opportunities
-

_____Drainage Ditch Maintenance -

- Maintain existing drainage ditches (including judicial ditches) where possible and feasible, for agricultural purposes
- Drainage Water Management conservation practices
- Water storage options within the drainage system
-

_____Cities-Urban Issues-

- Well head protection areas
- Storm water runoff-controls for filtration and/or storage
- Construction site- sedimentation and erosion control measures
- Other runoff from impervious areas including residual oils, gas and solvents
-

_____Wildlife Habitat-

- Preservation and management of wildlife habitat with a focus on wildlife species of concern (including rare, threatened and endangered species)
- Enrolling land into easements for long term preservation of habitat
- The restoration of new land into quality wildlife habitat
- Connectivity of wildlife habitat for travel corridors
- Encouraging planting pollinator habitat
- Promote tourism
- Address low levels of Dissolved Oxygen – install riffles, reduce nutrient runoff
-

_____**Forestry Land-**

- Forestry Stewardship Planning
- Conservation easement protection of land
- Forest diversity to promote resiliency to disease
- Erosion control and the protection of wetlands and surface waters through the use of Forestry Best Management Practices
-

_____**Air Quality-**

- Wind erosion
- County Burn Barrel Resolution
- Dust control on gravel roads
-

Please Add Your Concerns - Not already listed:

1.

2.

3.

Here are my comments on the county's water plan.

I have been on Lewis lake for 60 years, and have provided secchi disc readings for the lake to the MPCA for the last 20 years. In the last 10 years we have seen an MPCA documented decrease in water clarity, and increase in Phosphorous levels. In fact our T Phosphorous levels have increased 40% since 1997. While Lewis lake still falls within the guidelines for our eco region, our Phosphorous levels continue to rise. In 1997 we had TP levels of 23 ug/L, which had increased in 2015 to an average of 32 mg/L for the season, with some monthly readings as high as 40 mg/L.

So what are the impacts from the increase in Phosphrous? Every year we have more frequent blooms of algae which can completely cover the lake. The blobs are black, slimy and stinky, and always the topic of the lake. At times you can't even swim due to the black algae. In addition to the black algae, for the last few years we have also red algae blooms, and a few weeks ago I contacted the MPCA and they verified a large bluegreen algae bloom that covered both bays.

Lewis lake has an active Lake association dedicated to increasing the water quality of the lake.
Over the years our projects have included shoreline plantings and buffers, education, rip rapping, and even installing a community septic system. We need the county's help in monitoring septic systems that are on lakes, and I am asking you to incorporate a septic management plan in the county's water plan. Minimally this should include a schedule for pumping, checking for compliant and noncompliant systems on lakes, and insuring that septic size is adequate to meet the needs. This plan needs to include non permanent structures, like travel trailers, pop ups, and RVs that park along lakeshore. On our lake and many others, folks treat these structures as permanent structures, moving them the minimum requirement each year, with no septic requirements guiding them.

The MPCA suggests that as many 30% of septic systems are non compliant.
The consequences of noncompliant systems along lake shore are far reaching and impacts water quality, clarity, and phosphorous levels. Lake associations can't monitor septic systems, but the county can.
I currently have well water and septic in my community and I am required to pump it every 3 years. I receive a reminder in the mail and have to provide proof that it has been completed. With lakes being one of counties biggest assets, I am asking the county to initiate a septic management plan initially for lake shore properties. Many other counties have already done so.
A clean lake increases property values, which helps the county's tax base. As a lake association we are working hard on water quality and need your help in restoring the phosphorous levels on Lewis lake.

