DRAFT

Restoration Notice
for
Saline Branch and Forest Glen Restoration Assistance

Vermilion River Watershed, Illinois

As part of Hegeler Zinc--Lyondell Basell Companies NRDA Settlement

August, 2016

Prepared by
IDNR, Contaminant Assessment Section Staff

Preface

Releases of hazardous substances and oil into our environment can pose a threat to human health and natural resources. Natural resources are plants, animals, land, air, water, groundwater, drinking water supplies, and other similar resources. When the public's natural resources are injured by an unpermitted release of hazardous substances or oil, federal law provides a mechanism, Natural Resource Damage Assessment (NRDA) that authorizes Natural Resource Trustees to seek compensation for the public for injuries to natural resources. Illinois' Natural Resource Trustees include Illinois Environmental Protection Agency (IEPA) and Illinois Department of Natural Resources (IDNR). The Illinois Natural Resources Coordinating Council oversees restoration efforts and includes the Trustees and their legal representative, the Illinois Attorney General's Office (IAGO). This plan was developed by IDNR Contaminant Assessment Section (CAS) Staff who administer the NRDA program for Illinois.

This Restoration Notice describes for the general public and interested parties the terms of the settlement and the State Trustees approach to restoration with focus on the Trustees' support and assistance with two restoration efforts in the watershed.

Introduction

In 2009, Millennium Petrochemicals[1] filed bankruptcy. In an effort to seek compensation for the injuries described within, the Illinois Natural Resource Trustees represented by the Illinois Attorney General's Office, filed a claim for natural resource damages in the bankruptcy proceeding. Lyondell Chemical Company, et al., provided compensation to the public based on determination that natural resources were injured resulting from releases into the environment of hazardous substances, including but not limited to, metals, such as zinc, arsenic, cadmium, and lead from a former zinc smelting facility at Hegeler, Illinois, that was originally known as Hegeler Zinc (Figure 1). The settlement, entered in the US District Court on March 12, 2010, provided approximately $1.5 million to be used for natural resource restoration. In 2013 two plans were drafted, a Work Plan and a Restoration Notice, describing restoration activities to be carried out with a portion of these funds; and in 2015 $1 million was swept from the Natural Resource Restoration Trust Fund, where this money is stored. A restoration planning effort is ongoing for the remaining funds; however, as a result of the sweep of funds the Trustees anticipate completing less restoration than otherwise would have been pursued.

Similar to past restoration notices, this notice was developed to describe the Trustees' plans to use Hegeler Zinc Danville (HZD) restoration funds to implement a time critical restoration activity at a conservation site, Forest Glen; and support of another Natural Resource Damage Assessment restoration project, along the Saline Branch at Crystal Lake Park in Urbana. The Forest Glen project is a time critical action due to concern over a 6-acre detention basin draining. This basin provides water quality protection to the Vermilion River. The Saline Branch project is a time critical action to keep restoration activities ongoing at an approved restoration site, Crystal Lake Park in Urbana. The Crystal Lake project includes floodplain and instream restoration along the Saline Branch. Instream habitat in the form of pools and riffles will be implemented and rain gardens will be constructed to enhance the quality of stormwater runoff.

[1] Millennium Petrochemicals is the final corporate successor to the historical chain of operations, and is owned by Lyondell Basell Companies.

NRDA Bankruptcy Claim

The Former Hegeler Zinc Facility (the Site) in Hegeler, Illinois, operated from 1906 to 1954. This ~100-acre facility produced zinc slab and rolled zinc products, as well as sulfuric acid, resulting in slag waste. The large amounts of slag containing unburned residues and metals were stored in piles onsite. Based on the work of the United States Environmental Protection Agency (USEPA), the site was listed on the National Priorities List, or Superfund, in 2005. After which time, USEPA took the lead of a remedial investigation which consisted of soil, sediment, and groundwater sampling on and off site. Results showed that contaminates (mostly from various metals) not only affected the smelting site but nearby residences and streams, notably Grape Creek, which is hydraulically connected to the Vermilion River. In 2009 one of the site's responsible parties, Millennium Petrochemicals[1], filed bankruptcy along with other Lyondell entities. In response, IDNR and IEPA with legal representation by IAGO prepared an NRDA bankruptcy claim based on injuries to groundwater, surface water (including an Unnamed Tributary and Grape Creek), aquatic resources, and terrestrial resources (including grassland habitat). As a result of this claim, the State Trustees became parties to a Consent Decree approved by the bankruptcy court between the Lyondell entities, the United States of America, and a number of other states and received a settlement of its claim. To make the public whole for injuries to natural resources as a result of releases of hazardous substance, the State Trustees will continue to identify and fund efforts to preserve and enhance ecological features in the region.

