Barriers to Fish Passage in Nova Scotia

The Evolution of Water Control Barriers in Nova Scotia's Watershed



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Submitted for ENVS 4901- Environmental Science Honours



Abstract

Loss of connectivity throughout river systems is one of the most serious effects dams impose on migrating fish species. I examine the extent and dates of aquatic habitat loss due to dam construction in two key salmon regions in Nova Scotia: Inner Bay of Fundy (IBoF) and the Southern Uplands (SU). This work is possible due to the recent progress in the water control structure inventory for the province of Nova Scotia (NSWCD) by Nova Scotia Environment. Findings indicate that 586 dams have been documented in the NSWCD inventory for the entire province. The most common main purpose of dams built throughout Nova Scotia is for hydropower production (21%) and only 14% of dams in the database contain associated fish passage technology. Findings indicate that the SU is impacted by 279 dams, resulting in an upstream habitat loss of 3,008 km of stream length, equivalent to 9.28% of the total stream length within the SU. The most extensive amount of loss occurred from 1920-1930. The IBoF was found to have 131 dams resulting in an upstream habitat loss of 1, 299 km of stream length, equivalent to 7.1% of total stream length. The most extensive amount of upstream habitat loss occurred from 1930-1940. I also examined if given what I have learned about the locations and dates of dam installations, are existent fish population data sufficient to assess the impacts of dams on the IBoF and SU Atlantic salmon populations in Nova Scotia? Results indicate that dams have caused a widespread upstream loss of freshwater habitat in Nova Scotia howeverfish population data do not exist to examine the direct impact of dam construction on the IBoF and SU Atlantic salmon populations in Nova Scotia. Because of the large extent of rivers behind dams, this research suggests that dam construction may have contributed to the decrease of Atlantic salmon populations or may be currently inhibiting recovery of salmon stocks in Nova Scotia.

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1.0 Introduction

1.1 Overview

Habitat fragmentation is an important causal agent in species decline (Allan et al. 1997). The development of water control barriers such as dams, have altered freshwater habitats and have had a profound effect on aquatic organisms around the world (Schilt 2006). For example, an estimated 80% of the total discharges of large rivers in North America are impacted by dams (Bednarek 2001). Dams are valuable as they provide inexpensive and efficient power generation, flood control, recreational activities, water supply, irrigation, and navigation (Bednarek 2001). However, with over 36,000 major dams and hundreds of thousands of smaller ones implemented on river systems around the world, they can also have significant negative impacts on hydrological resources and aquatic ecosystems (Wells 1999).

Impacts of dams on freshwater ecosystems have been intensely studied and are well documented. Dams impact freshwater ecosystems by altering the natural hydrology of river systems. Examples of these impacts include; alteration of flow regimes, changing of water temperatures upstream and downstream, disrupting sediment transport, modifying nutrient loads, and fragmenting the continuity of river systems (Bednarek 2001; Saunders et al. 2002). The complex interactions and flow regimes within freshwater ecosystems play a profound role in the distribution, abundance, and

diversity of the organisms which reside there (Bunn & Arthington 2002).

Alterations of natural freshwater hydrological systems, through the use of damscan create substantial impacts upon aquatic organisms. For example, dams placed in freshwater ecosystems create the potential of restricting or eliminating the movement of fish upstream and isolating upstream populations (Hoffman & Dunham 2007). Movement among fish species plays an essential role for acquiring the resources necessary in order to complete their life cycles (Hoffman & Dunham 2007).

Some fish species are known to have complex life cycles in which they need to migrate for; spawning, overwintering, feeding, and seeking refuge (Meixler et al. 2009). Consequences of barriers include reducing the ability of fish to migrate upstream to critical habitats, extirpation of species from upstream populations, fragmenting or isolating upstream populations, increasing vulnerability to negative impacts of habitat disturbances, increasing the loss of genetic diversity at the population level and creating new habitats preferred by non-native species (Hoffman & Dunham 2007). Decreasing stream network connectivity is a significant threat which has caused freshwater species, especially diadromous fish in North America, to be listed as either endangered, vulnerable, or extinct (Saunders 2002).

The Atlantic salmon (Salmo salar) Inner Bay of Fundy population (IBoF) and the Atlantic

salmon Southern Upland population (SU) in Nova Scotia are endangered species potentially threatened by dams (DFO 2010; Gibson 2010). In order to aid in the recovery of these species, connectivity should be maintained in river systems, allowing critical habitat to be accessible. Installing a barrier without providing adequate fish passage will result in the permanent loss of access to upstream habitat.

Until 2011, limited knowledge existed regarding general information on dams along river systems within Nova Scotia such as; where the dams are located, what parts of Nova Scotia are most affected by dams, how many dams are there in Nova Scotia, when were they constructed, how many dams contain fish passage technology, and how much critical upstream habitat has been lost. This knowledge is critical as recovery efforts in a greater number of rivers are becoming increasingly important for long term fish population self-sustainability.

1.2 Research Problem

My research questions are:

- 1) "To what extent has aquatic habitat been lost due to artificial water control barriers,
- 2) when did this aquatic habitat loss occur, and
- 3) if given what I have learned about the locations and dates of dam installations, are existent fish population data sufficient to assess the impacts of dams on the IBoF and

SU Atlantic salmon populations in Nova Scotia?

There are three related hypotheses:

- the construction of dams has led to a reduction of 1/3 of the habitat for fish species in Nova Scotia,
- 2) the largest aquatic habitat loss occurred between 1920 to 1930, and
- existent data regarding fish populations will not be sufficient to assess the impacts of dams on the IBoF and SU Atlantic salmon populations in Nova Scotia.

To achieve the goal of exploring the impacts of dams on fish habitat and to address these research questions, there are three related objectives. The primary objective of this research is to determine the spatial distribution of dams throughout Nova Scotia. The second objective is to calculate the extent of aquatic habitat loss upstream due to dam construction in the SU and IBoF regions from 1800-2010. The third objective is to examine patterns between any observed SU and IBoF Atlantic salmon population declines and dam construction.

It is my goal that this research will be able to help fill in essential information gaps pertaining to dams in freshwater ecosystems and contribute to the body of knowledge that exists regarding endangered aquatic species and their freshwater habitats in Nova Scotia.

1.3 *Scope*

Examining the extent of aquatic habitat loss upstream due to dams and when it occurred will be limited to the SU region and the IBoF region of Nova Scotia, mainly due to time constraints and because these two regions contain endangered Atlantic salmon populations that depend on freshwater habitats which may be threatened by dam construction (DFO 2010; Gibson 2010). Artificial water control barriers will also be limited to solely examining dams, due to available database. Upstream river or stream length from each dam that is considered inaccessible to fish (no fish passage technology) is deemed as upstream habitat loss for the purpose of this study. Examining habitat suitability upstream from each dam site is beyond the scope of this research, therefore, results are preliminary and conservative.

2.0 Literature Review

Freshwater ecosystems have received less attention and support in conservation efforts compared to adjacent terrestrial or marine ecosystems, despite the fact that freshwater ecosystems contain a large extent of the world's global biodiversity and are exposed to higher pressures and threats from human impacts (Hermoso et al. 2011).

Habitat fragmentation is one of the most serious ecological concerns imposed on riverine environments (Raeymaekers et al. 2009). The cumulative construction of dams worldwide continues to increase and has led to extensive fragmentation of river systems (Lucas et al. 2009). Decreased connectivity can prevent or disrupt natural patterns of migration and dispersal between critical habitats especially for diadromous fish species that depend on access between different habitats in order to complete their life cycle (Lucas et al. 2009). Loss of connectivity can result in reduced fitness of organisms and in worst case scenarios can result in population extinction (Blanchet et al. 2010; Lucas et al. 2009).

The principal objective of this literature review is to provide the reader with context of where current literature stands with regards to the research proposed. This section will examine the extent of changes to the hydrological regime which dams impose on riverine systems and the connection of these physical attributes to aquatic habitats and associated biological communities. This review will also examine the connection between dam construction and upstream habitat loss for diadromous species such as, the endangered Inner Bay of Fundy Atlantic salmon population and the Southern Uplands

Atlantic salmon population in Nova Scotia, as well as the necessity of this study in addressing information gaps regarding freshwater habitat loss in Nova Scotia due to dam installations.

Literature was located using apriori and aposteriori methods, by searching academic journal databases using various combinations of the phrases "effects of dams on hydrology" and "effects of dams on fish populations and habitats". Cited works in relevant articles were also examined for other relevant articles. Literature was limited to using relevant articles from 1980-2011.

Grey literatureregarding endangered Atlantic salmon populations were found on provincial and federal websites using a snowball method. Only the most recent documents concerning status, habitats, population abundance and distribution, and threats for Atlantic salmon were incorporated.

2.1 Changes to the Hydrological Regime and Physical Habitat of Riverine Systems Imposed by Dams

The alteration of a rivers hydrological regime, due to dam installations, threatens the ecological integrity and sustainability of riverine systems. The physical characteristics, operating rules, and general climatic setting of a dam determines the extent of changes imposed to the hydrological regime (Graf 2006; Burke et al. 2008). A considerable amount of research exists in regards to the hydroecological impacts of dams, both upstream and downstream however, an exhaustive review of the literature is beyond the scope of this project.

This section of the literature review will focus on common themes which have appeared through various case studies and model-based research pertaining to the hydro-ecological effects of

dams. Common themes include changes to flow, temperature, sediment transport, and connectivity in the unregulated upstream and regulated downstream portions of dams.

2.1.1 Flow Regulation

Flow regimes are fundamental in determining the physical characteristics of a rivers habitat.

Spatial and temporal variations in frequency, magnitude, and duration of flows, regulates the shape and size of channels, distribution of riffle and pool habitats, the stability of substrate, and the temperature of riverine systems (Bunn & Arthington 2002; Bednarek 2001). Biological communities are dependant on specific habitat requirements, therefore, alteration of the natural flow regime indirectly affects the distribution and abundance of biodiversity within the river system. Dams physically block the river, store excess water, and release water according to human needs, resulting in altering the natural flow regime of the river, both upstream and downstream (Bednarek 2001).

Studies of altered flow regime downstream due to dams have concluded that; 1) dams reduce flood peaks, 2) dams alter low flow patterns, and 3) dams alter the timing of peak flows (Graf 2006). For example, a study conducted across the Connecticut River watershed in the United States concluded that peak flows declined by 32%, in rivers impacted by dams (Graf 2006). Magilligan and Nislow (2005) also assessed hydrological changes at twenty-one different dam sites across the United States

and found that on average the 2-year flow decreased by 60% after dam installation. The greater the deviation in magnitude and frequency of the flow regime from pre disturbance conditions, the greater the expected shift in species composition (Magilligan & Nislow 2005).

2.1.2 Conversion to Lentic Water Bodies and Temperature Changes

The creation of a reservoir through damming turns upstream free flowing rivers (lotic) into slow moving lake like water bodies (lentic). A study on the Colorado River found that dam installations converted one quarter of the river to lentic habitat, which resulted in the loss of fish who are naturally adapted to turbid riverine habitats (Bunn & Arthington 2002). The newly created lentic habitat also accompanied the success of invasive species which have contributed to the extirpation of native fish species in the Colorado River (Bunn & Arthington 2002).

The creation of lake like habitats upstream from dams also alters the natural temperature of the river (Bednarek 2001). For migrating cold water fish such as salmon, warm water temperatures act as thermal barriers to movement (Bednarek 2001). Fish species therefore may be forced to find alternate routes which can lead to decreasing their chance of reaching appropriate spawning grounds (Lucas et al. 2009)

Warmer temperatures upstream of dams can favour invasive fish species populations. For

example, the damming of the Peticodiac River in New Brunswick resulted in an increased abundance of non-native species, such as; small mouth bass, due to warm water temperatures facilitating high successful reproduction rates of the species (Locke et al. 2003)

Temperature changes can also occur downstream of dams, if large amounts of water from the stratified reservoir upstream is released. The release can cause cold water with low levels of dissolved oxygen to move downstream (Bednarek 2001; Bunn & Arthington 2002). Oxygen-poor cold water downstream can influence spawning behaviour of some fish species (Bunn & Arthington 2002). For example, cold water releases downstream of dams have been found to delay spawning of some fish species by up to thirty days (Bunn & Arthington 2002).

2.1.3 Altered Sediment Transport

Changes to the natural flow regime can also alter the transportation of sediment which changes the natural physical structure of aquatic habitats. Sediment transport is a key factor in developing a rivers natural structural habitat. Altering sediment transport through dam construction generally causes stream bed deposition upstream of the dam site (Magilligan & Nislow 2005). Reducing suspended sediment and bed load transport also results in increased erosion downstream (Magilligan & Nislow 2005).

Increased erosion downstream of damscan result in a loss of critical habitat used by some fish species for spawning, refuge, and migration. For example, downstream sediment related effects include the loss of riffle pool sequences, collapse of banks, and loss of riparian habitat, which are considered to be critical habitat for the successful completion of some fish specieslife cycles (Lucas et al. 2009).

It is evident through these examples that dams can make profound changes to freshwater habitat and may therefore, indirectly lead to the decline of aquatic species. The following section of the literature review will examine the effects of dam installations experienced by fish species only, with focus on the Inner Bay of Fundy and Southern Uplands Atlantic salmon populations. The focus of dam related impacts on fish species will be limited to examining the impact of lostconnectivity throughout river systems.

2.2 Connectivity

Connectivity is an important component of all aspects in a functioning river. Connectivity is defined as the spatial continuity of a habitat type (Cote et al. 2008). In freshwater ecosystems connectivity can be used to measure and describe longitudinal river network connectivity (Cote et al. 2008). Longitudinal connectivity refers to connections between upstream and downstream sections of a river network (Cote et al. 2008).

Loss of connectivity throughout the river system is one of the most serious effects that dams impose on migrating fish species (Schick & Lindley 2007; Lucas et al. 2009; Blanchet et al. 2010). It is widely referred to as the "barrier effect" (Morita & Yamamoto 2002). The barrier effect is defined as the prevention of migration throughout the freshwater ecosystem (Morita & Yamamoto 2002). The terms migration and movement are used inter-changeably within this review. For the purpose of this review, migration and movement will be used as defined by the Department of Ocean and Fisheries as, the spatial and temporal movement between spawning, feeding, and refuge habitats in response to genetic or environmental stimuli.

Aquatic fish species are impacted by dams as upstream habitats become inaccessible and populations can become isolated or extirpated due to impassibility of dam structure (Blanchet et al. 2010; Lucas et al. 2009). Lack of accessibility or poor connectivity between habitats can potentially lead to population decline as populations that are physically and genetically isolated upstream suffer from decreasing population sizes and inbreeding, this further increases the risk of extinction (Blanchet et al. 2010; Lucas et al. 2009; Raeymaekers et al. 2009).

Riverine ecosystems are considered to be dynamic landscapes, therefore, movement, habitat patchiness, and life stage dependent shifts in critical habitat interact with one another and influence

fish populations across the broader ecosystem (Poplar-Jeffers et al. 2009). Movement therefore is an important determinant of how fish species are distributed across the ecosystem and is related to their persistence within the system.

Examples of consequences of dam installations on fish species include, but are not limited to (Hoffman & Dunham 2007): 1) reduction or elimination of the ability for fish to reach upstream habitats; 2) extirpation of populations from upstream habitats; 3) fragmentation and isolation of upstream populations; 4) increased vulnerability to environmental change; 5) prevention of recolonization of disturbed upstream habitats; and 6) population-level genetic impacts. Impediments to migration caused by dams is exceptionally problematic for diadromous fish species as they must make migrations between marine and freshwater habitats in order to complete their life cycle (Cote et al. 2009).

Studies have shown that some declines of diadromous fish species have been attributed to the loss of connectivity from dam construction. For example, addition of large water storage dams to rivers in California's Central Valley resulted in a dramatic decline in the distribution and abundance of spring-run Chinook salmon due to blocked access to spawning habitat (Schick & Lindley 2007). It has also been found thatin the Peticodiac River in New Brunswick, poor upstream passage for migrating

fish species was the dominant reason for the decline and eventual extirpation in diadromous stocks (Locke et al. 2003). Another example is the extensive network of dams constructed in the Colombia River Basin, which blocked access to critical spawning habitats for Chinook salmon (Bunn & Arthington 2002). More than 75% of the spawning and rearing habitats that existed prior to dam installations are now eliminated within the Basin (Bunn & Arthington 2002). Decreasing connectivity amongst river systems is potentially a significant threat which may be inhibiting the recovery of endangered fish species in Nova Scotia.

2.3 Atlantic salmon in Nova Scotia

Two endangered Atlantic salmon (*Salmo salar*) populations found in Nova Scotia will be examined within this literature review: 1) Atlantic salmon Inner Bay of Fundy population (IBoF) and 2) Atlantic salmon Southern Uplands populations (SU).

2.3.1 Habitat Range

The IBoF population is an anadromous fish species endemic to the northern temperate hemisphere (DFO 2010). The entire population exists within Eastern Canada, in rivers draining into the Inner Bay of Fundy beginning at Mispec River in New Brunswick to the Pereaux River in Nova Scotia (DFO 2010). The IBoF Atlantic salmon are known to possess distinct genetic traits which are

associated with unique and complex life history characteristics (DFO 2010).

The SU population resides throughout the Southern Upland region of Nova Scotia, including all rivers along the Eastern Shore and south-western portion of the province that drain into the Atlantic Ocean (Gibson et al. 2010).

2.3.2 Status

Presently, both the IBoF and the SU populations of Atlantic salmon are at critically low levels and are listed as endangered (COSEWIC 2006; SARA 2011). The SU Atlantic salmon population has been designated as endangered by COSEWIC(Committee on the Status of Endangered Wildlife in Canada) in 2010 (SARA 2011). The IBoF population has been listed as endangered under both COSEWIC and the Species at Risk Act (SARA) since 2001 (COSEWIC 2006).

2.3.3 Threats

The SU and IBoF Atlantic salmon populations suffer from various anthropogenic and natural threats within the marine and freshwater environment. Examples of threats identified in the 2010 recovery strategy report for the IBoF and the review of information for the SU population by the Department of Fisheries and Oceans in 2010include; marine survival, acidification of freshwater, over fishing, and barriers to fish passage (DFO 2010; Gibson et al 2010). The scope of this review is limited

to examining barriers to fish passage.

It has been recognized that habitat in spawning rivers of both the SU and IBoF Atlantic salmon populations are threatened by human activities such as; agriculture, urbanization, road building, dam construction, and poor forestry practices (DFO 2010). Decreased smolt production due to habitat degradation has been observed, however, overall impacts on the IBoF and the SU from freshwater habitat degradation has not been quantified (DFO 2010).

Hydroelectric power is known to impact more than 30% of the salmon populations in the Southern Uplands and barriers are known to exist on at least 25 major rivers around the Bay of Fundy (DFO 2010; Gibson et al. 2010). However, overall impact of barriers and consequences of lost connectivity throughout the river system within the SU and IBoF remains largely unknown and is therefore of concern especially within the Southern Uplands as freshwater production is depressed due to acidified freshwater within the region (Gibson et al. 2010). It is acknowledged that barriers alter habitat and change the hydrology of rivers which has no known positive effects on salmon populations, therefore, spawner loss could be substantial and persistence of salmon populations within these regions could be threatened (DFO 2010; Gibson et al. 2010).

