

CHAPTER TWO: WATERSHED ISSUES, OPPORTUNITIES, GOALS & OBJECTIVES

NORTH BRANCH CHICAGO RIVER WATERSHED-BASED PLAN

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COMMON ACRONYMS/ABBREVIATIONS USED IN CHAPTER

BMP – Best Management Practices	NBOSP - 2005 North Branch Open Space Plan
FOCR – Friends of the Chicago River	NBPC - North Branch Planning Committee
G&O - Goals and Objectives	NBWW – North Branch Chicago River Watershed Workgroup
IDNR - Illinois Department of Natural Resources	SMC – Lake County Stormwater Management Commission
Illinois EPA – Illinois Environmental Protection Agency	

2 WATERSHED ISSUES, OPPORTUNITIES, GOALS, AND OBJECTIVES

Chapter 2, “Watershed Issues, Opportunities, Goals and Objectives” of the North Branch Chicago River Watershed-Based Plan was most recently updated in June 2019. See Figure 2-1 for a flowchart of the North Branch Chicago River watershed planning efforts.

North Branch Chicago River Watershed Partnership

The North Branch Chicago River watershed planning efforts started in the early 1990s through the Friends of the Chicago River (FOCR), non-profit river advocacy organization. The FOCR coordinated an ad hoc group called the North Branch Chicago River watershed partnership, that co-sponsored two watershed stakeholder workshops in 1991 and 1992 at the Chicago Botanic Gardens known as *Voices from the Stream*.

The *Voices* workshops were dedicated to identifying issues important to North Branch watershed residents and providing a vision for the future of the watershed. The vision for the watershed and issues identified by watershed stakeholders provided a baseline for developing goals and objectives for the 2000 North Branch Chicago River Watershed Assessment and Management Plan.

2000 North Branch Chicago River Watershed Assessment and Management Plan

Historically, a first draft of the Goals and Objectives (G&O) was developed for the 2000 North Branch Chicago River Watershed Assessment and Management Plan from a list of issues and opportunities identified through stakeholder and partner forums (see section above). Some specific actions for attaining the G&O were also identified during this process.

The draft G&O statement was distributed to all jurisdictional stakeholders for their input and was shared with the general public for comment at the

