



Salt Creek Watershed Restoring Balance

Citizens' Concerns about Natural Resource
Issues in the Lower Salt Creek Watershed





dredging pollution channelization
erosion flood TODAY....
The Salt Creek
surface runoff sediment dredging



A HISTORY OF THE SALT CREEK WATERSHED

Fourteen thousand years ago, huge glaciers carved out the Great Lakes and excavated the entire landscape down to the bedrock—drastically altering the Midwest. The subsequent glacial debris rebuilt the landscape by forming hills, valleys and plains, while the melt water formed the region's lakes, wetlands and streams.

Over time, woodland, wetland and riparian ecosystems reestablished themselves comprised of plants and animals that further built the landscape in an interdependent relationship with their environment. The soils that developed in the Chicagoland area—while at first influenced by geologic and topographic factors—were mostly shaped by the variety of natural plant and animal communities that provided the lush biomass necessary for the formation of thick, organic-rich soils.

The topography in conjunction with local weather conditions determined the shape of watersheds and the size of streams, flood plains and wetlands. Rainfall and snow melt would first infiltrate the soil, thereby recharging the groundwater. Plants held the soil in place and returned water to the atmosphere via evapo-transpiration. Any excess water in the system was

managed in wetlands and flood plains. All of these natural processes worked together to achieve a long-term equilibrium in the water cycle.

When Native Americans settled in the area they found a balanced ecosystem that they, too, managed to live with in harmony. Europeans found abundant natural resources and fertile soils suitable for extraction and agricultural purposes, which supported Chicago's great financial success and provided the catalyst for expanded settlement throughout the region. This development, like the glaciers before them, drastically altered the landscape and disturbed the delicate relationship between geology, topography, soil, climate, and native plant and animal communities.

Today, the Salt Creek watershed is highly urbanized and densely populated. Human activities of all kinds place tremendous strains on the natural environment, which are evidenced by air pollution, soil erosion, flooding, water pollution, habitat loss, and decreased species diversity. Citizens living throughout the Salt Creek watershed are becoming more aware of this imbalance and are looking for ways to improve conditions.

This document represents the efforts of a group of concerned citizens to identify problem areas and share a vision of Salt Creek's future. The group envisions people making better decisions about how they manage the land, how they manage the water that flows off the land, and what they can do to participate in the enhancement, protection and preservation of the creek. They understand that the Salt Creek watershed will not be what it was 10,000 or even 200 years ago. But it is a natural resource suitable for fishing, recreating, and deserving respect and proper management in order to improve the quality of life in an area that many people call home.



tributaries network cleanup
...and tomorrow
streambank management
resource habitat recreation

LIFE THROUGHOUT THE SALT CREEK WATERSHED

As we all know, water flows downhill. A watershed is simply the total area of land that drains into a given stream, river or wetland. The entire Salt Creek watershed drains about 150 square miles. This includes the land that drains into Addison Creek and Spring Brook, two of the creek's major tributaries. The creek itself is about 50 miles long and has a vertical drop of about 225 feet along this distance. As of 1996, land cover in the watershed consisted of 77% urban and built-up land, 15% forest and woodland, 4% wetland, and 4% other. The map on the next page shows the municipalities of the watershed.

Everyone lives in a watershed, and everyone lives upstream. For instance, Salt Creek flows into the Des Plaines River. The Des Plaines River flows into the Illinois River, which then flows into the Mississippi River. Ultimately, we are all residents—and therefore stewards—of the Gulf of Mexico. But it is more reasonable to manage surface water resources if they are on the scale of a local watershed, which is why the focus of this document is on the lower Salt Creek watershed.

The Lower Salt Creek Watershed

Salt Creek is dammed in Elk Grove Village creating Busse Lake, which forms a boundary between the highly urbanized lower watershed and the still developing upper watershed. This document focuses primarily on the lower watershed, downstream from the Busse Lake reservoir, because the resource concerns and management issues are similar for this geographic area.

From Busse Lake, the creek flows south and east about 45 miles to its confluence with the Des Plaines River in Lyons. Including Spring Brook and Addison Creek, the lower watershed drains about 130 square miles of urbanized landscape composed of 26 municipalities in two counties. Land use in the lower watershed is primarily residential mixed with commercial, followed by light manufacturing and county forest preserves.

