

## ANIMAL AGRICULTURE

Proposed Actions	Time frame	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source
Administer state and county feedlot rules and regulations.  Update feedlot ordinance with: <ul style="list-style-type: none"> <li>• new state rules</li> <li>• options for changing/defining setbacks from surface and groundwater features</li> <li>• encourage restriction of livestock access to any public water</li> <li>• reassessing manure application methods</li> </ul>	ongoing	County Wide/ HIGH	State approval of ordinance; number of feedlots in compliance; Reduce pollution to ground & surface waters	Existing Program	General Levy, NRBG, permits
Self assessment/inventory <ul style="list-style-type: none"> <li>• Checklist</li> </ul>	2004	County-wide/ MEDIUM	- Improve management skills	Printing - \$250	NRBG
Use of media (county newsletter, news releases, radio, Public Access Channel) <ul style="list-style-type: none"> <li>• Sharing of success stories</li> <li>• Information on federal &amp; state programs</li> <li>• County internet website</li> </ul>	2003-2007	County-wide/ HIGH	- Increase in adoption of BMP, good stewardship - Increase in public education	\$500	NRBG
Educational video <ul style="list-style-type: none"> <li>• Manure testing</li> <li>• Soil sampling</li> <li>• Equipment calibration</li> <li>• Rule changes</li> </ul>	2003-2004	County-wide/ HIGH	- Increase awareness of BMP; number of people viewing video from libraries	Video production - \$30,000	SEMNRWB; U of M Extension
Educational/tutorial CD or VHS version <ul style="list-style-type: none"> <li>• Good stewardship and land management</li> </ul>	2004	County-wide/ HIGH	- Reduce pollution to ground and surface water from runoff	Video production - \$10,000	U of M Extension; Dept of Agriculture
Continuing education through Extension <ul style="list-style-type: none"> <li>• Manure management workshop</li> <li>• Conservation tillage technique training</li> <li>• Rotational grazing</li> </ul>	2001-2007	County-wide/ HIGH	- Reduction in manure runoff - Improved cropland nutrient management - Increase in reduced tillage use	Announcements - \$50 Handouts - \$100 Refreshments - \$50	U of M Extension; MPCA 319 Grant

Add new registrations to GIS feedlot coverage	2001-2007	County-wide/ HIGH	Keep an updated inventory	Administrative	Planning & Zoning
Educate landowners located in karst geology	2003-2004	Karst region/ HIGH	- Reduce impact to groundwater	Mailers - \$100	SEMNRWB; U of M Extension
Targeted Feedlot Runoff Reduction Project - Open Lot Agreement (319 Grant)	2001-2004	Prairie Creek watershed; 1,000' of lakes, 300' streams or ditch, within 100-year floodplain/ HIGH	Inform livestock producers about choices provided in new rules; enrollment of producers in the Open Lot Agreement; manure management planning assistance, spreader calibration assistance	\$10,000	MPCA-Clean Water Act Section 319 Grant
Attempt to carry out the actions stated in the current NRBG Feedlot Workplan to bring feedlots into compliance	2003-2008	County-wide/ HIGH	Actions reported in annual feedlot report; decrease in resource impacts	\$170,000 includes match	Rice County; Rice SWCD; MPCA; Extension

