



Environmental Assessment Report

Portrait of the quality of Montréal's water bodies

The *Réseau de suivi du milieu aquatique* (RSMA) once again travelled the length of the territory of the agglomeration of Montréal to collect water samples. Their analysis enables the assessment of the quality of shore waters (QUALO), of streams and inland water bodies (RUISSO), of adjacent water bodies (COURDO) and of storm sewer systems (PLUVIO). Their observations and the results of the analyses were then used to draw a portrait of the general condition of the quality of Montréal's water bodies. They also allow for the detection of problem areas requiring improvement and a greater focus of our ongoing treatment efforts. These results can be viewed at rsma.qc.ca.

Highlights

Warm and dry weather conditions in the summer of 2012

Total precipitations in 2012 were 10% below the average of the past 15 years and the water levels in the Port of Montréal and Lake of Two Mountains were lower than normal. For the area between Montréal and Varennes, water levels were below chart datum, a condition similar to the one experienced in 1967.

PLUVIO: a first extensive screening for 119 contaminated storm sewer systems

A first study of the contaminated storm sewer systems (13) of the City of Pointe-Claire and the borough of L'Île-Bizard–Sainte-Geneviève has been completed. The 55 storm sewer systems feeding the Denis and Bertrand streams were also extensively analysed. The results revealed that cross-connections were likely present in 26 areas comprising more than 200 civic addresses. Only a more thorough detection process will allow for the identification of those systems that are truly improperly connected. To date, a total of 119 of the 176 contaminated storm sewer systems (67%) were subjected to a first detailed study in 2012.

COURDO: a better water quality

The 2012 portrait of the COURDO index shows an improvement in 54% of stations compared to 2002. None of the other stations presents any deterioration in water quality. Additional measures in the influence zone of the discharges of the Jean-R. Marcotte wastewater treatment plant (WWTP) have allowed us to better document this section of the St. Lawrence River.

QUALO: a historic week in 2012

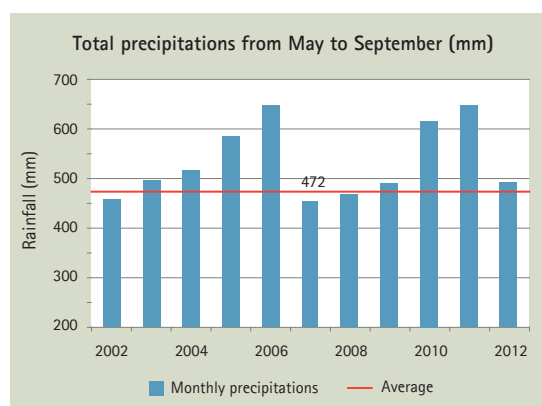
After more than 10 years of monitoring, the objective of the water treatment program, namely the full recuperation of water related uses, is about to be attained. Indeed, when no rainfalls were registered in the preceding 60 hours, the results indicate that 94% of the stations presented a contamination level inferior to the threshold for direct water related uses, for instance swimming.

RUISSO: a deteriorating trend

The values of the RUISSO index indicate that the quality of water has deteriorated at 14 stations comparatively to last year. The dry conditions experienced in 2012 are likely responsible for this situation.

A warm summer with fewer precipitations

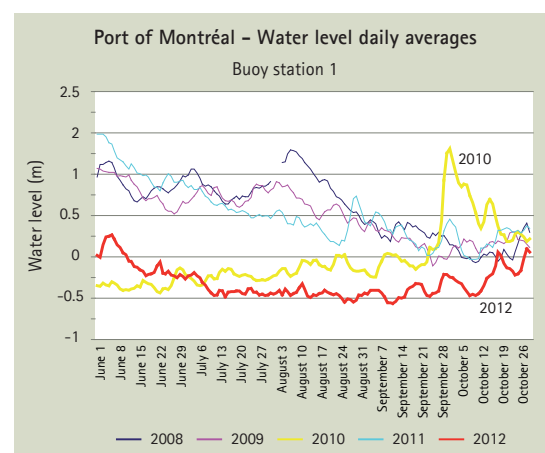
From May to September 2012, the Montréal region experienced particularly hot and dry weather conditions. The temperatures during that period were about 2 degrees above average, a very significant variation over the span of a single season. Indeed, 20 hot days were recorded ($> 30^{\circ}\text{C}$), double than normal; also, half of these days occurred in July, a phenomenon last observed in 1970.



Total precipitations were 10% less than the average of the past 15 years and nearly 20% below the average of the past 5 years. The dry spell was particularly severe in August, when the region only received 48.2 mm of rain, the average being of 92.7 mm from 1971 to 2000. Compared to the previous summers, there were fewer heavy rains.

After a warm spring and an early spring freshet in March, the water supplies rapidly diminished and the few occurrences of heavy rains were unable to prevent a significant hydrological deficit. The water levels of the St. Lawrence River in Montréal reached record lows in July and August. They were 1 meter lower than last year.

For the whole summer, the average waterflows were comparable to those recorded in 2010, but lower values were observed at the end of the summer, as witnessed by the values for July, August and September. Indeed, the Port of Montréal, in August, registered a daily average that established a new low level record since 1967 for that period of the year.



Des Prairies River, Anse-à-l'Orme Nature Park area



2010



2012

These photographs show the significant variation in water levels at the launching ramp of the nature park.