The quality and quantity of freshwater habitat will become increasingly important, as it

must be able to support increased returns of adult salmon and provide adequate accessible habitat for spawning if recovery progresses (DFO 2010; Gibson et al. 2010). It is evident that barriers to fish passage in fresh water habitats must be identified and prioritized for mitigation in order to ensure that freshwater habitats will not pose a limiting factor for potential recovery of these populations.

2.4 Identification of Literature Gaps

A review of the relevant literature indicates that there is scientific consensus regarding the disruption of ecological integrity caused by dam installations. However, literature pertaining to the recovery of both Atlantic salmon populations reveals extensive gaps in baseline information pertaining to characteristics of barriers to fish passage in Nova Scotia such as; locations of dams across Nova Scotia, what parts of Nova Scotia are most affected by dams, how many dams are there in Nova Scotia, when were they constructed, how many dams contain fish passage technology, and how much critical upstream habitat has been lost.

The IBoF recovery strategy implies that freshwater habitat is currently not limiting the reproductive success and persistence of the IBoF Atlantic salmon population (DFO 2010). However, this remains inconclusive due to lack of research aimed at identifying and evaluating habitat loss due to dam construction and the necessary mitigation measures for addressing it. I have not found any

literature pertaining to examining connectivity within freshwater habitats in the SU or the IBoF regions in Nova Scotia, nor to the extent of upstream habitat which is deemed inaccessible to Atlantic salmon populations due to dams. The recovery strategy for IBoF Atlantic salmon acknowledged various knowledge gaps regarding barriers in freshwater habitats (Table 2.0) (DFO 2010).

Table 2.0. List of high priority research and monitoring recommendations developed by the Department of Fisheries and Oceans regarding the recovery strategy of the IBoF Atlantic salmon population. Modified from DFO 2010.

Knowledge Gaps Regarding Barriers in Freshwater Habitats				
Barriers	Collect information on barriers			
Barriers	Quantifying restoration potential of various barrier			
	removal and fish passage improvement scenarios and			
	the methodology and technology that would be most			
	effective			
Barriers	Develop meta population viability analysis modelling			
	to investigate expected increases in productive			
	capacity and population persistence that would result			
	from removing particular barriers			
Barriers	Research impact of barriers on the loss in productivity			
	in adjacent estuarine and coastal habitats and potential			
	impact of those losses on salmon production.			

3.0 Methods

3.1 Study Design

Geographic Information System (GIS) (ESRI 2010) was used to integrate existing databases to investigate the; 1) extent of aquatic habitat loss due to dams and 2) occurrence of aquatic habitat loss due to dams.

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3.2 Sources of Data

The objectives of this research are achievable through recent progress of databases which have been made available. The Nova Scotia Water Control Structure Database (NSWCD) was sourced from Nova Scotia Environment, along with associated metadata (NSE 2010) (Appendix A). The NSWCD is considered an ongoing project within Nova Scotia Environment (NSE 2010). The NSWCD was initialized for legal and engineering purposes in regards to maintenance and status of dams across Nova Scotia (NSE 2010).

The NSWCD contains 586 total dam locations. 473 dam locations have assigned coordinates.

Only dams with coordinates were used throughout this study. 229 of 473 dam locations do not possess dates of construction. Only dam locations with known dates of construction were used to temporally analyze length of stream loss overtime within the SU and IBoF regions.

There are several sources of error in the NSWCD. The majority of errors arise primarily from the data collection process. The NSWCD database has been collected over a number of years and has been the responsibility of a variety of people within Nova Scotia Department of Environment. As a result, a variety of data collection techniques was employed. For example some dam locations were verified using Global Positioning Systems (GPS), while others were located using hard copies of maps.

Various errors can occur when using GPS units such as, interference of satellite signals. Employing different data collection techniques compromise the consistency and accuracy of the data.

Stream networkfor the SU region was derived from The Nova Scotia Hydrographic Network (NSHN). Stream network for the IBoF was derived from the Digital Elevation Model (DEM). Both databases for stream networks are from the Nova Scotia Topographic Database created by Service Nova Scotia Municipal Relations in 2009. Total stream length for the SU region derived from the NSHN is 32,414 kilometers and from the DEM in the IBoF region is 18,242 kilometers. Calculations for the total stream length used for these two regions excludes lake dimensions. The DEM was used instead of the NSHN to derive the stream network within the IBoF as it resulted in a better resolution, therefore, direction of flow was more accurate. The Nova Scotia Watershed Assessment Project (HSRG2011) provided data for primary watershed and lake boundaries.

Population data for Atlantic salmonin Nova Scotia is limited. Recreational fisheries data does exist however forboth Atlantic salmon populations. Recreational fisheries data is subjected to numerous uncertainties and biases such as unknown or unreported effort or falsified catches.

Recreational fisheries data pertaining to several rivers within the SU and IBoF regions were chosen for the purpose of this research as they provide the longest historic indicator of population

trends (Gibson et al. 2010; Gibson et al. 2003). Recreational fisheries data for IBoF and SU Atlantic salmon populations were obtained from the Department of Fisheries and Oceans Canada (Gibson et al. 2010; Gibson et al. 2003). Recreational catch and effort data for the SU population exists from 1983-2007 and from 1954-2002 for the IBoFpopulation. In 2007, a majority of rivers in the SU region were closed and in 2001 IBoF fisheries were closed.

Catch and effort data from the annual recreational salmon fishery for the SU and IBoF regions were collected using a license-stub return program since 1983 (DFO 2010). After the close of the fishing season, stubs are collected from anglers during autumn and winter (DFO 2010). Preliminary estimates of the season's catch and effort are provided the following spring, and estimates are finalized during the next year (DFO 2010). Effort is denoted as rod days which indicates the number of days during which an angler fished for part or all of that day (DFO 2010). Catch is considered to be the number of fish caught (DFO 2010).

3.3 Focus Area

The IBoFand SU regions in Nova Scotia were chosen as the study site for fourreasons (Figure 3.0). First, Nova Scotia is the scale used in available databases and it is the scale for which important new information exists for the NSWCD. Second, both the IBoF and SU Atlantic salmon populations

are endangered within Nova Scotia and freshwater habitat may be inhibiting their recovery. Third, there is limited knowledge regarding the prevalence of dams and the potential for salmonid habitat loss within these two regions in Nova Scotia. Fourth, 410 of the 473 dams that contain coordinates are located within the SU or IBoF regions.

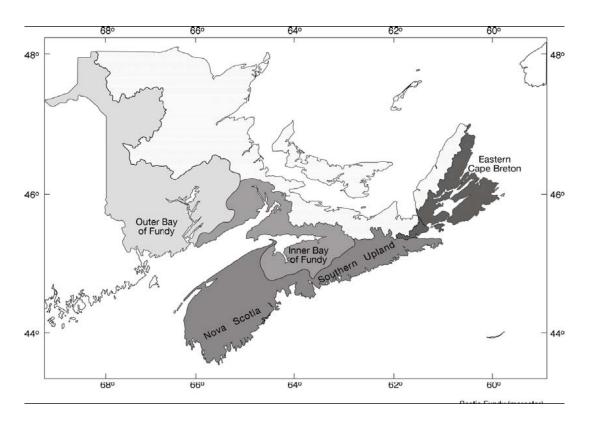


Figure 3.0. Map of Nova Scotia indicating the location of the Atlantic salmon Southern Uplands populations and the Atlantic salmon Inner Bay of Fundy population. Gibson 2010.

The SU region includes all rivers along the eastern shore and the south-western portion of the province that drains into the Atlantic Ocean. The IBoF region includes all rivers draining into

the Inner Bay of Fundy beginning at Mispec River in New Brunswick to the Pereaux River in Nova Scotia (DFO 2010).

3.4 Instrumentation and Validity

GIS was used to analyze extent and occurrence of habitat loss. GIS is a valuable tool for examining interactions, patterns, and trends in watersheds, this has been used in a broad array of recent studies. For example, Fukushima et al. 2007 used GIS to quantify fragmented aquatic habitats, which lead to identifying affected fish species and providing spatially explicit predictions of the areas of greatest impact. GIS analysis has also been previously used to calculate the extent of habitat loss due to impoundments, this led to identifying restoration priorities (Poplar-Jeffers et al. 2009).

3.5Procedure

The NSWCD was imported into a geographic information system according to primary function class of the structure, resulting in the creation of a new geo-database. Primary function class defines the primary reason for the structures existence. The categories of the newly created layers can be found in Table 3.0. The newly created layers were then overlaid onto the NSHN layer for the SU region and over the DEM for the IBoF region. A layer displaying primary watershed boundaries of Nova Scotia and a layer illustrating boundaries of lakes in Nova Scotia were then overlaid onto the existing layers.

Table 3.0. Description of newly created layers into a geo-database from the NSWCD, based on primary function class of structure.

Primary Function Class	
Aboiteaux/ Flood reduction	
structure	
Decommissioned	
Fish ladder	
Mine tailings management	
Navigation aid	
Water impoundment/Storage	

A snap model was created in order to improve accuracy and create consistency amongst the NSWCD and the NSHN and DEM layers. The snap model was able to move the location of dams to the nearest point on the associated river or stream(Horne 2011). The densify command in ArcGIS toolbox was first used in the model. The densify tool allows vertices to be created within the river/stream line file. This allowed the water control structure point files to join to the line file. The multiple ring buffer tool was then used in the model. This tool creates a new feature class of buffer features using a set of buffer distances. In this model the buffer distance was chosen to be fifty meters around the original location of the dam. Each ring represents increments of five meters. Creating the multiple buffer ring, allows for determining the accuracy of the dam location to the water line. If the

dam's location was greater than fifty meters from the stream/river location, it was deemed inaccurate therefore it was not snapped to the stream/river file and was omitted from the study. The snaptool was then used which allows movement of a point file to the nearest line file. The snap tool moved the location of each dam to the closest vertex on the NSHN and DEM files (Figure 3.1).

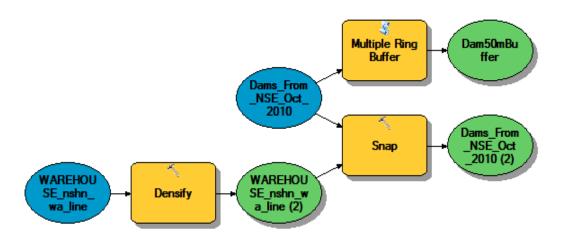


Figure 3.1. Flow chart representing snap model

Network analyst was used in order to calculate upstream river or stream length from each dam site. Network analyst is an extension of ArcGIS that allows conduction of network-based spatial analysis. Network analyst was first used to determine direction of water flow within the NSHN and the DEM. Once flow direction was set, the trace task tool in network analyst was used. This tracing option allows for upstream accumulation to be chosen and calculated from each dam location (Figure 3.2).

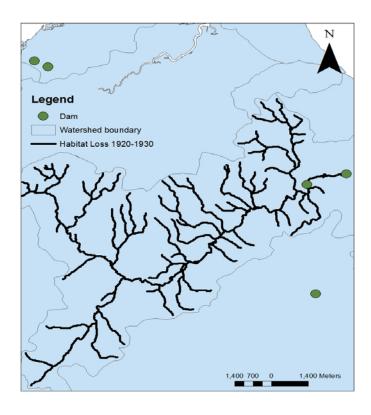


Figure 3.2 Example of method used to calculate upstream length from dam locations.

Calculation of blocked stream length upstream from dam locations in the SU and IBoF is considered conservative, as assumptions were made in order to maintain consistency and to avoid over representation of aquatic habitat loss in Nova Scotia due to dam construction. Assumptions made are as follows:

- 1. Fish passages assumed to be in adequate working condition, therefore no upstream loss was calculated
- 2. If more than one possible accessible route upstream was present at a dam site, no upstream loss was calculated.
- 3. No habitat loss was calculated at sites where it was indicated that the dam had been breached.
- 4. Lake dimensions were removed from upstream calculations as only streams and rivers are considered critical habitat for Atlantic salmon in Nova Scotia(Gibson et al 2010).

5. Dams in which year of construction were unavailable were included in total upstream loss but were omitted for temporal analysis.

3.6 Analysis

Once the occurrence and presence of dams and upstream lengthwas mapped in ArcGIS, the extent of aquatic habitat loss and the relationship between aquatic habitat loss and changes in Atlantic salmonpopulations in the SU and IBoF region of Nova Scotia were determined.

3.6.1 Extent of Aquatic Habitat Loss

The total combined length of stream loss per decade from 1800-2010 was calculated using GIS summary statistics for the SU region and IBoF region. Upstream lengths from dams with no associated year of construction were also summed.

3.6.2 Atlantic SalmonPopulation Data

Catch per unit effort was calculated using recreational fisheries data provided from DFO for the IBoF Atlantic salmon population (1954-2002) and for the SU Atlantic salmon population (1983-2007).

Catch per unit effort was calculated as follows:

Equation 1: *Catch per unit effort= Catch + Retained / Effort* (rod days).

Catch per unit effort was summed from all rivers in order to define an overall trend. Indicator

rivers and rivers containing a large amount of dams were assessed individually in order to determine if total catch per unit effort is representative of all rivers.

3.6.3 Characteristics of Dams in Nova Scotia

In order to increase general knowledge concerning barriers in freshwater ecosystems in Nova Scotia, the metadata was used to summarize characteristics of dams. Relevant parameters which wereused include: year of construction, primary function of structure, and existence of fish passage.

.

3.7 Limitations and Delimitations

Time was the main limitation experienced throughout this project, hindering both the scope and depth of research (Appendix B). In order to ensure that the study wasadequately addressed, within the given time frame, the study focused specifically on aquatic habitat loss due to the implementation of dams in SU and IBoF regions. Two Atlantic salmon endangered aquatic species were the focus of this study, however, results from this study may be valuable for research regarding other endangered aquatic species in Nova Scotia. Limitations also exist in light of the willingness and availability of information and databases that can be provided by individuals from the government, concerning Atlantic salmon populations.

4.0 Results

4.1 Characteristics of dams in Nova Scotia

The NSWCD contains a total of 586 dams as of September, 2010.410 of the 473 dams that contain coordinates are within the SU and IBoF regions. A total of 279 dams exist in the SU and 131 in the IBoF. The majority of dams that did not contain associated coordinates (76 of 111) are located within the Cumberland County, Colchester County, and Hants County, which are within the IBoF boundaries and twenty dams are within the SU region. Eleven dams without coordinates are located in Cape Breton.

Evidence shows that a large proportion of dams in the SU are concentrated in the Mersey and Annapolis watersheds. The Gaspereau and St. Croix watersheds within the IBoF also contain a large concentration of dams. Figure 4.0 illustrates the spatial distribution of dams throughout Nova Scotia with coordinates and subsequent stream loss for dams located within the SU and IBoF regions.

Eighty-four of the 586 dams across the province were found to possess fish passage technologies. No information is available on working condition of fish passages. The most common primary function of dams with coordinates built in Nova Scotia is forwater impoundment (78%) which, are primarily used for hydropower production (21%). Other common primary functions of dams include agricultural, water supply, wildlife conservation, aquatic recreational enhancement, and

municipal water supply.

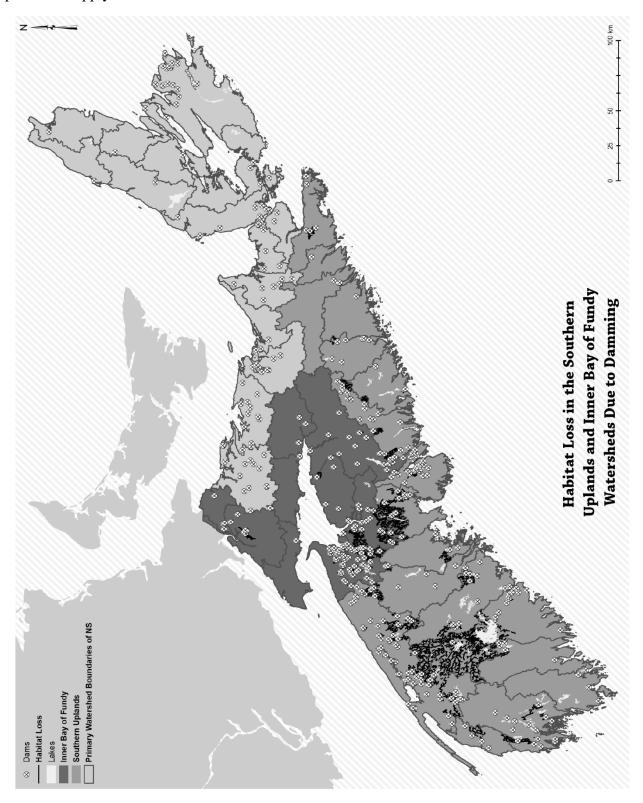


Figure 4.0. Spatial distribution of dams in Nova Scotia and habitat loss in the SU and IBoF watersheds from damming.

4.2 Associated Stream Loss

Total length of accessible streams for potential salmonid habitat in the SU region was found to be32,414 km. Findings indicate that 3,008 km of stream length has been potentially lost from 1800-2000, which is equivalent to approximately 9.28% of total stream length of the SU region (Table 4.0). The most extensive loss occurred from 1920-1930, with 47 dams constructed, resulting in a loss of 1,564 km of stream length. This decade alone accounts for approximately 52% of total loss.

The total length of stream in the Inner Bay of Fundy was found to be 18, 242km. Findings indicate that 1,299 km of stream length has been potentially lost from 1850-2010, which is equivalent to approximately 7.1% of total stream length (Table 4.0). The largest amount of loss occurred from 1930-1940, in which eight dams were constructed, resulting in 585 km of stream length being lost.

Table 4.0. Total length of accessible streams for potential salmonid habitat lost due to dam construction in the SU and IBoF from 1800-2010.

	Number of dams constructed		Length of upstream loss	
Year of				
Construction	\mathbf{s} U	IBoF	$\mathbf{s}\mathbf{u}$	IBoF
1800-1810	1	0	32	0
1810-1820	0	0	0	0
1820-1830	0	0	0	0
1830-1840	1	0	4	0
1840-1850	0	0	0	0
1850-1860	3	3	1	0
1860-1870	0	0	0	0
1870-1880	0	0	0	0
1880-1890	0	0	0	0
1890-1900	2	0	2	0
1900-1910	7	1	88	33
1910-1920	0	0	0	0
1920-1930	47	3	1564	290
1930-1940	7	8	19	585
1940-1950	13	7	131	15
1950-1960	19	2	303	2
1960-1970	9	3	39	0
1970-1980	25	6	252	18
1980-1990	43	18	89	43
1990-2000	7	7	46	31
2000-2010	0	5	0	9
Unknown	95	68	438	273
TOTAL	279	131	3008 (9.3%)	1299 (7.1%)
Total Stream				
Length			32414	18242

4.3Sufficiency of Fish Data

Decreasing trends in recreational fisheries catch and effort data is evident from 1983-2007 for the SU Atlantic salmon population (Appendix C). Figure 4.2 illustrates the relationship between cumulative habitat loss and catch per unit effort for the SU Atlantic salmon. Total catch per unit effort from 1983-1990 ranges from values of 8-12. From 1990-2000, total catch per unit effort decreases with the exception of a peak in 1996. In 1997 total catch per unit effort continues to decline again to

8.4 and decreases furthermore to 4.79 in 1998. In 2000, total catch per unit effort is reduced to 1.7.