According to the U.S. Geological Survey (USGS), 19 sewage treatment plants supply the main water discharge for the Salt Creek watershed, seven of which are actually on the creek. The Illinois Environmental Protection Agency (IEPA) ranks Salt Creek water quality as "fair." The main problems stem from non-point source pollution (from rainwater and melt water runoff), channelization (straightening of the

creek), and habitat changes (building in the floodplain, stormwater discharges).

Nearly all the problems facing Salt Creek, however, are related to rainwater in the watershed. Specifically, runoff from the urban landscape picks up a variety of chemicals and pollutants from lawns and roadways that directly discharge—untreated—into the creek. The manmade surfaces throughout the watershed convey a greater volume of rainwater than the creek evolved to hold. Furthermore, development in the floodplain has eliminated the creek's ability to handle this greater volume of water, which results in more frequent floods and increased property damage. Finally, in older communities, raw sewage enters the creek during heavy rains because of the manner in which the infrastructure was built. These are some of the major resource management issues facing the creek today.

THE MISSION OF SALT CREEK WATERSHED NETWORK

The Salt Creek Watershed Network (SCWN) was formed in March 1998 as a grass roots organization to bring people together, raise awareness of the issues facing the creek, and find ways to make the creek an enjoyable resource for people. SCWN recognized that various groups with common goals were operating throughout the watershed, but local efforts needed a regional perspective to ensure long-term and watershed-wide improvements.

As a result, SCWN's mission is to seek a common vision and provide coordination and promote communication among the various volunteer groups, citizens, businesses, agencies and others operating and living within the watershed. By facilitating, partnering and conducting public education throughout the watershed, SCWN promotes the improvement of water quality, recreation, and the use of best management practices and ecosystem enhancements.

During its first year, SCWN organized a watershed bus tour, coordinated several creek cleanups, elected a board of directors, and co-hosted an IEPA public meeting. SCWN then initiated the watershed planning process in an effort to bring together people throughout the watershed to discuss the issues facing Salt Creek.

History of the Watershed Planning Process

In early 1998, concerned citizens from the Salt Creek watershed came together to find common ground from which they could improve the quality of the watershed. Those stakeholders became participants of the Watershed Planning Team. In February 1999, IEPA awarded SCWN funds to develop this document. The Natural Resource Conservation Service facilitated the process, which included brainstorming sessions and a discussion of the issues over a 24-month period. While a variety of concerns were voiced, eight major resource categories were identified and prioritized:

- Water Quality
- Streambank Maintenance
- Habitat
- Flooding
- Land Use
- Public Policy
- Public Awareness/Education
- Recreation

The Watershed Planning Team divided into three working subcommittees to develop specific concern statements and goals for the eight categories, which are presented in the next section.

In February 2000, a Technical Advisory Team (A-Team) met to discuss the points raised by the Watershed Planning Team. Technical comments received by A-Team members were incorporated into this document in August 2000. Between December 2000 and March 2001, this document was written, revised and formatted.

SALT CREEK WATERSHED MUNICIPALITIES

Northern Cook County

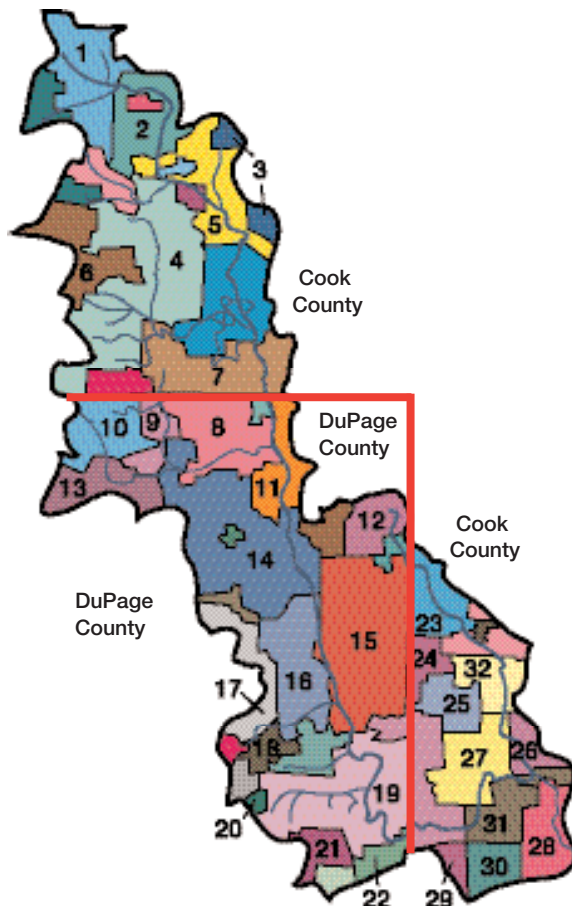
Municipalities:

