Examining DNR's role in the Natural Resource Damage Assessment process.

Protecting and Restoring Illinois' Natural Resources

(Photo by Scott Simpson, DNR Natural Heritage.)

Story By Ann Fletcher, Jessica Forrest and Beth Whetsell
Photos by Debbie Bruce, DNR ORC

What value would you place on a day's limit of fish or a day spent hiking, birding, wildlife watching or sightseeing? How much is a stream worth? What is the monetary value of serenity?

When assessing injuries to natural resources and determining how to restore the impacted resources, it is the job of the Natural Resources Trustees to ask these very questions.

Unfortunately, hazardous substances or oils—heavy metals, gasoline, pesticides, ammonia, cleaning products and more—enter the natural environment of Illinois on a daily basis. Although many releases (spills, leaks or discharges due to a pipeline break, factory malfunction, equipment failure, inappropriate waste disposal, leachate from a landfill or a vehicle accident) occur on a small scale, all spills are detrimental in some way, and some can significantly harm or injure Illinois' natural resources.

Characterized as injuries, contaminant-related impacts have the potential to affect a broad range of Illinois wildlife, habitat, biota and ecological and human services. Fortunately, federal law provides a Natural Resource Damage Assessment process for state and federal agencies to utilize when attempting to seek compensation from

Prairie restoration efforts, such as those at the Prairie Ridge State Natural Area in Marion County, may entail seeding, prescribed burning and removal of invasive species.

(Photo by Beth Whetsell, DNR OREP.)

A riffle project in an unnamed tributary to Salt Creek in Logan County occurred as a result of the Natural Resource Damage Assessment process.

parties responsible for oil and hazardous substance releases that negatively affect natural resources.

In Illinois, agencies actively involved in the process include the Department of Natural Resources and Illinois Environmental Protection Agency, with legal representation provided by the Illinois Attorney General's Office. The federal trustees the state commonly works with are the U.S. Fish and Wildlife Service and the National Oceanic Atmospheric Administration, which are represented by the United States Department of Justice. Collectively, these agencies are referred to as Natural Resource Trustees.

Representing DNR in upholding the NRDA mission is the responsibility of the Contaminant Assessment Section in the Office of Realty and Environmental Planning. Working as a state co-trustee with the IEPA, CAS cooperatively assesses the nature and extent of injuries to the natural resources and services of Illinois. The result of this collaborative effort provides a factual basis for evaluating the need, type and scale of compensatory actions. Compensation can be in the form of restoration, rehabilitation, replacement and/or acquisition of the equivalent injured resources. This article focuses on restoration efforts completed to date.

Restoration

The ultimate goal of the NRDA process is to expediently restore impacted natural resources to their whole, or un-injured, condition. As an indirect benefit, NRDA also provides an avenue for responsible parties to assume responsibility for natural resource injuries. Through both direct and compensatory restoration, responsible parties can avoid litigation through good-citizen efforts aimed at the restoration and/or compensation of lost resource functions and services.

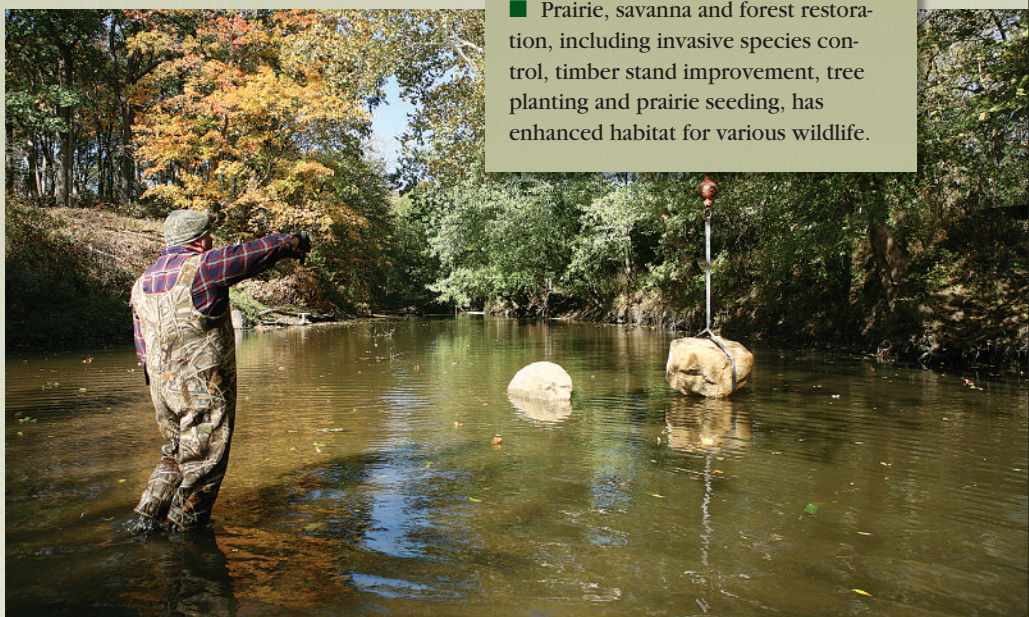
For Natural Resource Trustees, a significant portion of the NRDA effort involves the development of a restoration plan to guide the process of restoring injured natural resources and services. Typical restoration plans identify and evaluate a range of restoration alternatives, solicit public comment and provide rationale for the selection of restoration project(s).