The overall trend in catch per unit effort data within the SU does not represent each river individually. For example different trends were found in the St. Mary's River and the LaHave River which are indexrivers for the SU Atlantic salmon population and are minimally impacted by dam construction. Both of the index rivers exhibit increase overtime in catch per unit effort. The maximum catch per unit effort value for the St. Mary's River is 0.9 in 1996 and the LaHave River maximum catch per unit effort value is 0.6 in 2002 (Appendix C). In contrast, the Mersey River is heavily impacted by dams and exhibits a decreasing trend since 1983. The Mersey maximum value in catch per unit effort occurred in 1999 was 0.2.

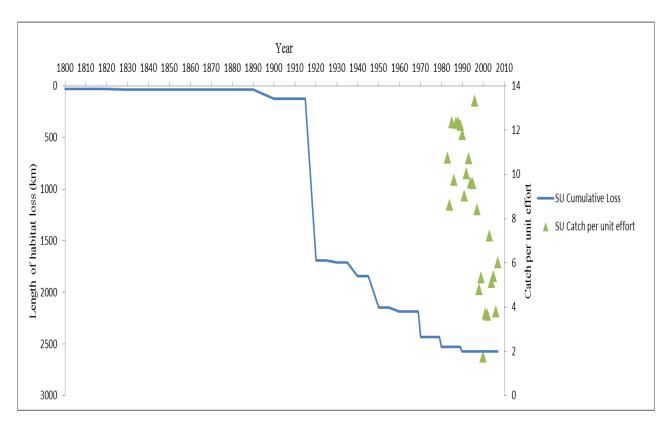


Figure 4.1. Length of cumulative habitat loss (km) from 1800-2000 and total catch per unit effort data for the SU Atlantic salmon populations from 1983-2007.

A declining trend in total catch per unit effort is evident for the IBoFAtlantic salmon population from 1954-2010, based upon recreational fisheries data (Appendix D). Figure 4.2.b shows the relationship between cumulative habitat loss in the IBoF region and catch per unit effort for IBoF Atlantic salmon. No catch or effort was recorded until 1960. Total catch per unit effort from 1960 to 1964 for the IBoF Atlantic salmon population was low with values ranging from 0.006 to 0.08. The early 1960's trend is evident in some individual rivers such as the Stewiacke River, which is the index river within Nova Scotia for the IBoF Atlantic salmon. This river is not impacted by habitat loss caused by dams. However, rivers which are impacted by dams such as the Gaspereau River possess larger

catch per unit effort values for this time period 0.1-0.22 (Appendix D). Some rivers such as the Economy Riverdoes not contain data for this time period. A general peak occurs in the majority of rivers from 1960-1970. Exact time of peak differs within rivers. For example, in the Stewiacke River this occurs in 1965 with a value of approximately 1.5 and in the Gaspereau River this occurs in 1961 with a value of approximately 0.2. A general decreasing trend occurs from 1970-1990overall in the IBoF region. This trend is evident in the Stewiacke River however, within the GaspereauRiver values remain relatively constant overtime until 1990. Values do not exist for any rivers after 1999 as the fishery closed.

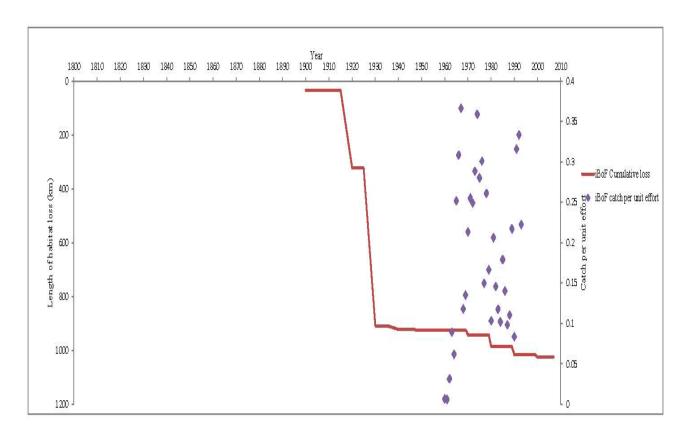


Figure 4.2. Length of cumulative habitat loss (km) from 1850-2010 and total catch per unit effort data for the IBoF Atlantic salmon population from 1954-2010.

4.4Data Limitations

Data limitations exist within the recreational fisheries data for the IBoF and SU Atlantic salmon in Nova Scotia. Data is non-existent prior to 1954 for the IBoF population or prior to 1983 for the SU population. No effort has been documented after year 2000 as fisheries were closed. A total of 54 rivers were monitored within the SU region and 46 rivers within the IBoF region, however, data does not exist every year for each river as rivers were closed to fisheries at various times. Limitations therefore arise when assessing correlation and causation of decline and the current status of Atlantic salmon.

Quality of data is questionable as various biases are associated with recreational fisheries data as described in section 3.2.

5.0 Discussion

5.1 Spatial Occurrence of Dams in Nova Scotia

Results of this research allowed for the identification of the presence and patterns of dam occurrence, purpose, and extent in Nova Scotia, due to the recent development of the NSWCD.

The NSWCD is an on-going project, therefore, the total amount of dams across Nova Scotia is yet to be determined. No national inventory of dams for Canada exists (Environment Canada 2008).

Development of a dam inventory for each province across Canada such as the NSWCD would greatly benefit management and protection implications regarding freshwater aquatic habitat across Canada

Results of presence and patterns of dam occurrence within the SU and IBoF can be assumed to be underestimated for two reasons;1) the database is incomplete,and 2) only 473 dams contained coordinates, the remaining amount of dams could not be analyzed.

Results of this research illustrating the spatial occurrence of dams throughout Nova Scotia could be used to target rivers or watersheds containing extensive dam construction for restoration via implementation of fish passage or dam removal. For example, results clearly indicate that the Southern

Uplands region is highly impacted by dam construction, especially in the Mersey River and the Annapolis River. Intense dam construction in these rivers may be resulting in subjecting negative impacts on already depressed Atlantic salmon populations, therefore, these regions should be targeted for the rehabilitation of river connectivity.

5.2 Implications for Endangered Salmon Populations

Correlation between salmon population data and cumulative habitat loss overtime within the SU and IBoF regions remain inconclusive as catch and effort data only extends into the 1950s and therefore cannot capture the effect of the 1920-1940 extensive dam construction and subsequent habitat loss. However, evidence shows that dams have impacted an extensive amount of freshwater habitat in Nova Scotia which should not be considered negligible.

Currently, freshwater habitat is not considered to be limiting the recovery of both the endangered SU and IBoF salmon populations (Gibson 2010; DFO 2010). However, results of this study suggest that the loss of connectivity amongstcritical habitats in freshwater ecosystems may be a limiting factor in Atlantic salmon recovery as a large extent of upstream habitat is potentially inaccessible to salmon. Research has shown that inaccessibility to upstream habitats has led to extirpation of species and may lead to eventual extinction (Cote et al. 2009; Schick & Lindley 2007).

Therefore, loss of spatial connectivity throughout freshwater habitats should be acknowledged as a serious threat to the recovery for salmon populations, especially within the SU region as freshwater habitat is already depressed.

5.3Indicator Rivers

Results show that indicator rivers which are used to analyze population abundances, distributions, and trends (St. Mary's River, LaHave River, and the Stewiacke River) for both the SU and IBoF Atlantic salmon populations are minimally impacted by dams or not at all. Results also indicate that catch per unit effortinindicatorrivers vary considerably from rivers which are heavily impacted by dams such as the Mersey Riverand the Gaspereau River. Therefore, indicator rivers are not representative of all rivers within the region.

Due to the misrepresentation of the rivers within both regions, current indicator rivers may be providing inaccurate results regarding Atlantic salmon population dynamics throughout the ecosystem, which could lead to ill-informed management decisions and restoration action. Rivers which are impacted from dam construction should be assessed similarly as current indicator rivers are which includes being regularly electro-fished. Implementing monitoring of rivers impacted by dams may gain insight intoif there are any outstanding differences insalmon population dynamics in rivers

which are impacted by dams and those that are not and to would aid in developing a better representation of all the rivers within the region. This information may lead to improved management and conservation policies regarding endangered Atlantic salmon populations.

5.4 Restoration Implications

The recent progress of the NSWCD has led to valuable findings regarding the extent and occurrence of dam construction and associated habitat loss within Nova Scotia. This study shows irrefutably that habitat loss due to dam construction within Nova Scotia is not negligible, therefore, an opportunity exist throughout the SU and IBoF regions to restore connectivity in endangered Atlantic salmon freshwater habitat.

Various research has concluded that the loss in spatial connectivity amongst riverine systems has been a primary determinant in the extirpation and extinction of fish species, therefore, restoring connectivity amongst riverine system should be of high priority for restoration opportunities (Locke et al. 2003;Bunn & Arthington 2002; Schick & Lindley 2007).

As the NSWCD has led to identifying barriers to fish passage in freshwater habitats and subsequent habitat loss in the SU and IBoF, areas can be prioritized for mitigation in order to ensure that freshwater habitat will not pose a limiting factor for the potential recovery of Atlantic salmon

populations.Restoration efforts should be focused on improving salmon migrationthroughout freshwater habitats which may result in re-colonization of previously disturbed upstream habitats.

Decreasing trends in recreational fisheries catch and effort data and decline in recruitment is wide ranging despite closures of fisheries are is considered to be due to low marine survival and acidification of freshwater habitats (Marshall et al. 2005; DFO 2009). Acidification, especially in the SU has been intensely studied and it is well documented that acid rain has substantially reduced the capacity of rivers to contain salmon populations (DFO 2009). For example, twenty rivers have lost 90% of their past known Atlantic salmon populations and thirty rivers contain populations classified as threatened (Figure 5.0) (ASF 2011). Acid rain has also killed fish populations within fourteen rivers throughout the SU (ASF 2011). Loss of connectivity amongst habitats overtime due to dam construction may have increased vulnerability of fish species to acidified waters.

It has been estimated that extirpations of Atlantic salmon populations are likely to occur in 85% of rivers within the SU alone in the near future due expected ecological regime shifts in temperatures, predators, and chemical impacts (Marshall et al. 2005). As of 2000, approximately 50% of salmon populations have already been extirpated from rivers within the SU and the numbers of vulnerable populations are increasing (Marshall et al. 2005). Therefore, it is evident that the magnitude of

cumulative effects throughout freshwater habitats is potentially inhibiting the recovery of Atlantic salmon.

An opportunity also exists to correlate findingsfrom this researchwith established acid rain data in order to prioritize areas of restoration highly impacted by multiple stressors which may significantly help in rehabilitating sustainable populations. For example, results from this study have shown that the Mersey, Meteghan, and the Sissiboo/Bear watersheds within the SU areheavily impacted by dam construction. Past research has concluded that these watershedsare also impacted by acidification of freshwater, therefore they should be prioritized for restoration via dam removal, fish way implementation, and liming.

Restoring areas highly affected by multiple stressors could lead to successfully increasing quality and quantity of freshwater habitat available to Atlantic salmon. Restoration efforts focusing on areas impacted by multiple stressors would likely be effective in promoting recovery of endangered species populations.

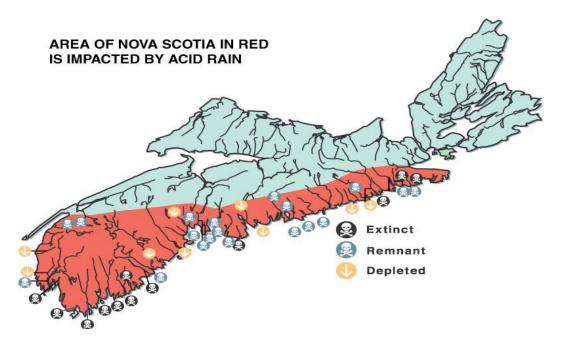


Figure 5.0. Areas of acidified freshwater within Nova Scotia and subsequent consequences for Atlantic salmon populations. ASF 2011.

5.5 Implication of Assumptions and Limitations

As previously mentioned various assumptions and limitations were made and placed upon the research in order to maintain consistency, accuracy, and in order to avoid portraying an unrealistic representation of habitat loss in Nova Scotia due to dams. Implications of the assumptions and limitations produced conservative results (Section 3.5). Amount of dams and subsequent habitat loss in Nova Scotia can therefore be estimated to be of a larger degree than what is portrayed throughout this research. However, this research does result in a justifiable representation using current available information for the province and can be considered as a baseline study for future research regarding loss of connectivity due to dam construction within the SU and IBoF regions of Nova Scotia.

5.6Conclusions and Future Work

The recent progress of the NSWCD has led to valuable findings regarding the extent and occurrence of dam construction and associated habitat loss within Nova Scotia. Results indicate that dams have caused a widespread upstream loss of freshwater habitat in Nova Scotia however fish population data do not exist to examine the direct impact of dam construction on the IBoF and SU Atlantic salmon populations in Nova Scotia. Because of the large extent of rivers behind dams, this research suggests that dam construction and subsequent lost connectivity amongst river systems may have contributed to the decrease of Atlantic salmon populations or may be currently inhibiting recovery of salmon stocks in Nova Scotia. This study shows irrefutably that habitat loss due to dam construction within Nova Scotia is not negligible, therefore, restoration actions should be taken to re-establish connectivity amongst river systems in order to ensure that the quality and quantity of freshwater habitat does not limit recovery of endangered Atlantic salmon populations in Nova Scotia.

The estimated habitat loss within the SU and IBoF regions is conservative for a variety of reasons (Section 3.5), it is therefore likely that the degree of actual habitat loss is much larger than the results presented in this study. Due to the conservative results of this study there is a need for further investigation regarding "worst case scenario" of habitat loss from dams within Nova Scotia and the

subsequent implications for endangered species populations, as it may be a contributing factor inhibiting recovery of such populations. The extent of freshwater habitat which has transformed from lotic water-bodies to lentic water-bodies due to dam construction could also be analyzed as this has important implications for native and non-native species within freshwater ecosystems.

A tangible outcome of this research is a map indicating locations of dams in Nova Scotia and associated habitat loss from dams within the SU and IBoF. The model used throughout this research could be replicated for the remaining portion of the province allowing for areas of extensive habitat loss from dams to be identified and thus potentially improve conserving and re-establishing biodiversity within riverine systems throughout Nova Scotia.

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7.0Acknowledgments

Many thanks are extended to my supervisor Shannon Sterling for support, encouragement, direction, and enthusiasm throughout this research and Peter Horne for continuous help, support, advice, and patience when it came to GIS aspects of this research. I would also like to thank Daniel Rainham for direction throughout the proposal phase and support throughout the entire research, Fred Whoriskey for advice and enthusiasm, and Ray Jahncke for GIS support. This project would not have been made possible if it wasn't for the countless hours of work put into the Nova Scotia dam inventory by Nova Scotia Environment and for their cooperation, support, and interest in this research and from Jamie Gibson from the Department of Fisheries and Oceans for his interest and support.

8.0 Appendices

Appendix A

Attached as a pdf document.

Appendix B

Table B.1. Gantt chart, timeline for thesis.

Objectives and Tasks	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Thesis Proposal							
Calculate extent of aquatic							
habitat loss							
Spatial comparisons between							
habitat loss and endangered							
species							
Temporal examination of							
patterns between fish							
population declines and dam							
construction							
Results							
Discussion							
Draft Thesis Due							
Final Thesis Due							
Prepare for							
presentation/poster							
Thesis Fair and HQE							
Maintain records of							
inaccuracies in databases							

Appendix C

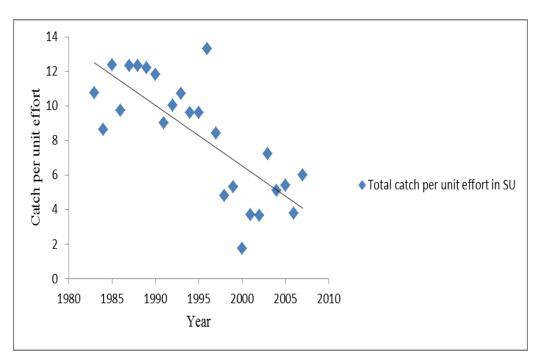


Figure C.1. Total catch per unit effort of rivers in the SU region from 1983-2007.

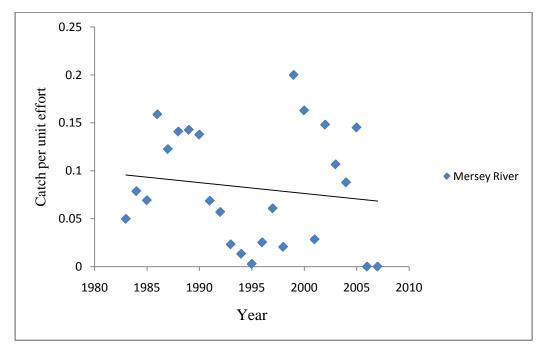


Figure C.2. Catch per unit effort in the Mersey River from 19983-2007.

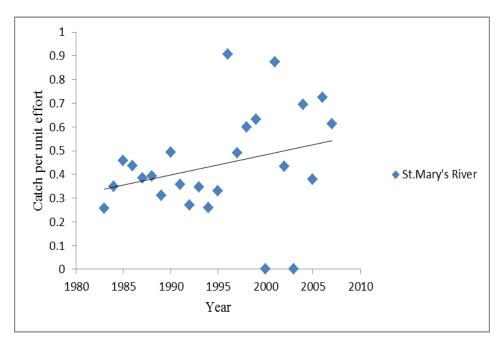


Figure C.3. Catch per unit effort in the St. Mary's Rivers from 1983-2007.

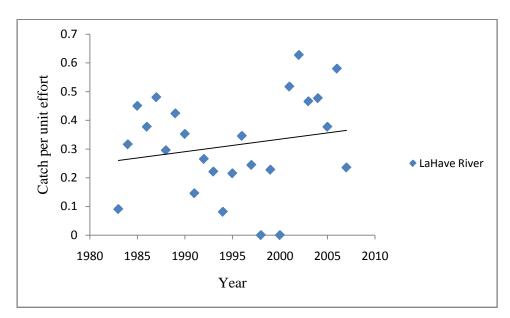


Figure C.4. Catch per unit effort in the LaHave River from 1983-2007.