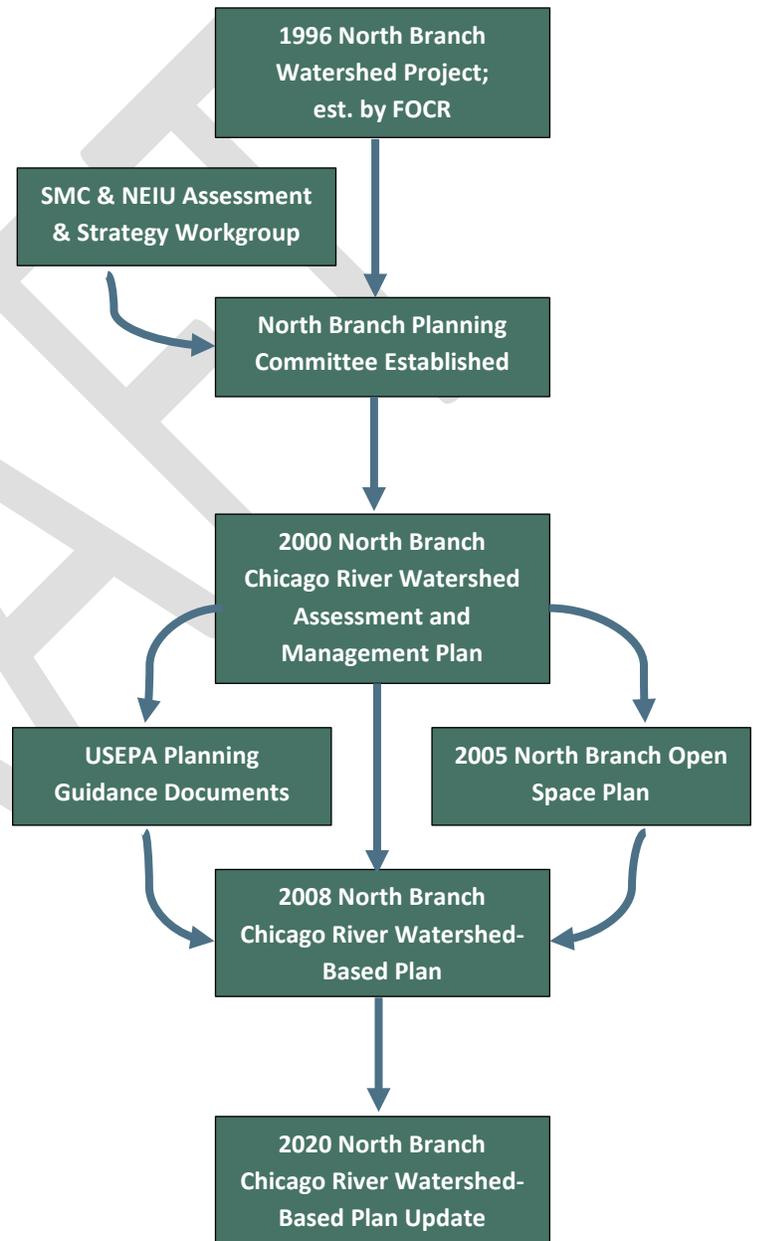


Figure 2-1 Timeline flowchart of North Branch Chicago River Watershed Planning Efforts

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March 1997 project kick-off meeting and the North Branch Watershed Project “River Rap” meeting session in November 1997. River Rap participants identified and prioritized additional watershed problems and opportunities that are also reflected in the goals and objectives statement. The goals and objectives developed in the 2000 Watershed Assessment and Management Plan were translated into the 2008 watershed-based plan.

2008 North Branch Chicago River Watershed-Based Plan

The 2008 watershed-based plan identified five goals that were established for the watershed plan to address the issues and opportunities raised in the planning process. The 2008 G&O statements were developed with some potential action steps. Action steps were identified during planning meetings associated with the 2000 North Branch Chicago River Watershed Assessment and Management Plan and identified in the 2005 North Branch Open Space Plan (NBOSP). The NBOSP was developed in 2005 as a follow-up to the 2000 watershed-based plan, by Futurity Inc. in cooperation with FOCR and Lake County Stormwater Management Commission (SMC). There were seven identified goals included in the NBOSP.

The five goals from the 2000 plan and seven goals from the 2005 Plan were combined into eight goals and were distributed to the North Branch Planning Committee (NBPC) for the July 12, 2006 meeting for discussion and comment. Subsequent refinement and condensing reduced the eight goals into five. These five goals and corresponding objectives were incorporated into a Building Blocks Worksheet (December 2003 USEPA’s “Getting in Step, A Guide for Conducting Watershed Outreach Campaigns”). The NBPC received the G&O Building Blocks Worksheet via email on February 27, 2007, and suggestions were received for inclusion and discussion. The NBPC discussed and completed the G&O from the Building Blocks Worksheet on March 14, 2007.

2020 North Branch Chicago River Watershed-Based Plan Update

The watershed G&O section below was based on the 2008 North Branch Chicago River Watershed-Based Plan. Proposed revisions to the 2008 existing watershed issues, opportunities, goals, objectives and indicators were brought to a public forum for stakeholder input at the February 13, 2019 NBWW General Membership Meeting. A 30-day comment period followed the February 13, 2019 meeting to allow stakeholders to provide additional feedback. Meeting notes from applicable NBWW General Membership public meetings are included in **Appendix A**.

2.1 2020 WATERSHED ISSUES & OPPORTUNITIES

One of the first tasks the North Branch Chicago River Watershed-Based Plan update was bringing the existing watershed issues and opportunities to watershed stakeholders at a NBWW General Membership Meeting (see **Appendix A** for stakeholder meeting minutes) A full list of the issues and opportunities watershed stakeholders developed in Table 2-1.

Table 2-1: North Branch Chicago River Watershed Plan Issues & Opportunities

KEY ISSUES & OPPORTUNITIES
<ul style="list-style-type: none"> Poor water quality due to nonpoint and point source pollution.
<ul style="list-style-type: none"> Substantial flood damage.
<ul style="list-style-type: none"> Need for protection and expansion of natural resources and open space.
<ul style="list-style-type: none"> Need for improved watershed-based public information and education.
<ul style="list-style-type: none"> Need for increased participation and coordination of government agencies, representative stakeholder organizations, schools and individual and business property owners in watershed improvement activities.

2.2 WATERSHED VISION

The 2020 North Branch Chicago River Watershed-Based Plan update did not change the **watershed vision** section of the plan. The 2008 watershed vision section was a comprehensive summary of the current goals and objectives of the plan and given that the goals and objectives did not significantly change during this update, the vision section did not change. SMC received no additional feedback or comments on the watershed vision section from watershed stakeholders at the February 13, 2019 NBWW General Membership meeting or 30-day comment period.

WATERSHED VISION:
Serves to focus the aim of the watershed stakeholders.

2.2.1 INTO THE FUTURE...A VISION FOR THE NORTH BRANCH

...We All Live “Downstream”

Watershed stakeholders have expressed concerns about the condition of the North Branch Chicago River for many years, but because of its large number of jurisdictions, coordination and cooperation opportunities for watershed restoration were limited. The North Branch Partnership, expanded through this project, provides a base of coordination for development and implementation of this watershed management plan, and for collaborating local resources to fund and complete projects.

