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DRAFT TECHNICAL NOTE FOR SCOPING OFFSITE DAMAGES

PHYSICAL CONDITIONS THAT INDICATE OFFSITE DAMAGES

A CONCEPTUAL CHECKLIST FOR SCOPING WATERSHED PROBLEMS

A WATERSHED CONDITIONS	B Descriptive of study area ? Y/N	C POTENTIAL OFFSITE AND PUBLIC EFFECTS: DAMAGES AND OPPORTUNITIES
I. LAND RESOURCES		
A. Severe agriculturally related erosion.		Sediment deposition that affects the uses of land and water
II. WATER RESOURCES		
B. Presence of lakes, ponds, and other water bodies.		Impaired uses of the water body for recreation, municipal and industrial water supply, aquatic life, and irrigation. Damages are: <ul style="list-style-type: none"> o - capacity loss o - quality impairment to user Impacted property values due to aesthetic effects.
C. Designated water use classifications		Impairment of surface and ground water uses from agricultural nonpoint and point sources of contamination.
D. Recreation uses of water.		Damage to water-based recreation facilities. Sediment deposition on land-based recreation facilities such as parking lots, roads, play grounds, golf courses, etc.
E. Irrigation		Impairment of ground and surface water due to deep percolation or runoff and transpo of soluble agricultural chemicals. Swamping along ditches and irrigation canals that affect the quality and quantity of wetlands and wildlife habitat. Aquifer mining (net withdrawal consistently exceeds net recharge year after year). Sediment deposition in irrigation canals. Direct contamination of aquifer because improper chemigation management or faulty check valves and other equipment.

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F. Navigable waters	Sediment damage to water courses. Interruption of transportation and commerce.
III. GEOLOGY	
A. Significant unconfined aquifer or aquifer recharge area.	Impairment of ground water use by nonpoint sources, septic systems, or point sources of contamination.
B. Presence of a natural saline aquifer or a salt bearing geologic strata.	Impairment of land or water uses because of salinity; result of overdraft or poor management.
C. Mineral deposits	Flooding and sediment damage to mine and quarry operations.
IV. SOILS	
A. Dispersive soils	Sediment damage to water courses, water bodies, and for all water uses.
V. CULTURAL RESOURCES	
A. Transportation routes	Flooding and sediment deposition on roads. Ditch sedimentation resulting in road flooding, land flooding and related safety hazards. Increased cost because of rerouting of transp to avoid dangerous conditions. Channel erosion damage to roads, bridges, railroads, and utilities. Loss of use of transportation facilities because of flooding, erosion, or sedimentation.
B. Flood plains	Urban sediment and flood damages.
1. Urban areas or fixed improvements located on flood plains.	Sediment damage to fixed improvements. Safety hazards to residents.
2. Cropland located on flood plains.	Social and economic impacts from flood associated damages.
C. People living in the area	Social impacts of erosion, sedimentation, flooding, and other damages. Aesthetic effects on quality of human life.
D. Historical and archeological resources present.	Loss of cultural resources because of erosion or flooding.
E. High density underground tile drainage	Increased levels of soluble agricultural chemicals due to improved drainage.
VI. BIOLOGICAL RESOURCES	

A. Wetlands	Sediment deposition effects on the quality and quantity of wetlands. Chemical and physical effects on wetland functions. Effects on wetland plants and animals and wetland habitat.
B. Fisheries	Loss or damage to habitat. Loss or damage to ecosystem. Loss or damage to community population. Economic effects because of impacts on sport and commercial species.
C. Threatened or endangered species of plants or animals	Loss or damage to habitat. Loss or damage to ecosystem. Loss or damage to community population. Economic effects due to impacts on sport and commercial species.
D. Key flood plain wildlife species	Loss or damage to habitat. Loss or damage to ecosystem. Loss or damage to wildlife community population. Economic effects due to impacts on sport and commercial species.
VII. LANDSCAPE / TOPOGRAPHY	
A. Abrupt changes of slope and gradient	Sediment deposition that causes damage to the functions of roads, ditches, water courses, and fixed improvements. Sediment deposition damages to the stream ecosystem. Sediment deposition damages to riparian ecosystems.
B. Steep overland slopes 1. High peak flows 2. Flash flooding	Accelerated soil depletion, causing long term loss of productivity for future generations. Increased damages due to ephemeral gully erosion. Increased channel erosion with greater sediment transport efficiency. Damages to channels, bridges, crossings. Land voiding, gullying. Increased cost of structural measures. Loss of life.

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	Crop and pasture damage.
	Damage to fixed improvements.
	Damage to utilities.
	High flood damages due to high energy flows.
	Intermittent flooding damage to downstream aquatic and riparian habitats.
	Intermittent losses of channel capacity.
C. Steep stream gradients	Loss of land and land use adjacent to streams due to erosion, sediment, flooding.
	Loss or impaired use of transportation facilities.
	Loss or impaired use of riparian and aquatic habitat with associated loss of animal populations.
	Increased repair and maintenance of fixed improvements and outlet structures.
	Channel head cutting in upland areas.
	Increased potential for flood damage.
D. Karst topography, sinkholes	Impairment of ground water quality and water uses by nonpoint source substances and point sources of pollution.
VIII. CLIMATE	
A. Seasonal distribution of high intensity runoff or precipitation events	Large chemical and sediment losses from fields.
	Large slug flow movement of sediment and agricultural chemicals to downstream reaches and flood areas.