Appendix D

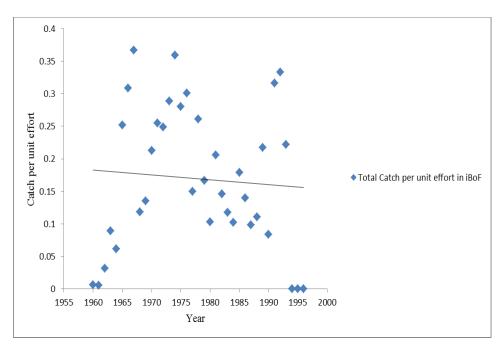


Figure D.1. Total catch per unit effort of all rivers in the IBoF region from 1960-1999.

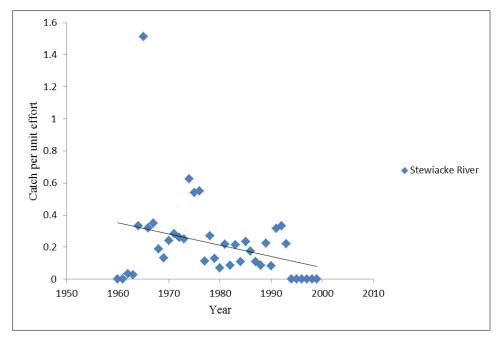


Figure D.2. Catch per unit effort in the Stewiacke River from 1960-1999.

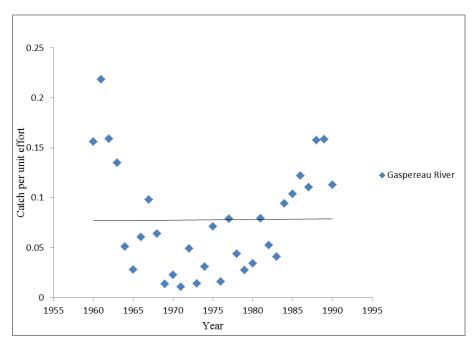


Figure D.3. Catch per unit effort in the Gaspereau River from 1960-1999.

Control Cont			teristics From the Nova Scotia Water Control Structure Data							
Column	Dam ID Number		Name of Structure Bayers Brook Diversion Dam	County Halifax	Easting 447791	Northing 4942420	UTMG 20T	Water impoundment/storage	Main purpose of dam Water supply - municipal	Fish Passage FALSE
Column	2	1894	Chain Lake Dam				20T	Water impoundment/storage	Water supply - municipal	FALSE
Column	4	1987	Volvo West Retention Pond Structure	Halifax	447497	4943163	20T	Aboiteau or other flood reduction structure	N/A	FALSE
March Marc	6		Paper Mill Lake Dam	Halifax	445822	4951475	20T	Water impoundment/storage	Non consumptive - aquatic recreation enhancement	FALSE
1. 1. 1. 1. 1. 1. 1. 1.	8	circa 1990		Halifax	454203	4963129	20T	Water impoundment/storage	water supply - hydroelectric	
Column	10	circa 1987								
Column	11									
Column	13		Albro Lake Control Structure	Halifax	454276	4948204	20T	Aboiteau or other flood reduction structure	N/A	FALSE
Column	15		Kearney Lake Dam	Halifax	444349	4950414	20T	Water impoundment/storage	Non consumptive - aquatic recreation enhancement	FALSE
10	17	1920s	Spruce Hill Lake Dam		448373	4937293	20T	Water impoundment/storage		FALSE
March	18 19									
Column	20		Lake Major Dam	Halifax				Water impoundment/storage	Water supply - municipal	
Color	22	1970's	Beaver Lake Water Control	Halifax	483376	4977410		Aboiteau or other flood reduction structure	N/A	TRUE
1.	24	1970's	Little River Lake Water Control	Halifax	494007	4981445	20T	Aboiteau or other flood reduction structure	N/A	FALSE
1	25 26		Fraser Lake Water Control Jennings Lake Water Control					Aboiteau or other flood reduction structure Aboiteau or other flood reduction structure		FALSE FALSE
190	27		Sherlock Brook Water Control	Halifax Halifax		4996183		Aboiteau or other flood reduction structure		FALSE
1.	29	1970's	Upper Mill Lake Water Control	Halifax	509409	4999149	20T	Aboiteau or other flood reduction structure	N/A	FALSE
10	31	mid 1980's	Davis Lake Dam	Colchester	487608	4998701	20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE
1.	32	1983		Halifax	483023	4984591	20T			TRUE
Column										
Column	36		DU 6537 Dagger Brook					Water impoundment/storage	Non consumptive - wildlife conservation	
March Marc	38	1978	James River Water Supply Dam	Antigonish	568130	5050975	20T	Water impoundment/storage	Water supply - municipal	FALSE
14	40	1986	MacElmon's Pond Dam	Colchester	466427	5026493	20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE
March Marc	41		Forbes Lake Dam	Pictou	528473	5039209	20T	Water impoundment/storage Water impoundment/storage		FALSE
Column			Mill Lake St Margarets Bay	Halifax	429159	4950024	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
	45	1921	Coon Pond Dam	Halifax	429074	4952295	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
10	47	1921	Wright Lake Dam	Halifax	429221	4953670	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
March Marc	49		Main Dam - Five Mile Lake	Halifax	423472	4967597	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
15	50 51		Williams Lake Dam	Halifax	453410	4941018	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - wildlife conservation	FALSE
1.00	52		South Gays River	Halifax	469987	4980075	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
10	54	1940	Lower St. Croix	Hants	418537	4979151	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
Mathematical Math	55	1933	Parsons Dam	Hants	418034	4977223	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
100	57 58									
Second Column		1990							Water supply - aquacultural	
Description Company				Kings	375678	4985377	20T	Water impoundment/storage	Water supply - municipal	FALSE
				Kings	384293	4995210	20T	Water impoundment/storage	Water supply - agricultural	FALSE
Column	65	2001/2002						Water impoundment/storage	Water supply - agricultural Non consumptive - wildlife conservation	
197	66		DU 6254					Water impoundment/storage	Non consumptive - wildlife conservation	
The component of the	68		Tupper Lake Control Structure	Kings	374520	4986560	20T	Water impoundment/storage	Non consumptive - aquatic recreation enhancement	FALSE
1970 1970			South River Lake Storage Dam	Kings	362859	4974888	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
1952	73	1800's	Burnt Dam flowage						water supply - hydroelectric	
1.	74							water impoundment/storage	water suppry - nydroetectric	
193	75		DU 6252 Armstrong Meadow Dam and Fishway Project		363116	4983129 4958186	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric Non consumptive - wildlife conservation	FALSE TRUE
Dec.	75 76 77	late 70's-early 80's	DU 6252 Armstrong Meadow Dam and Fishway Project Chisholm Dam	Kings Kings	363116 371939	4983129 4958186 4989357	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric Non consumptive - wildlife conservation Water supply - agricultural	FALSE TRUE FALSE
1921	75 76 77 78	late 70's-early 80's 1940 1935	DU 6252 Armstrong Meadow Dam and Fishway Project Chisholm Dam Aylesford Lake Dam Lanes Mills Dam	Kings Kings Kings Kings	363116 371939 369586 379189	4983129 4958186 4989357 4979873 4982863	20T 20T 20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric Non consumptive - wildlife conservation Water supply - agricultural water supply - hydroelectric water supply - hydroelectric	FALSE TRUE FALSE TRUE TRUE
12 195-25 Margo Find Processor December Decem	75 76 77 78 79 80	late 70's-early 80's 1940 1935 1936-7	DU 6252 Armstrong Meadow Dam and Fishway Project Chisholm Dam Aykesford Lake Dam Lanes Mills Dam Trout River Pond Dam Dean Chapter Lake Dam	Kings Kings Kings Kings Kings Hants	363116 371939 369586 379189 380984 388995	4983129 4958186 4989357 4979873 4982863 4976955 4970911	20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage	water supply - Indrodectric Mon consumptive - wildlife conservation Water supply - agricultural water supply - Indrodectric	FALSE TRUE FALSE TRUE TRUE TRUE TRUE FALSE
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FASE 1975	81 82 83	late 70's-early 80's 1940 1935 1936-7 1942 1942 mid 1940's	DU 6322 Amentona Meadow Dam and Fishway Project Chisholm Dam Alyselford Lake Dam Lanes Milh Dam Trout Rore Food Dam Trout Rore Food Dam Salmontal Lake Dam Hatchards Dam Hatchards Dam Hatchards Dam	Kings Kings Kings Kings Kings Kings Kings Lunenburg Queens	363116 371939 369586 379189 380984 388995 378345 378602 335933	4983129 4983186 4989357 4978973 4982863 4976955 4970911 4966717 4965017 4920914	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment storage	water supply - Indrodescritic Mort consumprise - wildfic conservation Water supply - agricultural water supply - Indrodescritic	FALSE TRUE FALSE TRUE TRUE TRUE TRUE FALSE FALSE FALSE FALSE FALSE
	81 82 83 84 85	late 70's-early 80's 1940 1935 1936-7 1942 1942 mid 1940's 1994-95 1994-95	DU 6322 Armstrong Meadow Dam and Fishway Project Chibsdom Dam Alyselofed Lake Dam Alyselofed Lake Dam Trout River Prod Dam Trout River Prod Dam Down Chapter Lake Dam Hatchards Dam Hatchards Dam Hatchards Dam Morgan Faile Power station Cornord Lake dam	Kings Kings Kings Kings Kings Hants Kings Lunenburg Queens Lunenburg Halifax	363116 371939 369586 379189 380984 388995 378345 378602 335933 363926 480932	4983129 4958186 4989357 4979873 4978973 4982863 4976955 4970911 4966717 4965017 4920914 4932712 4956793	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment storage	water supply - Indrodescritic Mare supply - agricultural water supply - layfordescritic water supply - Indrodescritic wa	FALSE TRUE FALSE TRUE TRUE TRUE FALSE FALSE FALSE FALSE TRUE TRUE TRUE TRUE
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149 Unknown Clementsport Community Park Dam Annapolis 294.887 49.47940 20T Decommissioned Non-consumptive-aquatic recreation enhancement TRUE 1983 Lighthouse Road Fire Park Dam Digby 20009 49511195 20T Water impoundment/storage Non-consumptive- fire protection FALSE	81 82 83 84 85 87 89 90 90 91 91 92 93 94 95 96 99 90 90 91 100 100 100 100 100 100 100	Jan. 2015. 2	DU 6252 Ammstrome Meadow Dam and Fishway Proiect Chibsidon Dam Alysidotal Lake Dam Alysidotal Lake Dam Alysidotal Lake Dam Inoue Rore Food Dam Industrial Dam Ind	Kings Linenberg Queens Linenberg Kings Kin	365116 371939 3701939	9881179 9858186 98958175 98958186 98958175 98758186 9895817 98528186 98528186 98528186 98528186 98528186 98528186 98528186 98528187 9858187	20T	Water impoundment viorage Water impoundment	water supple. Indirectories. Marte supple. Justicialization Water supple. Justicialization Water supple. Justicialization water supple. Indirectories Non consumetro a natula reversión enhancement water supple. Indirectories water supple. Ind	FALSE TRUE TRUE TRUE TRUE TRUE TRUE TRUE TRU
150 1983 Lighthouse Road Fire Pond Dam Digby 280099 4951195 20T Water impoundment/storage Non consumptive - fire protection FALSE	81 82 83 84 84 85 87 88 89 90 90 91 90 90 90 90 90 90 90 90 90 90 90 90 90	Jan. 2015. and 1970. and 1	DU 6252 Amentones Meadow Dam and Fishway Proiect Chilsholm Dam Ayledford Lake Dam Ayledford Lake Dam Lanes Milb Dam Troug Rover Found Dam Stathard State Dam Stathard State Dam Hatchard S Dam Morgan Fals Power station Cornord Lake dam White Rock Canal Intake White Rock Canal Intake White Rock Canal Intake Hatchard S Dam Nickenson Fond Storage Dam Nickenson Fond Fond Fond Fond Fond F	Kings Linenburg Linenburg Linenburg Linenburg Kings Ki	365116 3771939 3701939	9881129 9858186 98958157 98958186 9895857 98958187 9895857 98958186 9895817 9895817 9895817 98958186 98958186 98958186 98958187 98958186 98958186 98958186 98958187	2007 2007 2007 2007 2007 2007 2007 2007	Water impoundment storage Water impoundment	water supple. Indirectoriests Marter supple. Indirectoriests Marter supple. Indirectoriests water supple. Indirectoriests Non consumetive supple. Indirectoriests water supple. Indir	FALSE TRUE TRUE FAMSE TRUE TRUE TRUE TRUE FALSE
	81 82 83 84 84 85 85 86 86 87 88 89 90 91 91 92 93 94 96 96 97 98 99 100 100 100 100 100 110 101 102 103 104 105 107 108 109 109 110 110 110 110 110 110 111 111	bias 70x-avit 80x 1930 1931 1935 1935 1935 1936 1942 1941 1942 1941 1941 1958 1973 1959 1960 1973 1980 1980 1980 1980 1980 1980 1980 1980	DU 6252 Ammstrome Meadow Dam and Fishway Proiect Chibsidon Dam Ayledroof Lake Dam Ayledroof Lake Dam Ayledroof Lake Dam Inou River Food Dam Industria Dam Industri	Kings Laneaburg Queens Laneaburg Laneaburg Laneaburg Kings Characteristics Characteristi	365116 3701939 369586 3701939 369586 379189 369586 339081 339081 339081 339081 339081 339981 340281	9881129 9985189 9985187	2007 2007 2007 2007 2007 2007 2007 2007	Water impoundment storage Water impoundment	water supple. Indivolences Mater supple. Indivolences Mater supple. Javarishtuna water supple. Indivolences Non consumetive a susuale revenuos enhancement water supple. Indivolences water supp	FALSE TRUE FAME TRUE FAME TRUE FAME TRUE FAME TRUE FAMSE FALSE FAL