Overall Restoration Planning Vision

The overall goal of the Natural Resource Damage Assessment and Restoration (NRDAR) effort is to restore, enhance, and/or preserve similar resources as to those injured. Target community types for this specific NRDA effort, includes but are not limited to, grassland and stream habitat. At this time funds will likely be spent somewhere off site as USEPA continues to lead the remedial investigation of the Superfund site. Preference will be given to projects in the same general area/watershed of the injury (Hydrologic Unity Code (HUC) 8 Watershed = Vermilion (Wabash Basin); Figure 2).

Restoration Planning Efforts

The Trustees recognize the need to implement time critical activities to provide the most benefit to regional resources. Two previous documents have been drafted describing other time-critical activities the Trustees are funding. A work plan was drafted that outlines the use of $16,173 of the HZD NRDA funds for a dam removal monitoring effort, which is being used in cooperation with a federally matched state wildlife grant (IDNR 2013a). The monitoring effort includes sampling fish, mussels, and water quality pre and post dam removal. The proposed dam removals are located in Danville Illinois. A restoration notice was also drafted describing the state NRDA program's assistance with an endangered mussel translocation project (IDNR 2013b). The goal of this project is to increase the populations of two endangered Illinois mussel species, Northern Riffleshells and Clubshells, through translocation from the Allegheny River system in Pennsylvania to the Vermilion River basin (Wabash River drainage) in Illinois. Long term monitoring is an essential component to determine whether the translocation was a success. Previous translocations (2010 and 2012) resulted in positive results. Therefore additional funds were needed to continue the project. Approximately $80,000 in NRDA HZD restoration funds are being used for the 2013-2018 translocation efforts. Since 2010 a total of four translocations have taken place with a current total of 2,099 Northern Riffleshell and 1,766 Clubshell placed in eight sites in the Vermilion River basin. Additional translocations are expected in 2016 thru 2018. The workplan and restoration notice

along with progress reports are made available to the public via the IDNR NRDA Program's website: http://www.dnr.illinois.gov/programs/NRDA/Pages/HegelerZincDanville.aspx

IDNR CAS staff would like to support two additional time-critical projects further described herein. The first time-critical project includes assisting the Vermilion County Conservation District (VCCD) with a detention basin repair at a conservation site near the Hegeler Zinc Danville site, Forest Glen Nature Preserve (Figure 3). Significant erosion is occurring in an emergency spillway, which could compromise the stability of the structure. IDNR HZD funds (~$10,000) would assist in the repair, which is important to the overall water quality of the Vermilion River. The Forest Glen detention basin contributes to water quality protection of the Vermilion River by capturing sediment and nutrient runoff from surrounding agricultural fields (an approximate 600 acre drainage basin). Furthermore, in a pool downstream from the spillway, before water enters the Vermilion River, there is a known population of Mottled Sculpin. The Mottled Sculpin is a fishery categorized as a species in greatest need of conservation; their distribution oftentimes limited by physical factors such as temperature (requires cool water streams). If the detention basin would fail the rush of water could wipe out this known population of Mottled Sculpin.

