

## Overview

NatureServe is a 501(c)(3) non-profit organization based in Arlington, VA. NatureServe's mission is to leverage the power of science, data, and technology to guide biodiversity conservation and stewardship. For nearly 50 years, NatureServe has been the authoritative source for biodiversity data and the central coordinating organization for a network of over 60 member programs throughout North America. Together, NatureServe and the Network of member programs are dedicated to developing, collecting, and analyzing biodiversity information to support informed decisions about managing, protecting, restoring, and conserving natural resources. NatureServe and the Network develop and manage data for over 100,000 species and ecosystems, answering fundamental questions about what exists, where it is found, and how it is doing.

NatureServe was incorporated in 1994 as the Association of Biodiversity Information, and formally changed its name in 2001. The history of NatureServe goes back nearly 50 years as part of The Nature Conservancy which established the first state natural heritage program in 1974.

## Vendor Personnel and Qualifications

NatureServe employs 60 staff and is headquartered in Arlington, VA. Its Technology & Partnerships Department consists of 16 full-time technologists including software developers, project managers, IT support and system administrators. NatureServe staff profiles are available on our website at <https://www.natureserve.org/whos-who>.

NatureServe is a qualified Esri Partner Network solution provider. Visit our [Esri Partner listing](#) for an overview of our services and solutions.



## Vendor Experience

NatureServe has successfully developed and delivered hundreds of projects to clients in the government, corporate, and non-profit sectors. We have extensive experience developing work plans for multi-year, multi-million dollar projects that require coordinating the work of dozens of staff and subcontractors. We also have a strong track record of delivering winning repeat business with our clients.

NatureServe has successfully developed and deployed its hosted Software as a Service (SaaS) Environmental Review Tool (ERT) solution for 15 state agency customers, with an additional state system in development now for the Michigan Natural Features Inventory. Current agency customers with ERT solutions and links to these states' production sites are listed below.

- Arizona Game and Fish Department, <https://ert.azgfd.gov/>

- Colorado Natural Heritage Program, in partnership with Colorado Parks and Wildlife and other partners <https://codex.cnhp.colostate.edu/>
- Kansas Department of Wildlife and Parks, <https://ert.ksoutdoors.com>
- Louisiana Department of Wildlife and Fisheries, <https://laert.natureserve.org/>
- Minnesota Department of Natural Resources, <https://mce.dnr.state.mn.us/>
- Missouri Department of Conservation, <https://naturalheritagereview.mdc.mo.gov/>
- Nebraska Game and Parks Commission, <https://cert.outdoornebraska.gov/>
- New Mexico Department of Game and Fish and Natural Heritage New Mexico, <https://nmert.org/> and <https://nmedb.org/>
- North Carolina Department of Natural and Cultural Resources, <https://ncnhde.natureserve.org/>
- Pennsylvania Department of Conservation and Natural Resources, <https://conservationexplorer.dcnr.pa.gov/>
- Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission, <https://wildlifeactionmap.pa.gov/>
- South Dakota Game, Fish and Parks, <https://ert.gfp.sd.gov/>
- Tennessee Department of Environment & Conservation, <https://ert.tdec.tn.gov/>
- Virginia Department of Conservation and Recreation, <https://vanhde.org/>

## NatureServe's Environmental Review Tool

NatureServe released the first iteration of the ERT in 2012 in collaboration with the Virginia Natural Heritage Program to replace their legacy online environmental review system that was built on aging technology. Since 2012, NatureServe has successfully developed and configured custom solutions for more than a dozen additional states, including multiple site deployments in several states.

The ERT core product is a web application framework that provides a web mapping interface, built on Esri's ArcGIS Server JavaScript API, combined with a Drupal Content Management System. ERT's core functions allow:

- Access to natural resource and other spatial layers via a secure web map.
- The submission of projects for environmental review screening.
- The automated review (via a geoprocessing service) of submitted projects and production of PDF reports, including embedded maps.
- The closer internal review of projects, via the web map for ERT clients that opt for this workflow.

Drupal is a free, open source, cross platform Content Management System (CMS) built on PHP. It is used by tens of thousands of websites worldwide and has a very active developer community. Drupal is very

modular, and the core system can be extended by plugin modules. ERT is, in fact, a module which extends Drupal to provide a web map and other project review functionality.

Drupal is also secure, with a very fine-grained user access system. ERT clients need assurances that site contents will be blocked from unauthorized access and that control will be granular enough to support nuances in user permissions. For example, the system could allow certain users to see only very summarized resource data, while allowing other users access to the most sensitive information. Drupal can tailor access down to individual fields, based on user access roles, and seamlessly enforces these access privileges across the system.

ERT is fundamentally a web-based system for accessing and analyzing GIS data. Esri’s ArcGIS Server is the industry leading platform for delivery of web-based GIS services, providing secure access to map, feature and image services, as well as access to the full power of Esri’s ArcGIS geoprocessing capabilities. ERT uses ArcGIS Server for its GIS needs. Layers are hosted for display and query and a geoprocess performs the detailed GIS analyses required for project review. System functionality is therefore logically and cleanly split between the Drupal front end and the ArcGIS Server backend, so that each component performs only the job that it is best at.

Visit NatureServe’s website product page for the ERT at <https://www.natureserve.org/tools#ert> to learn more details about the capabilities of this customizable, off-the-shelf web application framework.

The screenshot displays the ERT software interface. On the left, there is a text-based project information section. The top right shows a map of the project area with various colored overlays. Below the map, there is a detailed search results table and a legend for the GIS layers.

**1. PROJECT INFORMATION**

Project Name: **Prahls Island Test**  
 Date of Review: **3/31/2015 09:19:03 AM**  
 Project Category: **Timber harvesting and Vegetation Management, Control of species**  
 Project Area: **9.15 acres**  
 County(s): **Bucks**  
 Township/Municipality(s): **TINICUM**  
 ZIP Code: **18947**  
 Quadrangle Name(s): **LUMBERVILLE**  
 Watersheds HUC 8: **Middle Delaware-Musconetcong**  
 Watersheds HUC 12: **Paunnaucussing Creek-Delaware**  
 Decimal Degrees: **40.445256 N, -75.067982 W**  
 Degrees Minutes Seconds: **40° 26' 42.9232" N, 75°**

**2. SEARCH RESULTS**

Agency	Results
PA Game Commission	Potential Impacts
PA Department of Conservation and Natural Resources	No Known Impacts
PA Fish and Boat Commission	Conservation
U.S. Fish and Wildlife Service	Potential Impacts

As summarized above, Pennsylvania Natural Diversity Inventory impacts to threatened and endangered and/or special status species above indicates "No Further Review Required". If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

**A Repeatable Environmental Review Tool Software Solution for State Agencies**