COURDO: a better situation than in 2002

For some 20 years now, the RSMA has conducted, on a somewhat regular basis, water sampling activities during the summer season. In 2012, the water sampling program for the Des Prairies River was resumed for the first time since 2002. Additional measures in the influence zone of the Jean-R. Marcotte wastewater treatment plant (WWTP) also allowed us to better document the impact of its discharges on the water quality of the St. Lawrence River.

Choice of stations

The choice of sampling points was made taking into account the presence of the main storm and urban effluents, the location of the control structures for wastewater interceptors as well as the main affluents. Whereas the Des Prairies River sampling program in 2012 relied on 46 stations, the scope of the 2012 program was reduced to 37 due to navigational constraints. Indeed, sampling of the stations located upstream of the Du Cheval Blanc Rapids was cancelled due to the low water levels in that area of the river. This was the first time ever that the RSMA was confronted by such a situation. As for the section downstream of the WWTP, the program included 57 stations located between the upstream point of the effluent and the Sorel-Tracy thermal power plant. A total of 94 stations forming the COURDO program were sampled on seven occasions between June 27 and October 23.

The sampling process

Sampling of the Des Prairies River was conducted over two days, the first for the 20 stations located upstream of the Hydro-Québec dam and the second, for the 17 stations located between the dam and the downstream extremity of the river. Because of this, the weather conditions were different during the samplings. Indeed, there were twice as many rainfalls in the 60 hours preceding the tours of the upstream sector (81 vs. 41 mm). As far as the sector located downstream of the WWTP is concerned, the sampling tour only required a single day.



Choice of buoys for the 2012 sampling program

Choice of parameters

Based on the 2002 results for the Des Prairies River, we were able to reduce the number of analyses for some stations by eliminating parameters that were never a discriminating factor in the COURDO index (ammoniacal nitrogen and metals). At the majority of stations, the analyses were limited to the following parameters: suspended solids (SS), total phosphorus (P_{tot}), dissolved oxygen (OD), pH and faecal coliforms (COLI). With respect to the effluent's stations, only the COLI and metals were measured.

Better quality water in the Des Prairies River

In 2012, only 28% of the faecal coliforms measured exceeded the 200 threshold compared to 61% in 2002. Also, there were only five exceedances of the 1000 threshold among the 245 samples, representing 2% rather than 12% of the total in 2002. At the estuary of the L'Assomption River, four of the seven samples collected exceeded 200 COLI, of which two even exceeded the 1000 threshold. As for the Des Mille Îles River, six of the seven samples exceeded 200 COLI, of which one only exceeded the 1000 threshold.

With respect to Montréal's shoreline stations, six of the fifteen stations presented a median slightly superior to the 200 threshold. For those stations on the Laval side, only two of the ten stations slightly exceeded that threshold. 300 m downstream of

Thresholds of the Ministère du Développement durable, de l'Environnement, de la Faune et des Parcs du Québec (MDDEFP) for recreational activities

200 threshold: the standard for direct water contact activities (swimming, windsurfing, waterskiing, white water sports, scubadiving and jetskiing) is 200 faecal coliforms per 100 mL of water (COLI).

1000 threshold: the standard for indirect water contact activities (recreational boating, canoeing and sportfishing) is 1000 faecal coliforms per 100 mL of water (COLI).

The COURDO index

The COURDO index (CI), calculated only for the Des Prairies River, is related to the levels of the following parameters: ammoniacal nitrogen, faecal coliforms, suspended solids, dissolved oxygen, pH, total phosphorus and main metals.

A sub-index (1 to 100) is given to each measure of a parameter. The lowest sub-index obtained at a given station determines the index for that day's sampling. An average of the sub-indexes is calculated to establish the CI of each station for that season. The index threshold from which water quality is deemed to be poor (CI-4) or polluted (CI-5) for a parameter is "40".

the La Pinière water treatment plant, the COLI results confirmed the effectiveness of the water's treatment during the summer season (median of 360 COLI). As for the stations in the middle of the river, one only of the ten exceeded the 200 threshold. The stations located on the Des Mille Îles and L'Assomption rivers showed medians respectively of 490 and 280 COLI.

Although the median levels of Ptot respect the 30 µg/L threshold relative to the eutrophication of waterways, occasional exceedances of the threshold were observed throughout the river. However, they are more frequent upstream of the dam (60 exceedances out of 107). Sampling over a two-day period may explain this difference, given that the upstream section of the river was sampled following heavy rainfalls, whereas the downstream section of the river was done mainly in dry weather. Contrary to 2002, there were no increases in contents at the stations located downstream of the La Pinière water treatment plant. However, the Ptot contents were greater in the estuaries of the L'Assomption (62 µg/L) and Des Mille Îles (46 µg/L) rivers.

Generally speaking, ammoniacal nitrogen contents in the river, in the 20 to 70 µg/L range, are considerably less than the chronic toxicity threshold (500 µg/L), except in the vicinity of the La Pinière treatment plant, where median values of



Hydro-Québec's Rivière-des-Prairies power dam built in the late 1920s

575 µg/L were measured in 2012 and 250 µg/L in 2002. The fact that the plant, in 2002, was being run in may explain this increase. Again, because of the impact of the La Pinière treatment plant, the median for the Du Moulin Island station, facing Jesus Island, was 127 µg/L compared to 59 µg/L in 2002. Where metals are concerned, no exceedances were observed throughout the river.

The portrait of the COURDO index (CI) for 2012 shows an improvement or similar results at all stations compared to 2002. Indeed, the indexes have remained the same at 46% of the stations and improved at the remaining 54%; no station has shown a deterioration of its indexes.