The second project the CAS would like to utilize HZD settlement funds for is support of another Illinois NRDA project in the Vermilion River Watershed. It is an instream and floodplain restoration project along the Saline Branch in Crystal Lake Park, Urbana IL (Figure 4). This project has an approved restoration plan (IDNR 2014), which can be found on the NRDA website at: http://www.dnr.illinois.gov/programs/NRDA/Pages/SalineSalt.aspx. There is $180,000 available for the Saline Branch project per the UofI/Sanitary District/CEDA Inc. Settlement. A Phase II restoration effort will be implemented later, which includes $270,000 in restoration funds to be used along the Salt Fork, also per the UofI et al. Settlement. Multiple matching fund sources were pursued for the Saline Branch project but the CAS was unsuccessful in securing additional funds. Therefore, to complete the project as proposed: 3 instream riffle-pool structures and 2 rain gardens with an educational and monitoring component, an additional $85,000 is required. Construction elements cannot be sacrificed for other project components such as design and monitoring, for risk of limited benefit to stream resources. Utilizing the HZD restoration funds to assist in this restoration effort has been justified because the Saline Branch project is in the same watershed as the HZD area of injury (the Vermilion River Watershed) and similar resources are being addressed (instream and floodplain habitat restoration). Pre/post restoration monitoring will be conducted to observe the biological and geomorphological changes over time, and ensure project success. In addition, an existing educational curriculum at the Urbana Park District (UPD) will be enhanced, to include information to the public regarding the benefits of the restoration project. The Saline Branch project includes multiple partners including the IDNR, UPD, United States Geological Survey, and University of Illinois whom provide valuable expert advice. The involvement of these groups illustrates the community's investment into this environmentally beneficial effort. The 2014 Restoration Plan [Ref: Final Restoration Plan Phase I: Stream & Floodplain Restoration along the Saline Branch Champaign County, Illinois] will serve as the basis for the Illinois NRDA program's assistance.

Beyond the four projects described herein, a restoration planning effort is ongoing for the Vermilion River Watershed Settlements. Multiple IDNR staff has been reached out to, including field biologists within, but not limited to, IDNR's Division of Fisheries, Division of Natural Heritage, Division of Wildlife, Land Management, Nature Preserves Commission, and Watershed Protection Program. Outside of the department many other groups have been reached out to, such as area NRCS/SWCDs, the Illinois Environmental Protection Agency, the United States Fish and Wildlife, the Champaign County Forest Preserve District, and local watershed groups.

A list of project alternatives will be screened against factors, such as restores habitat of injured state resources, technical feasibility, cost effectiveness, consistent with regional planning etc., which will be documented in a restoration plan subject to public comment. The public, including watershed groups, are encouraged to be a part of this process. Avenues for the public to participate include the following: public meetings or availability sessions, review of the draft restoration plan, and submitting restoration suggestions through the CAS website: http://www.dnr.illinois.gov/programs/NRDA/Pages/NRDARestorationFactSheet.aspx.

Compliance

IDNR's Comprehensive Environmental Review Process (CERP) will be applied. CERP coordinates internal reviews of actions funded or performed by IDNR to ensure that they comply with relevant state and federal environmental statutes.

Funding Breakdown:

Total available for restoration = $1,516,173

Dam Removal Monitoring	$16,173
Mussel Reintroduction Project	$80,000
Saline Branch Restoration Assistance	$85,000
Forest Glen Detention Basin Repair Assistance	$10,000
Sweep	$1,000,000
Remaining restoration dollars available	**$325,000**

References

IDNR. 2013a. Work Plan for the Hegeler Zinc Facility, Hegeler ILNRDA Bankruptcy Settlement. http://www.dnr.illinois.gov/programs/NRDA/Documents/HZD.WorkPlan.for.restoration.planning-3.1.13.pdf

IDNR. 2013b. Restoration Notice for the Continuation of a Mussel Reintroduction Effort Vermilion River Watershed, Illinois. http://www.dnr.illinois.gov/programs/NRDA/Documents/HZD.Restoration.Notice.7.31.13.pdf

IDNR. 2014. Final Restoration Plan Phase I: Stream & Floodplain Restoration along the Saline Branch Champaign County, Illinois. http://www.dnr.illinois.gov/programs/NRDA/Documents/Phase%20I%20-%20Saline%20Branch%20FINALrestplan%20July%202014.pdf

Figure 1. Photos of the Hegeler Zinc Facility in Vermilion County, IL. Left: an aerial photo of the facility in 1940 (USEPA presentation). Right: a zinc slag pile, residual waste of facility operations (picture taken by CAS staff).