Thanks in advance for your help and support.

mary mshimshock@msn.com

Comments:
We need to establish a protocol to address increasing phosphorous levels in our lake (Lewis Lake) and other lakes in our county. AIS (Curly Leaf), algae blooms like black algae blobs, red algae, and bluegreen all are invariably tied to phosphorous levels on the rise.
Also establishing a septic monitoring system for permanent and non permanent structures on county lakes would be in order. This is best done on at a county level.
Continued support of AIS efforts of control and prevention of same in the county.
Promotion and installation of buffer strips along public waters etc.
Erosion control of public waters likes of "willow waddles ",etc.
Encourage shoreland planting rather than mowing down to waters edge.

Thanks for time and effort in support of improving Kanabec County's new 10 year water plan.
Oren Larson, Lewis Lake Property Owners Association.

Teresa Wickeham

From:	Sip, Rob (MDA) <rob.sip@state.mn.us>
Sent:	Friday, May 13, 2016 1:02 PM
To:	Teresa Wickeham
Subject:	Kanabec County Comprehensive Local Water Management Plan Update
Attachments:	Final Version Reducing Ditch System Maintenance Costs Factsheet in the RRB - March 25, 2015.pdf; NRCS_FarmLandClassification_2016_MN_2.pdf; 2015 Crow Wing Prioritization.pdf; MDA Drainage Recommendations for Local Water Mgmt Plans - June 2014.pdf

Teresa,

Below is a website that MDA has developed to discuss and illustrate priority concerns. The MDA is in the process of updating this website and MDA realizes that recommendations are implemented based on staff, financial and technical resources. The MDA also realizes that this is a 5 year update. In addition to the website recommendations, the MDA is providing additional information below to highlight priorities.

MDA Water Planning Assistance Website:
http://www.mda.state.mn.us/en/protecting/waterprotection/waterplanning.aspx

1. Drainage Water Management (DWM) - The MDA recommends additional effort be focused on encouraging landowners and farmers to implement DWM practices and management plans. The Kanabec County ESD and SWCD can play a important role in working with drainage authorities, landowners and agricultural groups to determine how best to promote and implement DWM practices. Attached are drainage related recommendations from the MDA, which are also being updating. A fact sheet from the Red River Watershed Management Board regarding ditch system maintenance is also attached. Please distribute this factsheet when appropriate as you work with area farmers and landowners and water management partners.

The MDA also recommends that Kanabec County consider the development of a Multipurpose Drainage Management Plan in conjunction with its partners and below is a recent example that you are probably aware of. While this is just one recent example, it may serve as a model for Kanabec County:
http://www.co.martin.mn.us/images/Ditch%20Admin/Martin%20County%20Multipurpose%20Drainage%20Management%20Plan.pdf

2. Water Storage - The MDA recommends that Kanabec County along with its water management partners consider the development of a water storage plan for both public drainage systems and for private on-farm water storage. This plan may build off of existing water or drainage management plans and may include but not be limited to the following:

- Communication of the development of a water storage plan with private landowners in Kanabec County.
- Obtaining flow data and setting flow goals agreed upon by landowners within each public ditch systems or sub-watersheds.
- Prioritizing public ditch systems or sub-watersheds based on flow goals with input from landowners.
- Assessment of where short-term and long-term water storage projects can be located. This may include several types of water storage, including smaller scale (wetland restorations) or

larger scale projects such as constructed impoundments. However, larger scale projects are costly and require significant financial resources to engineer, construct, operate and maintain.
- Development of an implementation plan or schedule that would include discussion of funding considerations, again with landowner input.
- Operation and maintenance plans for each project.

The MDA is also aware of the sensitivity regarding past efforts to manage water on a regional basis and further recognizes that local policy-makers have difficult decisions to make regarding how to address these important issues.

3. Wind and Water Erosion - Attached is a map of prime soils that was recently updated by the USDA NRCS and please share this with your partners. The SWCD may have opportunities in the future to create additional awareness about prime soils by sharing and distributing this map. The MDA recommends that the Kanabec County water plan focus and renew efforts to reduce wind and water erosion and that efforts continue to implement more conservation practices such as WASCOBs, grassed waterways, etc., in priority areas.