Report on the 2012 COURDO program

General quality of the water in the Des Prairies River according to the COURDO index



Downstream of the treatment station, a better understanding of the zone of influence

The results of the 2012 sampling program have allowed for an updating of our understanding of the plume dispersion of the WWTP effluent and a better assessment of the route taken to the Sorel-Tracy thermal station (km 44). The geometric means of the COLI measures were used to chart the effluent's plume dispersion until km 44. The other parameters have shown very little variability between the stations.

Globally, given the hydrological conditions during sampling, the dispersion plume was sensibly the same as the one established by Laboratoire d'Hydraulique LaSalle in 1983, in the course of a study intended to circumscribe and chart the effluent's plume from its outlet facing the islands of Île aux Vaches and Les Îles Robinets (km 9.5). However, the additional station transects conducted in 2011 and 2012 within the COURDO program have enabled a better tracking of the plume dispersion of the wastewaters generated by the WWTP until km 44.

All of the data indicate that the WWTP's zone of influence is limited to the centre of the St. Lawrence River, on the northern side of the Îles de Verchères islands, and that it does not affect the northern shore of the St. Lawrence whose waters present different characteristics. However, a metal's

content analysis of the 439 samples reveals that none of them can be used as an indicator of the plume's presence. The content levels are either too weak (near detection levels) or equal or superior to those measured outside of the WWTP's plume.

Within the context of a further development of the St. Lawrence River and the commissioning, sometime soon, of a disinfection unit in the Jean-R. Marcotte wastewater treatment plant, a better understanding of the quality of waters in that area will prove very useful in terms of establishing water treatment priorities. However, the significant contamination originating in the L'Assomption, Des Mille Îles and Des Prairies rivers and the affluents and other urban waste from the north shore will also have to be taken into account.



Ice boom, km 26, downstream of the Îles de Verchères islands

1973-2000 Report

This report concluded that the water quality of the watercourses around the Island of Montréal had considerably improved due to the commissioning of the principal water treatment facilities. However, the population should be advised of the risks related to the practice of aquatic activities involving a direct water contact in the immediate vicinity of the Jean-R. Marcotte wastewater treatment plant. To consult the report, the reader should refer to the *Documents et données* section of the Web site at rsma.qc.ca.

Report on the 2012 COURDO program

Overview of the study zone of the effluent of the Jean-R. Marcotte wastewater treatment plant



Quality of shore waters: an average year

The QUALO program

The 96 sampling stations were distributed as follows:
Des Prairies River (34),
Lake Saint-Louis (25),
De La Prairie Basin (14),
St. Lawrence River (15)
and Île Bizard (8).

The program was performed over a 20-week period, from May 21st to October 3rd.

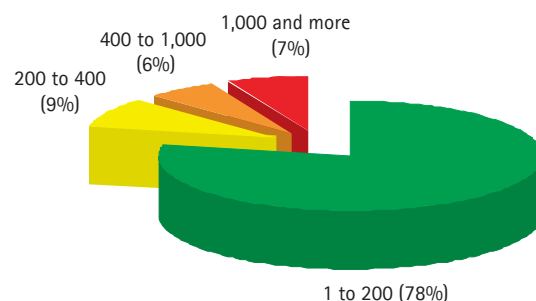
The territory covered was separated in three areas chosen randomly to be sampled from Monday to Wednesday.

After more than 10 years of activities, the QUALO program was streamlined in 2012, owing to the fact that certain stations were redundant and others hard to sample. The changes implemented allowed for a sampling program necessitating just three days. 22 stations were thus withdrawn and two added in new residential sectors for a total of 96 stations.

According to the QUALO indicator, 63 of the 96 stations (66%) sampled in 2012 were deemed fit for activities involving a direct water contact compared to 56% in 2011. 78% of the 1,917 samples analysed thus complied with the 200 threshold. The number of samples that exceeded the 1000 threshold remained stable at about 7%.

Among the 33 problem stations, one was categorized as unsanitary (Pierre-Payet Park), two as polluted, with the remaining qualifying as poor (18) or sometimes poor (12). Although most of the

