

Lake Michigan Watershed Planning Issues/Opportunities Summary

The table below summarizes watershed issues and opportunities identified by stakeholders at Lake Michigan Watershed Plan meetings held in April 2019 as well as those identified by stakeholders for the Dead River and Kellogg Creek watershed plans in 2006-2007. The issues and opportunities are collected into categories. Those identified during the Dead River and Kellogg Creek planning process are in *italicized* typeface.

Issue/Opportunity Category	Issue(s)/Opportunity(ies)
Partnerships and Coordination	Building Stronger Partnerships; Interjurisdictional Support; Some level of municipal coordination across watershed; Environmental Justice – show that issues can apply throughout watershed based plan*; <i>Create a group to maintain stream where homeowners are unable; Establish regular (annual/semi-annual) stream cleanup; If there is a dedicated drainage easement, whoever holds the easement needs to maintain the property; Coordinate transportation projects with SMC; Better coordination among governments within the watershed (incl. WI) especially related to stormwater management goals & responsibilities (effort & financing); Drainage District role and participation; Identify responsibilities of each jurisdiction and homeowners (need to clarify lead for activities –should there be a local organization?); Need up-to-date data; Public involvement in watershed management</i>
Water quality assessments	More comprehensive assessment of watershed (missing Dead River WQ assessment in IL EPA Integrated Report); Increase the number/frequency/location of water quality assessments; WQ impacts of detention (needs a study); Macroinvertebrate aquatic assessments (include wetlands, natural areas, IBI survey); <i>Need water quality monitoring for metals and other pollutants</i>
Ravines and Streams	Ravine erosion; Stormwater management as it relates to ravines; Need to address entire ravine, not just mouth at lake; <i>Encourage good stream bank protection measures and remove poor practices and debris including the removal of concrete rip rap/armoring; Streambank erosion control and restoration in ravine areas; Streambank vegetation / buffer restoration; Streambank modification; Fish habitat restoration/sedimentation in IBSP*; Encourage or restore fish passage from lake up into streams; Protect streamside trees; Stream obstruction /debris/enclosures/beaver dams; Garbage/yard waste in streams; Hydrologic modification; Restore hydrology for Glen Flora Tributary historic floodplain/wetland outfall location per Waukegan City Master Plan/Disconnection of channels from Lake Michigan (drain at state line); Identify historic water flow patterns (ground and surface)/Hydrology patterns in State Park; Remove concrete and other debris from abandoned properties; Low biological stream quality</i>
Education and Outreach	Education; Public education/outreach; Education of homeowners/municipal officials/contractors & landscape professionals (particularly related to shoreline/bluff erosion); Ravine education-all stakeholders; <i>Periodic homeowner newsletter of BMPs</i>
BMPs	BMPs for landowners; Monitoring/Maintenance of installed/older BMPs; Nature-based solutions; Incentivize landowners to participate
Lake Shoreline & Bluffs	Lake Levels; Beach/Sand Management; Lake Michigan stabilization/restoration; Shoreline infrastructure and protection; Lake shore stabilization/sand management/erosion (bluffs and beaches); Bluff Erosion; <i>Bluff erosion / property damage in ravines; Bluff / soil erosion and sediment control; Beach/Lake Michigan shoreline erosion</i>

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Stormwater & Flood Risk/Damage	Storm/Sanitary illicit connections; Runoff Mitigation (Volume); Changes in Runoff volume (new models needed); Reducing impervious surfaces; Impervious surface assessment, ordinances, and reduction; Stormwater runoff reductions; Audit/assess/evaluate/update existing ordinances & assess need for municipalities without ordinances; Accountability for stormwater similar to stormwater pollution prevention plans during construction (refers to municipal and landowner); Increase of runoff from single family residences; <i>Streambank erosion from, and at, stormsewers, point discharges, and/or hydraulic structures; Stormwater infiltration into sanitary sewers in streams and other areas; Land use change/Impact of future development; Update floodplain maps and adopt corrections (to remove properties or buildings from the flood insurance purchase requirement); Reduce/prevent flooding; Floodplain protection; Need detailed hydrologic study; Investigate impact of changing land use on groundwater and surface water levels</i>
Habitat and Wildlife	Invasive species management; Deer management; Protect Natural Headwaters of ravines; <i>Information on control and identification of invasive and exotic species; Instream and riparian/buffer habitat identification and management; Threatened and endangered species and habitat; Acquire and protect open space in watershed</i>
Climate	Management for resilience
Access	Public access to ravines/beaches/shoreline; Access for restoration work; Public access/awareness
Water Quality – causes/sources of pollution	Relict Pollution; De-icing; Sedimentation; Pesticide use in watershed & homeowner education regarding pesticide use; <i>Algae in creeks; Pollutants in stormwater runoff (includes road salt/chlorides, and fertilizers, pesticides, and herbicides from agricultural/lawn/playing field/golf course applications, sediment and nutrient loads, storm sewer systems); Contamination/ industrial point sources of pollution; Impact from airport such as fuel spills; Burning leaves in ditches; Beach closures; Dewatering during construction</i>
Funding	Funding for Joint Efforts; Identify funding sources (make available to municipalities/townships); Funding for MEANINGFUL improvements (making sure the right project or good projects are the ones funded); Need to get funding to homeowners to collectively address problems (e.g. ravines); Incorporating climate change—are there grants to implement these projects?*; <i>Funding for projects (public and private)</i>
Wetlands	Wetlands (restoration/preservation); <i>Protect and restore wetlands and seeps; Lack of wetland maintenance</i>
Infrastructure	Infrastructure inventory (aging); Maintenance of infrastructure; <i>Exposed utilities within stream corridor; Maintenance of existing infrastructure including concrete “banks”/roadways affected by erosion; Stormsewer infrastructure aging</i>

*Applies to multiple categories or does not neatly apply to a single category