152	1978	Barrington Woolen Mill Dam Harmony Lake Dam and Fishway	Shelburne Queens	291756 334608		20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - historical Non consumptive - aquatic recreation enhancement	TRUE
154	1984	Lakeview Mill Pond Dam	Queens	337352	4916308	20T	Water impoundment/storage	Non consumptive - fire protection	FALSE
155 156		McGowan Lake Wing Dam	Queens Lunenburg	336639 390048		20T 20T	Water impoundment/storage	water supply - hydroelectric	FALSE FALSE
157	1954	L. H. C. B. P. A. C. L.	Lunenburg	390059		20T	Pick halder (consent of down)	N/A	FALSE
158 159	1993	Indian Falls Fishway Greenwood Lake Dam	Lunenburg Shelburne	372638 304040	4829108	20T 20T	Fish ladder (not part of dam) Water impoundment/storage	N/A Water supply - industrial	TRUE
160	1993 1971	Forchu River Dam (Hebron or Hall Dam) DU6111 Chebogue River Meadows	Yarmouth Yarmouth	251299 255005		20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - wildlife conservation	FALSE FALSE
162 163	before 1928 1987	Milton Lake Dam DU6559 Melbourne Marsh Water Control Structure	Yarmouth Yarmouth	249628 253142		20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - wildlife conservation	TRUE FALSE
164	1987	DU6561 Comeau Hill Marsh	Yarmouth	254962	4850323	20T	Decommissioned	N/A	FALSE
165 166	1989 1986	DU6547 Goose Bay Marsh DU6508 Wall's Brook Dam	Yarmouth Shelburne	267929 332509		20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE TRUE
167	1980	DU6228 Silver River Marsh	Yarmouth	273812	4891426	20T 20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
168 169	prior to 1900 Early 1900s	Chocolate Lake Dam Minamkeak Lake Dam	Halifax Lunenburg	450828 372549	4908652	20T	Decommissioned Water impoundment/storage	Non consumptive - aquatic recreation enhancement Water supply - municipal	FALSE FALSE
170	early 1900s circa 1900	Leipsigate Lake Dam Croft Dam	Lunenburg Lunenburg	373208 371212		20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - municipal Water supply - municipal	FALSE FALSE
172	1927	Halfway River Front Dam	Hants	405636	4988616	20T	Water impoundment/storage	Water supply - industrial	FALSE
173	~1962 1984	Back Dam Annapolis Tidal Generation Station	Hants Annapolis	404129 301196		20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - industrial water supply - hydroelectric	FALSE FALSE
177 178	1982	Neives Lake (Paradise Hydro System)	Annapolis Annapolis	322240 310000		20T 20T	Water impoundment/storage Aboiteau or other flood reduction structure	water supply - hydroelectric N/A	FALSE FALSE
181	1957	Ridge Dam (Bear River Hydro System)	Annapolis	296866	4936323	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
182 183	1952 1951-1952	Gulch Lake - Sam Harris Dam (Bear River Hydro System) Lake Mulgrave Dam (Bear River Hydro System)	Annapolis Annapolis	293472 300044	4933630	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
185	1968	Lequille Main Dam (Lequille Hydro System) Dargie Lake Dam (Lequille Hydro System)	Annapolis Annapolis	302171		20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
187		Curl Hole Dam (Nictaux Hydro System)	Annapolis	338992		20T	Water impoundment/storage	water supply - hydroelectric	FALSE
188 189	1955 1956	McGill Dam (Nictaux Hydro System) Scragg Dam (Nictaux Hydro System)	Annapolis Annapolis	341237 342807	4958595	20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
192 193	1985 1930s	Sissiboo Grand Lake Dam Big Uniacke Lake Dam	Digby Digby	281112 284073		20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
194	Prior to 1958	Big Tom Wallace Lake Dam	Digby	283526	4929371	20T	Water impoundment/storage	water supply - hydroelectric	FALSE
195 196	1923	Donahue Lake Diversion Dam Ten Mile Lake Main Dam	Guysborough Halifax	619639 523674		20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE TRUE
197 198	1929 1980	Jordan Lake Main Dam South Lake	Shelburne Victoria	318615	4884415	20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
199	1980	Wreck Cove Brook	Victoria				Water impoundment/storage Water impoundment/storage	water supply - hydroelectric	FALSE
200		Peck Dam	Hants Digby			20T	<u></u>		FALSE FALSE
203 204	1930s 1997	Port Hood Mines Reservoir	Inverness	614073 743754		20T 21T	Decommissioned Water impoundment/storage	Non consumptive - fire protection	FALSE FALSE
205	1997 1970s	Bailey's Pond Dam Porters Dam	Cape Breton Kings	372952	4997728	20T	Water impoundment/storage	Non consumptive - wildlife conservation Water supply - agricultural	FALSE
206		Shag Harbour Pond Dam Duck Pond Brook	Shelburne Yarmouth	281990	4820488	20T	Decommissioned	N/A	TRUE FALSE
209 210		River Phillip Tributary	Cumberland			20T			FALSE
212		Baird Brook Mattatall Lake Tributary	Cumberland Colchester	463400	5059200	20T 20T			FALSE FALSE
213 214	1985	McGee Brook Dam South River	Kings Kings	351866 358242		20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - aquacultural	FALSE FALSE
215	1985	Middle River Tributary	Pictou	518308	5048277	20T	Decommissioned	N/A	FALSE
218 219		Tupper Brook Gooseneck Lake Tributary	Kings Guysborough	375993 598734		20T 20T	Water impoundment/storage Mine tailings management	Water supply - industrial N/A	TRUE FALSE
221 223		Rankin Brook Ski Wentworth Dam	Inverness Cumberland	457491	5050340	20T	Water impoundment/storage	Water supply - recreation facilities	FALSE FALSE
224		McEwan Brook Tributary	Annapolis			20T	- AM MAN	Approx American	FALSE
225 226		Hoig Brook North Aspy River Tributary	Cumberland Victoria	688000	5198350	20T			FALSE FALSE
228	1983	Sixth Lake Dam Beaver Brook Tributary	Guysborough Colchester	581957		20T 20T	Water impoundment/storage	Non consumptive - aquatic recreation enhancement	FALSE FALSE
231	1900's	Grand Lake Dam - Sydney	Cape Breton	722447	5116792	20T	Water impoundment/storage	Water supply - industrial	TRUE
232		Nappan River Dam	Cumberland Guysborough	409825 650582		20T 20T	Water impoundment/storage	Water supply - municipal	TRUE FALSE
235	post 1930, maybe 1960s	Van Tassel Lake Dam	Guysborough Digby	656252 277069	5021659	20T 20T	Water impoundment/storage	Water supply - municipal	FALSE FALSE
238	post 1930, mayoe 1900s	Waterford Lake Spillway	Cape Breton	721945	5125066	20T	Water impoundment/storage	Water supply - municipal	FALSE
242	1994-95	Leamington Brook Big Dam "Old" monitoring site Weir	Cumberland Halifax	419434 458967		20T 20T	Decommissioned Aboiteau or other flood reduction structure	Water supply - municipal N/A	FALSE FALSE
246		Watkins Dam Big Brook	Kings Inverness	387308		20T 20T	Water impoundment/storage Decommissioned	Water supply - agricultural N/A	FALSE FALSE
248		Watkins Dam Angus Brook	Inverness	651922					
1		Wilking Dain rangus Drook				20T	Water impoundment/storage	Water supply - agricultural	FALSE
250 252		Trucker Dun Fugus Mook	Cape Breton Digby	722300	5125195 5096550	20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural	FALSE FALSE
252 255	1977	THORITI SHILL LINGUE SHOOK	Cape Breton Digby Kings	722300 379614	5096550 4996751	20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural	FALSE FALSE FALSE
252 255 256 259	1986		Cape Breton Digby Kings Kings Colchester	722300 379614 378676	5096550 4996751 4996017	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - agricultural	FALSE FALSE FALSE FALSE FALSE
252 255 256 259 264		Lake George Town Dam	Cape Breton Digby Kings Kings Colchester Yarmouth	722300 379614	5096550 4996751 4996017 4875785	20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - municipal	FALSE FALSE FALSE FALSE
252 255 256 259 264 267 268	1986 circa 1920s	Lake George Town Dam	Cape Breton Digby Kings Kings Colchester Yarmouth Kings Kings	722300 379614 378676 253718 356713 356084	5096550 4996751 4996017 4875785 4987659 4986686	20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - agricultural	FALSE
252 255 256 259 264 267 268 270 273	1986 circa 1920s -1995	Lake George Town Dam Clap Dam Milhille Bon Reservoir Prince Mins Dam	Cape Breton Digby Kings Kings Cokchester Yarmouth Kings Kings Inverness Cape Breton	722300 379614 378676 253718 356713 356084 627000 704753	5096550 4996751 4996017 4875785 4987559 4986686 5109850 5132093	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - spricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - adoptival Water supply - industrial	FALSE
252 255 256 259 264 267 268 270 273 274 276	1986 circa 1920s -1995	Lake Georgie Town Dam. Chen Dam. Mithville Box Reservoir	Cape Breton Digby Kings Kings Colchester Yarmouth Kings Kings Liverness Cape Breton Cape Breton Cape Breton Cape Breton	722300 379614 378676 253718 356713 356084 627000	5096550 4996751 4996017 4875785 4987659 4986686 5109850 5132093 5118681	20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - spricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - additional Water supply - industrial Water supply - industrial	FALSE
252 255 256 259 264 267 268 270 273 274 276 278	1986 circa 1920s -1995 1972 1980's 1900's 1900's	Lake George Town Dann Che Dann Milfülle Bog Reservoir Prince Min Dann Sydney River Dann Sydney River Dann MacAklaffi Rosek Dann	Cape Breton Digby Kings Kings Cokchester Yarmouth Kings Kings Lings Kings Kings Cape Breton Cape Breton Cape Breton Cape Breton Cape Breton	722300 379614 378676 253718 356713 356713 356084 627000 704753 743978 713029 733855	5096550 4996751 4996017 4875785 4987659 4987659 4987686 5109850 5132093 5118681 5109128 5114399	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage Water impoundment storage	Water supply - agricultural Water supply - adaptive agricultural Water supply - adaptive agricultural Water supply - municipal Water supply - municipal Water supply - municipal	FALSE
252 255 256 259 264 267 268 270 273 274 276 278 279 278 279 280	1986 circa 1920s -1995 1972 1978 1980's	Lake George Town Dam Chip Dam Millible Bog Reservoir Prince Miss Dam Schooner Pond Dam Sydney River Dam Sydney River Dam Big Dam Lake	Cape Breton Digby Kings Kings Cokhester Yarmouth Kings Kings Kings Cokhester Yarmouth Kings Kings Cape Breton	722300 379614 378676 253718 356713 356084 627000 704753 743978 713029 733855 742567	5096550 4996751 4996017 4875785 4987659 4987659 4986686 5109850 5118681 5109128 5114399 5118819	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - spricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - additional Water supply - industrial Water supply - industrial	FALSE
252 255 256 259 264 267 268 270 273 274 276 278 279	1986 circa 1920s -1995 1972 1980's 1900's 1900's	Lake George Town Dann Che Dann Milfülle Bog Reservoir Prince Min Dann Sydney River Dann Sydney River Dann MacAklaffi Rosek Dann	Cape Breton Digby Kings Kings Kings Cokchester Yarmouth Kings Kings Lings Lings Lings Linverness Cape Breton	722300 379614 378676 253718 356713 356713 356084 627000 704753 743978 713029 733855	5096550 4996751 4996017 4875785 4987659 4987659 4986686 5109850 5118081 5109128 5114399 5118819	20T 20T 20T 20T 20T 20T 20T 20T 20T 21T 20T 21T 21T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipul	FALSE
252 255 256 259 264 267 268 270 273 274 276 278 279 280 281 282 283 283 283 283 284 285 276 278 278 278 278 278 288 279 288 270 278 278 278 278 278 278 278 278 278 278	1986 circa 1920s -1995 1972 1972 1980s 1970s 1970s carly 1900's	Lake George Town Dam Chip Dam Millible Bog Reservoir Prince Miss Dam Schooner Pond Dam Sydney River Dam Sydney River Dam Big Dam Lake	Cape Breton Digby Kings Kings Kings Cockhester Yarmouth Kings Kings Inverness Cape Breton Kings Kings Hinterness Kings Hinterness Kings Kings Hinterness Kings Kings Hinterness Kings	722300 379614 378676 253718 356713 356084 627000 704753 743978 713385 742567 248659	5096550 4996751 4996017 4875785 4986686 5109850 5118681 5118792 5118499 511889 5118928	20T 20T 20T 20T 20T 20T 20T 20T 20T 21T 20T 21T 20T 21T 20T 21T 20T 21T 20T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - spricultural Water supply - spricultural Water supply - industrial Water supply - industrial Water supply - municipal Water supply - municipal Water supply - municipal	FALSE
252 255 256 259 264 267 268 270 273 274 275 276 276 279 280 281 282 283 284 283 284 284 285 285 285 270 276 277 278 279 280 281 281 282 283 283 284 285 285 285 285 285 285 285 285 285 285	1986 circa 1920s -1995 1997 1997 1997 1997 1997 1997 1997	Lake George Town Dam Clap Dam Milhile Bog Reservoir Prioce Man Dam Schenner Wood Dam Sydney River Dam Sydney River Dam MacAskill's Resold Dam Sig Dam Lake Sarretie's Dam 77	Cape Breton Digby Kings Lape Breton Cape Breton Lape B	722300 379614 378676 253718 356713 356784 627000 704753 743978 713029 733855 742567 248659 379662 419161	\$096550 4996751 4996017 4875785 4987659 4986686 51109850 5112093 5118681 5109128 511879 5118819 4896041 4996250 4984867	20T 20T 20T 20T 20T 20T 20T 20T 20T 21T 21T 21T 21T 20T 21T 20T 21T 20T	Water impoundment vitorage	Water supply - agricultural Water supply - spricultural Water supply - industrial Water supply - manicipal Water supply - manicipal Water supply - manicipal Water supply - spricultural Water supply - spricultural Water supply - spricultural Water supply - spricultural	FALSE
252 255 256 264 267 268 270 273 274 275 278 279 288 270 278 279 280 281 282 292 293 274 275 278 278 279 288 279 278 278 278 279 278 278 278 278 278 278 278 278 278 278	1986 Girca 1920s –1995 1972 1972 1980s 1990s 1990s 1990s 1990s 1990s 1990s 1980s	Lake George Town Dam Clap Dam Milhile Bog Reservoir Prioce Man Dam Schenner Wood Dam Sydney River Dam Sydney River Dam MacAskill's Resold Dam Sig Dam Lake Sarretie's Dam 77	Cape Breton Disby Kings Kings Kings Kings Kings Kings Kings Kings Kings Cochesster Yarmouth Kings Kings Cape Breton Hants Disby Kings Hants Disby Kings Hants	722300 379614 378676 253718 356713 356713 356084 627000 704753 743978 713029 733855 742567 248659 379662	\$096550 4996751 4996017 4875785 4987659 4986686 51190850 5112093 5118819 511819 4896041 4996250 4984867	20T 20T 20T 20T 20T 20T 20T 20T 20T 21T 21T 21T 21T 20T 21T 20T 21T 20T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - municipal Water supply - agricultural Water supply - agricultural	FALSE
252 255 255 256 261 261 262 263 270 273 274 276 279 279 279 281 282 283 283 284 285 285 285 285 286 287 288	1986 circa 1920s -1995 1997 1997 1997 1997 1997 1997 1997	Lake George Town Dam Clap Dam Milbille Bog Reservoir Prince Mine Dam Schooner Poud Dam Schooner Poud Dam MacAskiri Hook Dam MacAskiri Hook Dam Bit Dam Lake Sucette's Dam ?? Cochrane Dam	Cage Breton Digby Kings Kings Kings Colchester Varmouth Kings Colchester Varmouth Kings Kings Kings Cage Breton Lage Breton Lage Breton Lage Breton Lage Annapolis Lanenburg Lanenburg Lanenburg Lanenburg	722300 379614 378676 379614 378676 253718 356984 627000 704753 744978 713029 733855 744978 419161 301356	\$996751 49967151 4996017 4875785 4987659 4986686 5109850 5118681 5118681 5118702 511849 51184	220T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural	FALSE
252 255 256 259 261 261 262 263 263 270 273 274 276 278 279 281 282 283 283 284 285 285 287 288 290	1986 circa 1920s -1995 1997 1997 1997 1997 1997 1997 1997	Lake Groupe Town Dam Cher Dam Cher Dam Milhville Box Reservoir Milhville Box Reservoir Prince Mine Dam Sydney Kwer Dam Sydney Kwer Dam Mackeklift Shook Dam Bu Dam Lake Sarentick Dam ?? Cochrane Dam Cochequid Hatchery Dam	Cage Breton Digby Kings Kings Kings Colchester Yarmouth Kings Kings Rings Inverness Cage Breton Lamenburg Annapolis Yarmouth Lumenburg Cumberland Signature Lumenburg Cumberland Richmond	722300 379614 378676 379616 253718 356713 356984 627000 627000 704753 713029 733855 713029 379662 419161 301356	\$996751 49967151 4996017 4875785 4987659 4987659 4986686 5109850 5118681 5109128 511849 5996250 4984867 4942088 5048663 5048663 5048663	220T 220T 220T 220T 220T 220T 220T 220T	Water impoundment vitorage	Water supply - agricultural Water supply - ministral Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - gricultural Water supply - ministral	FALSE
252 255 256 259 264 267 268 267 273 277 277 277 278 279 283 283 284 284 288 289 290 291 291 292	1986 circa 1920s -1995 1997 1997 1997 1997 1997 1997 1997	Lake George Town Dam Clap Dam Milbille Bog Reservoir Prince Mine Dam Schooner Poud Dam Schooner Poud Dam MacAskiri Hook Dam MacAskiri Hook Dam Bit Dam Lake Sucette's Dam ?? Cochrane Dam	Cape Breton Deby Kings Cokhesier Vyarmouth Kings Cokhesier Vyarmouth Kings Rings Rin	722300 379614 379676 379676 253718 356713 356084 627000 704753 743978 713029 733855 742567 248659 379662 419161 301356	\$006550 4996751 4996751 4875785 4875785 4987659 4986666 5118209 5118209 5118209 5118209 5118209 511881 5109128 511920 518819 4882041 4994208 5048663 5048663 5048663 5048663	220T 220T 220T 220T 220T 220T 220T 220T	Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water suppely - agricultural Water suppely - agricultural Water suppely - sunsicipal Water suppely - supsicultural Water suppely - supsicultural Water suppely - agricultural Water suppely - agricultural Water suppely - supsicultural Water suppely - supsicultural Water suppely - supsicultural	FALSE
255 256 256 257 260 261 262 263 263 270 270 270 270 271 278 279 280 282 283 283 283 284 285 287 286 287 288 287 288 287 288 287 288 287 289 299 294	1986 eirea 1920a	Lake George Town Dam Cha Dam Milhilde Bog Reservoir Prince Miss Dam Sydney River Dam Sydney River Dam Sydney River Dam MacAskaff's Brook Dam Bip Dam Lake Surente's Dam ?? Cochrane Dam Coherane Dam	Cape Breton Deby Kens Kens Cokhester Yarmouth Kens Cokhester Yarmouth Kens Kens Inventor Kens Inventor Cokhester Yarmouth Kens Kens Inventor Cape Breton Cape Bret	722300 379614 379614 379614 378676 253718 556713 556713 556713 556713 556713 743978 713729 743978 713029 733855 7443978 379662 419161 301356 434927 655032 388053	\$096550 4996751 49967151 4996017 4875785 4996017 4875785 4996696 4998666 \$1109869 \$1109869 \$1109869 \$110881 \$1190128 \$1118819 48896141 49996250 49942088 \$048663 \$048663 \$048663 \$9984966 49988725	220T 220T 220T 220T 220T 220T 220T 220T	Water impoundment/storage	Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - municipal Water suppely - municipal Water suppely - agricultural Water suppely - suppely - agricultural Water suppely - municipal Water suppely - municipal Water suppely - supricultural Water suppely - agricultural Water suppely - municipal Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural	FALSE
252 255 256 256 257 260 261 267 267 268 268 279 274 274 278 279 280 281 283 283 283 284 285 290 291 294 296 297	1986 circa 1920s -1995 1997 1997 1997 1997 1997 1997 1997	Lake Groupe Town Dam Cher Dam Cher Dam Milhville Box Reservoir Milhville Box Reservoir Prince Mine Dam Sydney Kwer Dam Sydney Kwer Dam Mackeklift Shook Dam Bu Dam Lake Sarentick Dam ?? Cochrane Dam Cochequid Hatchery Dam	Cape Breton Deby Kens Kens Cokhester Yarmouth Kens Cokhester Yarmouth Kens Lege Breton Cape Breton Cap	722300 379614 379614 378616 378676 253718 356713 35	\$996751 4996751 4996717 4875785 4996017 4875785 4996017 4875785 4996696 5109850 5109850 5109850 5118819 4896041 4996250 4984867 4942088 4942088 5018663 59041912 4996250 5904867 5904867 5904867 5904867	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 261 264 267 268 267 270 273 273 275 278 278 281 282 283 284 284 285 286 287 299 299 297 299 290 292 291 292 292 292 297 292 294 295 297 294 295 297 296	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Kriss Kriss Kriss Cokhoster Vyirnouth Kriss Kriss Cokhoster Vyirnouth Kriss Cokhoster Cok	722300 379614 379614 378616 253718 356713	\$996751 \$996751 \$9967751 \$996017 \$4875785 \$4987696 \$4875785 \$4987696 \$1198850 \$112093 \$118681 \$109128 \$118681 \$109128 \$118819 \$4984667 \$4984667 \$4984667 \$4942088 \$5047112 \$4996250 \$4996250 \$4942088 \$5047112 \$4996267 \$4996267 \$5047667 \$504767 \$506677 \$506677 \$506677 \$506677	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment storage	Water suppely - agricultural Water unpely - agricultural Water suppely - municipal Water suppely - municipal Water suppely - municipal Water suppely - municipal Water suppely - agricultural Water suppely - adoutrial Water suppely - municipal Water suppely - sprachbural Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - municipal	FALSE
252 255 256 256 259 264 264 270 278 278 278 278 279 281 281 281 282 283 283 284 285 285 290 291 292 294 295 296 299	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Kings Kings Kings Codebester Vyarnouth Kings Codebester Vyarnouth Codebester Codebester Codebester Codebester Codebester Cape Breton	722300 379614 379614 378676 253718 356713 356713 356713 356713 356713 356713 35713 3	\$996751 \$996751 \$996751 \$996017 4875785 \$4987659 \$4875785 \$4987659 \$512093 \$5118681 \$5109128 \$5118681 \$5109128 \$5118819 \$4896041 \$4996250 \$4984867 \$942088 \$942088 \$942088 \$947112 \$995496 \$995496 \$998875 \$9498755 \$9498775 \$914880	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
255 256 256 257 260 260 261 262 263 263 264 276 278 276 278 279 283 283 284 285 287 287 287 287 287 287 287 287 287 287	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Kriss Kriss Codebeter Vyarnouth Kriss Codebeter Vyarnouth Kriss Codebeter Vyarnouth Kriss Codebeter Combetinat Deby Varnouth Lamenburg Combeter Lamenburg Combeter Lamenburg Combeter Comb	722300 379614 379614 378676 253718 358715 358713 358713 359713 359713 359713 359713 359713 704773 7143978 715029 733855 742567 248659 379662 419161 301356 301356 434927 655023 368870 388406 388406 3889616 491194 41945 41945 41945 41945 41946 41946 41946 41947 4194	\$996751 \$996751 \$996751 \$996017 4875785 \$996017 4875785 \$4987659 \$4986666 \$118681 \$5109128 \$5118681 \$5109128 \$5118681 \$5109128 \$5118819 4896050 \$118861 \$996250 \$4984867 \$942088 \$942088 \$942088 \$942088 \$942088 \$942088 \$942088	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 257 261 262 267 268 267 274 274 274 275 278 279 280 281 282 283 284 285 290 291 292 292 294 295 297 292 297 298 298 299 299 290 291 292 291 292 294 295 297 295 297 296 297 297 296 297 297 296 297 297 298 299 299 291 292 294 295 297 295 297 296 297 297 296 297 297 298 399 390 390 390 390 390 390 390 390 390	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Dighty Kings Kings Kings Kings Cockhester Yurmouth Misser Cockhester Misser Misser Cape Breton Lamechard Misser	722300 379614 379614 379614 378676 253718 356713 356713 356784 627000 704753 744970 7447567 7442567 7442567 44569 379662 419161 301356 434927 655023 30356 4444924 4444826 464288	\$996751 \$996751 \$9967751 \$996017 \$4875785 \$996017 \$4875785 \$996089 \$1109850 \$132093 \$5118681 \$5109128 \$51199128 \$5118681 \$5109128 \$5118697 \$11	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 257 261 261 262 267 268 267 278 278 279 280 281 282 283 284 282 283 284 285 290 291 292 295 296 297 298 299 290 290 290 291 292 291 292 295 290 297 298 398 399 390 390 390 390 390 390 390 390 390	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Dieby Kriss Kriss Kriss Kriss Cokhester Varmouth Javanouth Javan	722300 379614 379614 378676 253718 358715 358713 358713 359713 359713 359713 359713 359713 704773 7143978 715029 733855 742567 248659 379662 419161 301356 301356 434927 655023 368870 388406 388406 3889616 491194 41945 41945 41945 41945 41946 41946 41946 41947 4194	\$996751 \$996751 \$9967751 \$996017 \$4875785 \$4976785 \$497686 \$1199850 \$1199850 \$1199850 \$1199850 \$1199818 \$1199128 \$118681 \$109128 \$118819 \$4996250 \$4996250 \$4996250 \$4996250 \$4942088	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 261 261 267 268 267 268 270 270 278 279 280 281 282 283 284 284 285 286 287 299 290 290 300 300 300 300 300 300 300 300 300 3	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Kriss Kriss Code-bester Vyarmouth Kriss Code-bester Vyarmouth Kriss Lines	722300 379614 379614 379614 378676 253718 356713 356713 356713 35713 377	\$996751 \$996751 \$9967751 \$996017 \$4875785 \$4987659 \$4875785 \$4987659 \$5112093 \$5118681 \$5109128 \$5118681 \$5109128 \$5118819 \$4896021 \$4896021 \$49960250 \$499600000000000000000000000000000000000	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 259 264 267 268 267 279 268 273 274 274 278 279 280 281 282 282 283 287 284 285 290 291 292 294 294 305 305 306 305 306 305 306 306 311 311 311	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Dubby Kings Kings Kings Kings Cokhester Varmouth Invenes Cope Breton Cape Bret	722300 379614 379614 379614 37876 253718 358713 358713 358713 358713 359684 627003 713029 713029 713029 7133855 742567 424567 424567 43978	\$996751 \$996751 \$9967751 \$996017 \$1,0000017 \$1,0000017 \$1,000000000000000000000000000000000000	20T	Water impoundment/storage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - agricultural	FALSE