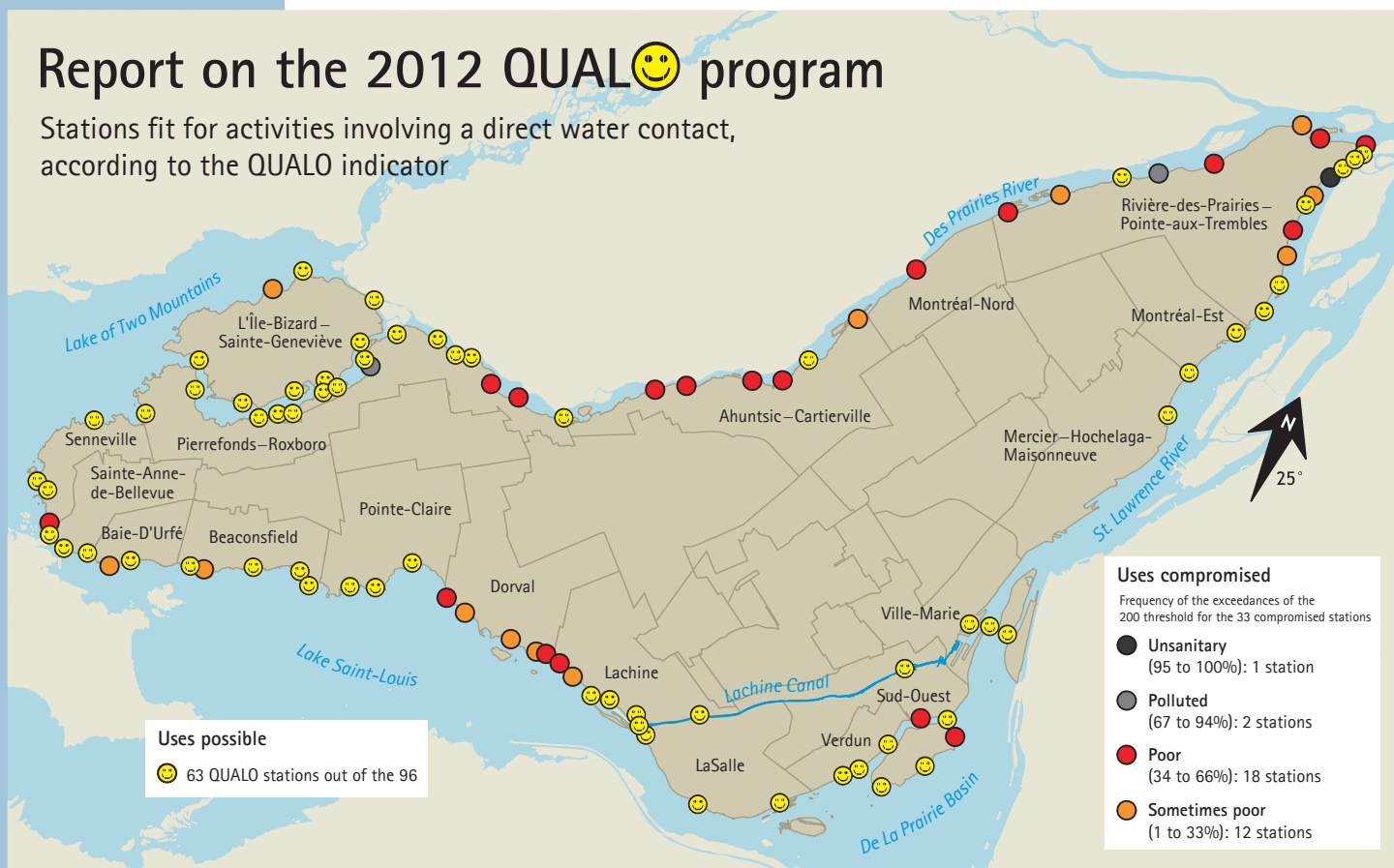
Distribution of COLI results
(faecal coliforms per 100 mL) in 2012



samples analysed were collected in dry weather, those taken in rainy weather revealed a significant increase in bacterial contamination. Indeed, an average of 78 COLI were measured in dry weather conditions, whereas the average for rainy days was 969 COLI. The impact of rainfalls was also observed when it rained in the days preceding the sampling activity. Finally, certain stations, because of their proximity to the overflow structures, are more liable to suffer their effects.

Report on the 2012 QUALO 😊 program

Stations fit for activities involving a direct water contact, according to the QUALO indicator



Report by water body

Des Prairies River: 53% QUALO

The water quality of the Des Prairies River has improved, given that the percentage of QUALO stations increased from 33% in 2011 to 53% in 2012. These results position the year 2012 slightly above the average of the past 10 years. The QUALO stations are mainly found in the upstream portion of the watercourse, that is to say upstream of Paquin Park at the level of Des Sources Boulevard. Those stations downstream of Cartierville Bridge present geometric means above 200 COLI and up to seven exceedances of the 400 COLI value. However, the worse results were observed at the station located at the level of the Rive Boisée (Pierrefonds-Roxboro) and of Cheval-Blanc Park (Rivière-des-Prairies-Pointe-aux-Trembles). The exceedances of the 400 COLI threshold are close to 90%. In both cases, contaminated storm sewer systems are responsible.

Île Bizard: 88% QUALO

Of the eight stations surrounding Île Bizard, seven were QUALO qualified. Three exceedances of the 1000 COLI threshold explain the change in category of the station located at the very end of Terrasse Martin, 1 km upstream of the nature park. Its poor quality has persisted in the past few years.

Lake Saint-Louis: 60% QUALO

The greatest deterioration in water quality was observed in Lake Saint-Louis. Over the past two years, the proportion of QUALO stations fell from 77% to 60%. One has to go back to 2006 to observe such a low percentage. For the first time since the beginning of the program, a group of many stations, all located between Lachine and Dorval, dropped in the standings. Significant exceedances were also observed at the boat ramp of Angel Park (Beaconsfield) and in Bertold Park (Baie-D'Urfé). As far as the quality of water in Godin Park is concerned, it rated poorly at the beginning of the year, when five readings exceeded 400 COLI. It's possible that the discussions held with the person responsible for environmental matters at Macdonald College were fruitful, since the values obtained since then were considerably less.

A HISTORIC WEEK IN 2012

From August 20th to August 22nd, which had no rainfalls over 60 hours, no less than 91 of the 96 stations complied with the 200 threshold. Consequently, in dry weather, the key objective of Montréal's water treatment program, namely the full recovery of all water related uses was almost attained with a water quality fit for swimming in just about 100% of the stations.

Therefore, during the 14th week of the sampling program, i.e. the week beginning August 20th, all of the stations in the De La Prairie Basin, Île Bizard and Lake Saint-Louis were deemed fit for water contact activities. The six stations that exceeded the 200 threshold were influenced by the stormwater outfalls in which reversed connections were identified by the PLUVIO program.