## EROSION & SEDIMENT CONTROL

Proposed Actions	Timeframe	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source
Implement current NPDES requirements for erosion control.	2003-2008	County-wide/ HIGH	Reduce sediment loading into all surface waters and wetlands.	\$25,000	Permit fees; Rice County; MPCA; NRBG
Seek funding for a demonstration project on erosion control	2005	HES Area/ HIGH	Display BMPs to encourage increased use of them; decrease in soil erosion	\$10,000- \$30,000	MPCA; MN Erosion Control Assoc.;
Provide technical and educational assistance to farmers on residue management and no-till systems and grazing systems.	ongoing	County-wide/ HIGH	Track adoption of residue management by annually performing a tillage transect survey.	\$2,000	NRCS; Rice SWCD; U of M Extension
Provide technical and educational assistance to contractors working on development projects.	2004	County-wide/ HIGH	Contractors reduce or stop soil erosion on construction sites	\$5,000	MN Erosion Control Assoc; MPCA
Coordinate County Highway Dept and SWCD to work together on construction of roads and ditches, and to follow up after road construction projects with critical area plantings, etc.	ongoing	County-wide/ HIGH	No sediment loss to surface waters and wetlands	\$5,000	Rice County Highway & Rice SWCD
Promote Project NEMO – Nonpoint Source Education for Municipal Officials	ongoing	Municipalities/ MEDIUM	Policy makers understand nonpoint source pollution and what assistance is available to help set standards	\$2,500	Project NEMO; MN Erosion Control Assoc.
Maintain adequate funding to provide technical assistance to contractors and landowners to adopt soil erosion BMP's.	2004-2005	County-wide/ HIGH	Reduce soil erosion and sedimentation.	\$10,000	NRCS; Rice SWCD
Target watersheds to accelerate land treatment.	2004-2005	Sub-watersheds of Rice County	Increase water quality of a particular lake or stream.	\$50,000	Rice County P & Z; SEMNWRB; Rice SWCD; CRWP
Conduct contractor workshops for construction and agricultural	2005-2006	County-wide/ LOW	More BMPs used on site;	\$25,000	U of M Extension; MN Erosion Control Assoc.; NRCS
Develop an environmental review committee for upfront review of proposed developments; onsite construction activity; and post vegetation management	2003	County-wide/ HIGH	More sites given more consideration for environmental issues, sensitivity issues, etc.	\$500	Rice County P & Z; Rice County Highway; Rice SWCD; NRCS; MPCA

Work in cooperation with divisions of the DNR to promote conservation of natural areas	ongoing	County-wide/ HIGH	Acreages put into conservation programs; decrease soil erosion	\$1,000	DNR; CREP; Federal & State Conservation programs
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# GROUNDWATER RESOURCES

Proposed Actions	Timeframe	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source
Promote the usefulness of the Rice County Geologic Atlas as a tool to assess localized groundwater sensitivity and as a decision-making tool to assess the impacts of projects, CUPs, variances, and permits	Ongoing	County-wide/ HIGH	Awareness of the geology, sensitive areas, and natural landscape of Rice County; reduced impact to groundwater resources	\$500/yr	Rice County Planning & Zoning
Inventory abandoned wells in Rice County	2004-2005	Wellhead Protection areas; County-wide/ MEDIUM	Number of wells located to be sealed	\$20,000/yr	Internship program - Carleton; St. Olaf
Make available materials and information on all groundwater issues including wellhead protection	Ongoing	County-wide/ MEDIUM	Increased awareness of source water protection and potential sources of contamination	\$500/yr	Rice County Planning & Zoning
Assist Faribault and the remaining communities in Rice County in completing their source water assessments and well head protection plans	2003-2006	County-wide/ HIGH	Compliance with Minnesota Rule, Chapter 4720.5100-4720.5590	\$500/yr	Rice County Planning & Zoning
Continue to offer water testing kits to the public	Ongoing	County-wide/ LOW	Long-term data of groundwater monitoring; assist residents of the County to determine if their drinking water is safe	\$600/yr	NRBG
Continue to offer free nitrate clinics in partnership with MDA	2003-2008	County-wide/ LOW	Residents receive information on health risks of nitrates; number of people with samples	\$500/yr	NRBG
Promote study of the Decorah Edge to understand its dynamics in relation to groundwater recharge	2006-2008	Decorah-Platteville-Glenwood confining unit/ MEDIUM	Determine if the Decorah Edge is a groundwater recharge area of the underlying aquifer and develop recommendations for protecting those areas	\$50,000/yr	USGS; MN DNR; Minnesota Geological Survey
Produce a poster of the stratigraphic column of bedrock in Rice County to distribute to the public	2004	Below surface geology/ LOW	Numbers of people educated by the geology of Rice County	Printing - \$50	Rice County P & Z
Delineate and map karst features in Rice County	2004-2006	County-wide/ HIGH	Identify groundwater sensitive areas to protect the aquifer and change land practices	\$20,000/yr	University of Minnesota; Carlton College; St. Olaf College
Educate the public on septic system	2003-2008	Wellhead	Upgrade of septic systems;	\$1,000 training	Rice County P & Z;

operation and maintenance		Protection areas; County-wide/ HIGH	attendance to trainings; decrease in nutrient loadings	& implementation	SEMN Wastewater Initiative
Encourage the removal of underground storage tanks	2003-2008	Wellhead Protection areas; County-wide/ HIGH	Eliminate or reduce the potential for groundwater contamination	\$5,000-\$20,000?	MPCA; MDH
Nitrate probability mapping	2004	Wellhead Protection areas; County-wide/ MEDIUM	The probability of nitrate contamination of wells; help to implement programs to address nitrates in County	\$1,500	MDH

