

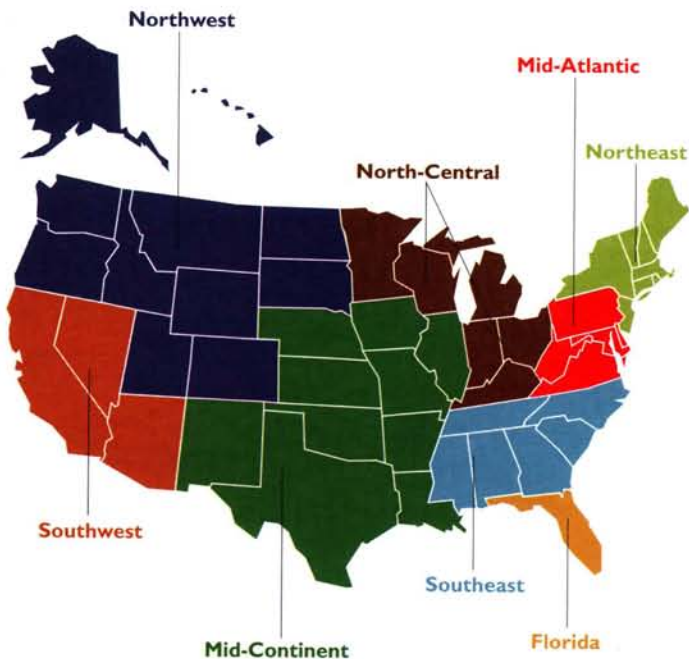


GREEN SECTION  
NATIONAL OFFICES

**United States Golf Association, Golf House**  
P.O. Box 708  
Far Hills, NJ 07931  
(908) 234-2300 Fax (908) 781-1736  
**James T. Snow, National Director**  
jsnow@usga.org  
**Kimberly S. Erusha, Ph.D., Director of Education**  
kerusha@usga.org

**Green Section Research**  
P.O. Box 2227  
Stillwater, OK 74076  
(405) 743-3900 Fax (405) 743-3910  
**Michael P. Kenna, Ph.D., Director**  
mkenna@usga.org  
904 Highland Drive  
Lawrence, KS 66044  
785-832-2300  
**Jeff Nus, Ph.D., Manager**  
jnus@usga.org

**Construction Education Program**  
770 Sam Bass Road  
McGregor, TX 76657  
(254) 848-2202 Fax (254) 848-2606  
**James F. Moore, Director**  
jmoore@usga.org



REGIONAL OFFICES

● **Northeast Region**  
**David A. Oatis, Director**  
doatis@usga.org  
**James H. Baird, Ph.D., Agronomist**  
jbaird@usga.org  
P.O. Box 4717  
Easton, PA 18043  
(610) 515-1660 Fax (610) 515-1663  
**James E. Skorulski, Senior Agronomist**  
jskorulski@usga.org  
1500 North Main Street  
Palmer, MA 01069  
(413) 283-2237 Fax (413) 283-7741

● **Mid-Atlantic Region**  
**Stanley J. Zontek, Director**  
szontek@usga.org  
**Darin S. Bevard, Agronomist**  
dbevard@usga.org  
485 Baltimore Pike, Suite 203  
Glen Mills, PA 19342  
(610) 558-9066 Fax (610) 558-1135  
**Keith A. Happ, Senior Agronomist**  
khapp@usga.org  
Manor Oak One, Suite 410,  
1910 Cochran Road  
Pittsburgh, PA 15220  
(412) 341-5922 Fax (412) 341-5954

● **Southeast Region**  
**Patrick M. O'Brien, Director**  
patobrien@usga.org  
P.O. Box 95  
Griffin, GA 30224-0095  
(770) 229-8125 Fax (770) 229-5974  
**Christopher E. Hartwiger, Agronomist**  
chartwiger@usga.org  
1097 Highlands Drive  
Birmingham, AL 35244  
(205) 444-5079 Fax (205) 444-9561

● **Florida Region**  
**John H. Foy, Director**  
jfoyl@usga.org  
P.O. Box 1087  
Hobe Sound, FL 33475-1087  
(772) 546-2620 Fax (772) 546-4653  
**Todd Lowe, Agronomist**  
tlowe@usga.org  
127 Naomi Place  
Rotonda West, FL 33947  
(941) 828-2625 Fax (941) 828-2629

● **Mid-Continent Region**  
**Paul H. Vermeulen, Director**  
pvermeulen@usga.org  
9 River Valley Ranch  
White Heath, IL 61884  
(217) 687-4424 Fax (217) 687-4333  
**Charles "Bud" White, Senior Agronomist**  
budwhite@usga.org  
2601 Green Oak Drive  
Carrollton, TX 75010  
(972) 662-1138 Fax (972) 662-1168

● **North-Central Region**  
**Robert A. Brame, Director**  
bobbrame@usga.org  
P.O. Box 15249  
Covington, KY 41015-0249  
(859) 356-3272 Fax (859) 356-1847  
**Robert C. Vavrek, Jr., Senior Agronomist**  
rvavrek@usga.org  
P.O. Box 5069  
Elm Grove, WI 53122  
(262) 797-8743 Fax (262) 797-8838

● **Northwest Region**  
**Larry W. Gilhuly, Director**  
lgilhuly@usga.org  
5610 Old Stump Drive N.W.,  
Gig Harbor, WA 98332  
(253) 858-2266 Fax (253) 857-6698  
**Matthew C. Nelson, Agronomist**  
mnelson@usga.org  
P.O. Box 5844  
Twin Falls, ID 83303  
(208) 732-0280 Fax (208) 732-0282

● **Southwest Region**  
**Patrick J. Gross, Director**  
pgross@usga.org  
**David Wienecke, Agronomist**  
dwienecke@usga.org  
505 North Tustin Avenue, Suite 121  
Santa Ana, CA 92705  
(714) 542-5766 Fax (714) 542-5777

©2005 by United States Golf Association®

Subscriptions \$18 a year, Canada/Mexico \$21 a year, and international \$33 a year (air mail).

Subscriptions, articles, photographs, and correspondence relevant to published material should be addressed to: United States Golf Association, Green Section, Golf House, P.O. Box 708, Far Hills, NJ 07931.

Permission to reproduce articles or material in the USGA GREEN SECTION RECORD is granted to newspapers, periodicals, and educational institutions (unless specifically noted otherwise). Credit must be given to the author, the article's title, USGA GREEN SECTION RECORD, and the issue's date. Copyright protection must be afforded. To reprint material in other media, written permission must be obtained from the USGA.

In any case, neither articles nor other material may be copied or used for any advertising, promotion, or commercial purposes.

GREEN SECTION RECORD (ISSN 0041-5502) is published six times a year in January, March, May, July, September, and November by the UNITED STATES GOLF ASSOCIATION®, Golf House, Far Hills, NJ 07931.

**Postmaster: Address service requested — USGA Green Section Record, P.O. Box 708, Golf House, Far Hills, NJ 07931-0708.**

Periodicals postage paid at Far Hills, NJ, and other locations. Office of Publication, Golf House, Far Hills, NJ 07931.

♻️ Printed on recycled paper