Demonstration projects and watershed management planning efforts around the country are showing that watersheds can be improved. Committed people supported by sound science and technical information are doing the same in the North Branch Chicago River watershed. Watershed planning provides the guidance for these restoration and management efforts. The North Branch Chicago River Watershed-Based Plan supplies direction and targets resources for watershed improvement projects. *The plan serves as a blueprint for improving water quality, reducing flood damage, and protecting natural resources - and for preventing existing watershed problems from worsening with future land development.*

While the North Branch Chicago River and watershed are not without their problems, they also have extraordinary potential to become a great resource for Chicagoland residents. Environmentally friendly land development and management practices and protecting open space will prevent watershed degradation

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(maintaining stream quality, reducing runoff and protecting natural resources) as we move into the future. In addition to employing practices and programs that prevent future degradation, weaknesses and failings in the built drainage system can also be retrofitted to improve water quality and reduce flooding. While the North Branch Chicago River will probably never be restored to its pre-settlement condition, opportunities for restoring wetlands, naturalizing the riverbanks, reducing runoff and pollutant loads to the river and reestablishing a riparian corridor abound in the watershed. Recreational trails and greenways will connect people to the river, making it a focal point rather than being hidden in a “back alley”. A healthy river will improve the quality of life for all watershed residents.

Success in restoring the watershed and improving the health of the river will depend on how well stakeholders interact with the river and manage their activities that affect the watershed. The North Branch Chicago River Watershed-Based plan also includes a significant public outreach and education component to reach watershed residents and communities. Watershed awareness is the first step in changing behavioral patterns that degrade the river. In addition to bringing watershed awareness to residents, communities will also work together on a cooperative basis and combine their resources with county, state, federal and private technical and financial assistance, as well as, cost-share funds to complete a number of the recommended watershed improvement projects and programs. The bottom line is residents and communities of the watershed need to work together to successfully protect and restore the North Branch Chicago River watershed. While this stakeholder collaboration includes sharing the costs, it also includes sharing the benefits of watershed improvements.

2.3 WATERSHED GOALS AND OBJECTIVES

Watershed Goals and Objectives were updated in June 2019. The five existing watershed goals are aimed to address watershed stakeholder issues/concerns. The watershed goals are essential to the development of the watershed action plan (**Chapter 6**). The goals and objectives reflect watershed conditions, address watershed stakeholder priority issues, consider changes, and meet the expectations of current and future stakeholders.

SMC proposed revisions to existing watershed goals, objectives and indicators at a public forum for stakeholder input at the February 13, 2019 NBWW General Membership Meeting. Measurable indicators were assigned to objectives to measure future progress toward achieving each goal as the watershed action plan is implemented. A 30-day comment period followed the February 13, 2019 meeting to allow stakeholders to provide additional feedback. Recommendations of the action plan include:

- Programmatic actions that address flooding; water quality; stormwater management and drainage; maintenance and protection of natural resources; and education, outreach, coordination, and implementation goals; and
- Site-specific actions that recommend Best Management Practice (BMPs) for specific problem locations identified during inventories and assessments; and

- Plan Implementation and Evaluation (**Chapter 7**), and Evaluation Scorecards (**Appendix L**) to examine the watershed plan goals by looking at their performance and progress. These sections evaluate milestones related to measurable indicators for the watershed goals and objectives.

NOTEWORTHY: WHAT ARE GOALS VERSUS OBJECTIVES?

GOALS:

- Mini vision statements or targets for the watershed plan.
- The desired change or outcome you wish to achieve.
- Driven by stakeholder issues and problems identified by the watershed assessment.
- Ideally will be clear, concise, and measurable.

OBJECTIVES:

- Specific, more precise steps needed to attain goals.
- Position reached or purpose achieved by some activity by a specific time.
- Objective outcomes should be measurable, attainable, relevant, and time-based.
- There may be multiple objectives to achieve a goal(s).

2.3.1 WATERSHED GOAL #1: IMPROVE WATER QUALITY IN THE WATERSHED

OBJECTIVES:

1. Measurably reduce nonpoint and point source pollutant loadings.

Indicators:

- a) Watershed stream annual monitoring program support (number of NBWW members) and number of monitoring locations. (see [Figure 2-2](#)).
- b) Number of water bodies and/or causes of impairment (including legacy pollutants) removed from the Illinois Environmental Protection Agency (Illinois EPA) Integrated Water Quality Report.
- c) Trends of phosphorus concentrations based on the NBWW monitoring data.

2. Reduce streambank and streambed erosion.

Indicator: Number of restoration projects and linear feet restored.

