



NATURAL AREAS: Wild or Wonderful?

Natural areas that are planned well and maintained properly can be both wild and wonderful.

BY JIM SKORULSKI,
DARIN BEVARD,
MATT NELSON,
AND
ROBERT VAVREK

Do not expect natural areas to be maintenance free! Annual mowing and/or burning, combined with practices to remove weeds, will be necessary to keep the areas playable and visually acceptable.

Natural areas have been an important part of golf courses ever since the game was developed. Granted, the words *natural area* usually evoke an image of expansive no-mow grassland like those associated with seaside or prairie golf courses. But forested areas, woodlands, meadows, desert, shrublands, wetlands, and riparian areas are all important natural areas that can encompass more acreage of the golf course than expected. Some truly appreciate the environmental benefits, the unique wild look and added challenge the areas add to the golf course. Others view natural areas as unkempt, unsightly, ball-hungry monsters that need to be tamed. Finding a workable balance between the two points of view is often a challenge, but with sound planning and good communication it is possible to incorporate naturalized areas into any golf course.

WHY NATURALIZE?

Naturalized areas provide many environmental benefits on golf courses. Numerous research studies have demonstrated that golf course natural areas can safeguard and enhance water quality and provide important habitat for plants and wildlife.

This habitat is invaluable in urbanized areas where golf courses are the primary green space. Golf courses are frequently touted for their important role in landscape conservation, and natural areas are the key in that regard.

Naturalized rough areas are often created as a means to reduce the total acreage of maintained turfgrass on golf courses. The elimination of weekly mowing and lower water usage can cut operating costs and conserve resources. Naturalizing severe slopes, rocky areas, and other hazardous sites can reduce maintenance headaches. Naturalized areas can also help define playing areas and provide an appealing contrast with the more manicured portions of the golf course. When properly placed, they provide a fair challenge while adding variety and interest to the landscape.

SELECTING THE RIGHT SITES

The location of naturalized areas is often the key to their success or failure. There are some important questions to ask when reviewing sites as potential no-mow areas.

What are your objectives? Define and prioritize what you are trying to accomplish. Do

you want to reduce maintenance, add strategy to the golf course, attract wildlife, protect a water body, or eliminate an eyesore/hard-to-maintain area? Clearly defining the objectives will make it easier to develop a good plan, pick the proper sites, select the right plants, and convince golfers to accept the program.

What are the impacts on play? The type of golf course and golfers' attitudes regarding course conditioning must be understood when developing a naturalization plan. It is equally important to consider the impact the proposed plan will have on pace of play! Like any hazard, the naturalized areas should be positioned properly to add challenge without unfairly penalizing the weakest golfers. Long forced carries from front and middle tees will never be popular and should be avoided. The width of landing areas and the severity of contouring should be considerations. Rough areas that frequently receive play are probably not going to be accepted as no-mow areas. Begin by selecting smaller and less controversial sites for the initial work. This provides an opportunity to learn the establishment and management programs that work best and allows golfers time to accept the new areas.

Use the committee approach when selecting sites and developing program objectives. Participation from members of the green and golf committees and the golf professional will more accurately reflect the golfers' viewpoints. The

professional advice of a golf course architect can also be helpful, especially for those sites that have more strategic value or that are controversial.