Field windbreaks, farmstead windbreaks and small areas of trees or other vegetation have been removed from the landscape at unprecedented levels in recent years. However, the MDA also realizes that many of the field windbreaks that have been removed were beyond their lifespan. Windbreaks and vegetative plantings that also incorporate pollinator habitat can serve dual purposes. It is also critical that cover crops, residue management and other soil health initiatives be implemented at an increased levels. The MDA recommends that tools such as PTMAPP (website below) be used as your county continues its important water quality efforts: http://www.rrbdin.org/prioritize-target-measure-application-ptmapp

4. Lake Management - The MDA recommends that a process be considered for development to prioritize lake management and protection efforts in Kanabec County. As an example, Crow Wing County developed a process (attached) to prioritize lake protection efforts. Recently two additional counties have adopted components of this process or have created similar lake protection efforts.

5. General Information about the MDA - you may wish to incorporate the following language if there is a need to illustrate state agency duties and responsibilities:

The MDA is statutorily responsible for the management of pesticides and fertilizer other than manure to protect water resources. The MDA implements a wide range of protection and regulatory activities to ensure that pesticides and fertilizer are stored, handled, applied and disposed of in a manner that will protect human health, water resources and the environment. The MDA works with the University of Minnesota to develop pesticide and fertilizer Best Management Practices (BMPs) to protect water resources, and with farmers, crop advisers, farm organizations, other agencies and many other groups to educate, promote, demonstrate and evaluate BMPs, to test and license applicators, and to enforce rules and statutes. The MDA has broad regulatory authority for pesticides and has authority to regulate the use of fertilizer to protect groundwater. The MDA is the lead agency for all aspects of pesticide and fertilizer environmental and regulatory functions as directed in the Groundwater Protection Act (Minnesota Statute 103H). These include but are not limited to the following:

- Serve as lead agency for groundwater contamination from pesticide and fertilizer nonpoint source pollution.
- Conduct monitoring and assessment of agricultural chemicals (pesticides and nitrates) in ground and surface waters.

- Oversee agricultural chemical remediation sites and incident response.
- Regulate use, storage, handling and disposal of pesticides and fertilizer.

Thank you for the opportunity to comment. Please do not hesitate to contact me if you have any questions.

Robert L. Sip
Environmental Policy Specialist
Pesticide and Fertilizer Management Division
Minnesota Department of Agriculture
3725 12Th Street North
St. Cloud, MN 56303

320-223-6531 (Office)
651-319-1832 (Cell)
651-201-6120 (Fax)

rob.sip@state.mn.us
www.mda.state.mn.us

Teresa Wickeham

From: Miller, Tony L (DNR) <tony.miller@state.mn.us>
Sent: Wednesday, May 11, 2016 9:18 AM
To: Teresa Wickeham
Subject: DNR Forestry input for Water Plan update
Attachments: 2c-Application.pdf; _SFIA factsheet 12-2-15.pdf; EQIP Fact sheet.pdf; State Technical Committee FSA update_20160217.pdf; csp_fact_sheet_no_1_3_29_13.pdf

I think it is important that we do all we can do to encourage landowners in the county to be good stewards of their properties. The DNR Woodland Stewardship Program has always provided landowners with a land management plan that considers water quality. We need to do whatever we can to encourage landowners to participate in this program. One of the biggest hold backs with this program now is the cost of having a plan written. This service used to be provided for free by the DNR, but now landowners are required to pay for their management plans. Two tax programs have been introduced over the years to help mitigate the cost to the landowners, the Sustainable Forestry Incentive Act (SFIA) and the 2c Managed Forest Land Classification. SFIA is a tax incentive program that prevents fragmentation of our forestland through an easement, and 2c is a lower property tax rate for landowners. We need to do all that we can do to keep these two programs available and attractive to landowners. I have attached factsheets on both of these programs for your information. We should also lobby for more cost sharing that would encourage landowners to plant more trees and shrubs, and to keep their forests healthy, especially to protect the waterways in the county. Current cost share programs for forestry practices available in this county include EQIP, CSP, and CRP. These program are very important for encouraging landowners to protect our natural resources. Hope this is the kind of information you were looking for from me :)

