

IV. 2012-2015 Implementation Schedule

(For details, reference Section II. Assessment of Priority Concerns in 2006-2015 plan and Goals, Objectives and Actions in 2012-2015 amendments)

Priority 1: Soil Erosion Causing Water Quality Impairments to Surface Waters of the County					
Actions	Lead/Supporting Agencies	Costs 4 years	Potential Funding Sources	Duration	Priority Watersheds
Goal 1: Address High Volume of Sediment Affecting Water Quality in the Tamarac, Middle and Snake River Watersheds					
Objective A: To understand sources of sediment and nutrients being deposited into the Tamarac, Middle and Snake River Watersheds					
1. Participate in MWRPP Processes to identify key erosion areas in conjunction with SWAT models.	County, WD, SWCD, MPCA, BWSR, IWI	Staff Time	All agencies in group.	2012-2015	Lower Red and Snake Major
2. Conduct Stressor ID with Field verifications of waterways & ditches that display priority erosion areas.	County, WD, SWCD, State, Federal	Staff Time	All agencies staff funding.	2012-2015	Tamarac, Snake
3. Water quality monitoring to expand water quality data base in cooperation with TMDL process.	County, SWCD, IWI	\$15,000 per year	MPCA	2012-2015	Lower Red, and Snake Major
4. Continue lake monitoring to determine trends.	County	\$4,000 per year	MPCA	2012-2015	Tamarac
5. Submit WQ data to EquIS data base to aid TMDL process.	County, IWI	\$1,600 per year	County, MPCA	2012-2015	Lower Red, Snake Major
6. Evaluate SWAT model and identify high priority sub watersheds for BMP implementation.	County, WD, SWCD, MPCA, IWI	Staff Time	All agencies, MPCA	2011-2013	Lower Red, Snake Major
Objective B: To reduce the sediment and nutrient loads into the Tamarac, Middle and Snake River Watersheds					
1. Serve on TMDL Implementation Teams for development of implementation projects and civic engagement processes.	County, SWCD, NRCS, WD, MPCA	Staff Time	NRBG, MPCA grants, Local Staff Funds	2012-2015	Lower Red, Snake Major
2. Participate in Technical Advisory Committees to set goals and implement projects to install 100 miles of buffers, SWI and wetland restoration	County, SWCD, NRCS, WD, BWSR, MPCA	\$106,700	Local Staff Funds, CCRP, RIM, EQIP,	2012-2015	Lower Red, Snake Major

adjacent to surface waters.			State grants		
3. Implement cost-share projects (2 miles buffers, 4 SWI, 1 grade stabilization) along drainage systems.	SWCD, WD, County, NRCS	\$127,162	State, Federal prog & grants, CCRP, EQIP	2012-2015	Lower Red, Snake Major
4. Participate in Technical Advisory Committees to review, plan and implement projects along CD45 and SD3.	WD, SWCD, County, NRCS	\$1.5 Mil	State, Federal, Prog & grants, CCRP, EQIP	2012-2015	Tamarac, Middle
5. Continue Land Alterations Permits issued for riparian areas.	County	\$2000 per year	DNR, Staff funds	2012-2015	All watersheds
5. Produce education programs and workshops for landowners for restoration of riparian areas along streams.	County, SWCD, various agencies	\$4400	DNR, Clean water grants, Staff funds	2012-2015	All watersheds
6. Introduce new Weed Management Program to control invasive and detrimental species.	SWCD	\$25,000	Federal grant	2012-2014	Tamarac, Snake, Middle
Goal 2: Protect Marshall County's Long-Term Valuable Soil Resource From Wind Erosion.					
Objective A: Seek funding sources to implement Best Management Projects.					
1. Install/renovate 10 shelter belts & 5 miles of wind break plantings.	NRCS, SWCD	\$28,000 per year	Federal, State	2012-2015	All
2. Offer programs with incentives for practices that stop soil erosion.	SWCD, NRCS	unknown	State, grants, staff funds, CCRP, EQIP	2012-2015	All
3. Seek funds to hire program Specialist to work with landowners to coordinate a package of conservation programs to protect soils.	SWCD	\$35,000 per year	Clean Water Grant, Staff funds	2012-2013	All
4. Develop program to offer incentives to producers who delay or minimize after-harvest tillage.	SWCD, NRCS	Staff Time	Staff Funds	2012-2015	All
5. Provide education for landowners and developers on erosion control plans.	County, SWCD	Staff Time	NRBG, Staff Funds	2012-2015	All
6. Promote Ag BMP Loans for Conservation Tillage Equipment to implement BMPs.	County, SWCD	Staff Time	NRBG, MDA, Staff Funds	2012-2015	All
7. Recommend to highway dept. locations for living snow fence plantings.	SWCD	Staff Time	Staff Funds	2012-2015	All
Goal 3: To Address the High Volume of Sedimentation affecting water quality in the Thief River Watershed.					
Objective A: To understand sources of sediment being deposited into the Thief River Watershed.					
1. Participate in MWRPP process of Thief River	County, WD, SWCD,	Staff Time	All agencies in	2012-2013	Thief

