Supplemental Information:

1600s Prominent aboriginal fisheries for Atlantic salmon (e.g. Credit River) (Dunfield 1985)

1654 Noted that Onondaga Lake (Oswego River drainage, NY) “abounds with fish – with salmon, trout and other fish” (Beauchamp 1908: 44)

1655 Missionaries noted that in Onondaga Lake, NY “the eel is so abundant there in the autumn that some take with a harpoon as many as a thousand in a single night” (Beauchamp 1908: 44)

1656 Jesuits capture Atlantic Salmon, catfishes, and eel on the Oswego River, NY (Webster 1982). It is also noted on the Oswego River that “after taking twenty large salmon in the night, next day our men took, in going along, thirty-four other salmon by strokes of oars and swords; there was so great a quantity of them we could strike them without trouble” (Beauchamp 1908: 44)

1657 Observer notes about the Oswego River, NY “the fish which are most common here are the eel and salmon, which are fished from the spring till the end of autumn, our savages managing so well their dykes and their weirs that they take there at the same time the eel which is going down, and the salmon which is going up” (Beauchamp 1908: 44)

1670 Large numbers of Atlantic Salmon observed spawning in the Humber River during September (Dunfield 1985)

1675 There is a very abundant fishery of several kinds of fishes at the mouth of the Niagara River, among which is the Lake Whitefish (Coregonus clupeaformis) (Whitaker 1892)

1700s

1700s Beaver (Castor canadensis) trapping was ubiquitous. The trapping of beaver was the first major ecological change of salmonid/riverine habitat by humans (Naiman et al., 1988)

1700s Oneida Lake it is noted “The lake was now covered as with a white cloak of hundred thousand millions of insects, which we call Haft (Hexagenia sp.)…which lay in some parts of the shore one and two inches deep” (Beauchamp, 1908: 46)

1743 Observers note that on the Onondaga River, NY, the river is 2 - 4 feet deep, very full of trees fallen across, or drove on heaps by the torrents (July 21st), indicating pre-degradation state of rivers (Bartram 1751)

1743 Eel and “a great fish two feet long” caught on the Oneida (Oswego) River, NY at the falls (Bartram 1751)

1750 Eels noted in the Niagara River below the falls – “Below the Falls in the holes of the rocks, are great plenty of Eels, which the Indians and French catch with their hands without other means; I sent down two Indian boys, who directly came up with about twenty fine ones” (Bartram, 1751:92)

1749 Lake Ontario described as, “very transparent; at 16 and 18 feet, the bottom can be seen as if one saw it through polished glass” (Smith, 1995:4)

1783 Gristmill on the Cataraqui River north of Kingston and Four Mile Creek in the Niagara District (Dymond; Royal Ontario Museum, 1965)

1790 Grist mill constructed on Meyer’s Creek (Moira River) (Dymond; Royal Ontario Museum,1965)

1792 An observer called a tributary to Oneida Lake, NY “the Fresh Lobster creek, from the numbers (of crayfish) we caught there…” (Beauchamp 1908)

1793 Lady Simcoe notes the Don River was very shallow in many parts and obstructed by fallen trees. She also remarks on the presence of Atlantic Salmon in the Don River, Sept. 13 (Robertson 1911)

1793 Large flocks of passenger pigeon (Ectopistes migratorius) were still prominent around Castle Frank (Don River) (Robertson 1911)

1793 Lake Whitefish and Lake Sturgeon (Acipenser fulvescens) netted at Niagara (Robertson 1911)

1793 Sawmill constructed on the Humber River (Dymond, Royal Ontario Museum, 1965)

1795 Observer reports, “Lake Ontario and all rivers that fall into it, abound with excellent salmon and many different kinds of sea fish which come up the St. Lawrence” (Weld 1807:86) and “in sailing across the lake animals of an immense size are frequently seen playing on the surface of the water” (Weld 1807:87)

1795 Grist and sawmills on the Don River (Dymond, Royal Ontario Museum, 1965)

1796 Small red-trout (Brook Trout) (Salvelinus fontinalis) were caught through holes in the ice on the Don River at Castle Frank (January 23rd) (Robertson 1911)

1796 Rattlesnake (Sistrurus catenatus) are noted along the Niagara Escarpment (Robertson 1911)

1796 Bear (Ursus americanus), wolves (Canis sp.), whitetail deer (Odocoileus virginianus), and bald eagle (Haliaeetus leucocephalus) are observed around York (Robertson 1911)

1796 Large numbers of black bass, probably Smallmouth Bass (Micropterus dolomieu) observed around the Thousand Islands area (Robertson 1911)