Anyone for a swim?



De La Prairie Basin: 86% QUALO

Only two stations did not obtain the QUALO rating, the first station located near Champlain Bridge, just downstream of the Saint-Pierre collector, and the second located at the level of Nuns' Island. In both cases, the average results surpassed 200 COLI and exceedances of the 400 COLI threshold were measured, numbering ten and six respectively.

St. Lawrence River: 73% QUALO

The water quality in the St. Lawrence River considerably improved in 2012, with an increase in QUALO rated stations from 44% to 73%. The problem area is located between 36th Avenue (3 values > 400 COLI) and 82nd Avenue (16 values > 400 COLI).

The QUALO indicator

The QUALO indicator signifies the maintenance of a very good bacterial quality for a station throughout the season, although it may have occasionally exceeded the 200 COLI threshold used to determine fitness for direct water contact uses.

To earn the QUALO rating, a station must satisfy two conditions: its annual results must not present a geometric mean above the 200 COLI per 100 mL threshold and a maximum of 10% only (i.e. 2 samples out of the 20 analysed) of results may exceed 400 COLI per 100 mL.

Keep your eyes peeled!



Should you come by one of our identified vehicles or one of our samplers, don't hesitate to ask your questions and share your comments.

RUISSO: an increase in polluted water bodies

The RUISSO index

The RUISSO index bears witness to the physico-chemical and bacterial quality of a watercourse relative to 25 quantified parameters (main metals, total phosphorus, ammoniacal nitrogen, dissolved oxygen, suspended solids and faecal coliforms). The index threshold from which the quality of water is deemed poor (IR-4) or polluted (IR-5) for a given parameter is "40".

In 2012, nine stations were withdrawn from the RUISSO program and five new stations were added. From May 16th to November 20th, a total of 51 stations were subjected to sampling. This year, the proportion of water bodies showing "excellent, good or fair" water quality diminished from 48% to 37% (on the basis of the 46 stations sampled in the past five years). The stations rated as being polluted increased slightly to 35%, but it is the stations rated as being poor that increased the most, going from 20% to 28%.

As advocated in the Montréal Community Sustainable Development Plan, it's the streams that have the most to gain by being further developed, restored and protected, as they form irreplaceable habitats necessary for biodiversity in an urban setting. With its 51 stations, the RUISSO program enables the collection of data on the water quality of the principal streams and inland waters present on the territory of Montréal.

