



CONSEIL DE GESTION DU BASSIN-VERSANT DE LA  
**RIVIÈRE RESTIGOUCHE INC.**



**RESTIGOUCHE RIVER**  
WATERSHED MANAGEMENT COUNCIL INC.

## **Science Committee**

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### **Report to Council on the results of the Science Committee meeting of 27-28 January 2010 to review salmon population status during the 2009 season**

The Science Committee met on 27 – 28 January 2010, in Campbellton, New Brunswick, to assess the status of Atlantic salmon in the river in 2009.

#### **The Restigouche River environment in 2009**

The Environment Canada gauging station on the Upsalquitch River serves as the indicator site for the Restigouche River. In 2009 the Upsalquitch River experienced an excessive high flow in April (at a 10-year flood incidence) and an excessive high flow in May (at a 2-year flood incidence). Lower excessive flows also occurred during July, August and November. The lowest flows were noted in February and September however they were not considered deficient flows, (less than the 2-year low flow).

Water temperatures for the main stem and the tributaries were generally relatively cold in July (13.4°C to 17.3°C). Maximum water temperature was reached on August 19<sup>th</sup> and ranged from 20.0°C to 24.2°C. Mean temperatures did not rise above 20°C on the Little Main Restigouche or Kedgwick Rivers. Mean temperatures rose above 20°C in the Patapedia, Causapsal, Matapedia, Upsalquitch and in the main stem Restigouche Rivers at a few sites during the month of August. The number of degree days in 2009 was similar to past years with the exception of 2006 which was extremely warm.

#### **Atlantic salmon trends in 2009**

Compared to 2008, rod day effort was up for Restigouche River in 2009 and down somewhat for the Matapedia River.

Catch data for both large and small salmon in the Matapedia and rest of the Restigouche River track each other pretty well. Overall, grilse catches in the system were down in 2009 compared to 2008 and MSW catches were up from 2008. The CPUE for large salmon were up in both Restigouche and Matapedia systems.

In 2009 for Restigouche New Brunswick, spawners as determined during visual (snorkel) counts in late September are encouraging for salmon. It would appear that spawners were at or near conservation requirements for all tributaries with the possible exception of the Little Main Restigouche. Spawners in the Matapedia River in 2009 were 153% of the conservation requirement. The Matapedia system has exceeded its conservation requirements every year since 1993. Spawners in the Patapedia River were 132% of conservation requirements. The Patapedia River has exceeded its conservation requirements every year since 1985.

At the DNR protection barrier at Ten Mile Pool on the North West Upsalquitch River grilse counts in 2009 were down compared to 2008 from 1119 to 617. MSW returns were up in 2009 compared to 2008 from 334 to 547. This is about 80% above the previous 5-year mean. This barrier operation started in 1979 and has operated for



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the past thirty-one years. In 2009 the barrier operated without interruption for 111 days. Counts of salmon at the Causapsal River barrier in 2009 were 461 salmon and 7 grilse, up 23% from the previous five-year average.

In 2009 for Restigouche New Brunswick, fry and parr densities are up slightly. Fry density levels in the Matapedia and Patapedia are down compared to 2008 however still remain at relatively high levels. Sampling conditions (i.e. late completion of electrofishing) may have affected estimates for the Matapedia and Patapedia. Overall, there is a good distribution of juvenile salmon in the rearing habitat throughout the system and there were 2 to 3 cohorts of juveniles at most of the sites sampled in 2009.

In 2009 the Restigouche system was estimated to have produced 491,000 smolts (1.84 per 100 m<sup>2</sup>) similar to levels in 2006 and 2008. Smolt production from the Kedgwick River is estimated at 127,000 (3.62/100 m<sup>2</sup>) which is similar to levels in 2006 to 2008. Smolt run timing and most biological characteristics were similar to previous years.

#### **Other research programs**

Since 2006, when didymo was first identified in eastern Canada, many salmon fishing rivers have been reported as affected by this invasive diatom. The Restigouche River watershed can be considered as one of the most affected systems since didymo is present in all the major tributaries. Throughout the years, its presence varied in intensity as well as occurrence. In 2009, blooms were mainly localised on the Little Main, Upsalquitch and Causapsal Rivers. Research efforts are currently assessing potential impacts on the early stages of Atlantic salmon. The main objective is to verify if didymo will act as an additional stressor to the population and affect the resource's recruitment. Even though there is no scientific evidence of a negative impact at this point in time, efforts to limit the spread to waterways must be made by promoting CHECK, CLEAN and DRY of sporting equipment.

There were few reports of fish with fungus in 2009 but much less than past years. During visual counts the snorkel crews noted very few fungus affected salmon and grilse.

Paul Cameron, chair