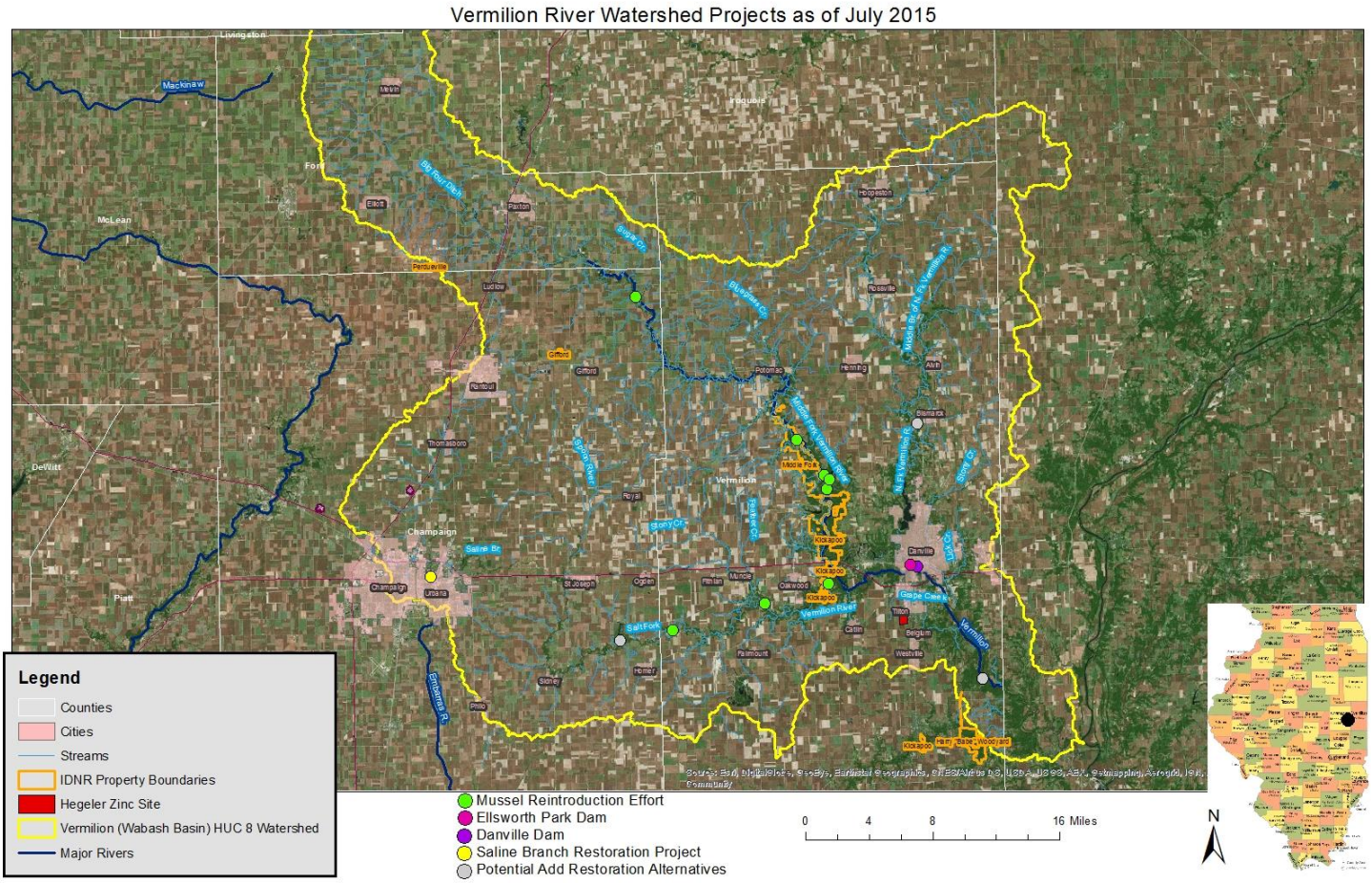

Figure 2. The Hegeler Zinc Facility in Vermilion County, IL and surrounding area, including the mussel reintroduction project area, the Dam Removal locations, and the Saline Branch project site. This map was obtained through IDNR Geographic Information System (GIS).