Inverness 1
Palatine 2
Arlington Heights 3
Schaumburg 4
Rolling Meadows 5
Hoffman Estates 6
Elk Grove Village 7

DuPage County

Municipalities:

Itasca 8
Medinah 9
Roselle 10
Wood Dale 11
Bensenville 12
Bloomingtondale 13
Addison 14
Elmhurst 15
Villa Park 16
Lombard 17
York Center 18
Oakbrook 19
Oakbrook Terrace 20
Westmont 21
Hinsdale 22



County
Boundary

Watershed
Boundary

Western Cook County

Municipalities:

Northlake 23
Berkeley 24
Hillside 25
Broadview 26
Westchester 27
Brookfield 28
Western Springs 29
LaGrange 30
LaGrange Park 31
Bellwood 32



ISSUES AND ACTIONS

The Watershed Planning Team identified the following eight issues in order to define a future vision for the watershed and create a list of actions needed to restore balance in the watershed. The concerns, vision and actions are identified for each issue.

ISSUE: Water Quality

Concern: Salt Creek was once a swimming and boating recreational asset. Now water quality has deteriorated because of non-point sources of pollution, destruction of habitat along the creek, development and flooding.

Vision: The water quality of Salt Creek is improved so that its ranking is changed from “fair” to “good,” and all citizens and wildlife living within the watershed enjoy the benefits.

Actions

- Understand the sources of impairment, which will be articulated in a Total Maximum Daily Load (TMDL) study.
- Communicate findings of the TMDL study throughout watershed. Work with municipalities to implement solutions to water-quality issues.
- Educate people about their positive and negative impacts on water quality and how to reduce point and non-point sources of pollution.
- Work toward restoring natural aquatic habitats that support a diverse, native, aquatic community.
- Evaluate then remove or modify unnecessary dams to restore natural flow and improve fish passage and flood-water management.
- Work with watershed constituents to strengthen and enforce ordinances that prevent water-quality impairments.

