Conservation on Golf Courses is available for purchase through USGA and Sleeping Bear Press. It is the first book that brings together the latest information on bird and bird habitat management as it applies to golf courses and similar settings.
The hands-on manual covers everything from general concepts, to specific techniques, and vital information on:

- Design and management for habitat conservation
- Management techniques for specific bird species
- Artificial nest structures
- Plants beneficial to bird populations
- Birds and golf course maintenance
- Dealing with problem birds

Wetlands Management Manual for Golf Courses

MACED

Don Harker
Gary Libby

Start Date: 1996
Number of Years: 3
Total Funding: $35,000

Objectives:

Develop an illustrated wetlands management manual for golf courses that uses a general narrative overview, drawings, case studies, key restoration techniques and indicator species to walk managers through a process of understanding wetlands.

This project will create an illustrated booklet of key wetlands restoration techniques and case studies for golf course superintendents. A final revision of Wetlands Management Manual for Golf Courses is expected during the winter of 2000. The booklet should be available for purchase through USGA in early 2001.
The approach is to use a general narrative overview, drawings, case studies, key restoration techniques and indicator species to walk managers through a process of understanding wetlands, leading to the ability to conserve, create/restore, and manage wetlands. The booklet will be as brief as possible and still cover the necessary material.
A reference method for the golf course manager to follow when working to conserve, restore, or construct a wetland was designed for the booklet. That method combines drawings with a plant species matrix. The drawing depicts (in aerial cross-section) different wetland conditions for the wetland types. A matrix contains the key species for that type and gives information about where in the wetland to plant a particular species, what restoration techniques to use, some wildlife value, flower color and size, and bloom period information. This easy reference approach is new and should prove to be a useful approach for land managers.

Developing Methods to Enhance Amphibian Diversity on Golf Courses: Effects of Golf Course Construction on Amphibian Movements and Population Size

University of Rhode Island

Peter Paton

Start Date: 1998
Number of Years: 3
Total Funding: $72,000

Objectives:

1. *Determine the pre-construction population size for amphibians breeding at ponds within the boundaries of a proposed golf course.*
2. *Determine pre-construction travel corridors and movement patterns for amphibians at this same site.*
3. *Quantify population size and movement patterns following construction on the golf course.*

Amphibian movement chronology and community structure has been monitored at two ponds and the surrounding landscape within the boundaries of a proposed golf course on the Univ. of Rhode Island campus since mid-February 1998. A total of 13,131 amphibian captures representing 11 species were documented, with six species of reptiles (61 capture events) and 8 species of mammals (1,475 captures) also detected.
In 1998, we found that the young of some species (Green Frog, Pickerel Frog, Spotted Salamander, and Red spotted Newt) dispersed in random directions across the landscape, while other species exhibited habitat selection and avoided edges between wooded habitat and a turf field (Wood Frog, Spring Peeper, Gray Tree Frog, American Toad). Movement data for metamorph amphibians (i.e., newly transformed young) gathered in 1999 generally supported the patterns observed in 1998. In addition, we did find that adults of some species readily moved across a 68 m wide turf field (Pickerel Frog, Green Frog), while adults from other species were rarely observed crossing this expanse of turf grass (Wood Frog, Spotted Salamander, Spring Peeper, Gray Tree Frog). Experiments conducted in 1998 showed that amphibians preferred to move through wooded habitats rather than turf, and grass height did not affect frog movement patterns. Data collected in 1998 and 1999 investigating movement patterns of amphibians across the landscape generally verified this relationship, as species richness and abundance was much greater in a contiguous forest patch, than near the ecotone between woods and a turf field.