252 255 256 256 259 264 267 268 279 268 279 274 278 279 280 281 282 282 283 283 284 285 290 291 292 294 295 302 303 305 306 305 316 317 311	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Dashy Krips Krips Krips Krips Krips Cokhester Varmouth Resea	722300 379614 379614 379614 378676 7378676 253718 350784 627000 627000 627000 704753 745978 715029 733855 745567 43597 43597 43497 43597 43596 434927 655023 368070 388405 388405 388405 388405 388405 388501 388500 270600	\$996751 \$996751 \$9967751 \$996017 \$8996017 \$8996017 \$8996019 \$996080 \$198097659 \$996080 \$118081 \$109128 \$118081 \$109128 \$118081 \$109128 \$118091 \$4996250 \$986863 \$9047112 \$9964867 \$9048675 \$048663 \$9047112 \$996496 \$9987560 \$998755 \$041000 \$998875 \$0410000 \$0410000 \$0410000 \$0410000 \$0410000 \$0410000 \$0410000 \$0410000 \$04100000 \$0410000000000	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment vitorage	Water supply - agricultural Water supply - ministral Water supply - municipal Water supply - adoutrial Water supply - industrial Water supply - municipal Water supply - municipal Water supply - municipal Water supply - specialtural Water supply - specialtural Water supply - specialtural Water supply - agricultural Water supply - agricultural Water supply - municipal	FALSE
255 256 256 257 260 260 260 260 270 270 271 274 274 275 278 279 281 281 281 281 285 285 285 287 287 287 287 287 287 287 287 287 287	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Kriss Kriss Kriss Cokhoster Virmouth Kriss Cokhoster Virmouth Kriss Cokhoster Cope Breton Cape Br	722300 379614 379614 379614 378676 253718 356713 356713 356713 35713 37713 37713 37713 37713 37713 37713 37713 37713 37713 37713 37713 37713 37713 37713 377	\$996751 \$996751 \$996751 \$996717 \$4875785 \$998017 \$4875785 \$4987659 \$118081 \$1199850 \$112093 \$118081 \$109128 \$118081 \$109128 \$118819 \$4896041 \$4996250 \$4984867 \$4984867 \$5148663 \$5047112 \$4996250 \$4984867 \$504863 \$5047112 \$4996250 \$49888	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - agricultural Water suppely - supricultural Water suppely - supricultural Water suppely - agricultural Water suppely - agricultural Water suppely - municipal Water suppely - municipal Water suppely - supricultural Water suppely - agricultural Water suppely - agricultural Water suppely - supricultural Water suppely - recreation facilities Water suppely - recreation facilities Water suppely - supricultural	FALSE
252 255 256 256 257 264 267 277 278 277 278 279 280 281 282 283 283 284 285 287 286 287 288 290 291 294 296 297 298 299 393 311 315 316	1986 circa 1920s -1995 1972 1989s 1972 1989s 1989 1984	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Deby Krigs Krigs Codebeter Vyarnouth Krigs Codebeter Vyarnouth Cape Breton Cap	722300 379614 379614 379614 378676 253718 359713 359713 359713 3597013 3597013 3597013 3597013 3597013 3597013 3597013 3744578 3715029 7743778 774397 774397 774397 774397 774397 774397 774397 774397 774397	\$996751 \$996751 \$996751 \$9960751 \$4875785 \$4987659 \$4987659 \$4986686 \$118081 \$112093 \$118081 \$119092 \$118881 \$109128 \$118881 \$109128 \$1188819 \$4896014 \$4996250 \$4984867 \$5148663 \$5047112 \$4996875 \$5048663 \$5047112 \$4998755 \$506863 \$5047880 \$498875 \$4988888 \$5068863 \$5047880 \$498875 \$498875 \$498875 \$506877	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment/storage	Water supply - agricultural Water supply - municipal Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - spricultural Water supply - spricultural Water supply - spricultural Water supply - agricultural	FALSE
252 255 256 256 257 266 267 267 268 267 278 279 280 281 281 282 282 283 283 284 285 287 286 287 288 290 291 292 288 290 291 291 292 298 296 297 298 299 302 302 303 304 305 306 307 312 314 315 316 317 311 311 311 311	1986 eirea 1920s	Lake George Town Dam Che Dam Miltithe Boo Reservoir Prince Miss Dam Sydney Knier Dam Sydney Knier Dam MacAddill's Rook Dam Big Dam Lake Surette's Dam ?? Cockrane Dam Cockrane Dam Dekeview Farma Dam Dekeview Farma Dam Heightons Dam	Cape Breton Dight Kings Kings Kings Kings Cokhester Varmouth Lings	722300 379614 379614 379614 378676 378676 255718 355713 355984 257718 355713 355984 257000 704733 744578 713029 733085 7745597 379662 419161 419161 439427 655023 301356 464288 464288 464288 3883013 388500 3778500 270600 374465 520155 531780	\$996751 \$996751 \$9967751 \$996017 \$8996017 \$8996017 \$8996017 \$1875785 \$996086 \$192093 \$1198850 \$112093 \$1198850 \$112093 \$118681 \$100128 \$114599 \$118681 \$100128 \$114599 \$118681 \$100128 \$114590 \$118687 \$100128 \$114590 \$114500 \$114500 \$114500 \$114500 \$114500 \$114500 \$114500	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - agricultural Water supply - municipal NiA NiA Water supply - agricultural	FALSE
252 255 256 256 257 267 268 267 267 268 267 274 274 275 276 278 279 280 281 282 283 283 284 285 290 291 292 294 295 296 397 398 399 390 397 391 391 392 393 393 393 393 393 393 393 393 393	1986 circa 1920s -1995 1077 10985 1097 1097 1097 1098 1098 1098 1098 1098 1098 1098 1098	Lake George Town Dam Cha Dam Miltitule Book Reservoir Miltitule Book Reservoir Prince Miss Dam Sydney River Dam Sydney River Dam MacAddil's Brook Dam Bis Dam Lake Sarette's Dam? Cockrane Dam Cockrane Dam Districted Farms Dam Heightons Dam DU 6302 Noed Lake Project	Cape Breton Deby Kriss Kriss Kriss Kriss Cokhester Virmouth Briss Briss Briss Cokhester Deby Briss Briss Cokhester Deby Briss	722300 379614 379614 379614 378676 378676 225718 22	\$996751 \$9967751 \$9967751 \$996017 \$4875785 \$4907609 \$4875785 \$4907609 \$1190815 \$118810 \$10908275 \$118810 \$10908275 \$118810 \$10908275 \$1	200T 200T 200T 200T 200T 200T 200T 200T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - agricultural Water supply - agricultural Water supply - municipal	FALSE
252 255 256 256 257 260 260 260 260 270 270 270 271 276 278 279 279 281 281 281 281 283 284 285 287 287 289 299 291 291 291 291 291 291 291 291 29	1986 eirea 1920a	Lake George Town Dam Che Dam Mildine Boo Reservoir Prince Miss Dam Sydney Kiver Dam Sydney Kiver Dam MacAckalir Rorok Dam Big Dam Lake Surettek Span 77 Gockrane Dam Coberane Dam Dykeview Farme Dam Heishtons Dam Du 6302 Noel Lake Project	Cape Breton Deby Kriss Kriss Kriss Cokhoster Virmouth Kriss Cokhoster Virmouth Kriss Cokhoster Virmouth Kriss Cokhoster Cope Breton Cape B	722300 379614 379614 379614 378676 253718 356713 356713 356713 35713	\$996751 \$996751 \$996751 \$996017 4875785 \$996017 4875785 \$996017 4875785 \$150850 \$112093 \$118081 \$1190850 \$112093 \$118081 \$1190850 \$118081 \$1190850 \$118081 \$109128 \$118081 \$109128 \$118819 4896041 \$4996250	20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - ministral Water supply - agricultural Water supply - agricultural Water supply - ministral	FALSE
252 255 256 256 257 264 267 267 278 277 278 279 280 283 283 284 285 287 287 288 287 288 287 288 381 281 381 381 381 381 381 381 381 381 381 3	1986 eirea 1920s	Lake George Town Dam Cha Dam Miltitule Book Reservoir Miltitule Book Reservoir Prince Miss Dam Sydney River Dam Sydney River Dam MacAddil's Brook Dum Bis Dam Lake Sarette's Dam? Cockrane Dam Cockrane Dam Districted Farms Dam Heightons Dam DU 6302 Noed Lake Project	Cape Breton Deby Krigs Krigs Cockneter Vyarnouth Krigs Cockneter Vyarnouth Cape Breton Cap	722300 379614 379614 379614 378676 253718 356713 356713 356713 35713	\$996751 \$996751 \$996751 \$996717 \$4875785 \$998017 \$4875785 \$4987659 \$4987659 \$512093 \$5118681 \$5109128 \$5118681 \$5109128 \$5118819 \$4896041 \$4996250 \$4984867 \$518819 \$5018755 \$514806 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$5078877 \$5014080 \$50587885 \$5017330 \$50567887	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - agricultural Water supply - spricultural	FALSE
252 255 256 256 257 266 267 268 267 268 267 273 274 274 277 278 279 280 281 282 282 283 284 285 287 287 288 290 291 292 294 302 303 305 306 306 307 307 311 311 311 311 312 323 324 335 331 313 325 325 326 327 328 329 330	1986 eirea 1920a	Lake George Town Dam Che Dam Mildine Boo Reservoir Prince Miss Dam Sydney Kiver Dam Sydney Kiver Dam MacAckalir Rorok Dam Big Dam Lake Surettek Span 77 Gockrane Dam Coberane Dam Dykeview Farme Dam Heishtons Dam Du 6302 Noel Lake Project	Cape Breton Dighty Kriss Kriss Kriss Kriss Kriss Cokhester Varmouth Breton Dighty Breton Cape Breton C	722300 379614 379614 379614 378676 253718 356713 356713 356713 35713	\$996751 \$996751 \$9967751 \$996017 \$996017 \$4875785 \$996017 \$4875785 \$1996017 \$1996686 \$1190850 \$1190850 \$1190850 \$118081 \$11909128 \$118819 \$199128 \$118819 \$996017 \$118819 \$996018 \$996	20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - ministral Water supply - agricultural Water supply - agricultural Water supply - ministral	FALSE
252 255 256 256 259 264 264 279 264 270 271 278 277 278 279 281 281 281 281 281 282 283 284 285 286 290 291 291 291 281 283 284 285 286 290 291 291 291 301 301 301 301 301 301 301 301 301 30	1986 eirea 1920a	Lake George Town Dam Che Dam Mildine Boo Reservoir Prince Miss Dam Sydney Kiver Dam Sydney Kiver Dam MacAckalir Rorok Dam Big Dam Lake Surettek Span 77 Gockrane Dam Coberane Dam Dykeview Farme Dam Heishtons Dam Du 6302 Noel Lake Project	Cape Breton Dieby Kriss Kriss Kriss Kriss Cokhester Virmouth Manage Mana	722300 379614 379614 379614 378676 378676 253718 253718 253718 356684 627000 627000 627000 704753 7445978 713029 733855 744597 743978 379662 419161 419161 381356 38105 388070 388405 388405 388405 388405 388405 388500 378450 378500 270600 270600 374465	\$996751 \$9967751 \$9967751 \$996917 \$996917 \$1875785 \$996917 \$1875785 \$1987659 \$1987659 \$1987659 \$1987659 \$1987659 \$1987659 \$118681 \$1109850 \$112093 \$1118681 \$109128 \$1118591 \$118681 \$109128 \$114399 \$118681 \$109128 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$1047112 \$1098756 \$107777 \$10778777	20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - ministral Water supply - agricultural Water supply - agricultural Water supply - ministral	FALSE
252 255 256 256 257 266 267 268 268 269 260 270 271 272 274 277 278 279 281 281 281 281 282 283 284 285 287 280 287 287 380 381 381 381 381 381 381 381 383 383 383	1986 eirea 1920a	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Deby Kriss Kriss Kriss Cokhester Virmouth Kriss Cokhester Virmouth Kriss Cokhester C	722300 379614 379614 379614 378676 253718 3596714 3596714 3596714 3596714 3596714 374378 379662 419161 301356 434927 43978 439	\$996751 \$996751 \$9967751 \$996017 \$4875785 \$4907609 \$4875785 \$4907609 \$1190815 \$1190815 \$1190815 \$1190815 \$1190815 \$1190815 \$1190925 \$118081 \$109128 \$118081 \$109128 \$118819 \$4942088 \$4942088 \$4942088 \$504712 \$4942088 \$504712 \$49677 \$504867 \$4942088 \$504712 \$49677 \$504867	20T	Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage	Water supply - agricultural Water supply - ministral Water supply - agricultural Water supply - agricultural Water supply - ministral	FALSE
252 255 256 256 257 266 267 268 267 268 268 277 278 278 279 280 281 281 282 282 283 283 283 284 285 290 291 292 281 285 286 287 288 290 291 302 303 304 305 305 307 312 314 315 316 317 318 319 312 324 325 330 331 332 333 333 333 333 333 333 333 333	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake Groupe Town Dam Cher Dam Milbrille Box Reservoir Milbrille Box Reservoir Milbrille Box Reservoir Prince Milbrille Box Reservoir Sydney Kwy Dam McAckdiff Shork Dam Bu Dam Lake Sarretick Dam 7? Cochrane Dam Cobequid Hatchery Dam Drkeviere Farms Dam Heightons Dam Dt COD Nost Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Dighty Kings Kings Kings Kings Cokhester Varmouth Lings Resear	722300 379614 379614 379614 378676 378676 252718 350784 252718 350784 252718 350784 350786	\$996751 \$996751 \$9967751 \$996017 \$996017 \$996017 \$996019 \$996080 \$1980080 \$118081 \$109128 \$118081 \$109128 \$118081 \$109128 \$11819 \$886014 \$4996250 \$986863 \$5109180 \$986863 \$5047112 \$996396 \$998875 \$048663 \$047112 \$996396 \$998875 \$048663 \$047112 \$9987560	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - municipal Water supply - modularial Water supply - modularial Water supply - municipal Water supply - supricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - municipal Water supply - supricultural	FALSE
252 255 256 256 257 266 259 264 267 268 269 267 273 274 274 277 278 279 280 281 282 282 282 283 284 285 290 291 292 286 287 288 290 291 292 294 294 305 307 307 307 307 307 307 307 307 307 307	1986 eirea 1920a	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Dighty Kings Kings Kings Kings Cokhester Yurmouth Mings Ming	722300 722300 7370614 7370614 7370614 7370614 7370614 7370614 7370615 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 73707	\$996751 \$996751 \$9967751 \$996017 \$996017 \$996017 \$996089 \$1098569 \$132093 \$118681 \$109128 \$118681 \$109128 \$118681 \$109128 \$118691 \$1996069 \$132093 \$118687 \$109250 \$132093 \$118687 \$109250 \$109850 \$10	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - supply - municipal Water supply -	FALSE
252 255 256 256 257 264 267 277 278 277 278 279 280 281 282 283 283 283 283 281 284 285 287 286 287 288 287 288 287 388 388 388 389 391 311 3118 3119 312 313 318 319 323 333 333 334 336 337 3333 3333 3333 333	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Deby Krins Krins Krins Cokhester Vyrmouth Krins Krins Krins Cokhester Vyrmouth Krins Cokhester Ladigat L	722300 722300 737614 737616 7378676 7253718 738676 7253718 738676 7253718 73877 73875 742567 743978 73885 743567 74367 743567 74	\$996751 \$996751 \$996751 \$996717 \$4875785 \$998017 \$4875785 \$4987659 \$1875785 \$1987659 \$118081 \$1190850 \$112093 \$118081 \$1190850 \$118081 \$1190850 \$118081 \$1190850 \$118081 \$119092 \$118819 \$4896041 \$4996250 \$498667 \$942088 \$942088 \$942088 \$942088 \$942088 \$942088 \$9518663 \$9071712 \$996250 \$997878 \$987878 \$987878 \$987878 \$987878 \$987878 \$987878 \$987888 \$997896 \$997896 \$9978978 \$997896 \$9978978 \$997896 \$997896 \$997896 \$997896 \$997896 \$997896 \$9978978 \$997896 \$997896 \$997896 \$997896 \$997896 \$997896	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - municipal Water supply - modularial Water supply - modularial Water supply - municipal Water supply - supricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - supricultural Water supply - supricultural Water supply - supricultural Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - municipal Water supply - supricultural	FALSE
252 255 256 256 257 266 267 268 269 260 270 270 270 270 278 279 280 281 282 282 283 283 284 285 286 287 288 290 302 303 303 303 304 301 301 303 303 303 303 303 303 303 303	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Dighty Kings Kings Kings Kings Kings Cokhester Varmouth Richard Ri	722300 722300 7370614 7370614 7370614 7370614 7370614 7370614 7370615 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 736715 73707	\$996751 \$996751 \$9967751 \$996017 \$996017 \$18595601 \$9975759 \$19975759 \$19975759 \$19975759 \$19975759 \$19975759 \$19975759 \$119881 \$109850 \$1132093 \$118881 \$109128 \$114599 \$118881 \$109128 \$114599 \$118881 \$109128 \$114599 \$118881 \$109128 \$114599 \$1145	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - supply - municipal Water supply -	FALSE
252 255 256 256 257 266 267 268 269 267 269 267 278 279 270 278 279 280 281 283 283 283 284 285 290 291 292 286 287 288 290 287 288 290 287 288 290 287 288 290 287 288 290 302 303 303 303 303 304 305 305 303 303 303 303 303 303 303 303	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Dashy Krips Krips Krips Krips Krips Cokhester Varmouth Breton Dashy Cokhester Dashy Cokhester Dashy Cokhester Dashy Cokhester Dashy Cape Breton Cambellad Krips Cokhester Varmouth Varmouth Varmouth Varmouth Varmouth Krips Krips Cokhester Deton Cokhester Peton Cokhester Peton Cokhester	722300 379614 379614 379614 379614 378676 253718 356713 356771 356771	\$996751 \$996751 \$9967751 \$996017 \$996017 \$996017 \$996019 \$996080 \$1996080 \$118081 \$109128 \$118081 \$109128 \$118081 \$109128 \$118081 \$109128 \$118081 \$109128 \$118091 \$118	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - supply - municipal Water supply -	FALSE
252 255 256 256 257 266 267 268 268 269 260 270 271 274 274 277 278 279 281 282 283 284 285 286 287 289 280 287 281 281 288 285 286 287 380 380 380 380 380 380 380 380 381 381 381 381 382 383 383 383 383 383 383 383 383 383	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Che Dam Miltible Boo Reservoir Prince Miss Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam Surents' S Dam? Cocknase Dam Cocknase Dam Ocknase Dam Divercises Farms Dam Heightons Dam DU 6302 Noed Lake Project Kentville Water Commission Schoffeld Brook Dam Litle Dyke Lake Weir Hamilton Brook Litle Dyke Lake Weir Hamilton Brook	Cape Breton Deby Krins Krins Krins Cokhester Vymrouth Mins Rins Rins Rins Rins Rins Rins Rins R	722300 722300 737614 737616 737616 7378676 7253718 738676 7253718 738676 7253718 738676 724577 743978 731802 733865 742567 743978 731865 742567 743978 74397	\$996751 \$9967751 \$9967751 \$9967751 \$996017 \$4875785 \$4907609 \$4875785 \$4907609 \$512093 \$51190810 \$5109128 \$51190850 \$5119093 \$5118081 \$5109128 \$5118092 \$5118010 \$996230 \$5118010 \$996230 \$518810 \$996230 \$518810 \$996230 \$5118810 \$4942088 \$5148667 \$514810 \$4942088 \$514810 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$4942088 \$5017126 \$50	2017 2017 2017 2017 2017 2017 2017 2017	Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - spricultural	FALSE
252 255 256 256 257 260 261 262 263 263 264 267 278 278 279 278 279 280 281 282 283 283 284 285 286 287 287 288 288 288 389 391 391 391 391 311 311 311 311 311 31	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Char Dam Miltible Boo Reservoir Prince Mass Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Bye Dam Lake Surente's Dam? Cockrane Dam Cockrane Dam Dekeciew Farme Dam Heightons Dam Du S302 Noel Lake Project Kentville Water Commission Schoffeld Brook Dam	Cape Breton Deby Krins Krins Krins Cokhester Vyrmouth Krins Cokhester Vyrmouth Krins Krins Cokhester Cokhe	722300 722300 737614 737616 737616 7378676 7253718 738676 7253718 738676 7253718 738676 724578 738676 742567 743978 731802 731885 742567 742567 743978 74397	\$996751 \$996751 \$996751 \$996717 \$4875785 \$4987696 \$4987696 \$4987696 \$1190850 \$1190815 \$1190815 \$1190815 \$1190815 \$1190815 \$1190915 \$118081 \$109128 \$1118819 \$4996230 \$118819 \$4996230 \$4996250 \$4984667 \$49942088 \$5001375 \$4988867 \$5001375 \$5014080 \$50508778 \$5014080 \$50508778 \$5014080 \$50508778 \$50527885	20T	Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage Water impoundment vitorage	Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - municipal Water supply - municipal Water supply - supricultural Water supply - agricultural Water supply - agricultural Water supply - municipal Water supply - municipal Water supply - agricultural Water supply - supply Water supply - agricultural Water supply - supply Water supply - agricultural	FALSE
252 255 256 256 257 266 267 268 269 264 277 278 277 278 277 278 279 280 281 282 283 283 283 283 284 285 287 286 287 288 287 288 287 288 287 388 389 390 311 311 3115 3116 3116 3116 3117 318 319 321 322 323 323 324 333 336 337 331 331 331 331 331 331 331 331 331	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Che Dam Miltible Boo Reservoir Prince Miss Dam Sydney Kiver Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam MacAddil's Rood Dam Sydney Kiver Dam Surents' S Dam? Cocknase Dam Cocknase Dam Ocknase Dam Divercises Farms Dam Heightons Dam DU 6302 Noed Lake Project Kentville Water Commission Schoffeld Brook Dam Litle Dyke Lake Weir Hamilton Brook Litle Dyke Lake Weir Hamilton Brook	Cape Broton Dighty Kings Kings Kings Kings Cokhester Varmouth Lings Ling	722300 722300 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 7370614 738675 738676 738676 738676 738676 738676 738676 738676 738676 738676 738676 738676 737060	\$996751 \$996751 \$9967751 \$996017 \$996017 \$1859560 \$1875785 \$1996086 \$1150985 \$119885 \$1198850 \$118681 \$109128 \$1118681 \$109128 \$1118681 \$109128 \$114399 \$118681 \$109128 \$114399 \$118681 \$109128 \$114399 \$118681 \$109128 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$114399 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$109128 \$1041112 \$104112 \$104	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - agricultural Water supply - spricultural	FALSE
252 255 256 256 257 266 267 268 268 270 271 272 273 274 274 277 278 279 281 281 281 281 281 282 283 284 285 286 280 290 291 291 291 292 294 295 304 305 305 305 307 301 314 315 316 317 318 319 317 318 319 313 313 314 315 315 315 315 315 315 315 315 315 315	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Cales Dam Milbeile Book Reservoir Milbeile Book Reservoir Milbeile Book Reservoir Prince Milso Dam Sydney Kiver Dam MacAddiff Stook Dam Bis Dam Lake Sarette's Dam ?? Cochrane Dam Cobequid Hatchery Dam Dekeview Farms Dam Heightons Dam DU GNO Noel Lake Project Kentville Water Commission Kentville Water Commission Schofield Brook Dam Linie Doke Lake Weir Hamilton Brook.	Cape Breton Deby Kriss Kriss Kriss Kriss Cokhester Varmouth Breton Deby Breton Deby Breton Cokhester Deby Breton Cape Breton Cokhester Varmouth Kriss	722300 722300 7379614 7379614 7379614 7378676 7378676 7378676 7253718 738676 7253718 738676 7387713 738676 7387713 738676 7387676 738767 73876 738767 73876 738767 73876 738767 73876 738767 738777 74779 747790	\$996751 \$996751 \$996751 \$9967751 \$996017 \$996017 \$996017 \$996086 \$1097696 \$1190818 \$109859 \$118081 \$109128 \$118819 \$109128 \$118819 \$996017 \$118819 \$109128 \$118819 \$9960760 \$996067 \$996067 \$118819 \$1092500 \$118819 \$1092500 \$118819 \$1092500 \$118819 \$1092500 \$118819 \$1092500 \$118819 \$1092500	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - supricultural Water supply - agricultural Water supply - agricultural Water supply - agricultural Water supply - supricultural Water supply - supply - supricultural Water supply - s	FALSE
252 255 256 256 257 259 264 267 267 268 269 269 269 269 271 278 279 280 281 282 283 283 284 285 286 287 288 280 290 301 311 315 311 318 319 321 323 333 333 334 336 337 331 331 331 331 332 333 333 333 334 336 337 337 338 338 339 339 331 331 331 331 331 331 331 331	1986 circa 1920s -1995 1972 1980s 1970s 1970s 1970s 1970s 1980 1980 1980 1980 1980 1980 1980 1980	Lake George Town Dam Cales Dam Milbeile Book Reservoir Milbeile Book Reservoir Milbeile Book Reservoir Prince Milso Dam Sydney Kiver Dam MacAddiff Stook Dam Bis Dam Lake Sarette's Dam ?? Cochrane Dam Cobequid Hatchery Dam Dekeview Farms Dam Heightons Dam DU GNO Noel Lake Project Kentville Water Commission Kentville Water Commission Schofield Brook Dam Linie Doke Lake Weir Hamilton Brook.	Cape Broton Dighty Kings Kings Kings Kings Cokhester Varmouth Lings Ling	722300 722300 7370614 7370614 7370614 7378676 7378676 7387876 7387876 7387877 73877 73877 73877 73877 73877 7457 74577 74577 74577 74577 74577 74577 74577 74577 7	\$996751 \$996751 \$996751 \$996717 \$996717 \$8996017 \$996017	20T	Water impoundment vitorage	Water supply - agricultural Water supply - municipal Water supply - spricultural Water supply - agricultural Water supply - agricultural Water supply - spricultural	FALSE