Evolution of the water quality of streams and inland waters

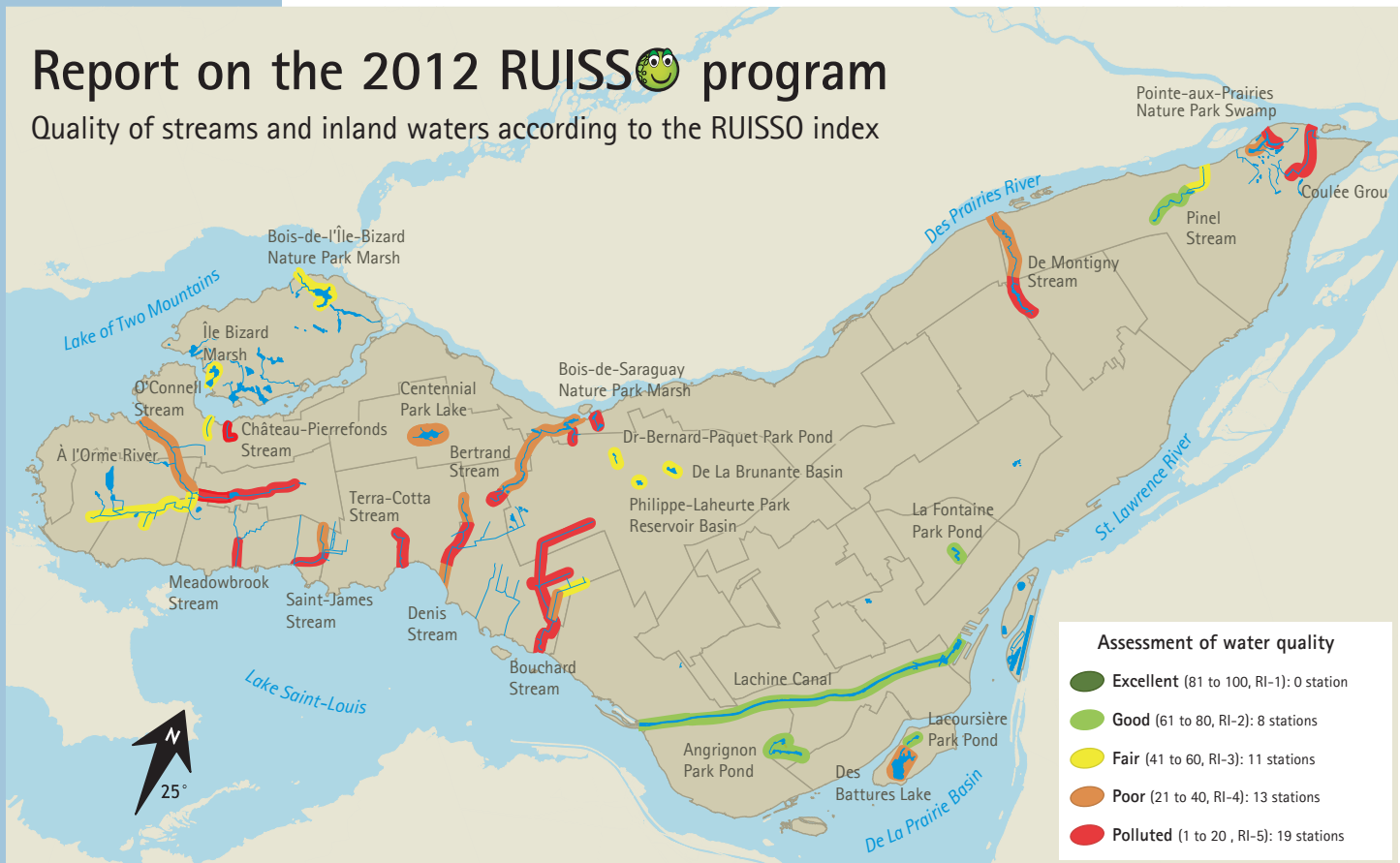


Note: the percentage for each year is based on the number of active stations during the current year.

In addition to these major trends, the RUISSO index (RI) measured at each station reveals that the quality of water has generally worsened at 14 of them compared to last year. Seven stations showed an improvement in water quality, whereas 28 stations remained stable (the two new stations added this year could not lend themselves to a comparison). For more information, the reader should refer to the *Qualité des ruisseaux* section of the rsma.qc.ca Web site.

Report on the 2012 RUISSO program

Quality of streams and inland waters according to the RUISSO index



Assessment of the quality of streams and inland waters

An assessment of the quality of streams and inland waters reveals that Lachine Canal earned the highest RI in 2012. Its good quality was maintained all along its length, and this, despite the appearance of a cyanobacteria bloom in September. In terms of ratings, there follows the urban ponds located in parks with very good RI (between 61 and 70). These ponds, essentially fed by the water supply system, are of better quality than the habitats mainly fed by rainstorm waters.

The pond in the Dr-Bernard-Paquet Park significantly deteriorated in quality, owing to pumping issues that occurred in the summertime. This pond now ranks with a group of streams and inland waters whose RI varies from 59 to 40 (fair quality), as is the case with the À l'Orme River and

the Pinel and O'Connell streams. The streams and inland waters with a RI between 20 and 40 (poor quality) are generally affected by pollution issues and, for the most part, we observed a worsening in their water quality due to a particularly dry summer season. Streams with a RI < 20 especially suffered from an insufficient water intake in 2012, a chronic problem for many of them which results in a somewhat unstable RI year after year.

Finally, it is worthwhile mentioning that the Meadowbrook and Château-Pierrefonds streams earned the lowest ratings, both of them still affected by reversed connections. As for the swamp found in the Pointe-aux-Prairies Nature Park and the marsh located in the Bois-de-Saraguay Nature Park, both suffer from a chronic shortfall in water intake.

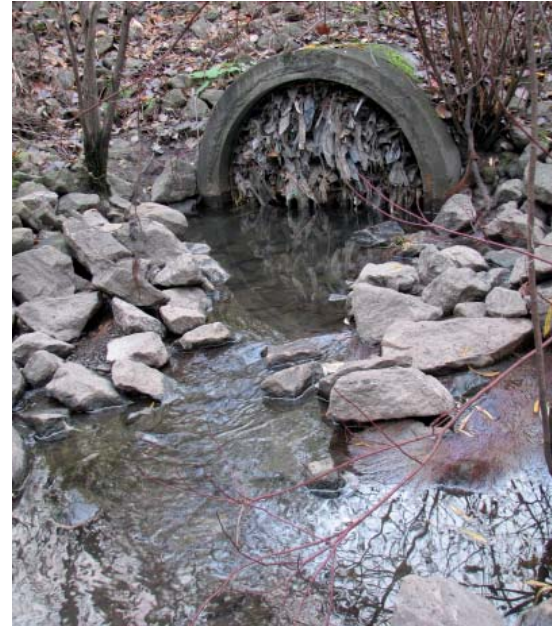
Watercourses and inland waters	2012 Index	2011 Index	Evolution of the RI*
Beaver Lake (restoration work since 2012)	-	49	-
Lachine Canal	73	72	Stable
Angrignon Park Pond	70	59	Improvement
Lacoursière Park Pond	62	64	Stable
La Fontaine Park Pond	61	39	Improvement
Dr-Bernard-Paquet Park Pond	59	80	Deterioration
De La Brunante Basin	56	52	Stable
Pinel Stream	54	57	Stable
Bois-de-l'Île-Bizard Nature Park Marsh	52	66	Deterioration
Philippe-Laheurte Park Reservoir Basin	51	-	-
O'Connell Stream	49	42	Improvement
Île Bizard Marsh (Cap-Saint-Jacques Nature Park)	48	20	Improvement
À l'Orme River	44	47	Stable
Des Battures Lake	38	46	Deterioration
Centennial Park Lake	37	38	Stable
Saint-James Stream	27	19	Improvement
Bouchard Stream	23	45	Deterioration
De Montigny Stream	22	23	Stable
Denis Stream	22	29	Deterioration
Bertrand Stream	22	39	Deterioration
Terra-Cotta Stream	20	33	Deterioration
Coulée Grou	18	12	Improvement
Meadowbrook Stream	17	18	Stable
Château-Pierrefonds Stream	16	17	Stable
Pointe-aux-Prairies Nature Park Swamp	16	16	Stable
Bois-de-Saraguay Nature Park Marsh	15	-	-

* The situation has been characterized as stable when the RI reading from one year to the next indicates a variance of less than 5 points.