Watershed with assistance on implementation plan and civic engagement process.	MPCA, BWSR, DNR, USFWS		group.		
2. Utilize SWAT and HSPF Model results to determine priority areas of high sediment and nutrient amounts.	WD, County, SWCD, NRCS, USFWS, DNR	Staff Time	All agencies staff funds, MPCA	2012-2015	Thief
3. Continue technical assistance with water quality monitoring as part of the MWRPP process.	RLWD, County, SWCD	\$19,000	MPCA	2012	Thief
4. Conduct stressor identification through field verifications of waterways and ditches that display priority erosion areas.	RLWD, County, SWCD, NRCS, USFWS, DNR	Staff Time	Staff funds	2012-2015	Thief
Objective B: Reduce sediment loads into the Thief River Watershed.					
1. Thief River Watershed Buffer Initiative (75 miles filter strips, 20 miles field windbreaks, 50 SWI) will be implemented to target areas of erosion.	SWCD, NRCS	\$350,000	Clean Water Grant, Staff funds, CCRP, EQIP	2 years	Thief
2. Continue to utilize Cost-share programs with landowners to install 2 miles of buffer, 4 SWI and 1 grade stabilization each year along drainage systems.	SWCD, NRCS	\$127,162	State, Federal Prog & grants, CCRP, EQIP, Staff funds	2012-2015	Thief
3. Plan and implement projects that are identified during MWRPP process.	County, SWCD, NRCS, WD, State, Federal	unknown	State, Federal, Staff funds	2012-2015	Thief
4. Continue Land Alteration Permits issued for riparian areas.	County	\$2,000 per year	DNR, Staff funds	2012-2015	Thief
5. Produce educational program and workshop for landowners for restoration of riparian areas along streams.	County, SWCD, various agencies	\$4,400	DNR, Clean Water Grant, Staff funds	2012-2015	Thief
6. Implement Weed Management Program to control invasive and detrimental species.	SWCD	\$50,000	Federal, County	2 years	Thief

Priority 2: Protect Groundwater-based Drinking Water Sources

Goal 1: Protect Groundwater-based Drinking Water Sources through Education and Monitoring Programs.

Objective A: Develop education programs on groundwater supplies

1. Provide technical data for Wellhead Protection Plans for City of Argyle and Marshall-Polk Rural Water System.	County, SWCD	\$160	NRBG, Staff funds	2012	Lower Red, Snake Major
2. Educate the public on DWSMA and produce map of DWSMA areas.	County, MDH	\$400	MDH, NRBG, Staff funds	2012-2015	All
3. Educate WRAC and citizens on groundwater in the County through use of speakers and written materials.	County, MDH, USGS	\$4,000	MDH, NRBG, Staff funds	2012-2015	All
Objective B: Monitor ground water quality.					
3. Conduct Well Screen Clinics for nitrates and ecoli.	County, MDA	Staff Time	MDA, NRBG, Staff funds	1 per year	All
4. Maintain well logs for land use planning. Provide searches for domestic wells.	County	Staff Time	NRBG, Staff funds	2012-2015	All
Objective C: Monitor groundwater levels.					
1. Pursue 2-3 additional observation wells for eastern Marshall County.	County, SWCD, DNR	Staff Time	State, NRBG, Staff funds	2012	Thief
Goal 2: Reduce Risk of Groundwater Contamination Through Implementation of Various Mitigation Programs.					
Objective A: Continue Well Sealing Program under LWMP					
1. Administer Well Sealing Program and provide well sealing demonstration.	County	\$3,000	NRBG, Staff funds	2012-2015	All
Objective B: Update, assist with and support other mitigation programs.					
1. Assist landowners with nutrient management and proper closure of unused animal waste facilities.	County, MPCA, Feedlot Officer	\$10,000	EQIP, NRBG, Staff funds	2012-2015	All
2. Promote livestock watering systems and prescribed grazing plans.	SWCD, County, NRCS, Feedlot Officer	\$10,000	Federal, State, Staff funds	2012-2015	All
3. Continue Dead Livestock Program.	County, Feedlot Officer	\$500 per year	MPCA, NRBG, Staff funds	2012-2015	All
4. Seek funding to identify and replace septic systems that are an imminent health threat to the public.	County	\$50,000 per year	Clean Water Grant, Ag BMP Loan, MPCA	2012-2015	All
Objective C: Promote use of Ag BMP low interest loan program for groundwater protection projects.					
1. Initiate funding for feedlot run-off, well sealing and failing septic systems.	County, SWCD, Feedlot Officer	Staff Time	Ag. BMP Loans, Staff funds	2012-2015	All

