2.1.1 Watershed Goal #1: Stream, Ravine and Coastal Restoration and Management

**GOAL:** Restore and manage stream, ravine, Lake Michigan shoreline and bluff systems to preserve and enhance stability, hydrology, beneficial functions and conveyance as part of a resilient and natural watershed system.

**OUTCOME:** Streams, ravines, Lake Michigan shoreline and bluffs are managed and protected to reduce erosion and provide enhanced functions as part of the watershed green infrastructure and natural drainage system.

**OBJECTIVES:**

a) Stabilize eroding stream, ravine, bluff, and Lake Michigan shoreline segments, including beaches and address localized erosion related to infrastructure.
   **Indicator:** Feet of stabilization projects implemented.

b) Reduce sedimentation and channelization, naturalize stream channels (including re-meandering) and ravines, and re-establish or improve stream connectivity to Lake Michigan where possible to enhance the beneficial functions of the natural drainage system.
   **Indicator:** Feet of stream and ravine restoration/naturalization projects implemented.

c) Develop a stream management and maintenance plan/program with a dedicated funding source.
   **Indicator:** Feet of stream addressed by management/maintenance program.

d) Restore and manage riparian areas, ravines, bluffs, and beaches (including vegetation and buffers) to enhance natural functions and protect property and infrastructure.
   **Indicator:** Acreage of ravine, bluff and beach management undertaken.

e) Implement projects to restore or mimic natural hydrology and improve climate resilience.
   **Indicator:** Number of projects implemented that support this objective.

2.1.2 Watershed Goal #2: Flood Risk, Flood Damage and Stormwater Management

**GOAL:** Mitigate the effects of increased runoff volumes, including ravine erosion, reduce flood damage and prevent future flooding from worsening.

**OUTCOME:** To the extent achievable, flood damages and stormwater runoff volumes are reduced and/or their effects are mitigated.

**OBJECTIVES:**

a) Reduce existing flood damage and number of flood problem areas through the implementation of flood mitigation projects, including areas affected by urban flooding.
   **Indicator:** Number of flood problem areas positively affected by flood mitigation projects implemented.
b) Reduce or mitigate runoff volumes through installation of green infrastructure or other measures to lessen flooding and ravine erosion.

   **Indicator:** Runoff volume reduction or mitigation measures implemented.

c) Maintain and manage constructed and natural drainage systems to mitigate flood damage and improve resilience for changing precipitation patterns.

   **Indicator:** Number of local drainage system improvement projects implemented.

d) Support updating of outdated floodplain maps and stormwater ordinances to reflect current flood risk and precipitation data.

   **Indicator:** Number of updated FEMA floodplain maps and local stormwater ordinances (less than 10 years old).

e) Purchase and remove structures that are repetitively flooded or in danger of catastrophic damage from flooding or ravine/bluff erosion through the voluntary buyout program.

   **Indicator:** Number of Voluntary Floodplain/Hazard Mitigation Buyouts.

2.1.3 **Watershed Goal #3: Natural Resources and Habitat**

**GOAL:** Preserve, restore and enhance a green infrastructure network and system of terrestrial and aquatic natural resources including stream corridors, wetlands, beaches and upland resources to provide for natural hydrology, native plant and wildlife communities and buffers for aquatic and high-quality natural resources.

**OUTCOME:** Natural resources are identified, managed and protected as a series of hubs and connections to enhance beneficial functions and high quality and/or locally endemic or distinctive natural areas of the watershed.

**OBJECTIVES:**

a) Protect and enhance ecological quality of aquatic and terrestrial resources by improving water quality and eradicating invasive species, while preserving and protecting threatened and endangered species and ecosystems.

   **Indicator:** Number of water bodies removed from the Illinois EPA’s impairments list.
   
   Number of causes of impairment removed.
   
   Acres of invasive species removal/management projects.

b) Preserve, restore, and create wetlands and wetland buffers wherever possible.

   **Indicator:** Acres of wetlands enhanced and/or restored.

c) Identify and connect environmental corridors across community, county and state lines.

   **Indicator:** Number of regional green infrastructure projects.

d) Preserve, manage, and restore rare or unique habitat and natural communities in the Chippewa Prairie Illinois Beach Lake Plain and Ramsar Wetland of International Importance.

   **Indicator:** Acres of coastal lake plain preserved, managed and/or restored.
2.1.4 **Watershed Goal #4: Watershed Education and Communication**

**GOAL:** Watershed stakeholders (residents, property owners, students and communities) have adequate knowledge, skills, resources, motivation and stewardship opportunities to implement the watershed plan and recommended programs.

**OUTCOME:** Stakeholders have adequate information, knowledge and opportunity to implement the watershed plan.

**OBJECTIVES:**

a) Conduct a watershed outreach campaign to inform and engage the public about watershed issues, landowner responsibilities, available resources and the importance of implementing the watershed plan recommendations.