362 363				,					
202	2004	Blacks Pond Dam Townsend Pond Control Structure	Cumberland Colchester	408826 484348	5078018 5025981			Non consumptive - aquatic recreation enhancement Non consumptive - landscape feature	FALSE FALSE
364 365	circa 1986	Falmouth Water Supply Dam	Hants Pictou	404475 516611	4983172 5052138	20T	Water impoundment/storage Water impoundment/storage	Water supply - municipal Non consumptive - landscape feature	FALSE FALSE
366	Circa 1986	rtysons Pong Dam	Digby				water impoundment/storage	rvon consumptive - tandscape reature	FALSE
367 369	1986		Annapolis Kings	320000 360578	4970000 4983144	20T 20T	Water impoundment/storage	Water supply - agricultural	FALSE FALSE
370 373			Inverness	653145	5167294	20T		The copper of th	FALSE FALSE
375		Fraser's Mills Hatchery Storage Dam	Lunenburg Antigonish	583152	5031415		Water impoundment/storage	Water supply - aquacultural	TRUE
379 382		DU 6144	Yarmouth Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE FALSE
383	1001	DU 6246	Annapolis	301051	4957050	20T 20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
384 385	1984	DU 6422 Ryerson Brook Marsh Project DU 6701 Belleisle Marsh Project Segment 1	Annapolis Annapolis	297525 310588	4951341 4962570	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
386 387		DU 6701 Belleisle Marsh Project Segment 4 DU 6780 Troops Marsh Project	Annapolis Annapolis	310851 314795	4963060 4966711	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
388		DU 6582 MACGILLVRAYS MARSH PROJECT	Antigonish	577640	5043949	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
389 390		DU 6627 DU 6214 (AND/OR 6209)	Antigonish Antigonish	592262 579300	5039725 5071200	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
391		DU 6288 DU 6287	Antigonish Antigonish	603079 579340	5049436 5039933		Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
394	1978	DU 6266 Renwick Brook Project	Cape Breton	733142	5117426	21T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
395 396	1900's	DU 6236 Homeville Road Project DU 6459	Cape Breton Colchester	736694	5109785	21T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	TRUE FALSE
397		DU 6453 Slade Meadow Project DU 6469 Sandville Marsh Project	Colchester			20T		Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
399		DU 6359 DU 6520	Colchester			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
400 401		DU 6527	Colchester Colchester			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
403 404		DU 6518/11 Barrachois Project DU 6560 Willow Church Project	Colchester Colchester				Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
405		DU 6557 Blockhouse Marsh Project	Colchester			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
406		DU 6565 McMillans Pond Project DU 6550 Bonnyman Marsh Project	Colchester			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
408 409		DU 6625	Colchester Colchester	487000	5061400	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
410			Colchester	471900	5006100	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
411		DU 6389 Treed Bog Project	Colchester	477700	5064300	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
413		DU 6511 Lake Road Project DU 6190	Colchester	465800	5059300	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
414 415		DU 6473	Cumberland Cumberland	434000	5060700	20T	Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
416 417		DU 6313 Lower Maccan Meadow Project DU 6486	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
418		DU 6518	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
419 420		DU 6531 Roadside Marsh Project DU 6518/10 Evans Pond Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
421 422		DU 6600 Randall's Lake Potholes Project DU 6623 Seaman Marsh Project	Cumberland Cumberland	417800	5059800	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
423		DU 6635 Maccan Poind Project	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
425 426		DU 6656 Hansford Marsh Project DU 6699 Wilmots Pond Project	Cumberland Cumberland			20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
427 428		DU 6882 Kaczmareks Pond Project DU 6877 Greenville Station Project	Cumberland Cumberland	453600	5059800		Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
429		DU 6139 Athol Marsh Project	Cumberland	453000	3039800	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
430		DU 6896 Blatch's Pond project DU 6138	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
432		DU 6300 Kings Mills Site Project	Cumberland	428400	5084700	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
433 434			Cumberland Cumberland	450900 403800	5057700 5063300	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
435			Cumberland Cumberland	403500 402600	5062500 5064100	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
437			Cumberland	442400	5067100	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
438 439		DU 6408 Browns Woodlot Project DU 6152	Cumberland Cumberland	452800	5077200	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
440 441		DU 6167 DU 6226 Mahoney Meadow Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
442		DU 6181	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
443 444		DU 6276 DU 6290	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
445 446		DU 6298 DU 6299	Cumberland Cumberland				Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
447		DU 6301	Cumberland			20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
448		DU 6331 Rutledge Brook Marsh Project DU 6181 Amherst Marsh Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
451		DU 6357 Gough Meadow Project	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
452 453		DU 6360 DU 6372	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
454 455		DU 6327 Malagash Point Project DU 6205	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
456		DU 6402 Wentoworth Meadow Project	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
457 458		DU 6421 Conns Mills Project DU 6425 Cove Road Project	Cumberland Cumberland			20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
459 460		DU 6620 Linden Marsh Project DU 6737 Sunrise Marsh Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
461		DU 6757 Trenholm Marsh Project	Cumberland				Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
462 463		DU 6773 Barronsfield Marsh Project DU 6789 Mattatall Meadow Project	Cumberland Cumberland			20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
464 465		DU 6777 Mud Creek Pond Project DU 6782 Bacon's Pond Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
466		DU 6793 McIver Marsh Project	Cumberland	402600	*******	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
467 468		DU 6789	Cumberland Cumberland	402600	5064100	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
469		DU 6806 DU 6128 John Lushy Marsh Project	Cumberland Cumberland				Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
471		DU 6815 Eric's Marsh Project	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
472 473		DU 6838 Tidal View Marsh DU 6841 Eel Creek Marsh Project	Cumberland Cumberland			20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
474 475			Cumberland Cumberland	442700 415200	5067100 5068500	20T	Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
476	4004	DU 6518/7	Cumberland			20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
477 478	1986 1988	DU6605 Lansdowne Meadow Project	Digby Digby	257430 286876	4907460 4938630	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
479 480	1984 1993	DU6393 Hassett Marsh Project DU6771 Big Tom Wallace Marsh	Digby Digby	264315 286468	4912230 4929466	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
481		DU 6505 Akins Meadow Project	Hants	407052	4987585	20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE
482 483	1989	DU 6520 Maitland Dyke Marsh Project DU 6599 Walton River Project	Hants Hants	460455 422547	5018613 5008001	20T	Water impoundment/storage Decommissioned	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
484 485	1991 1990	DU 6671 Zwicker Marsh Project DU 6665 Cogmagun Marsh Project	Hants Hants	421958 410854	4985362 4992397	20T 20T	Water impoundment/storage Decommissioned	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
487		DU 6665 Cogmagun Marsh Project DU 6792 Robinson Meadow Project	Hants	449096	5002533	20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE
488 489		DU 6491 Georgefield Marsh Project	Hants Hants	451200 455600	4986200 5004600	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
491 493	1980 1985	DU 6219 Three Mile Brook Project DU 6501	Hants	419356 384485	4999186 4992490	20T 20T	Water impoundment/storage	Non consumptive - wildlife conservation	TRUE FALSE
494	1702	DC 0301	Kings Annapolis	301500	4957500	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE
495 496	1980	DU 6297 Hutt's Marsh Project	Kings Kings	382784 366932	5000737 4994334	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
498		DU 6770 Hoffman's Marsh Project	Kings	387656	4998507	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
499 500		DU 6743	Kings Kings	386774 390500	5000515 4995900	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
501 502		DU 6739	Lunenburg Lunenburg	367600	4908900	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
503		DU 6330 Sartys Dam Project	Lunenburg		,	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
		DU 6664 Parkdale Pond Project DU 6707 Lohnes Marsh Project	Lunenburg Lunenburg			20T		Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
504 505	1986		Pictou Pictou	530677 539884	5055690 5047322	20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE TRUE
505 506		DU 6651	Pictou	500752	5055108	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
505 506 507 508			Pictou Pictou	495252	5061808	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
505 506 507		DU 6198 DU 6851		509100	5065300 5055972	20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE
505 506 507 508 509 510 511		DU 6851	Pictou			20T 20T	Water impoundment/storage		
505 506 507 508 509 510 511 512 513		DU 6851 DU 6366 White's Pond Project DU 6424 Mountain Road Marsh Project	Pictou Pictou Pictou	532450 491444	5059941	201	Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
505 506 507 508 509 510 511 512 513 517		DU 6851 DU 6366 White's Pond Project DU 6424 Mountain Road Marsh Project DU 6614 Meadow Pond Project	Pictou Pictou Pictou Queens	532450		20T	Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE TRUE
505 506 507 508 509 510 511 512 513 517 518 519		DU 6366 White's Pond Project DU 6424 Mountain Road Marsh Project DU 6424 Mountain Road Marsh Project DU 6456 Pedeck Pond Project DU 6450 Peters Brook Project DU 2828	Pictou Pictou Pictou Queens Victoria Victoria	532450 491444	5059941	20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation	FALSE TRUE FALSE FALSE
505 506 507 508 508 509 510 511 512 513 517 518 519 520		DU 6851 DU 6366 White; Pond Project DU 6364 Mountain Road Marsh Project DU 6364 Meadow Pond Project DU 6364 Meadow Pond Project DU 6369 Pares Bonk Project DU 2368 DU 2368 DU 2368 Marsh Brook Project	Pictou Pictou Pictou Queens Victoria	532450 491444 362339	5059941 4876911	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE TRUE FALSE
505 506 507 508 509 510 511 512 513 517 518 519 520 521 523		DU 6851 DU 6366 Whites Pond Project DU 6364 Mountain Road Marsh Project DU 6364 Meadow Pond Project DU 6364 Meadow Pond Project DU 2636 Pers Brook Project DU 26368 DU 26368 DU 6369 Brast Brook Project DU 6369 Brast Brastour Meadow Project	Pictou Pictou Pictou Oueens Victoria Victoria Victoria Victoria Victoria Victoria	532450 491444 362339 698400	5059941 4876911 5117650	20T	Water impoundment/storage	Non consumptive - widdlife conservation	FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE
505 506 507 508 509 510 511 512 513 517 518 519 520 520 521 523 526 528		DU 6851 DU 6366 Whites Pond Project DU 6364 Mountain Road Marsh Project DU 6364 Meadow Pond Project DU 6364 Meadow Pond Project DU 2636 Pars Brook Project DU 26369 DU 26369 DU 26369 But Harbour Meadow Project DU 6369 But Harbour Meadow Project DU 6369 But Harbour Meadow Project DU 63690 DU 6375 Henderson Brook Project	Pictou Pictou Pictou Queens Victoria Victoria Victoria Victoria Victoria Victoria Victoria Comberland	532450 491444 362339 698400	5059941 4876911 5117650 4942404	20T 20T 20T 20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE TRUE FALSE
505 507 508 509 510 511 511 512 513 517 518 519 520 521 523 523 526	1986 1986	DU 6851 DU 6366 Whites Pond Project DU 6432 Mountain Road Marsh Project DU 66414 Meadow Pond Project DU 66414 Meadow Pond Project DU 6640 Pons Pond Project DU 6200 Pares Bond Project DU 6200 Marsh Brook Project DU 6150 Logo Marsh Brook Project DU 6150 Logo Marsh Brook Project DU 6150 Logo Marsh Brook Project	Pictou Pictou Pictou Queens Victoria Victoria Victoria Victoria Victoria Victoria Victoria Annapolis	532450 491444 362339 698400	5059941 4876911 5117650	20T 20T 20T	Water impoundment storage	Non consumptive - wildlife conservation	FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE
505 506 507 507 508 509 510 511 512 513 517 518 519 520 521 522 523 526 528 529 530 531		DU 6851 DU 6366 Whites Pond Project DU 6364 Mountain Road Marsh Project DU 6364 Meadow Pond Project DU 6364 Meadow Pond Project DU 2636 Pars Brook Project DU 26369 DU 26369 DU 26369 But Harbour Meadow Project DU 6369 But Harbour Meadow Project DU 6369 But Harbour Meadow Project DU 63690 DU 6375 Henderson Brook Project	Pictou Pictou Pictou Queens Victoria Victoria Victoria Victoria Victoria Victoria Victoria Victoria Cumberland Cumberland Hants Richmond	532450 491444 362339 698400 294207 451070	5059941 4876911 5117650 4942404 5063707	20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment/storage	Non consumptive - wildlife conservation	FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE TRUE TRUE
505 506 507 508 509 510 511 512 513 517 518 519 520 521 522 523 525 528 529	1986	DU 6851 White: Pond Project DU 6366 White: Pond Project DU 6451 Mountain Road March Project DU 6451 Meadow Pond Project DU 6451 Meadow Pond Project DU 5252 DU 5252 DU 5252 DU 5252 DU 5252 DU 5250 Bit Introver Meadow Project DU 5250 Bit Introver Meadow Project DU 6260 March Brook Project DU 6260 Pond Ponder DU 6260 Pond Project DU 6261 Fenderson Brook Project DU 6275 King Meadows Project DU 6375 King Meadows Project DU6551 Shoul Lake Dam	Pictou Pictou Pictou Pictou Queens Victoria Victoria Victoria Victoria Victoria Victoria Victoria Cumberland Cumberland Hants Richmond Annapolis Kings	532450 491444 362339 698400 294207 451070 458478	5059941 4876911 5117650 4942404 5063707 4998706 5052980 4993374	20T 20T 20T 20T 20T 20T 20T 20T 20T 20T	Water impoundment storage	Non consumptive - wildlife conservation	FALSE TRUE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE TRUE TRUE

