

2011

Clear Creek Watershed Action Plan



Prepared for:



Lost Nation-New Landing
River Conservancy District of IL

Prepared by:



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Executive Summary

Watershed Planning Effort

The Clear Creek Watershed Action Plan (Plan) was developed through a cooperative effort between the Lost Nation/New Landing River Conservancy District, Natural Resources Conservation Service, stakeholders of the watershed, and various federal, state, and local environmental and planning agencies. The interested parties formed the Clear Creek Watershed Planning and Technical Advisory Committee, and held 12 public meetings and one executive session over the course of two years.

The Plan was developed to provide suggestions for minimizing erosion and sedimentation; minimizing nutrient loading into surface waters and groundwater; protecting “Class A” and other productive soils; protecting, enhancing, and managing wildlife and their habitats; and protecting the rural lifestyle of the community. It is meant to be used by the local people on a voluntary basis, with assistance from local, state, and federal organizations with missions related to the goals of improving the watershed’s environment, and it does not suggest any regulatory requirements. It provides cost-effective solutions to environmental issues while honoring the agricultural economy of the region.

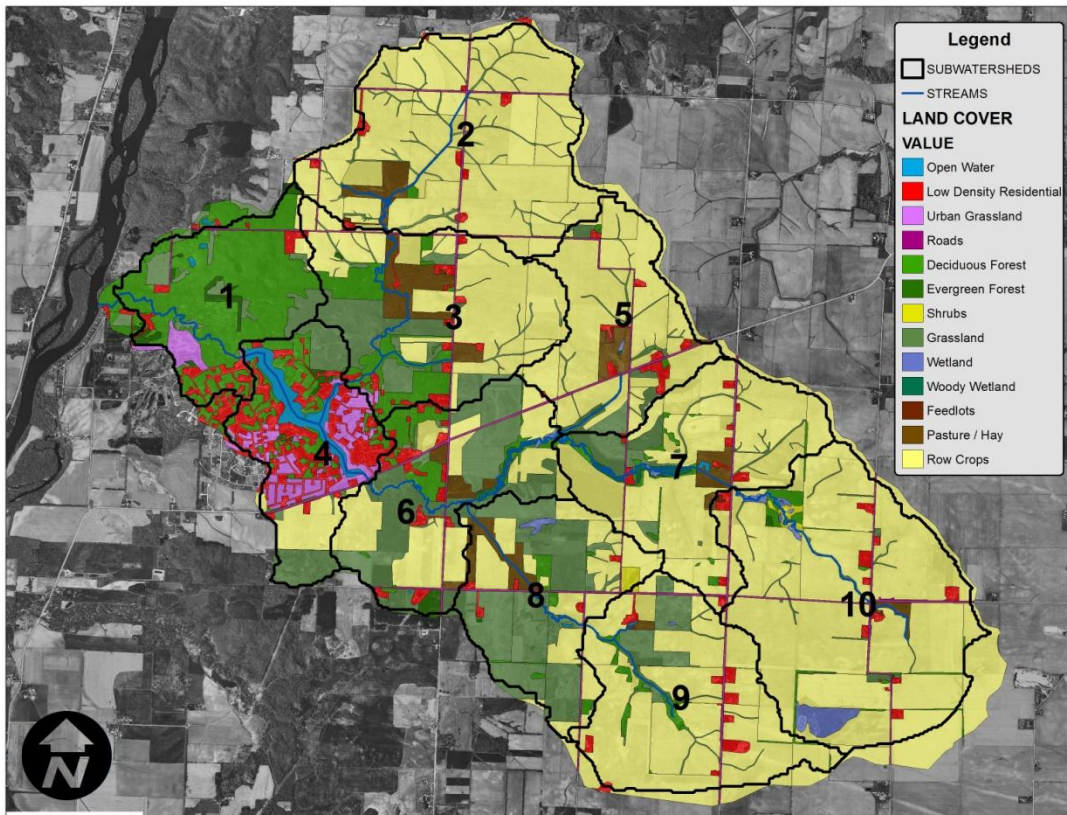
The Plan contains five chapters that provide the following: (1) an introduction; (2) an inventory of the watershed’s natural resources and challenges; (3) goals, objectives, and action items to address environmental challenges and maintain or improve environmental quality; (4) modeling study to estimate pollutant load reduction potential; and (5) management recommendations, implementation plan, and monitoring plan. The Plan provides a basis to allow various agencies and individuals to collaborate on education and project implementation. It is an advisory document, and should be amended from time to time as needs change.

Watershed Description

The Clear Creek Watershed is a 7.22-mile basin that drains 11,130 acres (17.4 mi³) in Ogle and Lee counties in north-central Illinois. Streams in the watershed flowed through mostly flat to rolling agricultural land, The Nature Conservancy’s Nachusa Grasslands, and a subdivision situated around Lost Lake before it entered a former Biologically Significant Stream section of the Rock River. The land use of the watershed consists of about 56% row crops, 5% active pasture, 2.3% residential development, 2.4% wetlands, and the remainder in forest and grassland cover. No future land use changes are planned for the watershed by either county.

Natural area types present in the watershed include forest, rural grassland, prairie, and wetlands. The watershed contains 1,490 acres of high priority grasslands at Nachusa Grasslands and two Conservation Opportunity areas of high value to wildlife, the Rock River Conservation Opportunity Area and the Nachusa-Franklin Creek-Castle Rock-Lowden Miller Conservation Opportunity Area. It is within one of three Forest Legacy Areas in Illinois.