1796 Cougar (Puma concolor) are heard calling on the upper St. Lawrence (Robertson 1911)

1798 Toronto newspaper announcing a farm sale extolled the property, “above all, it affords an excellent salmon fishery, large enough to support a number of families…” (Bogue 2000:23)

1799 First dam on the Ganaraska River (near mouth) (Dymond, Royal Ontario Museum, 1965)

1799 D.W. Smyth, Surveyor General observes “the Humber, the Tobycocke (sic), the Credit, and other streams towards the head of the lake, abound in fish, especially salmon” (Lizars 1913: 113)

1800s

1800s The quantity of Lake Whitefish and other species taken in seines was described as “immense.” Lake Whitefish were used as fertilizer, and small Lake Whitefish, ciscoes (Coregonus spp.), and Lake Sturgeon were “destroyed as nuisances” (Smith 1995)

1800s The Kawartha-Trent watersheds were mainstays of the Mississauga diet, utilizing Lake Whitefish, Atlantic Salmon, bass, trout, Muskellunge (Esox masquinongy), American Eel, and other fishes (Forkey 2003; Williams 2018)

1800s An observer in NY notes, “In Deer Creek the fish were long and slim, in Grindstone short and chubby, and in Salmon River large and heavy” (Bogue 2000:21). This is first evidence of tributary specific local adaptations in Atlantic Salmon

1801 Gristmill constructed at Cobourg Creek (Dymond, Royal Ontario Museum, 1965)

1805 To realize how plentiful Atlantic Salmon were at the annual spawning time, an individual paddled his canoe across the stream in Port Oshawa, when the salmon partly raised his boat out of the water, and were so close together that it was difficult for him to get his paddle below the surface (Conant 1903)

1807 First fishing regulation for the preservation of salmon, forbidding the use of any net, “wear” (sic), or “other engine” (sic) in or at the mouth of any river in the Home and Newcastle districts. A provision stated, “nothing in this Act shall be constructed to prevent persons at any time from taking salmon with a spear or hook and line”. (Dunfield 1985:75)

1810 1807 regulation was revoked; new regulations imposed a closed season for Atlantic Salmon from October 25 to January 1, along with fishing within 100 yards of a dam and netting at river mouths in the Home District (Dunfield 1985)

1810 Salmon….swarmed the rivers so thickly that they were thrown out with a shovel and even with the hand (Dunfield 1985)

1815 Genesee River Atlantic Salmon run estimated to be 10,000-100,000 fish (Follett 1932, Bogue 2000)

1815 Stone hooking started along Lake Ontario shoreline/near shore environments (Ontario Waterfront Regeneration Trust 1996)

1817 Dam constructed on Genesee River (Dunfield 1985)

1818 Observer noted “In the months of June and September, the salmon ascend the main stream (of Oak Orchard Creek, NY) and its small tributaries, in great numbers, and were easily taken; sometimes they would ascend in high water, and when it receded, would be left upon the banks. They have been picked up in cultivated fields along the streams, after a freshet.”

1820s Atlantic Salmon noted to be extremely abundant along Wilmot Creek. Observers note, “they were so plentiful…that men slew them with clubs and pitchforks – women seined them with flannel petticoats…later they were taken by nets and spears over one thousand being often caught in the course of one night” (Bouge 2000:25)

1820 Dam built on Seneca River at Baldwinsville, NY, part of Oswego River System connecting inland Finger Lakes to Lake Ontario. Reduced runs to Cayuga and Seneca lakes of Atlantic Salmon that had migrated out of Lake Ontario, up the Oswego to the Seneca and into the Finger Lakes up to 170 miles inland (Parsons 1973; Webster 1982)

1822 The Salmon River, N.Y. at the falls “trout abound in abundance, and it is the head of passage for salmon which ascend this river” (The National Pilot 1882)

1823 Netting and weirs banned in the Trent River and new fishing season instituted running from January 1 to November 30 (Dunfield 1985)

1824 Harbour seals observed from Lake Ontario, and noted to occur in Lake Champlain NY, Onondaga Lake NY, and the Ottawa River as far up as present day Ottawa (Merriam 1884, New York Times 1895, COSEWIC 2007)

1824 At least 13 mills occurred on the Humber River and its tributaries (Dymond, Royal Ontario Museum, 1965)

1825 Erie Barge Canal connected to Lake Ontario watershed (Sly 1991)

1830s Sea Lamprey noted to be present by at least this time (MacCrimmon 1977)

1830s Stone hooking was removing as much as 43,000 tonnes (47,000 tons) annually accelerating lakeshore erosion (Ontario Waterfront Regeneration Trust 1996)

1832 Brook Trout were so plentiful, they were caught with a bucket in Orono Creek (tributary of Wilmot Creek) (Schmid and Rutherford 1976)