Tony

TOWNSHIP OF BRUNSWICK
Kanabec County, Minnesota
1086 Imperial Street, Ogilvie, Minnesota 56358

May 10, 2016

Kanabec Soil & Water Conservation District
Attn: Ms Deanna Pomije
20018 Mahogany St. NW Ste 3
Mora, MN 55051

RE: KANABEC COUNTY WATER PLAN

Dear Ms. Pomije,

At the regular board meeting of May 9, 2016 the town board of Brunswick Township decided by consensus that the following statement should be part of Kanabec County's new water plan.

> The Kanabec County Water Plan shall be based upon the assumption that the County and Judicial Ditches in the county shall be maintained and continue to function as they have been designed and subsequently improved and the plan shall contain a statement to this effect.
>
> The County and Judicial Ditches were established for economic development and to prevent diseases and these purposes continue today.

Sincerely,

Ronald L. Peterson, Clerk
1086 Imperial Street
Ogilvie, Minnesota 56358

Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

May 9, 2016

Ms. Teresa Wickeham
Kanabec County Environmental Services
903 Forest Ave. E.
Mora, MN 55051

RE: Notice of Decision to Revise and Update the Local Water Management Plan

Dear Ms. Wickeham:

Thank you for the opportunity to provide information to help with the process of revising and updating the Kanabec County Local Water Management Plan. The Minnesota Pollution Control Agency (MPCA) is providing the following information as input on priority concerns.

We recommend incorporating and implementing the strategies and goals from the following studies and reports:

- Snake River Watershed Total Maximum Daily Load (TMDL) study and Watershed Restoration and Protection Strategy report (2014), focusing on the priority/targeted areas and interim 10-year milestone goals
- Ann River Watershed Bacteria, Nutrient, and Biota TMDL and Implementation Plan (2013)
- Lake St. Croix TMDL and Implementation Plan (2012), the goal for the St. Croix Watershed is to reduce the amount of phosphorus to the St. Croix River and Lake St. Croix by 20 percent by 2020
- Groundhouse River Fecal Coliform and Biota (Sediment) TMDL and Implementation Plan (2009)
- The Rum River Watershed WRAPS and TMDL are also currently underway and are expected to be completed in 2017

MPCA has also developed a Nutrient Reduction Strategy: http://www.pca.state.mn.us/rfcrfdk to address nitrogen and phosphorus statewide. It may be helpful to reference the report in your plan and work towards the proposed reductions over the next 10 years.

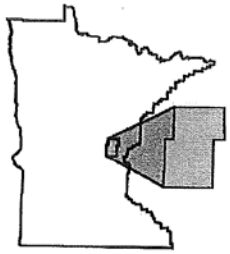
We look forward to our continued partnership with Kanabec County to work on the Watershed Restoration and Protection Strategy (WRAPS) process to develop strategies to protect high quality surface water resources and restore impaired waters within the county. Thank you for the opportunity to provide initial input. We look forward to working with you on updating and revising your plan. Please feel free to contact me at 651-757-2473 or rachel.olmanson@state.mn.us.

Sincerely,

Rachel Olmanson
Environmental Specialist 2
Metro Watershed Section
Watershed Division

RO:cp

cc: Jason Weinerman, BWSR
Brian Livingston, MPCA



KANABEC SOIL & WATER CONSERVATION DISTRICT

2008 Mahogany St. Ste. 3
Mora, MN 55051
(320) 679-3781
www.kanabeccounty.org

July 14, 2016

Dear Local Work Group Members,

We want to thank you for taking time out of your busy schedules to attend the Local Work Group. It is important to get local opinions and ideas on conservation needs in our county.