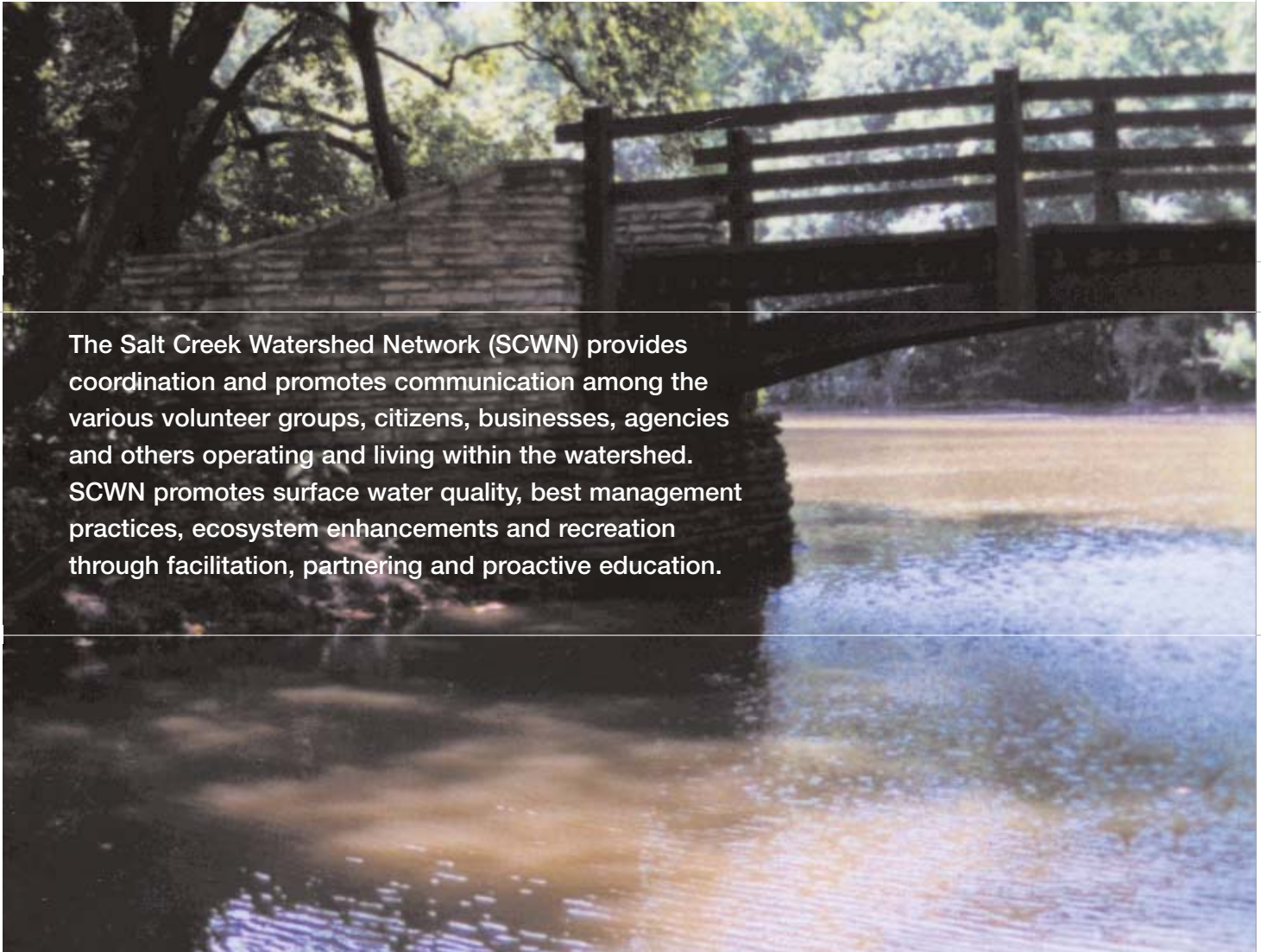
ISSUE: Streambank Maintenance

Concern: Salt Creek streambanks have eroded due to flooding and poor streamside management which has left them bare and less functional. Numerous jurisdictions along the creek have resulted in no consistent maintenance process.

Vision: Restored streambanks that are stable, support vegetation, and provide habitat for wildlife.

Actions

- Identify jurisdictions along the creek to determine responsibility for maintenance of such things as log jams.
- Identify existing projects that can serve as models for other communities.
- Develop educational information about streambank erosion and appropriate best management practices, then distribute this information to all streambank landowners.
- Develop a list of critical agencies/commissions within the watershed making decisions about dam and stream maintenance, then get on their mailing list.
- Develop a method to mobilize Salt Creek Watershed Network and citizens to publically support and actively participate in streambank stabilization, dam maintenance and other related issues.



The Salt Creek Watershed Network (SCWN) provides coordination and promotes communication among the various volunteer groups, citizens, businesses, agencies and others operating and living within the watershed. SCWN promotes surface water quality, best management practices, ecosystem enhancements and recreation through facilitation, partnering and proactive education.



ISSUE: Habitat

Concern: Salt Creek no longer supports a diversity of plants and animals due to urbanization and the effects of erratic stormwater discharges (unstable hydrologic conditions). Channelized areas have a uniform gradient, no riffle or pool development, no meanders (curves) and very steep banks. During low-flow periods in the summer, many channelized streams have low dissolved-oxygen levels. Under these conditions, they provide poor habitat for fish or other stream organisms, such as benthic macroinvertebrates.

Vision: The effects of urbanization are minimized and better managed. The riverine ecosystem is in balance with healthy aquatic and terrestrial habitats that support a diversity of plants and animals.