1832 Rideau Canal Waterway opens connecting Kingston to Ottawa

1835 Sea Lamprey recorded in Duffin’s Creek (Lark 1973)

1836 2,000 Atlantic Salmon could be taken in one night’s spearing, largest being 443/4 lbs in Salmon River, NY (Dunfield 1985)

1837 Seth Green travels to Grafton, ON from 1837-1840 to fish for Atlantic Salmon in Keeler’s Creek. Salmon considered plentiful in this creek. Green observes other fish consuming salmon eggs when salmon are spawning (Black 1944)

1842 Atlantic Salmon noted to appear in Lake Ontario in April, and leave it again in October or November. Also noted to migrate to Oneida Lake, and weigh ten to fifteen pounds (DeKay 1842)

1842 Atlantic Salmon “are often speared along the shores of the Bay of Quinte, and at the mouth of the rapid river Trent” (Henry 1842)

1842 The number of salmon in NY had been greatly reduced and, in many places, they had been totally destroyed (Webster 1985)

1845 A total of 7,406 water-powered sawmills were being operated in the State of New York (Smith 1995)

1846 Evidence to suggest that salmon stocks frequenting the streams of Lake Ontario were considerably less abundant than formerly (Dunfield 1985)

1846 Almost 60 mills occurred on the Humber River and its tributaries (Dymond, Royal Ontario Museum, 1965)

1848 "[I]n the upper province of Canada... [salmon] are very rarely fished for or taken with the fly, and it is said confidently that in the lake itself they will not take the fly under any circumstances." (Knight 2007:81)

1848 Salmon within the Oswego watershed “went further, before dams were built across the Oswego River. They ascend to the Seneca and Cayuga Lakes, and went as far up their tributaries as they could, sometimes to the very fountain heads of small brooks.” (Spirit of the Times 1848)

1850s 87 Mills occurred on the Credit River (Corcao, University of Toronto, 1986)

1851 Sea Lamprey observed parasitizing Atlantic Salmon (MacCrimmon 1977)

1852 Numerous eel weirs are noted to be on the Oswego River, N.Y., as well as the Oneida River up to Oneida Lake and the Seneca River to Baldwinsville (Syracuse Journal 1852). It is reported the fishing season commences in June and lasts until November (Syracuse Journal 1852)

1856 200,000 salmon were reported taken at Port Credit (Dunfield 1985)

1857 Canadian legislation passed called the “three-rod law”, prohibiting stone-hookers from operating within three rods (15 meters) of the shore. The law was considered too late to protect fish habitat (Ontario Waterfront Regeneration Trust 1996)

1858 Noted that there is a species of the true shad (Clupea alosa – Alewife?) taken in Lake Ontario, but it is very rare (Ure 1858)

1858 Sea Lamprey considered common in the lake, where it is a parasite on Atlantic Salmon (Ure 1858), and noted to parasitize salmon and Walleye (Forest and Stream 1886).

1859 The Origin of Species published by Charles Darwin

1859 Superintendent of Fisheries for Upper Canada (Mr. John McCuaig) describes the fishery resource near Port Credit as, “literally inexhaustible riches” (Department of Marine and Fisheries 1898:53)

1860s Lake Trout begin to decline (Bogue 2000)

1860s Cultivation of the land reached its highest level (Huntsman 1944)

1860s Salmon River, NY, runs of Atlantic Salmon were greatly diminished with eight dams on the river (Parsons 1973)

1860 Oswego River salmon reduced to runs of stragglers (Dunfield 1985)

1860 Thirty-six dams occurred on the Ganaraska River watershed (Richardson 1944)

1860 50 mills occurred on the Don River and its tributaries (Dymond, Royal Ontario Museum ,1965)

1860 90 mills occurred on the Humber River and its tributaries (Dymond, Royal Ontario Museum, 1965)

1864 Wilmot suggested that certain salmon streams in Ontario should be set apart specifically and solely for natural propagation purposes, with the Moira and Credit Rivers being recommended (Dunfield, 1985). Salmon known to migrate up to Stoco Lake on Moira River (Parsons, 1973)

1864 Caledonia hatchery initiated by Seth Green in New York (Black, 1944)

1864 George Perkins Marsh publishes Man and Nature, warning the effects of human actions on the environment (Marsh, 1864)

1866 The Upper St. Lawrence River considered a fair Brook Trout fishery (King, 1866)

1866 Samuel Wilmot creates first Canadian hatchery for Atlantic salmon on Wilmot Creek (Crawford, 2001)

1867 Trent River salmon stated to no longer exist (Dunfield, 1985)

1867 The rivers running into the Bay of Quinte, Moira, Salmon and Napanee Rivers were at one time and certain seasons almost overflowing with pickerel (Walleye) and suckers (Canadensis, 1867)

