Can the Long Point Causeway be Redesigned?

Article by Paul Ashley

Photo: Ron Ridout

It seemed like a good idea back in 1927 – build a causeway through the Big Creek marsh from the Port Rowan mainland to Long Point. The construction would provide much-needed local employment and the road would give better access to area beaches and cottages. Marinas could be developed and, with the influx of people, a theme park would offer entertainment. Back then, not much thought was given to the impact on the marsh or its wildlife inhabitants.

My grandmother remembers it well. She would walk down to the causeway every day after school to watch the construction progress. Within two years of dropping the first load of fill into the marsh, men working with teams of horses had built a rudimentary road across the Big Creek marsh delta. That road did not resemble today's highway; it was much lower, which meant it was often flooded. My father and his dad often talk about their trips to their cottage on Long Point, laden with summer holiday essentials, including the sheep dog, and forced to wade beside their 1936 Ford as it chugged through the water. My grandfather reminisces that back then the turtles and snakes were so thick that you couldn't help but run over a few. There was a plentitude of wildlife on the road doing what they liked to do – resting on the warm surface, nesting on the shoulders, taking the easy way along, or simply trying to cross. The causeway had been built right through their habitat.

Back in the thirties, the causeway included three bridges. When driving to Long Point, you would use the first bridge to cross the Port Royal Ship Canal – a grand name for a channel dug to transport logs through the marsh. The second bridge was south of the present day Canadian Wildlife Service (CWS) office. The third and last bridge was over the historic outflow of Big Creek, at the base of Long Point. After several improvements were made to raise the road and reduce the need for amphibious cars, the two southerly outflows were filled in and the bridges removed. This left the Port Royal Ship Canal as the only outlet to Big Creek marsh. An unforeseen consequence of removing the bridges was the loss of the marsh's natural filtering capacity. Sediment and pollution-laden water now flowed directly into Long Point's Inner Bay instead of being purified by the marsh.

In spite of warning signs, over 10,000 animals are killed annually. Malgré les panneaux de mise en garde, plus de 10 000 animaux sont tués chaque année. Photo: Paul Ashley

The causeway has enabled five generations of my family and countless others to enjoy the beaches and cottage life at Long Point – it is the only artery in and out of the community. While providing access for people, it has inadvertently caused environmental problems. For example, coastal marshes require seasonal flooding and storm events to keep them healthy. With the road acting as a barrier, the health of the marsh is deteriorating. The causeway also limits fish access to the marsh, and fishing in the bay would be better if the spawning areas in the marsh were more readily accessible. These negative impacts go unnoticed when driving along the causeway. However, the

The Long Point Causeway (foreground) acts as a barrier for amphibians and reptiles moving between the Big Creek Marsh (top) and Long Point Bay (bottom). La chaussée surélevée de Long Point (en avant-plan) agit comme une barrière pour les amphibiens et les reptiles qui se déplacent entre le marais Big Creek (en haut) et la baie Long Point (en bas). Photo: Paul Ashley

Long Point is home to North America's largest population of the threatened, and long-lived, Blanding's Turtle (some live to be 75). Many try to cross the causeway in early summer, en route to their nesting areas. La plus grande population nord-américaine de tortues mouchetées, une espèce menacée qui vit longtemps, parfois jusqu'à 75 ans, traverse souvent la chaussée surélevée au printemps. Photo: Paul Ashley

causeway's annual toll of roadkill along its 3.5 kilometres is evident.

Surveys by CWS show that more than 10,000 animals are killed annually on the causeway – birds, mammals, amphibians, snakes, and turtles of all description. Leopard frogs make up the bulk of the death toll. However, 99 other species have been killed, including rare and endangered species. To date, wildlife crossing signs and reduced speed limits have had little effect. A recent study by CWS and the Long Point Waterfowl and Wetlands Research Fund (LPWWRF) concluded that some drivers intentionally run over wildlife, especially turtles and snakes. The perpetrators of these crimes are almost always men. The rate at which turtles are being run over at Long Point makes the causeway the fifth deadliest road in the world for turtle mortality. What can be done about this?

In April 2006, CWS, Bird Studies Canada, LPWWRF, and other agencies met to discuss ways to mitigate the negative impacts of the causeway on the Long Point environment. Several strategies have been used elsewhere around the world. For example, the construction of a barrier wall system can prevent wildlife from crawling up onto the road. In addition, "ecopassages" (specially designed culverts) allow wildlife to cross under the causeway. Construction of a barrier wall may be as simple as "squaring" the shoulders of the existing causeway. This modification would raise the road surface of the causeway without substantially increasing its footprint on the landscape. It would also provide much-needed shoulders for vehicles and, possibly, for a pedestrian path to make the causeway safer for people. To increase water flow through the marsh, improve water quality in the bay, and increase fish access, another large bridge along an undeveloped portion of the causeway has also been suggested.

The Long Point causeway, 80 years later, is still a good idea, but one that needs fine-tuning.

The threatened Eastern Fox Snake, endemic to the lower Great Lakes, is a frequent causeway victim. La couleuvre fauve, une espèce en danger, endémique dans la région inférieure des Grands Lacs, est fréquemment victime de la circulation sur la chaussée surélevée. Photo: Ron Ridout Inset: Paul Ashley

Paul Ashley is a biologist with the Canadian Wildlife Service at the Long Point and Big Creek National Wildlife Areas. If you would like to become involved with the mitigation efforts, we encourage you to contact the author at paul.ashley@ec.gc.ca.