

ONCE UPON A GRAVEL PIT: RECONNECTING FLOODPLAIN THROUGH AGGREGATE EXTRACTION

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Located across from the City of Waterloo, Snyder's Flats is 96 hectares of conservation lands nestled inside the Bloomingdale Oxbow of the Grand River. The landscape within those edges contains river floodplain, wetlands, forests, meadows, ponds, a flowing stream channel as well as a variety of wildlife species including birds, mammals, herpetofauna and fishes. But the property was not always this natural or diverse.

Cleared for agriculture, the site was first settled in 1807 by Jacob Snyder and remained mixed farming until the 1960s. In 1969, the Grand River Conservation Authority (GRCA) purchased the flats as part of the valley land acquisition program to reduce flooding & erosion risks. In the late 1970s the site was identified as a source of high quality aggregate and led to a partnership between the conservation authority and Preston Sand & Gravel. Together they envisioned a plan to model an "environmentally friendly" approach to gravel extraction.

Extensive resources were confirmed in 1987 below the water table and advanced the development of the Snyder's Flats Rehabilitation Plan. The Snyder's Flats project would be a demonstration site where, through extraction activities, opportunities to reconnect lost floodplain function and enhance habitats would be created. Through the Snyder's Flats Rehabilitation Plan, five main aquatic habitat features were constructed: a warm water pond, a coolwater pond, two floodplain pools and a connecting channel. These features added more than 17 hectares of floodplain habitat and nearly 5 kilometres of shoreline.

In 2015, a number of biological inventories were completed to evaluate restoration successes and inform an update to the Snyder's Flats Management Plan. The original fish survey conducted in 1988 identified a total of 8 fish species. Following the establishment of the ponds and connecting floodplain channel, fisheries assessments between 1991 and 1996 rose substantially to record 26 different types of fish. That number grew again to more than 30 fish species during the 2015 surveys including Largemouth and Smallmouth Bass, Yellow Perch, Northern Pike, Black Crappie and Common Carp. Many other smaller species such as darters, shiners, minnows, suckers and panfish are also part of the Snyder's fish community. For the first time an at risk fish species, the Silver Shiner, was recorded in 2015. But perhaps the most telling evidence is the many young of the year fish. Their presence confirms the fish are successfully using the created aquatic habitats for spawning and nursery activities where gravel extraction once took place.