1868 Lyons (Lynde) Creek, Duffin’s Creek, Rouge River, Don River, Humber River and Credit River have Atlantic Salmon that migrate up stream in the fall (except the Don) and suckers, redhorses (Moxostoma spp.), Northern Pike (Esox lucius), Walleye (S. vitreus) and bass spawn up the streams in spring; suckers, redhorses, bass and Walleye frequent the streams in spring for spawning at Mimico, Oakville, Bronte and Port Nelson (Burlington) (Regier, Ministry of Natural Resources, 1975)

1868 Wilmot describes the current state of Whitefish “These rich and beautiful fish at one time so numerous in Lake Ontario, are now almost wholly gone” (Department of Marine and Fisheries 1869)

1868 Walleye (Sander vitreus) are noted to have frequented the Trent, Moira, Napanee, and other rivers flowing into Lake Ontario during early spring in vast numbers, where they are now very much reduced (Department of Marine and Fisheries 1869)

1868 Canada’s Federal Fisheries Act signed (May 22, 1868) (Prince 1921)

1869 Alewife reported to be abundant in Seneca and Cayuga Lakes (Smith 1995)

1870s Wilmot described the fish (Brook Trout) as “exceedingly scarce" in southern Ontario in and "in the older settled sections quite extinct” (Knight 2007)

1870s Common Carp (Cyprinus carpio) introduced (Scott and Crossman 1998)

1870s Atlantic Salmon captured in Stony Lake (Trent River watershed) (Corcao, University of Toronto, 1986, Williams 2018) up to 20lbs, and noted from the lakes of Peterborough County (Creighton 1892). Atlantic Salmon stated to run as far as Fenelon Falls (Dunfield 1985)

1870 Seth Green introduces American Shad (Alosa sapidissima) fry until 1872 (total of 80,000) into Genesee River (1971) and Lake Ontario (United States Commission of Fish and Fisheries 1874; Smith 1995). Alewife may have been introduced at this time (Scott and Crossman 1998). Debate continues on whether Alewife is endemic to Lake Ontario

1870 Oakville (Sixteen Mile) Creek, Highland Creek, Rouge River, Duffins Creek, Bowmanville Creek set aside for natural and artificial propagation of Atlantic Salmon (Dymond, Royal Ontario Museum, 1965)

1870 Salmon River, NY, is the only watershed on south shore of lake that still has some Atlantic salmon, with 400 netted off the mouth of the river ranging in weight from 1 to 45 lbs (Parsons 1973)

1870 Wilmot notes the size of some of the larger Atlantic Salmon captured on Grafton Creek; where seventy nine salmon measured between thirty-five and forty inches in length sampled, averaging about thirty seven inches (Department of Marine and Fisheries 1871)

1871 Wilmot begins artificial propagation of Lake Whitefish in Newcastle (Knight 2007)

1871 Kerr seized 600 yards of pike net, 800 yards of whitefish gill net on Burlington Bay, containing three Northern Pike and a few speckled trout (Brook Trout) (Regier, Ministry of Natural Resources, 1975)

1871 2,500 pound of Brook Trout were caught in the headwaters of the Credit River (Department of Marine and Fisheries 1872)

1872 Wilmot begins artificial propagation of Lake Trout in Newcastle (Knight 2007)

1873 Alewife reported in abundance in Lake Ontario (Smith 1995)

1873 "Only a few years ago there was good trout-fishing to be found within twenty miles of Toronto," wrote a correspondent for The Canadian Magazine, "but the creeks have all been fished out." (Knight 2007:82)

1873 1,156,000 Chinook Salmon (Oncorhynchus tshawytscha) stocked in Salmon River between 1873 and 1898. No recruitment from natural reproduction and stocking discontinued by 1898. 144,000 Atlantic Salmon fry also stocked during this time period with low survival and recruitment (Parsons 1973)

1873 Lake Ontario said to “abound to an enormous extent” in minute crustaceans, especially the genus Mysis (United States Commission of Fish and Fisheries 1874:78)

1873 Observer noted the abundance of Atlantic Salmon on the Credit River at the cataract falls: "These falls were still more remarkable in former times as forming the final barrier to the navigation of the salmon westward. In those times on two or three occasions in each summer, the Credit was filled with salmon, actually to overflowing, fresh and fat pushing their way westward to deposit their eggs. In a few weeks thereafter, those that had escaped the spear of the Indian or the new settler, might be seen wending their way backward pale and thin" (Credit Valley Conservation 1956)

1874 Rainbow Trout (O. mykiss) introduced into Lake Ontario tributaries (Crawford 2001)

1874 68,000 juvenile Chinook Salmon released into Wilmot Creek from the Sacramento River Basin (Crawford 2001)