542	1968	Point Tupper 2 Ash Retention Pond	Annapolis Richmond	328772 631874	4971463 5046473	20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - industrial	FALSE FALSE
547	1924 1954	Seloam Lake Main Dam Burnetts Mill Brook Nictaux Falls Dam (Nictaux Hydro System)	Halifax Halifax Annapolis	538394 505404 339379	5000032 4996611 4968616	20T 20T 20T	Water impoundment/storage Decommissioned	water supply - hydroelectric N/A	FALSE FALSE
552 553		Grand Lake Dam (Lequille Hydro System) Lequille Hydropower Development	Annapolis Annapolis	303141	4948702	20T 20T			FALSE FALSE
	1982 1949	Corbett Lake Dam (Paradise Hydro System) Paradise Lake Dam (Paradise Hydro System)	Annapolis Annapolis Annapolis	320717 326442 326400	4958722 4958243 4964900	20T 20T 20T			FALSE FALSE
557 558	1950	Saunders Pond Dam (Paradise Hydro System) Dewey Creek Wildlife Management Area	Annapolis Kings	324544 385546	4964463 4998255	20T 20T	Water impoundment/storage	Water supply - agricultural	FALSE FALSE
560 561 562		Lake Mulgrave Wing Dam #1 (Bear River Hydro System) Lake Mulgrave Wing Dam #2 (Bear River Hydro System) Lake Mulgrave Wing Dam #3 (Bear River Hydro System)	Annapolis Annapolis Annapolis	299932 299479 300506	4933548 4933818 4933787	20T 20T 20T			FALSE FALSE
563 564 565		Ridge Development Wing Dam (Bear River Hydro System) Roxbury Dam (Paradise Hydro System)	Annapolis Annapolis	297041 328826 325077	4936073 4961450 4964075	20T 20T 20T			FALSE FALSE FALSE
566 567		Saunders Pond Spillway (Paradise Hydro System)	Annapolis Annapolis Annapolis	339174 339197	4948377 4948448	20T 20T			FALSE FALSE
568 569 570			Annapolis Annapolis Annapolis	339218 339349 339350	4948521 4948753 4949035	20T 20T 20T			FALSE FALSE
571 572	1920s	Quarry Lake Dam Pereaux Aboiteau	Halifax Kings	445651 390848	4946886 5005481	20T 20T	Water impoundment/storage Aboiteau or other flood reduction structure	Non consumptive - aquatic recreation enhancement N/A	FALSE FALSE
573 574 575		Canning Aboiteau Canard Aboiteau	Kings Kings Annapolis	389081 389573 299652	5000698 4997989 4945685	20T 20T 20T	Aboiteau or other flood reduction structure Aboiteau or other flood reduction structure Water impoundment/storage	N/A N/A Non consumptive - landscape feature	FALSE FALSE FALSE
576 577	1985 or 1993	Sailing Club Dam DU 6270/3	Annapolis Kings	301280 390336	4958007 4996091	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - wildlife conservation	FALSE FALSE
578 579 580		DU 6817 Upper "Hickman" Segment DU 6817 Middle "Graham" Segment" DU 6817 Lower "Waugh" Segment	Kings Kings Kings	391591 391908 392081	4995695 4995625 4995895	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
581 582 583		DU 6701 Belleisle Marsh Project Segment 2 DU 6701 Belleisle Marsh Project Segment 3	Annapolis Annapolis	310591 309876 310525	4962553 4962004 4961696	20T 20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - wildlife conservation	FALSE FALSE
584	unknown 1929	Belleisle Aboiteau Big St. Margarets Bay Lake Dam 1 Tusket Falls Main Dam	Annapolis Hants Yarmouth	414398 261390	4962460 4863604	20T 20T	Aboiteau or other flood reduction structure Water impoundment/storage Water impoundment/storage	N/A water supply - hydroelectric water supply - hydroelectric	TRUE TRUE
587	1929 Prior to 1930 Prior to 1930	Carleton Dam Mink Dam Kempt Back Dam	Yarmouth Yarmouth	265015 267511 270164	4868416 4878059 4883481	20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	TRUE FALSE FALSE
589 590	1929 1929	Great Barren Dam Tusket Falls Powerhouse Dam	Yarmouth Yarmouth Yarmouth	279435 260789	4861632 4863094	20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
592	circa 1930 1936 1960	Roseway Main Dam Gardners Mills Dam Weymouth Falls Dam	Shelburne Yarmouth Digby	311406 261520 265895	4850533 4879361 4921303	20T 20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	TRUE FALSE FALSE
594 595	1960 1959	Sissiboo Falls Dam Fourth Lake Main Dam	Digby Digby	271395 283379	4923673 4916498	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
597	1959 1959 1959	Fourth Lake Wing Dam #1 Fourth Lake Wing Dam #2 Fourth Lake Wing Dam #3	Digby Digby Dieby	286607 283083 288407	4918335 4914093 4918603	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
599 600	1959	Musquash Dam Gays River Mine	Digby Halifax	283425 473495	4915243 4984667	20T 20T	Water impoundment/storage Mine tailings management	water supply - hydroelectric N/A	FALSE FALSE
601 603 604	1986	Masons Mill Pond Control Structure Sand Lake Glace Bay Harbour Dam	Halifax Cape Breton Cape Breton	437673 736886 734996	4953674 5113707 5120021	20T 21T 21T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - fire protection Water supply - municipal Non consumptive - aquatic recreation enhancement	FALSE FALSE FALSE
606	1900's 1900's	City Reservoir Power Lake	Cape Breton Cape Breton	718328 721416	5109815 5113025	20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - municipal Non consumptive - aquatic recreation enhancement	FALSE FALSE
607 608 609	1984	Tangier River Lake Dam Abbecombec Ocean Village 1 Abbecombec Ocean Village 2	Halifax Halifax Halifax	520676 504365 504555	4973755 4953674 4953299	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - landscape feature Non consumptive - aquatic recreation enhancement	TRUE FALSE TRUE
610		Parrsboro Aboiteau Harrison Lake	Cumberland Cumberland	396339 401529	5028381 5063345	20T	Aboiteau or other flood reduction structure Water impoundment/storage	N/A Non consumptive - aquatic recreation enhancement	FALSE FALSE
	1980 1950's	Kuhn Marsh Retention Berm Oathill Lake Control Structure Maynard Lake Control Structure	Halifax Halifax Halifax	458416 456215 456238	4948102 4947087 4946355	20T 20T 20T	Aboiteau or other flood reduction structure Water impoundment/storage Water impoundment/storage	N/A Non consumptive - aquatic recreation enhancement Non consumptive - aquatic recreation enhancement	FALSE FALSE
615 616 617	1960's 1990 1990's	Glenforest Drive Weir Glenbourne Estates Retention Pond	Halifax Halifax Halifax	449189 446375 446516	4945303 4946995 4946505	20T 20T 20T	Aboiteau or other flood reduction structure Water impoundment/storage	N/A Non consumptive - aquatic recreation enhancement	FALSE FALSE TRUE
617 618 619	1990s 1988	Parkland Dr. Retention Pond Annapolis Municipal Dam Upper Clements Park Dam	Annapolis Annapolis	297368 296692	4942637 4953488	20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Water supply - municipal Non consumptive - aquatic recreation enhancement	FALSE FALSE
620 621 622		Upper Clements Animal Park 1 Upper Clements Animal Park 2 Crosskill Lake	Annapolis Annapolis Annapolis	296692 297206 317087	4953488 4953279 4971610	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement Non consumptive - wildlife conservation Water supply - municipal	FALSE FALSE
623 624		Lily Lake Reservoir Second Lake Reservoir	Annapolis Annapolis	333730 334405	4982265 4982371	20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - municipal Water supply - municipal	FALSE FALSE
626	early 1970's 1923 1924	Trout Lake Weir Governor Lake Main dam Anti Dam Reservoir	Annapolis Halifax Halifax	336636 526180 539582	4958114 5003602 4994407	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - aquatic recreation enhancement water supply - hydroelectric water supply - hydroelectric	FALSE FALSE TRUE
629 630	1926 1923	Marshall Falls Main Dam Malay Falls Main dam	Halifax Halifax	540524 540678	4983085 4981867	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	TRUE TRUE
	1936 1928	Ruth Falls Main Dam MacDonald Dam and Canal Intake Amherst Golf Club Pond	Halifax Hants Cumberland	539532 403748 408967	4978157 4970448 5077586	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric Water supply - recreation facilities	TRUE FALSE FALSE
635 636	1998	Avon River Causeway Angevine Lake Dam	Hants Cumberland	409468 461082	4983187 5065396	20T 20T	Aboiteau or other flood reduction structure Water impoundment/storage	N/A Non consumptive - aquatic recreation enhancement	FALSE TRUE
637 638 639		Second River Dam Park Lake Dam DU 6931 McNeils Pond	Cumberland Cumberland Hants	435130 431557 410311	5048779 5064104 4980093	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Non consumptive - wildlife conservation Non consumptive - aquatic recreation enhancement Water supply - agricultural	FALSE FALSE
640 641	1948 1985	Tom Lake Spillway Kehoe Brook - Tailings Pond	Guysborough Cape Breton	617782 720791	5021436 5120268	20T 20T	Water impoundment/storage Mine tailings management	water supply - hydroelectric N/A	FALSE FALSE
642 643		Kehoe Brook Settling Pond Sand Lake Brook Dam Marconi Towers Dam	Cape Breton Cape Breton Cape Breton	721067 734661 735030	5119844 5114371 5115608	20T 20T 20T	Mine tailings management Water impoundment/storage	N/A Water supply - municipal	FALSE FALSE
645 646	1966	Middle River Dam Pictou Causeway Rory Brook Dam	Pictou Pictou	519945 521579 619422	5054237 5055791 5080936	20T 20T 20T	Water impoundment/storage Aboiteau or other flood reduction structure Water impoundment/storage	Water supply - industrial N/A Water supply - municipal	TRUE FALSE FALSE
648 649	prior to 1930, maybe circa 1900		Digby Lunenburg	276956	4946921	20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - municipal Non consumptive - historical	FALSE FALSE
650 651 652	1989-1990	Don Cox Fishladder Muskrat Cove Dam Gaspereau Lake Dyke, formerly Black Brook Dam	Halifax Kings Kings	443636 379090 379334	4958086 4982879 4982251	20T 20T 20T	Fish ladder (not part of dam) Water impoundment/storage Water impoundment/storage	N/A water supply - hydroelectric water supply - hydroelectric	TRUE FALSE FALSE
653 654	1936-37	Forest Home Control Structure MacMillan Dam	Kings Kings	380280 381457	4976830 4977194	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
655 656 657		MacDonald Dam Wolfville Pond Dam Reservoir Park Dams	Hants Kings Kings	403286 391285 394297	4970368 4993858 4993426	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric Non consumptive - aquatic recreation enhancement	FALSE FALSE
658 659		Orchard Ave. Dam Soldier Lake Wing Dam No.1	Kings Halifax	393790 454437	4993712 4963607	20T 20T	Water impoundment/storage Water impoundment/storage	Non consumptive - landscape feature water supply - hydroelectric	FALSE FALSE
660 661 662		Soldier Lake Wing Dam No.2 Jordan Lake Main Outlet Dam Jordan Lake Driving Canal Outlet Dam	Halifax Queens Queens	456039 321511 323046	4960758 4888323 4884942	20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
663 664	mid-1800s	Jordan Lake Sixth Lake Dam St. Peters Canal Locks	Queens Richmond	323577 666071	4888942 5057921	20T 20T	Water impoundment/storage Navigation aid	water supply - hydroelectric N/A	FALSE FALSE
665 666 667	circa 1830 1906	Barrett's Mill Dam Barrett's Feely Lake Dam	Kings Halifax Halifax	353612 445074 445123	4988400 4960183 4960924	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - agricultural Water supply - industrial Water supply - industrial	FALSE FALSE FALSE
668 669	2005	North Canoe Lake Weir "New" monitoring site Weir	Hants Halifax	395881 458480	4963546 4971112	20T 20T	Decommissioned Aboiteau or other flood reduction structure	N/A N/A	FALSE FALSE
670 671 672	2000-01 1950's	Johnson Brook Weir Lakewood Road Dam DU 6121 Avon Project	Halifax Kings Kings	458334 378440 401525	4967606 4996330 4995894	20T 20T 20T	Aboiteau or other flood reduction structure Decommissioned Water impoundment/storage	N/A N/A Non consumptive - wildlife conservation	FALSE FALSE FALSE
673 674	2008-09	Balmoral Grist Mill Dam Waugh River Fish Ladder Liscomb River Fish Ladder	Colchester Colchester Guysborough	484826 482898 570572	5054631 5053777 4987163	20T 20T 20T	Water impoundment/storage Fish ladder (not part of dam) Fish ladder (not part of dam)	Non consumptive - historical N/A N/A	FALSE TRUE TRUE
676 677	1977 1969 1949	Morgan Falls Fish Ladder Grand River Fish Ladder	Lunenburg Richmond	363909 0	4932665 0	20T	Fish ladder (not part of dam) Fish ladder (not part of dam)	N/A N/A	TRUE TRUE
	1960s 1960s	Long Lake (Richmond Co) Dam Big St. Margarets Bay Lake Dam 2 (Timber spillway) Big St. Margarets Bay Lake Dam 3 (Wing Dam)	Richmond Hants Hants	662043 416271 416223	5059982 4959896 4960333	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	Water supply - aquacultural water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
681 682	-,-00	The Roll Dam Mill Dam	Queens Shelburne	359535 300774	4880070 4834237	20T 20T	Water impoundment/storage Water impoundment/storage	Water supply - industrial	TRUE TRUE
683 684 685	1929	McGowan Lake Powerhouse Intake Canal Herring Cove Lake Storage Dam Leamington Brook Little Dam	Queens Queens Cumberland	336337 362310 419603	4920216 4884692 5046190	20T 20T 20T	Water impoundment/storage Water impoundment/storage Decommissioned	water supply - hydroelectric Water supply - industrial Water supply - municipal	TRUE FALSE FALSE
686 687		Lower Lake Falls Development Spillway Deep Brook Development Spillway	Queens Queens	341256 355182	4891598 4882328	20T 20T	Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric	FALSE FALSE
	1947 1947 1990	Donahue Lake Sluiceway Tom Lake Main Dam Aulds Lake Dam	Guysborough Guysborough Guysborough	617317 617495 621797	5018949 5021183 5054609	20T 20T 20T	Water impoundment/storage Water impoundment/storage Water impoundment/storage	water supply - hydroelectric water supply - hydroelectric Water supply - industrial	FALSE FALSE
691		Morrisons Lake Dam	Guysborough	621420	5054522		Water impoundment/storage	Water supply - industrial Water supply - industrial	FALSE