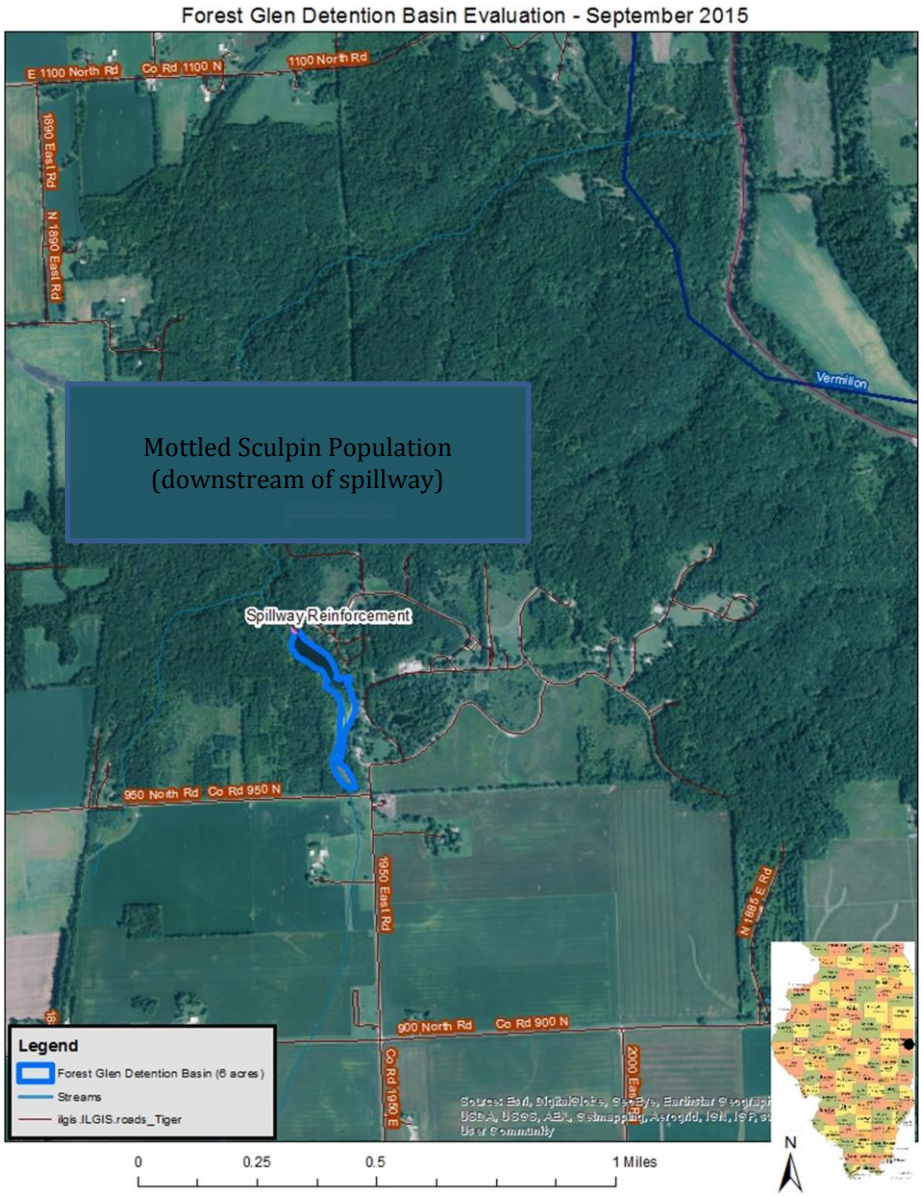

Figure 3. The Forest Glen Detention Basin in Vermilion County, IL and surrounding area. This map was obtained through IDNR Geographic Information System (GIS).