1875 Abundant Sea Lamprey occurred in Cayuga Lake by this date (Smith 1995)

1875 Wilmot states that “shoals of herring (probably Cisco, Coregonus artedi) do not, as formerly, come so near the shore because the gravel which composed the bottom almost to the shore has gradually become covered with sand” (Dymond, Royal Ontario Museum, 1965:16)

1876 "... herring (probably Cisco), bass (of the various kinds), pike (Northern Pike), pickerel (Walleye), whitefish (Coregoninae), and salmon trout (Lake Trout), maskinonge (Muskellunge) and all the various kinds of fishes of a less valuable description, including eels, are at all seasons in Burlington Bay, and frequent the waters of Burlington Bay and Dundas Marsh in great quantities at all times, ... for the purposes, amongst other things, of spawning and increasing their species, etc., etc. ..." (Regier, Ministry of Natural Resources, 1975:84)

1877 A “Kennebec” salmon, eighteen inches long, was captured “nearly done to death by a lamprey eel” in Cayuga Lake (Forest and Stream 1877)

1877 Adult (jack) Chinook Salmon captured near the estuary of Wilmot Creek (Crawford 2001)

1878 Brief increase in Atlantic Salmon population sizes until their ultimate crash in the 1890s (Dymond, Royal Ontario Museum, 1965)

1878 Striped Bass (Morone saxatilis) stocked into the Genesee River (140 measuring from 5-7” in length) (Regier, Ministry of Natural Resources, 1975)

1879 Wilmot states “speckled trout (Brook Trout) must soon become a luxury of the past in the older and more cleared sections of Ontario” (Knight 2007)

1880s Harbour seal extirpated from Lake Ontario (COSEWIC 2007)

1880s Brook Trout were gone from lower portions of tributaries and scarce in the upper portions by 1890 (Richardson 1944)

1880s Northern Pike population sizes increased (Regier, Ministry of Natural Resources, 1975)

1880 75-80% of forests in southern Ontario had been cleared for farming and urban uses (Bacher 2011)

1881 Samuel Wimot notes broad environmental change on land through removal of trees, cultivation of land, runoff from farms, construction of dams, and the addition of industrial and human sewage. Wilmot gives up trying to rehabilitate Lake Ontario’s salmon, lamenting that, “I cannot disguise from myself that the time is gone by forever for the growth of salmon and speckled trout in the frontier streams of Ontario” (Bogue 2000:27) and, “a few years ago parrs and smolts could be seen in large numbers, it is now quite an exceptional occurrence to see them anywhere” (Wilmot 1881:348)

1882 Harbour Seal documented from Onondaga Lake, with the specimen “measures just six feet from tip to tip, and will weight about 100 pounds” (Forest and Stream 1882)

1882 Chinook Salmon stocking practices abandoned (Crawford 2001)

1882 Lake Sturgeon fisheries target sturgeon at the mouths of the Salmon River and Big Sandy Creek, Oswego County, N.Y. (New York Times 1889)

1883 Brown Trout (Salmo trutta) accidentally released into Genesee River (Crawford 2001)

1884 Wilmot’s hatchery on Wilmot Creek discontinued for the artificial propagation of Atlantic Salmon (Parsons 1973)

1884 Passenger pigeon functionally extinct (Mitchell 1935)

1884 Lake Whitefish becoming scarce in Lake Ontario (Regier, Ministry of Natural Resources, 1975)

1886 Sea Lamprey observed parasitizing an adult Walleye. Observer notes “some years since, a 20-pound salmon taken from a gill net in Lake Ontario, and having a two inch hole in its side which had been made by a lampreys suction” (Forest and Stream 1886)

1890s Freshwater mussels harvested for button and pearl industry (Metcalfe-Smith et al., 2005)

1890s Crayfish noted as being abundant in Lake Ontario (Smith, 1892)

1890s Smith (1892) notes a run of Atlantic Salmon in the Oswego River called the “June run”, which was usually two or three weeks earlier than the appearance of fish in the Salmon River, NY

1890 Lake Trout considered essentially gone from Lake Ontario (Bogue, 2000)

1890 Alewife considered the most abundant fish in the lake (Bogue, 2000)

1890 White-tailed deer locally extirpated from the Township of Hope (Port Hope, ON area) (Reeve, 1967)

1890 An Atlantic Salmon weighing 12 pounds was taken on a fly rod below the first dam on the Oswego River (Smith 1892). This is the first recorded catch of Atlantic Salmon by angling