Please review the following outcomes.

We look forward to hearing any feedback, comments or questions about these outcomes.

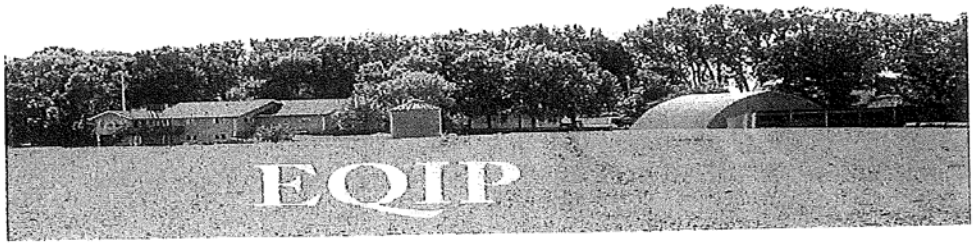
Sincerely,

Deanna Pomije

Deanna Pomije, District Manager - SWCD

Shannon Rasinski

Shannon Rasinski, District Conservationist - NRCS



Rank the following Resource Concerns in order of priority

Cropland		Pastureland		Forestland	
6	Air Quality ✓	10	Air Quality	10	Air Quality
7	Livestock Production	5	Livestock Production	6	Livestock Production
5	Wildlife Habitat ✓	9	Wildlife Habitat	4	Wildlife Habitat
9	Energy	8	Energy	7	Energy
10	Excess Water	7	Excess Water	9	Excess Water
8	Insufficent Water	4	Insufficent Water	8	Insufficent Water
1	Water Quality ✓	1	Water Quality	1	Water Quality
2	Soil Erosion	2	Soil Erosion	3	Soil Erosion
3	Soil Quality	6	Soil Quality	5	Soil Quality
4	Plant Condition	3	Plant Condition	2	Plant Condition

Reason for Selections Above.

Water quality, soil erosion and soil quality are the most important to the Local Work Group because all of them are directly related to the quality of life in Kanabec County. Snake River Watershed WRAPS report has identified the following impairments: *E. coli*, excess nutrients (phosphorus), fish and macroinvertibrates.

What are the top 2 Conservation Practices that need to be implemented and why?

Riparian buffer strips (herbaceous or woody) - improves water quality, reduces soil erosion and improves wildlife habitat. Cover Crops - improves soil quaitlity, water quality, reduces soil erosion, improves wildlife habitat and can provide livestock feed.

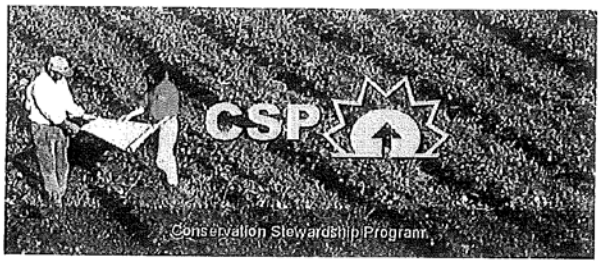
What are the top priority Geographical Areas? (Must include HUC number)

Snake River Watershed 07030004

What are the roadblocks for producers to install conservation practices?

Lack of knowledge, not willing to do something different, not wanting to work with the governement, cost of project, lack of funding

Please include any input concerning the tribes.



Priority Resource Concerns:
Rank the following resource concerns by land use by most important to least.

Agland

Animal	5
Energy	7
Plants	3
Soil Quality	2
Soil Quantity	4
Water Quality	1
Water Quantity	6

NIPF

Animal	4
Energy	6
Plants	2
Soil Quality	3
Soil Quantity	5
Water Quality	1
Water Quantity	7

What improvements to existing CSP enhancements would you recommend:
General - Easier ranking process. Enhancements descriped with more detail. Better incentives.