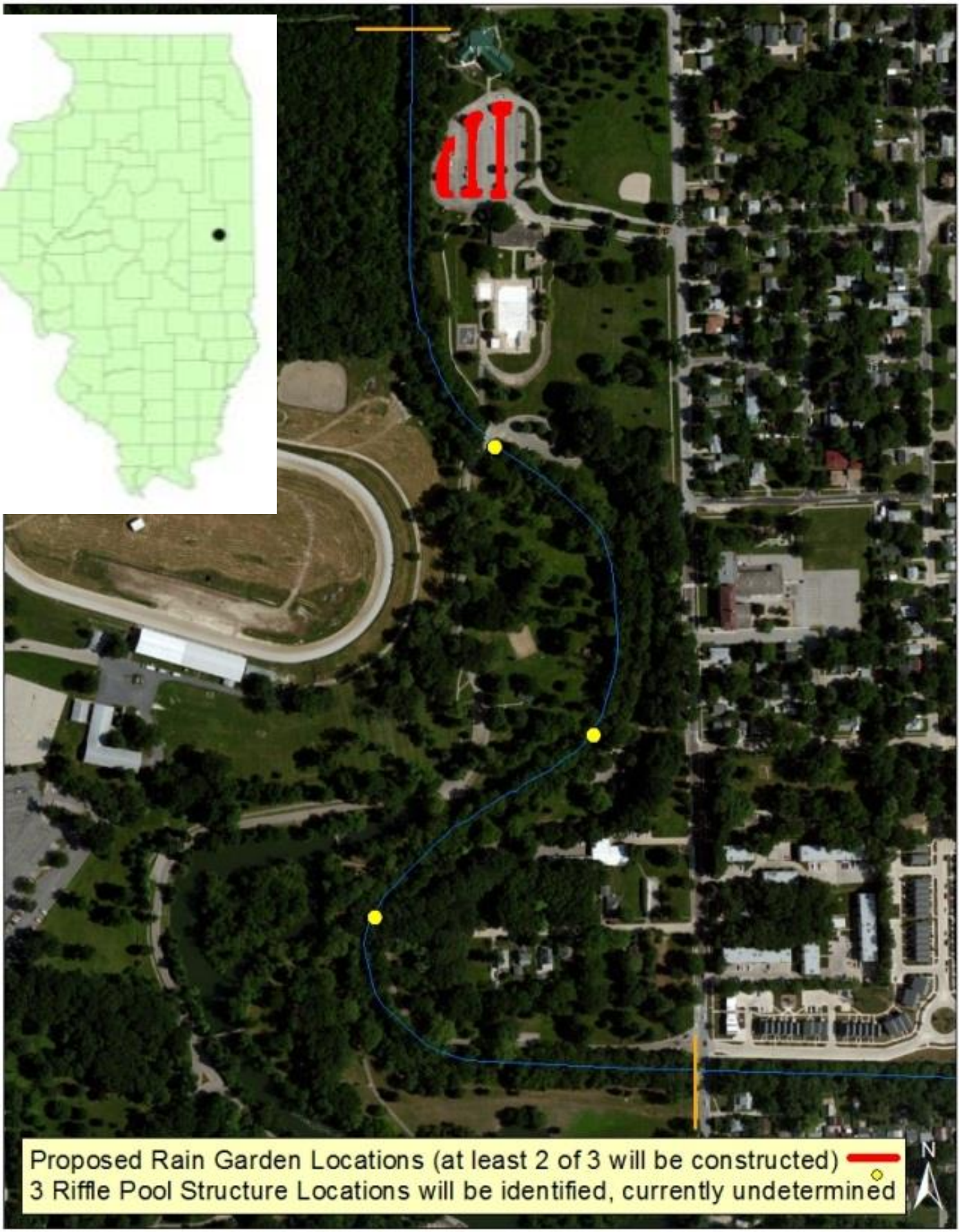

Figure 4. The Crystal Lake Park instream and floodplain restoration effort in Champaign County, IL. This map was obtained through IDNR Geographic Information System (GIS).