1891 An Atlantic Salmon weighing 71/2 pounds was caught in a gill net in the Bay of Quinte about August 17 (Smith, 1892)

1892 Lake Trout and Lake Whitefish noted as being very scarce on the American shores of Lake Ontario (Smith, 1892)

1893 Stony Lake and other Peterborough County lakes are said to contain a kind of land-locked salmon, which hardly take the fly (Department of Marine and Fisheries, 1893)

1895 Harbour Seals noted in Lake Ontario, where three were shot at the upper end of Wolfe Island, and three years previous one was captured at Cape Vincent (Forest and Stream,1895)

1895 Eel were plentiful in the Niagara River, where “in the eddies between the falls and the rapids the eel fishing is very good during the summer season, and it is exceedingly so in the eddies on the Canadian side, where foam gathers. One of the best of these eddies is where the little steamer Maid of the Mist makes her landings…”, with the method of fishing being “a cone of lead, in which,, about the large end, are arranged six good, strong hooks, is made fast to a strong line and then swished, by the aid of a pole, back and forth through the gathered foam”. (Dunlap, 1895)

1898 Atlantic Salmon extirpated from Lake Ontario (COSEWIC, 2010)

1899 Atlantic Salmon noted to have previously staged in shoals in the Oswego River below the falls, waiting for the until the sun was off the water to pass up; and an angler fishing for trout many years ago on the Salmon River, at the foot of the high falls, took several grilse (Forest and Stream, 1899)

1899 A Chinook Salmon weighing over 10 lbs was taken on a trolling spoon at the head of the St. Lawrence River in September (Sage et al., 1904)

1900s

1900s Rainbow Trout established in some American tributaries of Lake Ontario (Crawford, 2001)

1900s Beaver populations were scarce (Naiman et al., 1988)

1900s Bronte watershed reduced to less than 30% forest cover through deforestation from roughly 100% cover a century before (Conservation Halton, 2002)

1900s Credit River watershed reduced to 3-5 % forest cover through deforestation (Credit Valley Conservation, 1956)

1900 Toronto Harbour (mouth of Don River) noted to have significant loss of wetland area due to increased sedimentation, loss of vegetation, and altered bathymetry resulting in declines in fish abundance (Whillans, 1977)

1900 A Chinook Salmon weighing 12.5 pounds, was caught in a gillnet in September (Sage, 1904)

1903 Several sea salmon (Atlantic Salmon) are reported to have been taken in the St. Lawrence River (Department of Marine and Fisheries, 1904)

1907 Increase in Lake Whitefish and Lake Trout catch at Cape Vincent, Grenadier Island, and Duck Islands, NY (Green, 1908)

1908 American Eel noted below Niagara Falls, “at the proper season and you will find them by cartloads, by millions upon millions” (Gill 1908:121) and, earlier, Goode (1881:83) noted that, “the visitor who enters under the sheet of water at the foot of the falls will be astonished at the enormous number of young eels crawling over the slippery rocks and squirming in the seething whirlpools”

1911 American Eel noted to be present in Crow Lake, Ontario (Game and Fish Department of Ontario, 1912)

1912 Credit River has Norval Dam built (original dam was built on this site in 1856)

1914 Bennetts Bridge Hydro facility built on Salmon River (F. Verdoliva, NYSDEC, pers. comm.)

1915 Water clarity of Lake Ontario noted to be very clear, being able to see 25 feet down. Attached algae (Cladophora sp.) found on rocks at a depth of 150 feet (Kindle, 1915)

1916 100 tons of American Eel caught from Oneida Lake (J. Casselman, Adjunct Professor Queens University, pers. comm.)

1916 Chinook Salmon stocking reinstated, 100,000 stocked from the Fraser River (Crawford, 2001)

1918 Ontario Department of Game and Fisheries develops policy stating its goal to be the development of wild-reproducing, self-sustaining populations of Rainbow Trout in the Great Lakes (Crawford, 2001)

1919 Numerous reports of returning adult Chinook Salmon, and reports of successful wild spawning in the Credit River and Twelve Mile (Bronte) Creek (Crawford, 2001)

1920 Trent-Severn Canal system completed (Angus, 1988)

1922 Rainbow Trout stocked into Bronte Creek and the Humber River (Crawford, 2001)

1925 Adult Chinook Salmon captured in the Credit River up to 30 lbs (Davidson and Hutchinson, 1937)

1926 Rainbow Trout introduced into upper Salmon River watershed above Bennetts Bridge Reservoir, NY (F. Verdoliva, NYSDEC, pers. comm.)

1927 Sea Lamprey noted as being abundant in Squair (Wilmot?) Creek (Squair, 1927)

1927 Adult Chinook Salmon captured in Bronte Creek during October (Mackay 1963)

1927 Bloater (Coregonus hoyi), Kiyi (C. kiyi), Shortnose Cisco (C. reighardi), and Lake Herring caught at Port Credit (Christie 1973)

1929 Ontario introduces Brown Trout into tributaries of Lake Ontario (Crawford 2001)

1929 Brook, Brown , and Rainbow Trout stocked in mainstem of Salmon River below the Bennetts Bridge Reservoir dam, NY, until 1938 (F. Verdoliva, NYSDEC, pers. comm.)

