By The Numbers: Climate Change and the Future of Golf in Grey and Bruce

Climate change and the effects it might have on tourism and recreation has, in recent years, received some attention from researchers specializing in tourism. In a previous article in MIYB (A Frog in the Pot: Climate Change, Tourism, and Small Business, October 2008) for the Owen Sound & District Chamber of Commerce, we discussed climate change and the need to pay attention to what is happening and how it might affect tourism activities in Grey and Bruce. In this article we look at climate change and golf. But first, a brief discussion of overall climate change.

Global average temperatures are estimated to rise between 1.4^{o} to 5.8^{o} C by 2100. Since 1861, the global average has risen 0.6^{o} C, with the 1990s being the warmest decade, and 1998 the single warmest year. Sea levels are estimated to rise between 9-88 millimetres (primarily due to thermal expansion as water warms). The negative effects on winter activities, due to less snow and shorter cold winters, will be high. For example, the snowmobiling season will decrease by between 23% to 98%, depending on the particular climate change model used (low to high impact).

Golf is both climate-dependent and weather-sensitive. This means that the climate must be such that golf course development and sustainability is feasible (makes economic sense), and that golfers are affected by the weather (rain, wind, and temperature) – extremes of any will increase or decrease participation. One study of courses in the GTA found that variations in weather can have a positive effect (35% increase in participation) or negative (62% decrease) as measured by rounds of golf. Rain of about 2.5 mm can result in a 19% decline in rounds of golf and 2.5 to 5 mm results in a 35% decline. Between 18^{o} C and 28^{o} C is the prime golf temperature range and anything above and below this range will result in decreased rounds. High winds of more than 20 km per hour, usually associated with storm systems, will cause decreased participation. A minimum summer temperature increase is expected to be 1-2^{0} C in the Great Lakes area by 2025-2034. For the same period, an increase of precipitation by 15-25% is predicted. Summers and shoulder seasons are getting warmer but more rain is likely. These findings help us to start understand the impact climate change will have on the future of golf in Grey and Bruce.

Golf is a significant recreational activity in North America. Statistics from the early 2000s indicated that there were 20,000 golf courses and about 30 million amateur golfers in North America. The economic impact of golf was US$62 billion, with US$20.5 billion directly generated at golf courses. In Bruce County in 2001, there were about 51,600 tourist trips that included golf as an activity. In 2004, 10% of all overnight tourists reported golfing as an activity, compared to 9% for boating. Total tourism spending in 2004 in for Bruce County was $154.8 million. Golf is big business.

What does this all mean for the future of golf in Grey and Bruce. In studies published in 2006 and 2008, researchers put forth several scenarios (ranging from low to high impact) of the likely effects of climate change on golf in the GTA and Michigan, not too unlike our area. General predictions indicate increased rounds of golf of between 5.5-13.5% in the 2020s, and 7.7-23.7% in the 2050s if the present golf season is maintained. If the season is expanded, or climatically adapted, increases are projected to be 23.0-37.1% in the 2020s, and 26.6-60.5% in the 2050s. This adjusted season assumes a 7-week extension in the 2020s, and a 12-week extension in the 2050s. Grey Bruce could well benefit from a much longer season in the near future. These predictions could be used to support business decisions to invest in new courses, expansions, and commitments to maintain high standards to attract and retain golfers.

These scenarios need to be tempered by additional studies specific to Grey and Bruce. Unanswered questions include "What percentages of these potential increases should be attributed to local golfers or tourists?" "How will gas prices affect golfers, especially the