Public review of draft restoration plans and project designs are integral components of the process. Through this review, Trustees seek comment on the approaches used to assess natural resource injuries and also on the projects proposed for the restoration of injured natural resources or services. Anyone who reviews the draft restoration plans is encouraged to comment on any part of the draft, including descriptions of the affected areas, the proposed restoration projects and/or the restoration selection process. The public also is encouraged to evaluate and comment on the feasibility of the proposed restoration projects.

Restoration completed to date

- Creation of wetlands, including a moist-soil unit, shallow-water wetlands and vernal ponds, have resulted in habitat for waterfowl, migratory birds and other terrestrial and aquatic wildlife.
- In-stream restoration, such as boulder clusters, stone toe protection, longitudinal habitat stone and riffles, has increased bank stabilization and provided habitat for aquatic wildlife.
- Prairie, savanna and forest restoration, including invasive species control, timber stand improvement, tree planting and prairie seeding, has enhanced habitat for various wildlife.

(Photo by Adele Hodde.)



An in-stream enhancement project in Sugar Creek in Logan County involved placement of boulder clusters to enhance aquatic habitat.

DNR stream biologists conduct fish surveys to monitor effectiveness of restoration measures.

Once a plan is finalized, the Trustees act to implement the preferred restoration project(s).

Monitoring

To determine the impact a restoration project has had on the environment, qualitative and quantitative monitoring is conducted to evaluate whether the resources that were lost due to the injury are restored.

Specific monitoring plans are developed on a case-by-case basis to effectively meet requirements of each restoration effort. Monitoring surveys most commonly associated with NRDA projects include sampling resources, such as fish, aquatic and terrestrial insects, mussels, plants, reptiles and amphibians as well as resident birds and the overall habitat. At every site, qualitative data, such as photographs and general observations, are recorded.

NRDA Accomplishments

Similar to DNR's mission, CAS strives to manage, protect and sustain Illinois' natural and cultural resources; provide resource-compatible recreational opportunities; and, promote natural resource-related issues for the public's safety and education. DNR staff have dedicated a significant amount of time and effort to the NRDA program which has provided contributions to the Natural Resource Restoration Trust Fund totaling more than $2 million. Funds placed in this trust are used to implement restoration projects throughout the state.

To date, more than 20 restoration projects—with expenditures totaling more than $500,000—have been designed and implemented throughout the state, and staff are exploring restoration alternatives for eight additional projects.

NRDA: A win/win solution

Natural Resource Damage Assessments allows responsible parties to help restore natural resources as good citizens; the public receives just compensation for its losses; and Illinois natural resources such as fish, wildlife, and habitat are protected and restored.

Because of NRDA, people from across the world can continue to enjoy Illinois' natural resources that are once again healthy and safe.

The authors are with the DNR Natural Resource Damage Assessment program and based in the Springfield headquarters. For further information, call (217) 785-5500.

NRDA Partnerships

- DNR and IEPA programs, such as: DNR's Conservation Reserve Enhancement Program and IEPA's 319 Program
- Biological experts from DNR, IEPA, the Illinois Nature Preserve Commission, Institute of Natural Resources Sustainability, Natural Resource Conservation Service and Soil and Water Conservation, United States Geological Survey and universities
- Land mangers
- Site superintendents
- Various agencies/organizations, including park districts, city government, drainage districts, the Illinois Department of Transportation and private companies
- Private landowners

Get involved

Get involved in the NRDA process by attending public meetings and/or public availability sessions and reviewing public notices in newspapers or draft restoration plans at your local library or online.

For more information, visit the DNR Contaminant Assessment Section Web site at www.dnr.state.il.us/orep/cas.

The Natural Resource Damage Assessment process helps ensure a safe and healthy environment.