# STORMWATER MANAGEMENT

Proposed Actions	Timeframe	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source or Agencies Involved
Encourage municipalities to consider ordinance requirements for Better Site Design (BSD's)	2003-2008	Municipalities/Villages in Rice County/ HIGH	More water will infiltrate at the location it falls; less untreated runoff into streams	\$100	NRBG;
Conduct a BSD demonstration project	2005	Wellhead Protection area; Municipality/ MEDIUM	Developers and citizens will see the economic & environmental benefits of managing water on their property	\$50,000 +	Federal grant; MPCA; SEMNWRB
Encourage all communities to adopt a stormwater management plan	2003-2008	Municipalities/Villages in Rice County/ HIGH	Better filtration and reduced impact to surface waters	\$200	NRBG; MPCA; MN Erosion Control Assoc.
Identify stormwater outfalls that directly discharge to waterbodies without treatment	2004	County-wide/ HIGH	Awareness of locations to improve the stormwater education in that area	\$2,500 -	Municipalities;
Educate the public using storm drain stenciling or other stormwater projects	2004-2005	Wellhead Protection areas; County-wide/ HIGH	Possible water quality improvement because of awareness and knowledge	\$500	Municipalities; CRWP; MDH
Encourage all communities to adopt some minimum standards regarding stormwater at the policy or ordinance level with the principal of no net gain of runoff	2003-2008	Wellhead Protection areas; County-wide/ HIGH	Increase in number of best management practices for stormwater management; less water entering streams untreated	\$5,000	Municipalities; SEMNWRB; CRWP; DNR; MDH
Provide extra technical support to storm water permit writers	2004-2007	County-wide/ MEDIUM	Increase in number of permits written to require site specific BMPs	\$25,000	MPCA; Rice P & Z; Federal grant
Develop an educational campaign of "No Net Gain of Runoff"	2005	County-wide/ MEDIUM	Increase awareness of the public on the impact of stormwater on water quality	\$15,000	DNR; Rice County P & Z; SEMNWRB; MPCA
Create standards in the Zoning Ordinance for runoff volume control	2003	County-wide/ HIGH	Control more runoff away from surface waters and allow more infiltration	\$1,000	Rice County P & Z; MN Erosion Control Assoc.; MPCA
Develop a watershed/catchment/drainage network base map	2004	County-wide/ HIGH	Better understand the hydrology of the landscape to make for better planning	\$10,000	NRBG; Rice County P & Z; DNR; Rice SWCD; NRCS; MGS
Work in cooperation with the County Highway Department on stormwater management on construction of roads, improvement projects throughout the county	2003-2008	County-wide/ HIGH	Better planning for filtering sediment, pollutants and protecting critical areas	\$500	Rice County P & Z; Rice County Highway Dept.
State policies for surface water/storm water management in the new	2003-2004	Wellhead Protection areas; County-wide/	Protect all surface waters and critical areas from degradation of	\$1,000	Rice County P & Z; NRBG; MPCA; DNR

ordinance for new development, re-development, and critical areas		HIGH	development		
Create a drainage inventory of private ditches	2004-2005	County-wide/ MEDIUM	Understand the hydrology of the public drainage system and its effects for downstream flooding	\$5,000	Rice SWCD; NRCS; Rice P & Z
Research or demonstration project of urbanization in agricultural areas and how that affects the agricultural drainage system	2005-2007	Agriculture Zoned/ MEDIUM	Develop procedures to minimize the effects of urbanization on existing drainage systems	\$100,000 +	U of M Extension; NRCS; Rice SWCD
Develop Best Management Practices for mitigating the effects of agricultural runoff for flash flooding	2006-2008	County-wide/ HIGH	Reduce downstream flooding, protecting property and habitat	\$15,000	U of M Extension