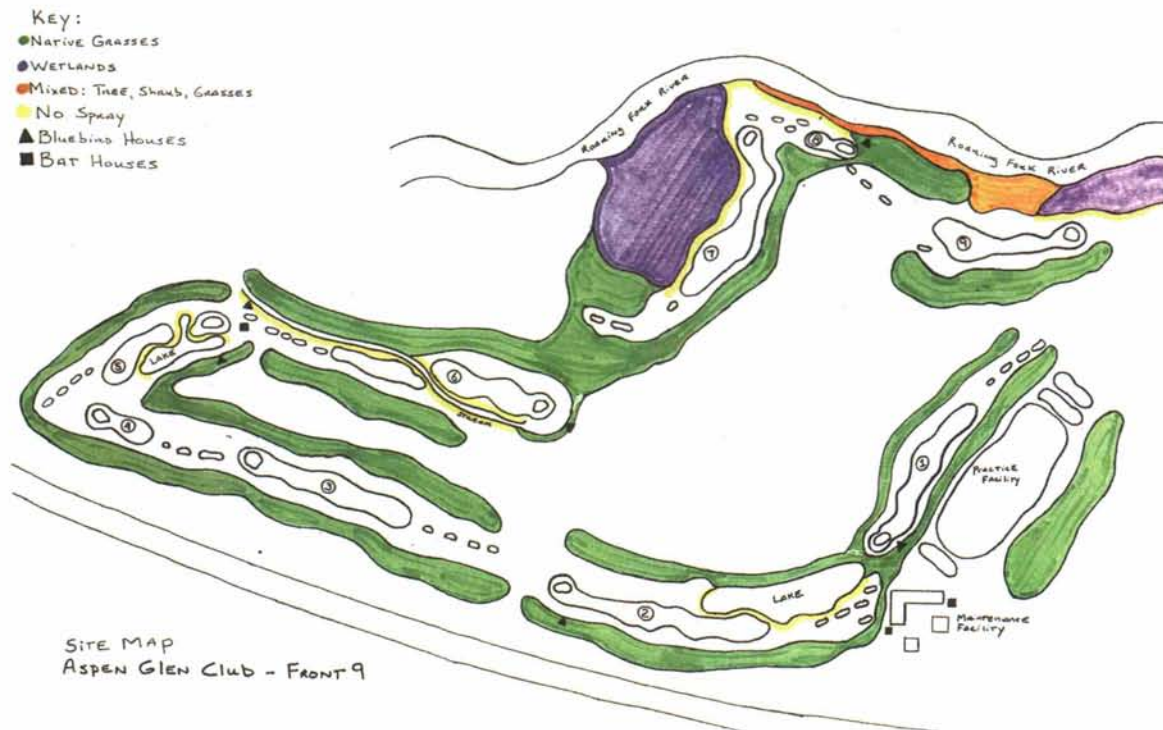
A map can be a valuable tool to help visualize proposed sites and their impacts. More detailed site maps can also be created based on site conditions, anticipated play, plant inventories, etc., and used for the planning and communication processes.

Are the growing conditions favorable?

Soil texture, pH, salinity, drainage, irrigation, existing vegetation, and traffic patterns are important considerations when evaluating sites for naturalization. Soils higher in clay, silt, or organic matter retain more moisture and nutrients that will promote more vigorous growth and will be better suited for more out-of-play areas.

Higher-play areas that receive supplemental irrigation are not the best choice for naturalization. More abundant moisture will create dense growth and favor grasses and plants that are better suited for areas far from play. Frequent cart traffic will damage natural grassland areas, leaving them unsightly and making them difficult to play from. Avoid attempts to naturalize such areas until the traffic can be rerouted.

Does the site connect with any larger natural area? Small habitat "patches" are more valuable for wildlife when connected to larger natural areas. For instance, naturalizing a grassland or meadow area bordering a larger wooded area is



A simple map should be developed to help with the site selection process and as a communication tool.



Naturalizing stream and pond bank areas stabilizes the soil and protects water quality while providing habitat for a number of organisms.

more effective than a naturalized “island” between golf holes. Creating similar corridors linking the areas to bodies of water is also encouraged.

PLANT SELECTION

Plant selection is a critical step in the planning process. It should be based on the location of the site and growing conditions. Make a list of plants that will look attractive, meet play expectations, and when possible offer wildlife food and cover. Visit a local nature preserve or wildlife management area to obtain planting ideas. Local university specialists, government agencies, and seed/plant suppliers can be a tremendous source of information and guidance at this point. More out-of-play areas can be established with grasses, plants, shrubs, and trees that provide thicker cover and food sources for wildlife, while areas in play can be seeded with native or naturalized grasses that exact less penalty on an errant shot.

ESTABLISHMENT CHALLENGES

The establishment phase may be the most difficult part of the project, and the process can

sometimes be slow and frustrating. Ease into the program by initiating work in smaller out-of-play areas where the site conditions and existing plant material are favorable. The establishment work may be as simple as stopping routine mowing, completing selective weed removal, spot seeding, or planting work. The smaller areas also provide an opportunity to become familiar with the management programs that will be necessary to keep the areas playable, free of invasive weeds, and meet the plan’s objectives.

More extensive renovation work should also be initiated on a smaller scale, if possible. The renovation will involve the removal of unwanted vegetation, soil preparation, and a larger-scale seeding or planting effort. Existing vegetation can be removed mechanically or with herbicides, depending on the plant material and the site. A soil nutrient test is advisable so nutrient and pH adjustments can be made if necessary. Soil preparation and seeding or planting programs also vary depending on the site and region where you are located. The specifics of those practices can be found in the articles listed under “Suggested Reading.”