Priority 3: Promote Flood Damage Reduction to Preserve Agricultural Land and Prevent Damage to Property					
Goal 1: Address Function of Ditch Systems for Adequacy of Meeting Drainage Needs.					
Objective A: Provide education on ditch management and maintenance processes					
1. Coordinate ditch management workshop.	County, WRAC, WD	\$2,000	Staff funds, NRBG, Registration, grants	2013	All
2. Education to public on ditch maintenance with brochures.	County, SWCD, WD	\$2,000	Staff funds, various grants	2012-2015	All
3. Improve regular maintenance by communicating special issues relating to projects.	County, SWCD, WD, State, Federal agencies, citizens	\$640 per year	Staff funds	2012-2015	All
4. Identify priority repair areas within ditch systems for project funding.	County, SWCD, WD, citizens	Staff Time	Staff Funds	2012-2015	All
Goal 2: Promote Flood Damage Reduction.					
Objective A: Assist Landowners with flood damage control projects.					
1. Removal of beaver dams and issuance of beaver bounties.	County, WD	\$35,000 per year	County, WD, Staff funds	2012-2015	All
2. Increase efforts to enroll land into wetland restoration practices	SWCD, NRCS	unknown	NRBG, CCRP, WRP, Staff funds.	2012-2015	All
3. Install 7 rain gardens & 1 bio retention basin. Purchase 300 rain barrels for sale to public.	SWCD	\$62,700	Clean Water Grant, cities, landowners	2 years	All
4. Culvert inventory with specification list.	County, WD, SWCD	unknown	Grants, County, WD	2012-2015	All
Objective B: Prevent property damage from flooding.					
1. Administer Floodplain Ordinance	County	Staff Time	DNR, Staff funds	2012-2015	All
2. Technical assistance to building in floodplain	County, WD, TSA1	Staff Time	DNR, Staff funds, landowner	2012-2015	All
3. Review preliminary Flood maps and studies, public hearing, revise floodplain ordinance.	County, WD	Staff Time	DNR, Staff funds	2012	All
Goal 3: Improve Communication Between Watershed Districts and County on Flood Reduction Projects.					
Objective A: Report on status of flood control projects.					
1. Representation on Project Work Teams	County, various agencies	Staff Time	Staff	2012-2015	All
2. Information exchange between Watershed Districts and County.	WD, County	Staff Time	Staff, County, WD	2012-2015	All
3. Educational Speaker on watershed management	County, WD	\$4,000	State Grant, staff funds	2013 or 2014	All

V. 2012-2015 Implementation Schedule - Ongoing

County-Wide Activities					
Actions	Primary Responsibility	Costs 4 years	Potential Funding Sources	Duration	Watershed
1. Water Quality Monitoring	County, WD, IWI, SWCD	unknown	MPCA grants, Local staff	ongoing	All
2. Water Quality Presentations	County, WD	Staff time	NRBG, WD, County	ongoing	All
3. Rainfall monitoring	SWCD, Citizens	Staff Time	SWCD, volunteers	ongoing	All
4. TMDL Process	County, all agencies, citizens	Staff Time	All agencies	ongoing	All
5. BMP support	County, SWCD, WD	Staff Time	State, Federal, Local	ongoing	All
6. Public Info on natural resources	County, SWCD	Staff Time	State, Federal, Local	ongoing	All
7. Education Programs	County, SWCD, WRAC	Staff Time	NRBG, Local	ongoing	All
8. Partners for Fish/Wildlife	USFWS	Staff Time	Grants, USFWS	ongoing	All
9. Flood Damage Reduction	WD, County	unknown	State, Federal, Local	ongoing	All
10. Maintain Drainage Systems	County, WD, Twp, DNR	unknown	County, WD, Twp, State	ongoing	All
11. Solid/Hazardous Waste Programs	County Solid Waste Dept.	unknown	MPCA, Local	ongoing	All
12. Feedlot Program	County/UM Extension Staff	\$14,000 yr	MPCA,UM Extension	ongoing	All
13. WCA Program	County/SWCD	\$40,000 yr	BWSR, County, SWCD	ongoing	All
14. Floodplain Ordinance	County	\$10,000 yr	NRBG, County	ongoing	All
15. Shoreland Ordinance	County	\$18,000 yr	DNR, County	ongoing	All
16. Sewage Treatment Ordinance	County	\$19,000 yr	MPCA, County	ongoing	All