# SURFACE WATER QUANTITY AND QUALITY

## Public Drainage Systems

Proposed Actions	Timeframe	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source
Decrease the total volume of water drained	2003-2008	County-wide/ HIGH	Increase the storage capacity by increasing the areas that catch and temporarily hold the water and evapotranspire the water; i.e. wetlands as storage areas, floodplain storage	Unknown	NRCS; Rice SWCD; Rice Highway Dept; DNR; Dept of Ag
Stabilize the hydrograph – lower peak flows, raise base flows	2003-2008	All watersheds/ HIGH	Minimize flood damage, minimize channel erosion; Maintain stable low flows for fisheries protection, minimize low flow water quality impacts	\$50,000 +	DNR; MGS; MPCA;
Upland assessment of each drainage ditch	2003-2008	Ditch watershed/ HIGH	Determine where conservation and best management practices are needed	\$15,000	Rice SWCD; NRCS; intern
Upgrade tile systems with open channels	2003-2008	County-wide/ MEDIUM	Creation of fish & wildlife habitat	\$100,000 +	Private landowners; Rice SWCD; NRCS; federal grant
Stabilize unstable slopes on the drainage ditch banks	2004-2008	All drainage ditches/ MEDIUM	Decrease in bank failure through sloughing and erosion; decrease in sediment and phosphorus to the system and decrease in maintenance costs	\$25,000	Federal grant
Encourage any BMPs along a ditch	2004-2008	All drainage ditches/ MEDIUM	Acreage in the Conservation Reserve Program (CRP)	\$500	NRBG; Rice SWCD

## Lakes & Rivers

Proposed Actions	Timeframe	Area/Priority	Measurable Outcomes	Approx Cost/Yr	Funding Source
Protect undeveloped shoreline through land acquisition, easements	2003-2008	Shoreland areas/ HIGH	Less nonpoint source pollution to the lake; more fish habitat; maintain water quality and aesthetics	\$500	DNR; Minnesota Land Trust;

Promote the use of phosphorus-free fertilizer on lakeshore properties	2003-2008	Shoreland areas/ HIGH	Decrease in severe algae blooms	\$500	NRBG; CRWP
Monitor the major lakes for the minimum requirements of total phosphorus, chlorophyll-a, and secchi to enlist these lakes on the next 303(d) TMDL list	2003-2005	15 major lakes in Rice County/ HIGH	Access to federal funding to implement restoration of lake watersheds; improve water quality	\$2,000	Rice P & Z; Lake Associations
Complete one (1) or more upland assessments of lakes watersheds per year	2003-2008	Lake watersheds in western part of county/ HIGH	Identify potentials sources of pollution to the lake; potential areas of implementation	\$15,000	U of M, Carleton, or St. Olaf intern program
Develop a program to upgrade and finance 25% of septic systems of lakeshore properties and homes in the lakes watersheds with emphasis on off-site cluster systems for lakeshore properties	2004-2008	Shoreland areas/ LOW	Minimize nutrient loading to the lake; protect drinking water of the private well	\$1,000	Rice Co Environmental Health; SE MN Wastewater Initiative
Become more involved with organizations interested in the preservation and improvement of water quality in Rice County	2003-2008	County-wide/ MEDIUM	Create a partnership with local groups to implement more projects to improve water quality in the county	\$500	NRBG
Educate lake watershed residents through meetings, fairs, training sessions, and a newsletter.	2003-2008	County-wide/ HIGH	Less destruction of lakeshore habitats, i.e. littoral zone	\$2,000	NRBG; CRWP; U of M Extension; DNR
Develop a citizen's lake monitoring program on all the major lakes in the County.	2003-2008	County-wide/ HIGH	Long-term data to develop trends in water quality	\$1,000	CRWP; Rice P & Z
Develop a "Landscaping for Wildlife" program and enlist 5% of homeowners on each major lake to plant native	2003-2008	County-wide/ MEDIUM	Creation of wildlife habitat; creation of a buffer to protect the water quality of the lake	\$20,000	DNR; U of M Extension;

plants on their shoreline and lake lot					
Develop greater restrictions in areas with highly erodible soils and steep slopes	2003-2008	County-wide/ HIGH	Reduce sedimentation in lakes and streams	\$3,000	DNR; Rice SWCD; NRCS

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