3. Reduce phosphorus loads by removing phosphorus from wastewater discharges, upgrading poorly functioning septic systems and reducing nonpoint sources.

Indicator: See Indicator 1(c)



Figure 2-2: NBWW water column chemistry sampling

4. Find ways and work with communities to reduce the quantity of road salt (sodium chloride) and/or utilize road salt alternatives needed for safe and cost-effective winter maintenance to reverse the current trend of rising chloride levels in water bodies.

Indicator: Number of municipal Winter Maintenance Programs that include policy and manual development, de-icing workshop attendance and certification.

2.3.2 WATERSHED GOAL #2: REDUCE FLOOD DAMAGE IN THE WATERSHED

OBJECTIVES:

1. Reduce flow rates and volumes from existing developed areas and prevent increases in flow rates and volumes from new development.

Indicator: Number of municipalities that have codes that allow or require green infrastructure for stormwater management.

2. Protect and restore floodplain functions.

Indicator: Number of projects within the floodplain that protect/restore floodplain functions.

3. Mitigate flood damages (see Figure 2-3) using both remedial and preventive measures including property protection.

Indicators:

- a) Number of Voluntary Buyout properties purchased (*also satisfies Goal 2, Obj. 2*)
- b) Number of structures removed that are chronically damaged by flooding and ac/ft of flood storage gained.

4. Determine potential locations and feasibility of regional flood storage sites.

Indicators:

- a) Number of detailed studies completed and number of participants.
- b) Number of storage facilities constructed, and ac/ft of storage created.



Figure 2-3: City of Park City July 2017 roadway flooding along the Dady Slough

2.3.3 WATERSHED GOAL #3: PROTECT AND ENHANCE NATURAL RESOURCES AND PROVIDE ASSOCIATED RECREATIONAL OPPORTUNITIES

OBJECTIVES:

1. Protect and restore wetlands, streams and lakes to improve water quality and aquatic habitat.

Indicators:

- a) Additional wetland acres protected and/or restored.
- b) Number/linear feet of stream restoration projects completed. See Figure 2-4.
- c) Number/linear feet of wetland and lake restoration projects completed.
- d) Number of native fish species and population identified in the watershed based on NBWW and/or IDNR data.



Figure 2-4: Skokie River Stream Daylighting Project, Two-Stage Channel

2. Protect and enhance native plant communities, native wildlife habitat and biodiversity.

Indicator: Acres of terrestrial native natural area restoration projects completed.

3. Identify and develop areas for river-based recreational opportunities such as hiking, fishing, canoeing, running, biking, birding, peace of mind and a tranquil setting for both personal and social benefit.

Indicator: Area of open space identified and preserved for environmental and recreational natural areas.

4. Protect and restore riparian greenways and buffers along and around all water resources.

Indicator: Length of native plant buffers and riparian greenways along water bodies maintained, expanded, and/or restored.

2.3.4 WATERSHED GOAL #4: DEVELOP & IMPLEMENT A PUBLIC INFORMATION AND EDUCATION PROGRAM WITHIN THE WATERSHED

OBJECTIVES:

1. Develop and implement a primary and secondary school-based river curriculum.

Indicator: Number of schools participating.

2. Provide public information and education program for community leaders, elected officials, businesses and homeowners. See Figure 2-5.

Indicator:

- a) Number of attendees at NBWW general membership meetings (per year).
- b) Number of subscribers to NBWW website (per year).



Figure 2-5: The Village of Glenview led a Best Management Practice (BMP) public tour at NBWW's 2018 Annual Meeting

2.3.5 WATERSHED GOAL #5: IMPROVE COMMUNITY & AGENCY PARTICIPATION AND COORDINATION IN WATERSHED IMPROVEMENT ACTIVITIES

OBJECTIVES:

1. Encourage watershed communities to adopt or officially support the North Branch Chicago River Watershed-Based Plan update and coordinate plan implementation activities.

Indicators:

- a) Number of municipalities, counties, and natural resource agencies that have adopted or otherwise indicated official support of the 2020 North Branch Chicago River Watershed-Based Plan update.
- b) Number of action recommendations completed.
- c) Number of grant applications received by SMC (Watershed Management Board Grant Program, Stormwater Infrastructure Repair Fund, & Illinois EPA Section 319 Grants)



Figure 2-6: Students volunteer to help implement a streambank stabilization project adjacent to Deerfield High School

2. Watershed committee annually assesses community participation on active plan implementation and provides updates to the watershed-based plan every 10 years.

Indicator: Number of watershed stakeholders providing feedback for the watershed scorecard.

3. Improve stewardship of the North Branch Chicago River and its aquatic resources by increasing public participation in the upkeep of the river (see Figure 2-6).

Indicator: Number of participants during the annual Chicago River Day event.