THE MAINTENANCE CONSPIRACY

Somewhere, somehow, the misconception that naturalized areas require no maintenance was conceived. The fact is, all naturalized areas, whether forest, grassland, meadow, or wetland, require some seasonal maintenance to keep them playable, visually acceptable, and to maximize their environmental value. The degree of maintenance depends upon the location of the area in relation to play and the level of visual quality expected by golfers. That said, established natural areas are less intensive to maintain on a daily basis.

The primary maintenance concerns with naturalized grassland areas are weeds and insect pests. Fertility management is usually minimal once the areas are established, unless additional stand vigor is desired. Mowing grassland areas is completed annually in fall to manage weeds. More heavily played areas may be cut again following the initial growth flush in spring as a way to control density. The debris left following mowing should be removed. Controlled burning is also an excellent weed management tool often used on a rotational basis with mowing. The burning is most often initiated in spring to con-

tol weeds and remove excessive organic material from native grassland areas. Fire has other benefits as well, including stimulating seed germination, warming the soil, and making nutrients more available. Those who regularly use fire do so with careful planning and extreme care. This management option is not applicable for every site, and acquiring permits can be a challenge in some locations.

Not all weeds can be managed with mowing or burning practices. Selective weed control will have to be accomplished by hand-picking and herbicide applications. Annual weed grasses and some broadleaf weeds can also be managed with spot applications of pre-emergent herbicides. Insects can also be damaging to grassland/prairie areas. Various species of white grubs, sod webworms, armyworms, and chinch bugs can cause catastrophic damage if left unchecked. Curative applications of insecticides may be required based on monitoring populations and determining damage thresholds.

COMMUNICATION

The acceptance of change or of any new program on a golf course always requires good communication. Start talking with golfers and committee members when you first start to make plans. Explain what you are trying to achieve and solicit input on the initial site selection. Be a strong advocate for the environmental benefits and potential cost savings that are expected. Post information and pictures, write articles for the golf course newsletter, or use a Power Point presentation to educate and build support for the program. Seek the help of interested members, join Audubon International, or contact local conservation groups to obtain information and to help get the message out. Arrange a day trip with the committee to tour another golf course where similar areas have been developed. A short meeting with the superintendent there will be invaluable.

Install nest boxes, feeder stations, and descriptive signage during the establishment of the sites to remind golfers of the project's objectives. A camera can be a great communication tool. Use it to take before and after shots and to record the various plant and animal species attracted to the site. Keep an active list of the native plant species and any new wildlife sighted.

In time, most golfers will come to appreciate the natural beauty these areas can provide and

PLANT SELECTION GUIDES

- The Internet is a fertile source of information regarding plant selection. The Web site www.auduboncommunities.org/regional/search has been developed by Audubon International and lists native plant materials and provides informative links, illustrations, and supplier information.
- The National Wildlife Federation Web site www.enature.com also provides a state-by-state guide of native plants and other information for naturalization work.
- Your local university extension agency, USDA field office, BLM specialists, or State Department of Natural Resources can provide guidance in selecting appropriate and beneficial plant materials and tips on their use and establishment.

begin to realize their environmental worth. Do not become discouraged if some areas are not accepted. There will always be some give and take initially as the sites develop. Natural areas can be both wild and wonderful. Just give them a chance.

REFERENCE AND READING LIST

- Dodson, Ron. *Managing Wildlife Habitat on Golf Courses*. 2000, Ann Arbor Press. 177pp.
- Bevard, Darin. 2004. "Unnatural Expectations." *USGA Green Section Record*. 42(1):16-18.
- Harker, Donald F, Gary Libby, Kay Harker, Sherri Evans, Marc Evans. *Landscape Restoration Handbook, 2nd Edition*. 1999, USGA and N.Y. Audubon Society.
- Jennings, John. 2004. "Prairie Fire!" *USGA Green Section Record*. 42(1):8-10.
- Nelson, Matt. 1997. "Natural Areas." *USGA Green Section Record*. 35(6):7-11.
- Vavrek, Robert. 2002. "Makin' Hay." *USGA Green Section Record*. 40(3):31.
- Wildlife Links: Improving Golf's Environmental Game*. 2006, USGA. 24pp.
- Weston, John. 1990. "Using Native Plants in the Golf Course Landscape." *USGA Green Section Record*. 28(1):12-16.

Special thanks to JEAN MACKAY, director of education for Audubon International, for contributions to this article.

JIM SKORULSKI is a senior agronomist in the Green Section's Northeast Region, DARIN BEVARD is an agronomist in the Green Section's Mid-Atlantic Region, MATT NELSON is an agronomist in the Green Section's Northwest Region, and BOB VAVREK is a senior agronomist in the Green Section's North-Central Region.