



# PROGRESS & THE ENVIRONMENT

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Volume 11 Issue 3

[www.skellyloy.com](http://www.skellyloy.com)

Summer 2007

**SKELLY AND LOY**, enjoying its 38th year in business, is a 180-person, engineering-environmental consulting firm that is consistently ranked among *Engineering News Record's* Top 200 Environmental Firms. The company provides expert engineering, environmental, geologic, water resources, waste management, and cultural resource services throughout the United States and abroad.

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## Ensuring Regulatory Compliance For Threatened And Endangered Species



Skelly and Loy staff, conducting the largest Phase II bog turtle (*Clemmys muhlenbergii*) survey since its inception, make their way through some very tough terrain at a 32-acre wetland site in Chester County, Pennsylvania.

**F**ederal and state endangered species regulations can be challenging and require solutions based on an exceptional degree of both biological and innovative engineering design. While many firms offer broad-based natural resource services, threatened and endangered species services represent a specialized niche area. Skelly and Loy's strength for answering the requirements of the rigorous field is our expert staff, several of whom are recognized qualified species experts by the United States Fish and Wildlife Service (USFWS) and state wildlife agencies. Compliance with federal and state protection statutes can be an issue with any project potentially affecting a protected species or critical habitat, including transportation, land development, infrastructure development, and resource extraction. Given the decline of biodiversity on national and state levels, the increased need for ecological studies associated with threatened and endangered species will accompany the increasing number of species of concern. Ensuring regulatory compliance for the client while delivering the project goal can be achieved when potential issues with protected species are proactively addressed during the project planning phases.

## Ensuring Regulatory Compliance For Threatened And Endangered Species

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Biologists who are versed in threatened and endangered species issues at Skelly and Loy specialize in developing and executing Best Management Practices (BMP's) and/or Special Conditions for avoidance and minimization of impacts to listed species. Our experience has allowed us to effectively coordinate with agencies on numerous projects, enabling our clients to proceed with minimal disruption to their projects.

The Warren Street U.S. Route 222 Reconstruction/Relocation project in Berks County, Pennsylvania, is an example of how large-scale projects can require careful planning and deliberation on the part of the client, in this case, the Federal Highway

Administration (FHWA) and the United States Army Corp of Engineers (USACE) in conjunction with the Pennsylvania Department of Transportation (PennDOT). In 1998, the bog turtle (*Clemmys muhlenbergii*) was placed on the list of threatened species by the USFWS. During that time, preparations to widen a section of a two-lane highway to a four-lane highway complete with access ramps were well underway.

Unfortunately, the project included wetland crossings in or near existing populations of the species. During the nine years of the project, Skelly and Loy's staff was available to develop construction monitoring protocols as part of threatened and endangered species compliance with the USACE

Section 404 Authorization issued for the project.

Throughout Skelly and Loy's long involvement in the project, we conducted construction monitoring in sensitive areas within the project footprint, conceived protocols for the avoidance of chemical spills and other activities that might indirectly or directly impact the bog turtle, and instructed construction staff on the recognition of the species and the procedure to be followed in the event of finding a bog turtle in a construction area. Our understanding of construction projects combined with our species of concern expertise enabled us to provide our client with the best possible strategies to complete the project on time without



Skelly and Loy staff provided environmental monitoring of a nesting pair of bald eagles as part of a permit requirement. Maps from the resulting data were used to plot flight directions during foraging.

## Ensuring Regulatory Compliance For Threatened And Endangered Species

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impacting the species and within compliance of the Federal Endangered Species Act and Federal Clean Water Act Section 404 Authorization.

The MD-30 Hampstead Bypass project is another example of a transportation improvement project that required bog turtle construction monitoring and construction staff training. Skelly and Loy provided the contractor and Maryland State Highway Administration (MD SHA) with bog turtle training as part of the ongoing construction monitoring for the MD-30 Hampstead Bypass project. The training consisted of a PowerPoint Presentation describing the life history and recognition of the species. The training attendees were presented with a protocol for handling the occurrence of a bog turtle wandering into a construction area. They were provided with a list of our on-staff bog turtle surveyors who could be called in the event of direct or indirect impacts to the species. Skelly and Loy bog turtle surveyors are available day or night to make recommendations and conduct agency coordination should accidental impacts occur.



Indiana bat survey protocols are followed to the letter by Skelly and Loy staff to ensure regulatory compliance.

Threatened and endangered species biologists at Skelly and Loy provided construction monitoring and training on a variety of small and large private projects. The Columbia Gas Line 1278 Project in Northampton County consisted of the placement of a new pipe line. Wetlands within the right-of-way proved to be habitat for bog turtles. Our bog turtle surveyor provided construction monitoring and remained on-site during the wetland crossings to make recommendations and to move turtles away from the construction area, should they be encountered.

Having an on-site species of concern monitor is one of the many alternatives to undergoing formal consultation with the agencies responsible for oversight of a listed species. Our staff was also able to provide recommendations for the operation of heavy equipment within sensitive wetlands. The project was completed on schedule, and, thanks to having a biologist on-site, avoidance of impacts to the species was achieved.

In addition to providing guidance during construction, our threatened and endangered species biologists have developed numerous BMP's or Special Conditions accepted by the agencies for many species over a broad range of projects. These BMP's and Special Conditions have allowed a project to proceed without costly and time-consuming adjustments to



Bog turtle monitoring during active construction and development projects is routinely performed by Skelly and Loy staff.

the design or extended agency consultation.

Our threatened and endangered species biologists are constantly finding innovative methods to protect the species and protect their clients, thereby allowing time-tested effective money-saving alternatives to formal consultation.

For more information on threatened and endangered species, please contact Teresa Amitrone at Skelly and Loy's Harrisburg office and visit [www.skellyloy.com](http://www.skellyloy.com).

**PROGRESS &  
THE ENVIRONMENT**  
is a publication of  
**SKELLY AND LOY, INC.**

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*Skelly and Loy is determined to exceed total client satisfaction in the performance of quality engineering and environmental services*

**CORE VALUES**

*To produce quality work, on time, and within budget  
To keep staff members gainfully employed  
To earn a reasonable profit*

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