Figure A: Clear Creek Watershed Current Land Cover Map with Sub-Watershed Units .



Watershed Goals

The Clear Creek Watershed Planning and Technical Advisory Committee created the following goals to improve watershed conditions:

1. Minimize erosion and sedimentation.
2. Minimize nutrient loading into surface waters and groundwater.
3. Protect "Class A" and other productive soils.
4. Protect, enhance, and manage wildlife and their habitats.
5. Protect the rural lifestyle.

Watershed Assessment

The watershed is an important agricultural area, as over 90% of its soils are designated as either prime or of statewide importance. The watershed offers very little natural filtering of pollutants from these land uses. It consists of only 0.22% floodplain, 2.4% wetlands, and 5.9% hydric soils, all predominantly located along the creek corridor. Studies suggest that Clear Creek and Lost Lake have moderate to good water quality. According to studies by the Environmental Protection Agency (2010), the Rock River has a fish consumption advisory, due to mercury and polychlorinated biphenyls from atmospheric deposition and other unknown sources, presumably not caused from uses in the Clear Creek Watershed. Lost Lake fully supports aquatic life, but it does not support aesthetic quality due to total suspended solids (TSS), total phosphorous, and aquatic algae stemming from nonpoint sources upstream and along the lake shore. Known upstream sources include agriculture and runoff from forest, grassland, and parkland, such as Highly Erodible Lands covering 31% of the watershed, channelization of about 10% of the open waterways, runoff and soil compaction of cropland affecting about 59% of the watershed, lack of vegetation along riparian zones, livestock on 550 acres with free access to 17,330 linear feet of stream, and worsening unstable stream banks. Sources within the lake community include impervious surfaces, residential home and lawn care, the dam, and eroding shoreline. The only known, potential point source of pollution in the watershed is a wastewater treatment plant for the subdivision, which has been recently reconstructed. No violations were reported from the new operation at the time of this Plan.

Watershed Management Recommendations

In order to prevent nonpoint source pollution, the Plan recommends treating the sources of pollutants using streambank and shoreline stabilization, rural and urban best management practices (BMP), and proper planning and coordination between groups. The main focus of the Plan is stabilizing severely eroding streambanks and shorelines, as they are the main contributor to nonpoint source pollutant loading into the streams and lake. Rural BMPs include creating wetlands (especially those connected to the streams), creating filter strips along streambanks, implementing nutrient and pasture management, and practicing conservation farming. These actions are especially important in the rural sub-watersheds #2 and #10. Urban BMP efforts are concentrated in sub-watershed #4, which houses the Lost Lake residential community. They include planting buffer strips along the shoreline, rain gardens in lawns, educate homeowners about proper lawn care, and continuing a campaign for a zero phosphorous community. It is important to continue planning efforts and cooperate with organizations that have similar missions. The Plan suggests hiring a watershed coordinator that can coordinate communication efforts and serve as the “face” of the watershed planning effort.

Figure B: Clear Creek Watershed Land Cover Map with Recommendations Implemented.

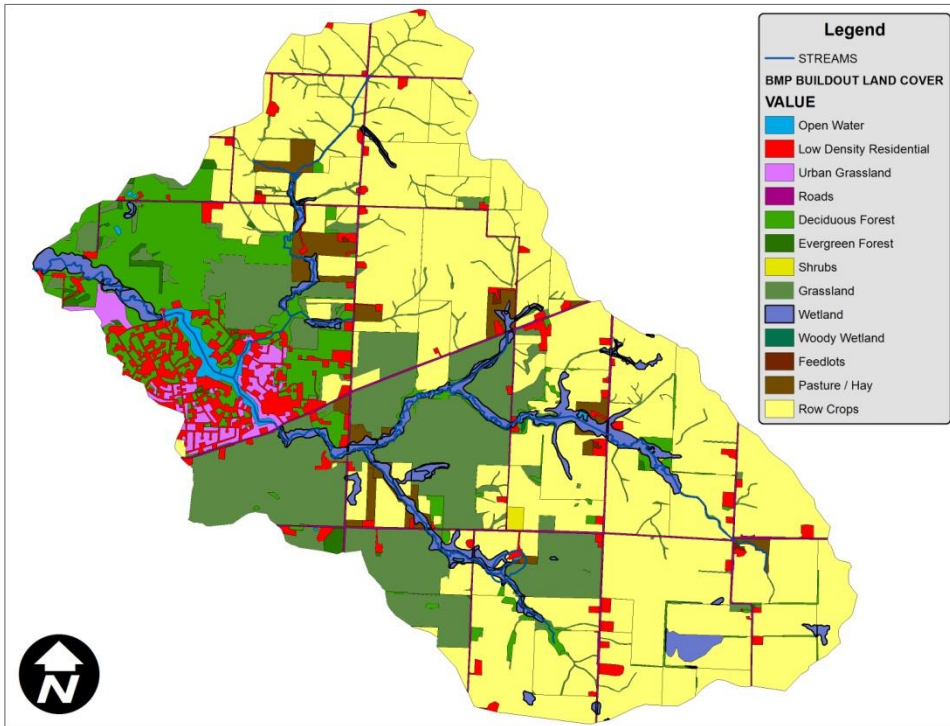


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Written by: Nathan Hill

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Written by: Nathan Hill and Rebecca Olson

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Addendum A: Clear Creek Watershed Planning Committee and Technical Advisory Committee Meeting Agendas and Minutes

Agendas Created by: Rebecca Olson
 Minutes Written by: Rebecca Breckenfelder and
 Dan Boehle

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