1929 Fisheries research station at Port Credit for herring (Ciscoes?) and Burbot studies; one net contained 5,000 lbs of Burbot (February 20th) (Clarkson 1977)

1930s Upper Ganaraska River watershed is a virtual desert. Sand dunes and a few former tree stumps are all that remains. All topsoil has been eroded by wind and rain leaving barren sand (Richardson 1944)

1930 Construction of second hydro plant, Lighthouse Hill, on Salmon River, NY

1931 Rainbow Smelt first recorded from Lake Ontario (Smith 1972). Debate continues on whether Rainbow Smelt are endemic to Lake Ontario (MacKay 1963)

1933 Chinook Salmon stocking considered a failure, lack of self-sustaining permanent populations (Crawford 2001)

1939 291,000 Coho Salmon (Oncorhynchus kisutch) and 141,000 Chinook Salmon stocked in mainstem of Salmon River, NY. No recruitment, stocking discontinued (F. Verdoliva, NYSDEC, pers. comm.)

1940s Beaver populations begin to recover (Reeve 1967)

1940s Reforestation projects begin in southern Ontario (e.g. Ganaraska Forest) (Richardson 1944)

1940s Abundant Rainbow Trout populations established in Canadian Lake Ontario tributaries (Crawford 2001)

1940s Contamination from dioxins and similar chemicals were high enough to eliminate all natural reproduction in Lake Trout (Cook et al., 2003)

1940s Decline/elimination of Hexagenia limbata mayfly species from mesotrophic waters of Lake Ontario due to pollution and eutrophication (Environment Canada, 2008)

1940 2,500 Atlantic Salmon fingerlings stocked into Wilmot Creek (Ontario Game and Fish Department, 1941)

1944 240,000 Atlantic Salmon fry stocked into Duffin’s Creek until 1948 (McCrimmon, 1950)

1944 250,000 lbs of Cisco were landed at Port Credit (Clarkson, 1977)

1946 One adult Atlantic Salmon returns to Duffin’s Creek (5 lb female) (McCrimmon, 1950)

1946 Credit River flow monitoring begins. Lowest recorded base flow this year was 360 l/second. (Credit Valley Conservation 1956). The Credit River now averages 3,500 l/second in a drought. (Credit Valley Conservation unpublished data)

1946 Atlantic Salmon stocked into the Rouge River (McCrimmon, 1949)

1947 Spawning of Rainbow Trout confirmed in Duffin’s Creek (Crawford, 2001)

1950 Kokanee Salmon (Oncorhynchus nerka) introduced into Lake Ontario (Parsons, 1973)

1954 Hurricane Hazel

1955 Great Lakes Fishery Commission formed to address Sea Lamprey impacts, fisheries collapses due to overharvest, habitat loss, and the need for a cooperative approach (GLFC website: http://www.glfc.org/aboutus/brief.php - accessed May 18, 2014)

1956 28,000 Atlantic Salmon stocked in mainstem of the Salmon River, NY, below Lighthouse Hill Reservoir in an attempt to develop a spawning population until 1959 (Parsons, 1973)

1958 Completion of Moses-Saunders Hydroelectric Dam in the St. Lawrence River near Kingston (OPG website: http://www.opg.com/generating-power/hydro/ottawa-st-lawrence/Pages/rh-saunders-station.aspx - accessed May 18, 2014)

1960s Rusty Crayfish (Orconectes rusticus) found in Kawartha Lakes (Ontario Federation of Anglers and Hunters, pers. comm.)

1964 Last Lake Ontario Kiyi caught (Miller et al., 1989)

1968 30,000 Coho Salmon introduced into the Salmon River, NY (Crawford 2001)

1969 Large releases of Chinook Salmon (65,000 spring fingerlings) into the Little Salmon River, NY (Crawford 2001)

1970s Last Lake Ontario Blue Pike (S. vitreus glaucus) caught (Miller et al., 1989)

1971 First treatment of Canadian tributaries to Lake Ontario with lampricide (Pearce et al., 1980)

1972 Great Lakes Water Quality Agreement passed (Environment Canada website: http://www.ec.gc.ca/grandslacs-greatlakes/default.asp?lang=En&n=E615A766-1 - accessed May 18, 2014)

