

# Learning to Live With Golf Cart Traffic

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Golf carts have become an integral part of most golf course operations today. In more ways than one, they have made their mark at public, municipal, private, and resort courses throughout the country. While golf carts have done much to popularize the game of golf in this country, they also are the source of many headaches for the golf course superintendent. Since golf carts are here to stay, learning how to deal with the negative aspects associated with their use is essential in producing the best quality golf course conditions.

In 1990, the National Golf Foundation estimated that there were 800,000 to 850,000 electric and gasoline-powered golf carts in use on golf courses. Each cart was estimated to have made 150 rounds annually at an average rental fee of \$14.00 per round, for a total of more than \$1.7 billion in revenue. It further should be noted that this figure does not include income from trail fees from privately owned golf carts. Given these rather substantial income figures, the importance of this revenue producer to the golf industry is obvious. Furthermore, to add to this already impressive number of golf carts in existence, approximately 115,000 new carts are manufactured each year.

**Other factors that lend credence** to the use of golf carts on golf courses include enabling those with physical handicaps to play the game, as well as extending the number of years of play for many golfers. Use of golf carts also enables golfers to enjoy the game despite inclement or oppressively hot weather conditions and, in some cases, they actually assist in speeding up play.

Considering these benefits, it is safe to assume that carts are here to stay on the golf course. But consider some of the negative effects of cart traffic on the turf and soil. Even though a golf cart tire does not exert as much actual pressure on the turf as the human foot, golf cart opera-

tors tend to travel in similar patterns, resulting in accelerated turf wear and compacted soil conditions that limit turf recovery in these areas. During periods of turf dormancy, turf injury can be particularly severe, with little chance for improvement until normal turf growth resumes. This is a problem with warm-season grasses during the winter months and, to some extent, with cool-season grasses during dry, hot summers or very cold winters. Not only are effective management programs necessary to correct turf wear and soil compaction, therefore, but effective traffic-control methods also are necessary to minimize turf damage.

Problems of excessive turf wear and compaction are most noticeable in areas where traffic concentrates, usually near tees and greens or tight fairway areas. Loss of turf due to intense traffic conditions also can occur in other areas when adverse environmental conditions exist, such as drought stress or heavy rainfall conditions. While concentrated traffic on dry or frozen soil tends to cause turf loss due to physical wear, soil compaction is the greater concern when wet conditions persist. Programs ranging from intensive aeration to renovation with soil amendments to complete sodding sometimes assist in reestablishing acceptable turf conditions. Unfortunately, these improvements may only be temporary, and turf loss may occur again when similar environmental conditions return.

**The most efficient and logical** approach to most problems is to correct the source of that problem. Effective traffic control, therefore, is essential to minimize the negative effects resulting from concentrated golf cart traffic. A variety of approaches have been found to be effective in providing improved turf-grass quality under high-traffic conditions.

Turf injury near tees and greens often occurs despite the presence of cart

paths. There seems to be a natural tendency for drivers to pull their golf carts off the edge of the path, as they would when pulling their cars off to the side of the road. This causes a gradual deterioration of the turf adjacent to the path, and the area soon becomes a mudhole awaiting the brand-new golf shoes of the unsuspecting, recently elected club president.

**This situation can effectively be avoided** by installing curbing along the paths in these potential wear areas. Installation of four- to six-inch curbing during initial path construction, using the same material, be it concrete or asphalt, works well and presents a neat, uniform appearance. When adding curbing to existing concrete cart paths, concrete curbing can now efficiently be installed (in areas of the country where it is practical) utilizing a one-step curbing machine. Typically, however, curb additions to existing paths are made with treated wood timbers or railroad ties.

With any curbing method used, the most important point to remember is to backfill the turf side to the top of the curb. Attention to this detail provides a cleaner look and allows for easier maintenance in these areas. Furthermore, the tendency to trap water on the turf side of the curb is eliminated.

**To minimize turf wear** and compaction throughout the fairways and roughs under intensive traffic conditions, installation of a continuous cart path system has proven to be the best solution in many parts of the country. At facilities that average more than 30,000 to 40,000 cart rounds annually, continuous golf cart paths are essential for maintaining healthy turf and good course conditioning. A continuous path system also allows the use of golf carts, restricted to paths only, during excessively wet conditions when carts might not otherwise be permitted on the course. Loss of revenue is thereby averted too.