Actions

- Educate people about the value of a diverse ecosystem consisting of abundant native plants and wildlife.
- Work with biologists to complete the watershed-wide survey of existing terrestrial and aquatic habitats and species.
- Develop strategies that protect and enhance existing terrestrial and aquatic habitat and species variety.
- Work with stakeholders to remove or modify unnecessary, non-functional dams in an effort to restore the natural flow of water, thereby improving fish passage.

ISSUE: Flooding

Concern: Urbanization has changed the hydrology of the watershed by increasing impervious surfaces and modifying or developing the flood plain. This has increased direct flow to the creek and the frequency and severity of flood events, thus worsening the erosion problem. Building in the flood plains has been a very expensive proposition, due to losses during floods.

Vision: When feasible, the man-made infrastructure is removed from the flood plain to allow natural systems to renew themselves. Floodwaters are less destructive as there has been a watershed-wide effort to encourage better flood-plain management practices and reduce erratic flows into the creek.

Actions

- Educate the public on the causes of flooding in order to encourage public support for ordinances that improve flood-plain usage.
- Work with watershed jurisdictions to amend policies and ordinances that impact urbanized flood plains.
- Educate the public on actions individuals can take to reduce the amount of rainwater flow from their property into storm-drain systems.
- Partner with stormwater specialists to help restore natural stormwater processes and flood-plain processes to the maximum extent possible.

ISSUE: Land Use

Concern: The way we manage the land has changed and the impacts on the land are greater. Many land-use policies support continued development. Each community within the watershed has its own focus on land use without broader vision toward the entire watershed.

Vision: All local governments and agencies work together to create land-use policies that are consistent throughout the watershed and protect environmental quality.