PLUVIO: a first screening for 119 of the 176 contaminated storm drainage systems

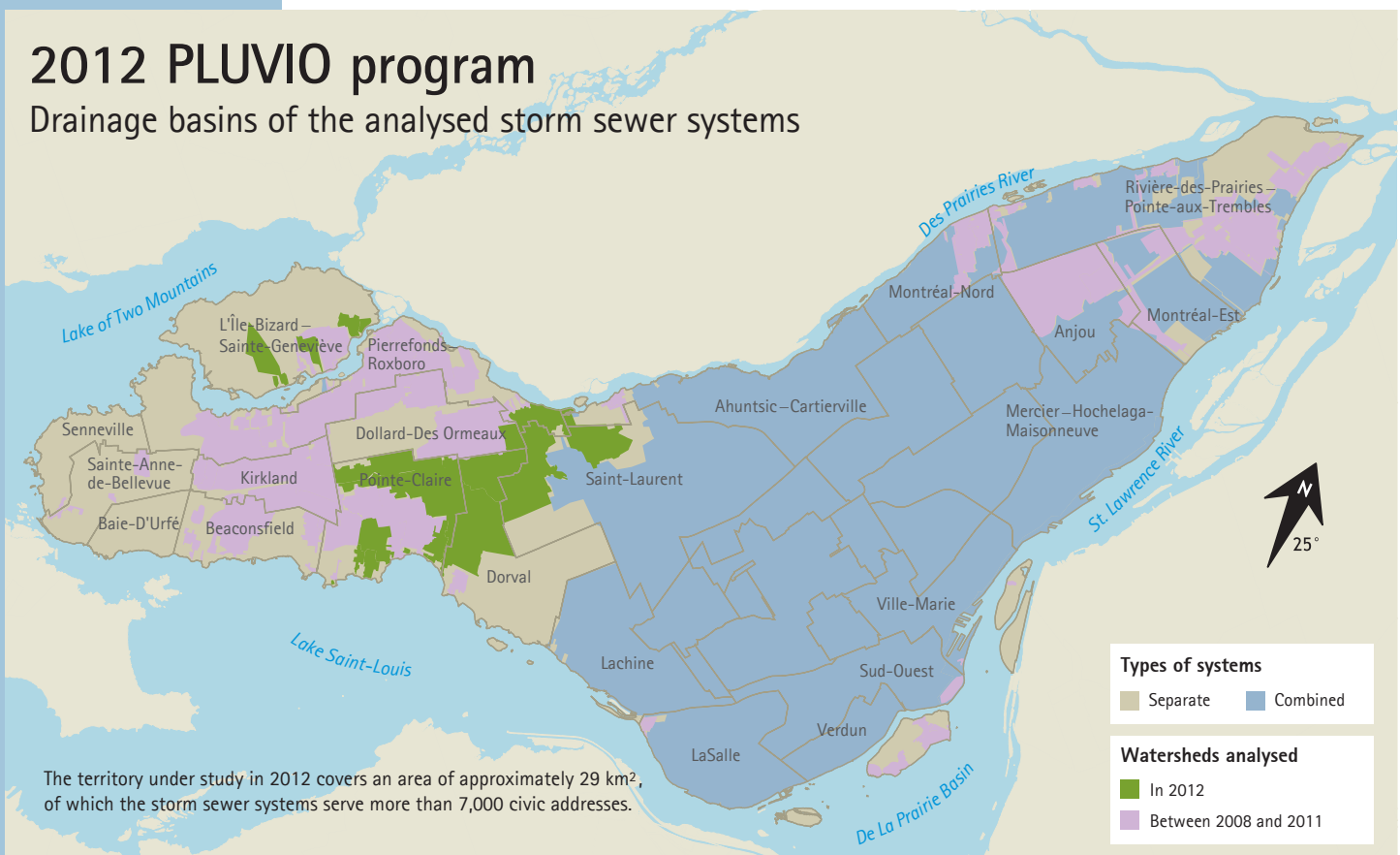
The center of the island is served by a sewer system that combines stormwaters and sanitary waters, and diverts them to the Jean-R. Marcotte waste water treatment plant. At both of the island's extremities, as well as in Nuns' Island and Île Bizard, a stormwater system evacuates rainwaters directly into adjacent and inland waters, whereas another catches and diverts sanitary waters to the treatment plant. It is in these separate systems that one can find reversed connections.

For many years now, the RSMA has identified storm sewer systems as an important source of contamination of water bodies resulting, not only from diffuse pollution, but also from reversed connections from the sanitary system to the stormwater system. According to studies performed within the PLUVIO program to locate issues in order to solve them, there may be some 550 storm sewer systems that flow into adjacent waterbodies or inland waters of the Montréal agglomeration, with the



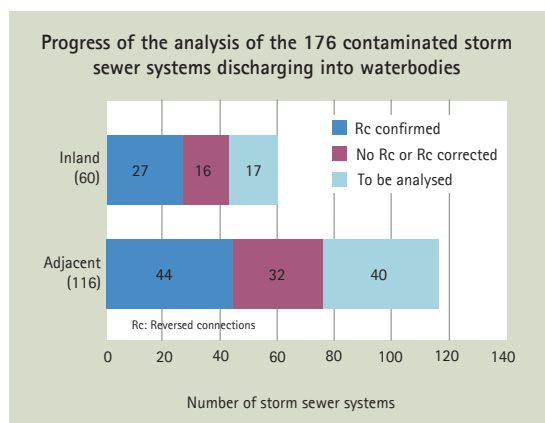
Storm sewers also carry contaminants of all kinds into the territory's streams and inland waters.

