Frequently Asked Questions Related to Winter Operations of Golf Courses

- Q: How do golf course operations benefit from winter recreation?
- A: Each of the golf course operations we've worked with and talked to has somewhat different priorities, depending upon their location and size of market. Among the benefits they've noted are:
 - Increases revenue opportunities
 - · Maintains key staff positions
 - Provides new community recreational opportunities
 - Enhances golf course and real estate values
 - · Attracts real estate buyers
 - · Optimizes asset utilization
 - Provides another amenity for existing property owners
 - Protects turf from incidental winter use
- Q: What services do SE Group and Nordic Group International provide?
- A: The SE Group/Nordic Group International consulting team provides turn-key services, including:
 - Market and economic feasibility studies
 - · Operations evaluations
 - Planning/design for different types of winter recreation
 - Cross-country skiing and fat biking trail design, and terrain gardens
 - Snowmaking and lighting plans
 - Tubing/snowplay layout and design
 - Recreation and guest services programming
 - Turf management strategies
 - · Construction oversight
 - · Marketing plans
- Q: What major resorts offer winter operations on golf courses?
- A: A representative sample of four-season destination resorts with golf course skiing includes Aspen Snowmass, Vail Resort, Whistler Blackcomb, Keystone Resort, Telluride Ski & Golf Resort, Okemo Mountain Resort, Woodstock Inn & Resort, and Sun Valley Resort.

- Q: What revenue-generating attractions can I offer in winter?
- A: The most profitable winter operations include revenue from continued use of the golf clubhouse facility, augmented by attractions such as:
 - · Cross-country skiing
 - · Fat biking
 - Snowshoeing
 - Tubing/sledding
 - · Sleigh rides
 - Dog sledding
 - · Food and beverage sales
 - Lodging
 - Ice skating
 - Special events
 - Winter weddings
 - · Business meetings
- Q: What is the typical length of the operating season?
- A: For most geographic areas, winter operations average approximately 75 days per season.
- Q: How important are snowmaking and lighting for winter operations?
- A: Snowmaking guarantees favorable snow conditions during the winter season (especially holidays) and extends the operating schedule at both ends, while also increasing revenue opportunities from pre-season ski ticket and group sales. The inclusion of lighting will attract skiers and tubers who are unable to visit during daylight hours.
- Q: How many kilometers of ski trails are typically required, and how many kilometers of snowmaking and lighting?
- A: We recommend 10 or more kilometers of groomed trails. The routing and design of the trail system should accommodate beginner to advanced skiers in order to provide a variety of experiences. Generally golf course terrain isn't suited to advanced skiers, but we can often design for intermediates. Approximately 2.5 kilometers of the trail system should be covered with snowmaking, as well as incorporate night lighting. The inclusion of night lighting allows users to ski after work to enjoy a workout or a relaxing glide under the stars.





Frequently Asked Questions Related to Winter Operations of Golf Courses (continued)

- Q: Is it possible to tie snowmaking into my irrigation system?
- A: Many modern "airless" snowmaking guns can now operate under low water pressure that is typical of an irrigation system. In the event a pressure boost is required, certain snowmaking guns are equipped with on-board booster pumps.
- Q: How many visitors can I expect and how much revenue can I generate?
- A: Visitation to a cross-country and/or tubing facility is a function of the size and demographic composition of the surrounding population, location of the facility, marketing, pricing and other critical variables. Additionally, potential revenues are tied to the quality of the experience and market orientation. Many golf courses are uniquely positioned in and around major population centers, and accordingly, can take advantage of the consumer's desire to have fun and enjoy exciting winter sports activities.
- Q: What type of capital investment is required to develop cross-country skiing and snow tubing, with snowmaking and lighting?
- A: Costs depend on the type and size of the services offered (amount of ski trail and number of tubing runs, grooming vehicles/snowmobiles, inventory of equipment, any infrastructure upgrades and construction). Accordingly, the range of capital costs for building a turn-key snowplay/tubing facility that includes four sliding lanes and one lift, as well as lighting and grooming machine may be \$300,000 to \$600,000, while the range for a cross-country facility that includes approximately 3.5 kilometers of ski trails with snowmaking, lighting and grooming may be \$500,000 to around \$1 million for a full-service, first-class product. Due to the opportunity of sharing snowmaking and grooming equipment, there are significant capital efficiencies of implementing both cross-country skiing and snowplay/tubing. Ultimately, the capital investment required is a function of many variables, including site topography, extent of existing infrastructure and facilities, and the size and orientation of the market.

- Q: What are some of the typical complexities encountered with winter operations?
- A: Through our work and ongoing research we have seen the following problems (some are very infrequent):
 - Turf may take longer to green up where trails are groomed (from two weeks to as long as one month on very localized routes)
 - Mechanical damage to the turf from grooming too early or with improper vehicles
 - Seasonal moving of ski/golf equipment is inconvenient if the clubhouse isn't designed to accommodate both sports
 - Use of the irrigation system for snowmaking requires that the irrigation lines are below the frost-line to prevent freezing
 - · Learning curve for non-skiing staff
- Q: How much uncompacted snow do I need on the ground to start grooming trails?
- A: Recommended snow depth varies depending upon snowfall and temperatures, location of trails (roughs, cart paths, and/or fairways), and type of grooming equipment utilized. At some golf courses, early-season grooming with low-impact snowmobiles (as opposed to heavier snowcats) can take place with 4 to 6 inches of snow on the ground, and skiing can begin on 4 inches of compacted snow. While snow grooming vehicles are large in size in comparison to golf maintenance machinery and mowers, the load distribution of a snowcat is slightly more than 1 pound per square inch. This is considerably less than a typical person's footprint load of 3 pounds per square inch.

For more information on how your golf course can capture your potential winter market, contact the experts at SE Group and Nordic Group International.



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