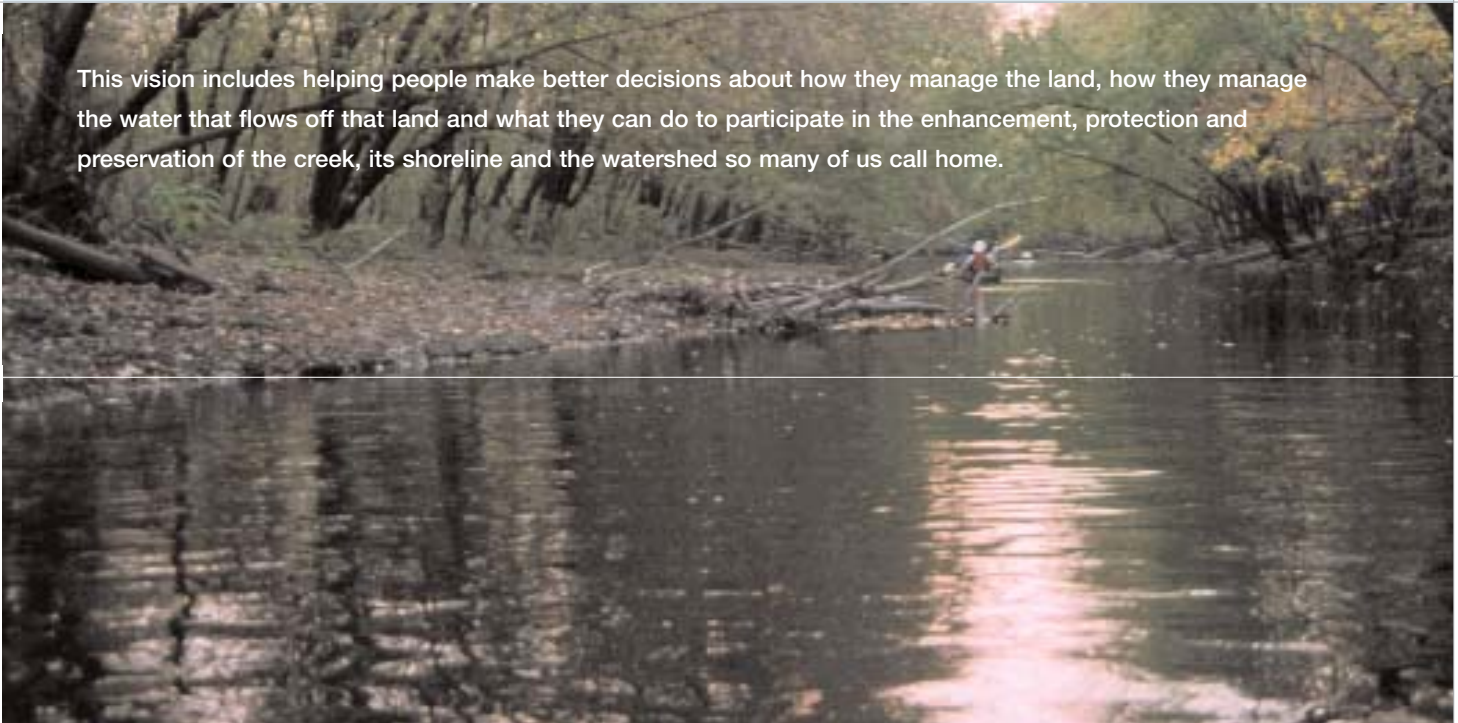
Actions

- Implement stormwater and flood-plain ordinances that minimize or eliminate development in flood plains.
- Educate landowners about land-management issues and identify ways they can better care for and protect the watershed.
- Educate policy makers on how to minimize the negative impacts of land-use changes and land-management practices within their jurisdiction.
- Amend ordinances to protect and improve riparian environments.
- Improve communications among stakeholders to increase consistent best management practices across the watershed.

A VISION FOR THE SALT CREEK WATERSHED

- > People recreating on and relaxing by the creek.
- > Municipalities working together to better manage the Salt Creek as a natural resource.
- > Citizens, businesses and municipalities understanding the sources and impacts of non-point pollution.
- > A riverine ecosystem that supports a diversity of life.

This vision includes helping people make better decisions about how they manage the land, how they manage the water that flows off that land and what they can do to participate in the enhancement, protection and preservation of the creek, its shoreline and the watershed so many of us call home.





ISSUE: Public Policy

Concern: Salt Creek flows through numerous jurisdictional boundaries and is home to a large population of individuals, landowners and agencies, many with overlapping and possibly conflicting viewpoints.

Vision: The numerous jurisdictions, individuals, landowners, and agencies work in coordination to best manage and improve the water resources in the watershed.

Actions

- Create an advisory board with representatives from each watershed jurisdiction and stakeholder group to coordinate policies throughout the watershed, addressing water-quality and stormwater management.
- Establish a clearinghouse of exemplary ordinances and best management practices.
- Promote a forum for sharing successes and experiences that encourage jurisdictions to learn from one another.
- Advocate public involvement in policy changes and in implementing those changes.

ISSUE: Public Awareness/Education

Concern: Much of the land in the Salt Creek watershed was developed decades ago, and its current poor condition has become “acceptable” or considered “the way it is.” A majority of the public is unaware of the issues facing the environmental quality in the watershed and lacks an understanding of the solutions.

Vision: The watershed is home to informed citizens, policy makers and other stakeholders who appreciate the environmental assets in the watershed, foresee its long-term value, understand how their actions affect it, and make individual decisions necessary to reduce negative impacts.

Actions

- Develop a strategic outreach communication plan that includes message points, action steps and evaluation strategies.
- Heighten awareness for, deepen appreciation of, and promote action on behalf of Salt Creek throughout the watershed.
- Identify priority target audiences and then determine the most effective education program for each group.
- Utilize existing networks to get the word out.

ISSUE: Recreation

Concern: Because few people have a connection to Salt Creek, or they perceive it as inaccessible and unhealthy, it is an underutilized recreational resource.

Vision: More and more people visit the public areas of the watershed to enjoy the benefits of healthy natural resources, including recreational activities on the creek.

Actions

- Evaluate current recreational opportunities and identify ways to create more.
- Promote the development of access points and portages for paddlers.
- Identify barriers that keep people from utilizing Salt Creek.
- Develop safe access along the shores that encourage responsible recreational use of the creek.
- Promote change in the legal status of Salt Creek to “navigable” waterway.
- Promote changing the “designated use” of the creek from “general” to “secondary contact.”
- Work in conjunction with the Salt Creek portion of the NIPC-sponsored regional Water Trails Plan.
- Do what is necessary to restore the natural flow to the creek and provide safe passage for recreation.
- Establish a communication program that informs citizens of safety issues associated with the creek’s recreational uses.