1972 Three minnows, Blackchin Shiner (Notropis heterodon), Blacknose Shiner (N. heterolepis), and Sand Shiner (N. stramineus) were common to abundant in Burlington Bay in 1927 and are now absent or extremely rare (Crossman and Van Meter, 1979). Blacknose Shiner show decline in north shore tributaries as well (e.g. Credit River, Ganaraska River) (Ganaraska Region Conservation Authority, unpublished data; Credit Valley Conservation Authority, unpublished data)

1972 First treatment of New York tributaries to Lake Ontario with lampricide (Pearce et al., 1980)

1974 American Eel ladder completed at Moses-Saunder Dam

1974 Fishway on Ganaraska River allows adult salmonids to pass over Corbett’s Dam (Ganaraska Region Conservation Authority, unpublished data)

1976 Wild juvenile Coho Salmon captured in Wilmot Creek as well as in 1979 and 1982 (Gartner Lee Associates Limited, 1983)

1977 Natural reproduction documented for Coho Salmon, Rainbow Trout, and Chinook Salmon in the Salmon River, NY (Connerton et al., 2009)

1979 Pink Salmon (Oncorhynchus gorbuscha) first reported from Lake Ontario (Dermott, 1982)

1983 Three high quality tributaries, Little Sandy Creek, Lindsey Creek, and Irondequoit Creek, NY, stocked with a total of 50,000 yearling Atlantic Salmon (F. Verdoliva, NYSDEC, pers. comm.)

1985 First record of Spiny Water Flea (Bythotrephes cederstroemi) in Lake Ontario (Sly, 1991)

1987 Natural reproduction of Atlantic Salmon confirmed on Little Sandy Creek with 29 young-of-year per acre found (L. Wedge, NYSDEC Region 7 Fisheries Manager, pers. comm.)

1988 Ontario Ministry of Natural Resources launches a research program to determine the fluvial limitations or opportunities for an Atlantic Salmon restoration plan for Lake Ontario (using the new angler license money) (Ontario Ministry of Natural Resources, unpublished data)

1989 First record of Zebra Mussel (Dreissena polymorpha) in Lake Ontario (Ontario Federation of Anglers and Hunters, pers. comm.)

1990s Large numbers of wild juvenile Chinook and Coho Salmon sampled on north shore tributaries (Ontario Ministry of Natural Resources, unpublished data)

1990 Stocking of NY Atlantic Salmon shifted to a put, grow, and take fishery with increased stocking levels to reach 200,000 yearlings and the emphasis shifted to the Black River, NY, with an annual stocking of 100,000. (F. Verdoliva, NYSDEC, pers. comm.)

1990 Small return of 50-100 Atlantic Salmon grilse to Credit River. (Ontario Ministry of Natural Resources, unpublished data)

1991 Quagga Mussel (D. bugensis) found in Lake Ontario (Mills et al., 1993)

1996 Federal Energy Regulatory Commission licensing of hydro plants on Salmon River, NY requiring mandatory base flows. Annual stocking of 30,000 Atlantic Salmon yearlings to create a summer fishery for returning adults and to continue to evaluate the species. Adult Atlantic Salmon returns started in 1998 and have continued since with increased returns and angler catches in the river seen since 2007 (F. Verdoliva, NYSDEC, pers. comm.)

1998 Round Goby (Neogobius melanostomus) found in Lake Ontario (Morrison and LaPan, 2007)

2000s

2004 Commercial harvest of American Eel prohibited in Ontario (Ontario Ministry of Natural Resources, unpublished data)

2004 Atlantic Salmon stocking program on the Black River, NY, discontinued because of lack of recruitment and poor returns (F. Verdoliva, NYSDEC, pers. comm.)

2006 Royal Ontario Museum works with national not-for-profit to determine if the extirpated Lake Ontario Atlantic Salmon has any related existing stocks (J. Imhof, Trout Unlimited Canada, pers. comm.)

2008 Small return (49 grilse) of Atlantic Salmon at Credit River from initial new Lake Ontario Atlantic Salmon program stocking in 2006/07 (OMNR, unpublished data)

2009 Small return of Atlantic Salmon continues on Credit River with a few more fish and some adults up to 8 pounds. (OMNR, unpublished data)

2009 47 young-of-year Atlantic Salmon found in two locations on the Salmon River, NY. First documented natural reproduction of Atlantic Salmon in the Salmon River since the late 1800's (J. Johnson, USGS Tunison Lab of Aquatic Science, pers. comm.). Also significant increase in the catch of the boat fishery of Atlantic Salmon in Lake Ontario seen in 2009 (J. Lantry NYSDEC Lake Ontario Unit Cape Vincent Research Center Annual Creel Survey, pers. comm.)

2010 Natural reproduction documented for Atlantic Salmon in a Credit River tributary (Rogers Creek) (Ontario Ministry of Natural Resources, unpublished data)