

Issues within the Sub-Watershed: Grand Marais Creek

What are the existing conditions, related potential problems and solution alternatives?

Issues related to: FLOOD DAMAGE	What is the NATURE of the problem?	How SEVERE is the problem? [high, moderate, low]	How wide spread or to what EXTENT is the problem?	What are the possible SOLUTIONS?
Flooding	Overland flooding, section by section	High	#75 and west, covering the whole watershed north to south	Storage of water to the east (in ridges)

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	Residential and ag flooding along the Grand Marais	High	From Fisher to the outlet, about 1' of fall per mile	Adequate culvert sizing – will it affect timing? Sediment cleanout, bigger culverts, remove cartways and beaver dams, west outlets, improve the outlet – outlet is inadequate (Corps 206 study), restrictive bridge at CR 64? Holding water upstream of damage areas.
	Emergency Services cannot reach patients	High	west of 75	CREP Impoundments
	Residential and ag flooding west of the Grand Marais, east of #220	High	From Fisher to the outlet, about 1' of fall per mile	Culverts through #220, improve ditches/outlets

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Flood Damages <i>(crop land, pastures, residential, roads, etc.)</i>	Roads and ag lands and bridges	High	High east of 75, moderate west of 75	
	Lack of detailed mapping of flood damaged areas	moderate	Watershed wide	Crystal Sugar aerial imagery – Agri Images, FSA crop loss data, prevented plant, harvest loss, Gary Wagner – UMC, RMA (Federal crop)
	Residential flooding north of EGF, west of #220	high	Many homes have been ring diked	
Drainage	CD 2, CD 66, CD 126, JD 60, CD 39, CD 25	High	Systems overflow and flood every 1- 2 years	

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	Additional private ditching	Low to moderate	Transfers problem downstream	
	Benefited areas are much smaller than drainage areas	Low		
	Subsurface drainage (Tiling)	Low		
Drought	Crop damage	Low	Private ponding of water has been done to increase infiltration	
Stream Flows	Flashy hydrograph (high peaks)	High	Subwatershed wide	
	Sedimentation	High	Grand Marais	
	Flow Information	Moderate	CD 2 / Grand Marais	Add stream gages for public information

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Lake Levels	Not applicable			
Groundwater	City of Euclid			
Other Flood Damage Issues				



Issues related to: NATURAL RESOURCES	What is the NATURE of the problem?	How SEVERE is the problem? [high, moderate, low]	How wide spread or to what EXTENT is the problem?	What are the possible SOLUTIONS?
Erosion and Sedimentation <i>(stream, lake bank, ag and residential, ditches, etc.)</i>	Bank failures on CD 2, JD 60, Grand Marais is silted in	High, especially in Grand Marais	Entire subwatershed	
	Wind and water erosion, worst wind erosion in winter	High	Entire subwatershed	

Issues related to: NATURAL RESOURCES	What is the NATURE of the problem?	How SEVERE is the problem? [high, moderate, low]	How wide spread or to what EXTENT is the problem?	What are the possible SOLUTIONS?
	Loss of windbreaks	High	Entire subwatershed	
	Conservation tillage	High	Floods remove crop residue and plug culverts	
	Extreme erosion in the ditched portion where the River is diverted directly to the Red River	High		Stabilize banks, restore natural channel
Water Quality (point and nonpoint pollution, groundwater, etc.)	Turbidity and TSS under periods of high flow and low DO under low flow	Extremely High	Entire subwatershed	Implement BMPs such as riparian buffer strips, reduce erosion

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	River will be listed on next MPCA List of Impaired Waters (TMDL)	High	Entire subwatershed	A TMDL study will eventually be conducted to determine causes of impairment and make recommendations for load reductions
Fish and Wildlife Habitat <i>(fish passage, waterfowl nesting habitat, beaver, otter, upland game, etc.)</i>	Degraded fish and wildlife habitat, especially along the Grand Marais	West of 75 is high; east of 75 is low	Entire subwatershed	
	Prairie chicken and grouse hunting is on the rise			
	Vegetation in flood plain is killed during high flows	Moderate	Along the entire corridor of the Grand Marais	Improve water clarity, reduce flashiness of hydrograph (project 60)

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	Flashy hydrograph hinders waterfowl production along the Grand Marais	moderate	Along the entire Grand Marais	Reduce flashiness of hydrograph (project 60)
Water-based Recreational Activities <i>(water access, fishing, hunting, recreational trails, etc.)</i>	Minimal opportunities for fishing	Low	Entire subwatershed	
	Waterfowl hunting is on the rise			
	Riparian corridor hunting is quite good			
	Limited trail systems	Low	Snowmobile trail along #220	
Unique Water / Land Related Resources	Native prairie			
	Calcareous fens			

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	Small wetlands are missing (DU Study)	High	West of 75	
Other Natural Resource Issues	Important non- game avian corridor	moderate	The Mn/ND border corridor is high in diversity	

OTHER COMMENTS/ISSUES TO COMPLETE THE “PICTURE!”

THESE COMMENTS SHARED BY: _____ (NAME) _____ (TELEPHONE)

NOTE: Return this form to Myron Jesme, Red Lake Watershed District Office