APPENDIX A: GLOSSARY

Action Teams or Subcommittees: these are the ongoing or temporary groups that are formed to carry out specific tasks of a more specialized nature, including planning special events or investigating specific issues such as wetlands preservation or best management practices.

Benthic Macroinvertebrates: bottom dwelling (benthic) invertebrates that can be seen by the unaided eye (macro). Most benthic macroinvertebrates in flowing water are aquatic insects or the aquatic stage of insects, such as stonefly nymphs, mayfly nymphs, caddisfly larvae, dragonfly nymphs and midge larvae. They also include such things as clams and worms. The presence of benthic macroinvertebrates that are intolerant of pollution is a good indicator of good water quality.

Best Management Practices (BMPs): practices or techniques that are used to prevent or ameliorate damage to natural resources; some BMPs used in urban areas may include urban stormwater wetlands, dust control, urban filter strip, porous pavement, silt fence and vegetative streambank stabilization.

Bioengineering (or Soil Bioengineering): techniques for stabilizing eroding or slumping river banks that rely on the use of plants and plant materials, such as live willow posts, brush layering, coconut logs and other “greener” or “softer” techniques in contrast to techniques that rely on creating “hard” edges with riprap, concrete and sheet piling (metal and plastic).

Channelized Stream: a stream that has been artificially straightened, deepened, or widened to accommodate increased stormwater, to increase the amount of adjacent land that can be developed or used for urban development, agriculture or navigation purposes.

Collaboration: a mutually beneficial and well-defined relationship entered into by two or more organizations to achieve results they are more likely to achieve together than alone.

Combined Sewer Overflow (CSO): in older communities, the storm sewers and sanitary sewers were combined. In newer communities the two sewers are separate. During heavy rains, the volume of water is so high that raw sewage is discharged directly to a surface water body.

Consensus: an inclusive form of decision making in which all of the parties discuss and debate the issues prior to reaching an agreement. All parties must either agree with the decision or at least agree that they can live with it. Any one party may block an agreement.

Geographic Information System (GIS): a computer system that inputs, assembles, stores, manipulates and displays (usually in the form of maps) geographically referenced information.

Impervious Surfaces: the land in a watershed—expressed in an area or percentage—covered by hard surfaces that prevent the infiltration of water into the soil. Impervious surfaces are the asphalt or concrete roads, parking lots, buildings or other “hard surfaces” that are relatively impenetrable to the movement of water.

Non-point Source Pollution: the diffuse, intermittent runoff of pollutants from various sources. Precipitation moving over and through the ground picks up pollutants from these various sources and carries them into rivers, lakes and groundwater.

Partner: the watershed stakeholders who take an active role in the watershed management planning process.

Planning Committee: the group of stakeholders responsible for creating the watershed-management plan.

Sewershed: an area of land where stormwater drains into a common storm sewer.

Stakeholder: a person who has a legal, economic, personal or professional interest in the watershed.

Technical Advisory Team (A-Team): the group of technically qualified ecologists, biologists, hydrologists, engineers, planners and others who advise the planning committee in performing the assessment and analysis phase and developing the best management practices and policies in the action plan.

Urban Runoff: water from rain or snow that runs over surfaces such as streets, lawns, parking lots and directly into storm sewers before entering the river—rather than infiltrating the land upon which it falls.

Watershed: an area of land that drains into a given stream, river, lake or wetland.

RESTORING BALANCE:

Citizens' Concerns about Natural Resource Issues in the Lower Salt Creek Watershed



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the first steps to restoring balance

GETTING INVOLVED

With the completion of this planning document comes the excitement of sharing it with as many people in the watershed as possible. SCWN needs people to share this story, promote these causes and move this plan into action. To implement this plan, everyone must get involved—writers, educators, fisherman, paddlers, designers, residents, business leaders and municipalities—to achieve a balanced and healthy ecosystem for future generations.

To learn more about SCWN or to get directly involved contact us:

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ACKNOWLEDGMENTS

Thanks to the Illinois Environmental Protection Agency for a grant to undertake the watershed planning process. SCWN appreciates the support of the Conservation Foundation of Naperville for administering these funds. Additional thanks goes to the Natural Resource Conservation Service for facilitating the watershed planning process.