2012 PLUVIO program Drainage basins of the analysed storm sewer systems



exception of the port area. Of these, about 175 are contaminated at their outlet by faecal coliforms.

The graph below shows the degree of advancement of the studies performed to date by the RSMA. Of the 176 contaminated storm sewer systems, 119 have been the subject of a preliminary detailed study by the RSMA. Some 40 of these systems discharging into adjacent water bodies and some 30 into inland waters feature reversed connections. In about 10 systems, the reversed connections have already been corrected. In some 20 others, no reversed connections have been found; the contamination measured at their outlets are caused by overflow structures or the presence of animals.



The 2012 program has enabled the completion of the study of the contaminated storm sewer systems of the City of Pointe-Claire and the borough of L'Île-Bizard-Sainte-Genève (13 systems). However, all of the outlets of the storm sewer systems flowing into the Denis (27) and Bertrand (28) streams were sampled in 2012. Among the 55 storm sewer systems, our research focused on the 20 systems that proved to be contaminated according to previous studies or those conducted in 2012.

Although the findings of these studies were still being interpreted at the time of publication of this report, the PLUVIO results obtained in 2012 indicate that reversed connections are likely located in some 26 sectors, comprising upwards of 200 civic

addresses spread among 16 systems. Further screening will enable us to identify those that are truly poorly connected. However, 17 systems were found to be free of any reversed connections. Actually, bacterial contamination of animal origin once again revealed itself as the prime contamination factor in dry weather conditions, especially in Pointe-Claire.

HEALTHY STORM SEWER SYSTEMS ON THE HORIZON... MORE AND MORE ACHIEVEMENTS!

Over the past five years, many reversed connections (Rc) have been rectified in boroughs and cities such as Beaconsfield, L'Île-Bizard-Sainte-Genève, Montréal-Nord, Pierrefonds-Roxboro, Pointe-Claire, Rivière-des-Prairies-Pointe-aux-Trembles, Ville-Marie and Verdun; in Nuns' Island only, some 50 Rc were corrected. The City of Kirkland has distinguished itself in this respect. During the past three years, this city's taxpayers have allowed Rc screening of their properties to take place and nearly 95% of the Rc discovered have been remedied to date. Residential owners whose homes were affected by Rc have benefited from a subsidy by the municipality to help them defray the costs of the corrective measures required.

The Yellow Fish Road program, organized by *Trout Unlimited Canada*, is an environmental initiative that is firmly entrenched in Kirkland. Each spring, community groups criss-cross the streets of the city to paint symbolic small yellow fishes near storm sewers. This activity is intended to raise awareness among the population that the discharge of



untreated wastewaters in our waterbodies threatens our health and environment. For further information, please consult their Web site at french.yellowfishroad.org.

RSMA would take this opportunity to congratulate the citizens and authorities of Kirkland for their initiatives.

What is a reversed connection?

It's a connection or defect in a piece of equipment that allows sanitary wastewaters to seep elsewhere than in a domestic or combined sewer network, for instance in a storm sewer system, on the ground, in a ditch or in a watercourse, with the exception of a septic tank.

The PLUVIO program identifies the problem areas, namely the segments of the storm sewer system that include buildings liable to be affected by reversed connections.

N.B. The expression "reversed connection" is used to distinguish it from a cross-connection. This expression, used in the field of potable OR drinking water systems, designates a permanent or temporary connection between an intake for potable water and one for non potable water, for instance a connection with fire protection sprinklers or cooling water intakes.

Did you know that...

Blue-green algae in Lake Saint-Louis

The appearance of blue-green algae or cyanobacteria blooms is a further highlight observed at the tail end of the summer from the point of entry to Lachine Canal, in Lake Saint-Louis, till its estuary in the Old Port of Montréal. According to the experts consulted, this is the first reported occurrence of such blooms in the free waters of the territory of Montréal. The blooms are generally found along the shores of waterbodies due to the actions of both winds and currents, as these algae float on the surface. The RSMA had also observed such blooms in Des Battures Lake on Nuns' Island in 2009. The hot temperatures enjoyed in the summer of 2012 may be responsible for their presence.

Three of the eight samples sent to the *Centre d'expertise en analyse environnementale du Québec* exceeded the chronic toxicity threshold recommended for recreational activities such as swimming and kayaking. Certain blue-green algae may contain toxins and, depending on their nature and time of exposure, these may result in adverse health effects. The RSMA is monitoring this phenomenon closely. For further information, please consult the MDDEFP's Web site at the following address: mddefp.gouv.qc.ca/eau/flrivlac/algues.htm



Boat launch in the Lachine marina



Last lock of the Lachine Canal before its discharge into the Old Port of Montréal

Remedial work in Du Portage Park

Since 1999, the RSMA has been monitoring the quality of water at the sampling station of Du Portage Park in the borough of L'Île-Bizard-Sainte-Geneviève. The water's quality is variable and sometimes even polluted. Incidences of poor water quality have been particularly frequent in 2011 with five results > 1 000 COLI. A leak originating in a pipe of the neighboring wastewater pumping station is the likely cause. The borough took corrective actions in September 2012. The RSMA would like to congratulate the borough's Public Works team for their initiative. Their remedial measures should positively impact the quality of local waters.

Stay tuned for further news!



Resurgence in the Des Prairies River at the level of Du Portage Park

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