   **Indicator:** Number of people reached by watershed outreach campaign.

b) Educate local government officials and agencies, consultant and contractors working in the watershed, landscapers and nurseries, and landowners on road salt alternatives and application BMPs to minimize the use of road salt by public and private snow removal providers.

   **Indicator:** Number of public agencies and local private contractors attending the annual Lake County De-icing Workshop.
   Number of public agencies with winter maintenance responsibilities that use alternative de-icing products.

c) Educate local government officials and agencies, consultant and contractors working in the watershed, landscapers and nurseries, and landowners on best practices related to Lake Michigan shoreline and bluff maintenance/management and ravine management.

   **Indicator:** Number of people that receive information about shoreline, bluff, and ravine management.

d) Utilize trainings, workshops, public meetings, newsletters, websites, media, campaigns, and stakeholder word of mouth to provide watershed stakeholders opportunities to participate in watershed programs and projects.

   **Indicator:** Number of landowners that receive information about watershed programs and projects.
   Number of workshops.
   Number of action recommendations completed.
   Continuous increase in number of contacts on the SMC Des Plaines River watershed contact database.

e) Facilitate and engage the public, schools and youth groups (students), and homeowner associations to volunteer for stream, beach and natural area stewardship and maintenance.

   **Indicator:** Number of volunteers for stream, beach and natural area stewardship and maintenance.
2.1.5 **Watershed Goal #5: Water Quality**

**GOAL:** Improve water quality and address modified hydrology.

**OUTCOME:** Water quality improves and water bodies support their designated uses (are not impaired).

**OBJECTIVES:**

a) Watershed streams, beaches and lakes (including applicable areas of Lake Michigan) meet water quality standards, including those within the Waukegan Harbor Area of Concern.

   **Indicator:** Number of water bodies meeting designated use standards.

b) Reduce the potential for legacy contaminants/pollutants to enter Illinois Beach State Park, its waters, Lake Michigan, or the Lake Michigan shoreline.

   **Indicator:** Site remediation projects completed.

c) Develop and implement a watershed monitoring program to collect and assess and report physical, chemical, and biological water quality data on streams and applicable areas of Lake Michigan on a regular basis.

   **Indicator:** Implementation and support of watershed monitoring program.

   **Indicator:** Reports on water quality monitoring to community and stakeholders

d) Reduce nonpoint source pollution loading and erosion from existing development, re-development and construction sites by controlling inputs and implementing BMPs.

   **Indicator:** Monitoring data trends for common nonpoint source pollutants.

e) Reduce the quantity of road salt (sodium chloride) needed for safe and cost-effective winter maintenance to reverse the current trend of rising chloride levels in water bodies.

   **Indicator:** Winter Maintenance Program establishment including: policy and manual development, de-icing workshop attendance and certification.

f) Reduce fecal coliform contamination on Lake Michigan beaches by controlling contributing sources such as gull populations and pet waste and performing appropriate beach management activities.

   **Indicator:** Number of beach closures.

g) Mitigate modified hydrology by implementing BMPs and restoring the natural drainage system, including (where appropriate) removal or retrofitting of impoundments, dams, and weirs in streams.

   **Indicator:** Number of projects implemented to mitigate modified hydrology.
2.1.6 Watershed Goal #6: Watershed Coordination and Partnerships

**GOAL:** Improve coordination, engagement and decision-making between public, private and non-profit stakeholders to implement the watershed plan.

**OUTCOME:** Stakeholders coordinate and utilize available resources to implement watershed improvement projects.

**OBJECTIVES:**

a) Watershed communities and stakeholder organizations adopt the Lake Michigan Watershed-Based Plan.

   **Indicator:** Number of municipalities, counties, natural resource agencies and organizations that adopt the Lake Michigan Watershed-Based Plan.

b) Establish a watershed organization or committee with funding and support to guide watershed plan implementation, provide technical assistance to watershed stakeholders, and coordinate multi-partner projects.

   **Indicator:** Establishment of lead organization (watershed planning committee) with budget and executive committee. Number of projects advanced/undertaken with the support of the watershed planning committee.

c) Communities and organizations will designate a representative and participate in the watershed committee.

   **Indicator:** Communities and organizations have designated an individual or board member(s) representative to participate on the watershed planning committee.

d) Provide stakeholders (including property owners) with information on funding sources and mechanisms for implementing projects and pursue cost-sharing arrangements between stakeholders for watershed projects that have broad, meaningful benefits and impacts.

   **Indicator:** Number of projects with alternative or multiple sources of funding.

e) Watershed committee annually assesses progress on plan implementation and provides updates to the watershed-based plan every 10 years.

   **Indicator:** Number of watershed stakeholders providing feedback for the watershed report cards.