What new CSP enhancements would you like to see developed?

What are the practices currently being implemented in your county? How could CSP improve upon these?
Cover crops, Residue Management, Conservation Cover, Tree and Shrub Establishment, prescribed grazing, Well Decomisssioning, and Waste Facitly Closure

Program Needs

Local Work Group input to be reflected on the local ranking quesitons. Want to go back to own local ranking questions with points. Flexibility for producers.

Cropland		Pastureland		Forestland	
8	Air Quality	8	Air Quality	8	Air Quality
7	Livestock Production	4	Livestock Production	5	Livestock Production
6	Wildlife Habitat	7	Wildlife Habitat	4	Wildlife Habitat
4	Energy	6	Energy	6	Energy
5	Water Quantity	5	Water Quantity	7	Water Quantity
1	Water Quality	1	Water Quality	1	Water Quality
3	Soil Erosion	3	Soil Erosion	2	Soil Erosion
2	Soil Health	2	Soil Health	3	Soil Health

Reason for Selections Above.

Potential Partners

Pheasants Forever, Snake River Watershed Management Board

NRCS

What is the best way to advertise ALL programs in your county (radio, newspaper, flyers, mailings, other)???
Newspaper, face-to-face at meetings, mailings, county fair, door-to-door.

Additional information the State Office could provide to assist with outreach:
[i.e. talking points, fact sheets, etc.] Encourage outreach to the younger generations, as they formulate opinions they take with them throughout their life.

Priority Concerns – Listed by Land Use & Categories

(Compiled comments from the public hearing on 7/20/16 have been added below into the listed priority concerns.)

Surface Water Quality

- Surface Water Quality as it relates to development adjacent to riparian areas, emergency spill contamination, soil erosion, hazardous waste and solid waste
- Feedlot runoff control to prevent excess nutrients into surface waters
- Grazing Best Management Practices such as use exclusion in sensitive areas and rotational grazing
- Reduce sedimentation / erosion
- Promote and install vegetative buffers along public waters, wetlands and drainage ditches
- Address high levels of fecal coliform/E coli through the promotion of septic compliance
- Nutrient management planning to control excess application of nutrients to cropland
- Erosion control on road construction, account for drainage
- Pesticide runoff, especially in riparian areas
- Unused manure pits, runoff potential
- Vegetated buffers needed, promote and install buffers along public waters
- Erosion control along public waters, such as willow wattles
- Need for increased capacity on part of the Kanabec Soil & Water Conservation District for the implementation of the Water Plan.

Protection of Shore Lands

- Surface Water Quality as it relates to development adjacent to riparian areas, emergency spill contamination, soil erosion, hazardous waste and solid waste
- Prevent Feedlot Runoff of excess nutrients to surface waters
- Livestock Exclusion and Grazing Management near surface water areas
- The prudent development of shore land areas to promote the use or preservation of native vegetation and avoid adverse soil erosion

Ground water concerns

- Homes with new babies/nitrate level in drinking water
- Unsealed abandoned wells
- Unused manure storage – potential leaks or breaches
- Septic contamination from non-compliant systems
- Cities well-head protection areas for special concern
- Highly sensitive land in sand plains aquifer-special consideration to prevent aquifer contamination
- Contamination from lead, arsenic and other contaminants
- Waste tire disposal (past and present) contamination above and below ground
- Leaching silage
- Unused gravel pits – reclamation needed

Development pressures

- County and Township ordinance development
- Hwy 65 potential development – prevent over development, which deters tourism and residency
- Promote tourism
- Preserve the counties aesthetic quality by controlling excessive signage

Lake Water Quality

- Control and prevention of Aquatic Invasive Species
- Excess algae / weed growth, the result of excess nutrients
- Lakeshore Erosion

- Unfavorable boating activities
- Prioritizing lake protection efforts within the County (Crow Wing Cty.)
- Wild rice preservation and restoration efforts
- In recent years, Lewis Lake is seeing higher Phosphorus testing, lower water clarity and more issues with various algae growth covering more and more areas in the lake. It was stated that septic system noncompliance as part of the cause to the low water quality issues, as other conservation practices have already been installed around the lake. Requesting a county septic management plan to be incorporated into the water plan. Requesting the septic management plan to include non-permanent structure such as RVs and travel trailers. "With lakes being one of the county's biggest assets, I am asking the county to initiate a septic management plan initially for lake shore properties. Many other counties have already done so."
- Lewis Lake water quality issues: increased algae and vegetation growth caused from increased Phosphorus. Suggesting a county wide septic monitoring system set-up for permanent and non-permanent structures on the County Lakes.
- Encourage native shore land plantings rather than mowing down to the water's edge
- Continued support of the Aquatic Invasive Species control and prevention in the County

Agricultural Land

- Erosion control practices for water and wind erosion
- Promote soil health best management practices, such as cover crops, residue management and perennial vegetation for good upland cropland treatment
- Encourage good livestock and manure management practices, for better water quality
- Feedlot runoff control to prevent excess nutrient runoff
- Grazing Best Management Practices such as use exclusion in sensitive areas and rotational grazing
- Nutrient management planning to control excess application of nutrients to cropland. Promote the 4 R's on Nutrient Management: the right source, the right timing, the right placement and the right rate on nutrient applications.
- Promote wide-span use of good conservation upland treatments that reduce soil erosion and promote sustainability
- Wetland retention
- Protect the ground and surface water from Ag. chemical and nutrient runoff
- Plan for extreme weather events-plan for more upland treatments-soil health resiliency.
- Targeting best management practices, aligned with local plans and reports
- Engage the agriculture sector into planning opportunities
- Residue management needed providing more cover to bare cropland, less tillage
- Cover crops – more adoption needed

Drainage Ditch Maintenance

- Maintain existing drainage ditches (including judicial ditches) where possible and feasible, for agricultural purposes
- Drainage Water Management conservation practices
- Water storage options within the drainage system

Cities-Urban Issues

- Well head protection areas
- Storm water runoff-controls for filtration and/or storage
- Construction site- sedimentation and erosion control measures

- Other runoff from impervious areas including residual oils, gas and solvents

Wildlife Habitat

- Preservation and management of wildlife habitat with a focus on wildlife species of concern (including rare, threatened and endangered species)
- Enrolling land into easements for long term preservation of habitat
- The restoration of new land into quality wildlife habitat
- Connectivity of wildlife habitat for travel corridors
- Encouraging planting pollinator habitat
- Promote tourism
- Address low levels of Dissolved Oxygen – install riffles, reduce nutrient runoff

Forestry Land

- Forest Stewardship Planning
- Conservation easement protection of land
- Forest diversity to promote resiliency to disease
- Controlling invasive species
- Preparing for the changing climate, promoting sustainability and resiliency
- Erosion control and the protection of wetlands and surface waters through the use of Forestry Best Management Practices
- Forest Management Guidelines

Air Quality

- Wind erosion
- County Burn Barrel Resolution
- Dust control on gravel roads

Ranking of Priority Concerns (4 submitted):

Surface Water Quality-	1
Ground Water Concerns-	2
Agricultural Land-	3
Protection of Shore Lands-	4
Development Pressures-	5
Lake Water Quality-	6
Forestry Land-	7
Wildlife Habitat-	8
Drainage Ditch Maintenance-	9
Cities, Urban Issues-	10
Air Quality-	11

2016 Local Work Group Ranking of Kanabec County Priority Concerns from the Natural Resources Conservation Service (NRCS):

Surface Water Quality	1
Soil Erosion	2
Plant Condition	3
Soil Quality	4
Livestock Production	5
Wildlife Habitat	6
Insufficient Water	7
Energy	8
Air Quality	9
Excess Water	10