

4.2.

Protection of Natural Environments

February 10, 2020

2019 Annual Report

Auditor General of the Ville de Montréal



OBJECTIVE

Ensure that the Ville de Montréal (the City) has developed a planned and structured procedure for increasing the proportion of protected natural areas on its territory in order to comply with the Schéma d'aménagement et de développement de l'agglomération de Montréal and the Plan de développement durable de la Ville, and for maintaining this conservation status.

RESULTS

The Schéma d'aménagement et de développement de l'agglomération de Montréal is intended to protect 10% of the Montréal agglomeration's land territory as natural environments. In October 2019, 6.1% of the territory was protected. To meet the target, the City developed a natural environment protection strategy. Even with the development of such a vision, we noted that improvements are required with respect to the following main findings:

- The full potential of local parks in boroughs and related municipalities for protecting natural environments is not known;
- Several natural environments that are considered protected, particularly local parks identified by the Service des grands parcs, du Mont-Royal et des sports in 2008, do not have a conservation status;
- The City's strategy is very general and lacks specific details about the actions to be taken for each site covered, and the Service des grands parcs, du Mont-Royal et des sports does not specify the role that boroughs and related municipalities are expected to play to meet this protection target;
- Ecological audits, which form the basis of an ecological management plan, are not conducted at the frequency recommended for maintaining up-to-date knowledge of the ecological value of a natural environment;
- With one exception, there are no ecological management plans for the City's protected natural areas to regulate the actions that need to be taken to maintain their ecological value;
- No exercise was carried out to evaluate the annual cost of the ecological maintenance of the natural environments for which Service des grands parcs, du Mont-Royal et des sports is responsible;
- No annual budget is allocated in any of the business units for carrying out ecological maintenance work in order to maintain the ecological value of protected areas for which they are responsible;
- No accountability reports are submitted, either to the urban agglomeration council concerning the requirements that were established when the directory of protected natural environments (Répertoire des milieux naturels protégés) was created, or to the Direction générale concerning knowledge of the state of assets.

In addition to these results, we have formulated various recommendations for business units.

The details of these recommendations and our conclusion are outlined in our audit report, presented in the following pages.

Note that the business units have had the opportunity to formulate their comments, which appear after the audit report recommendations.

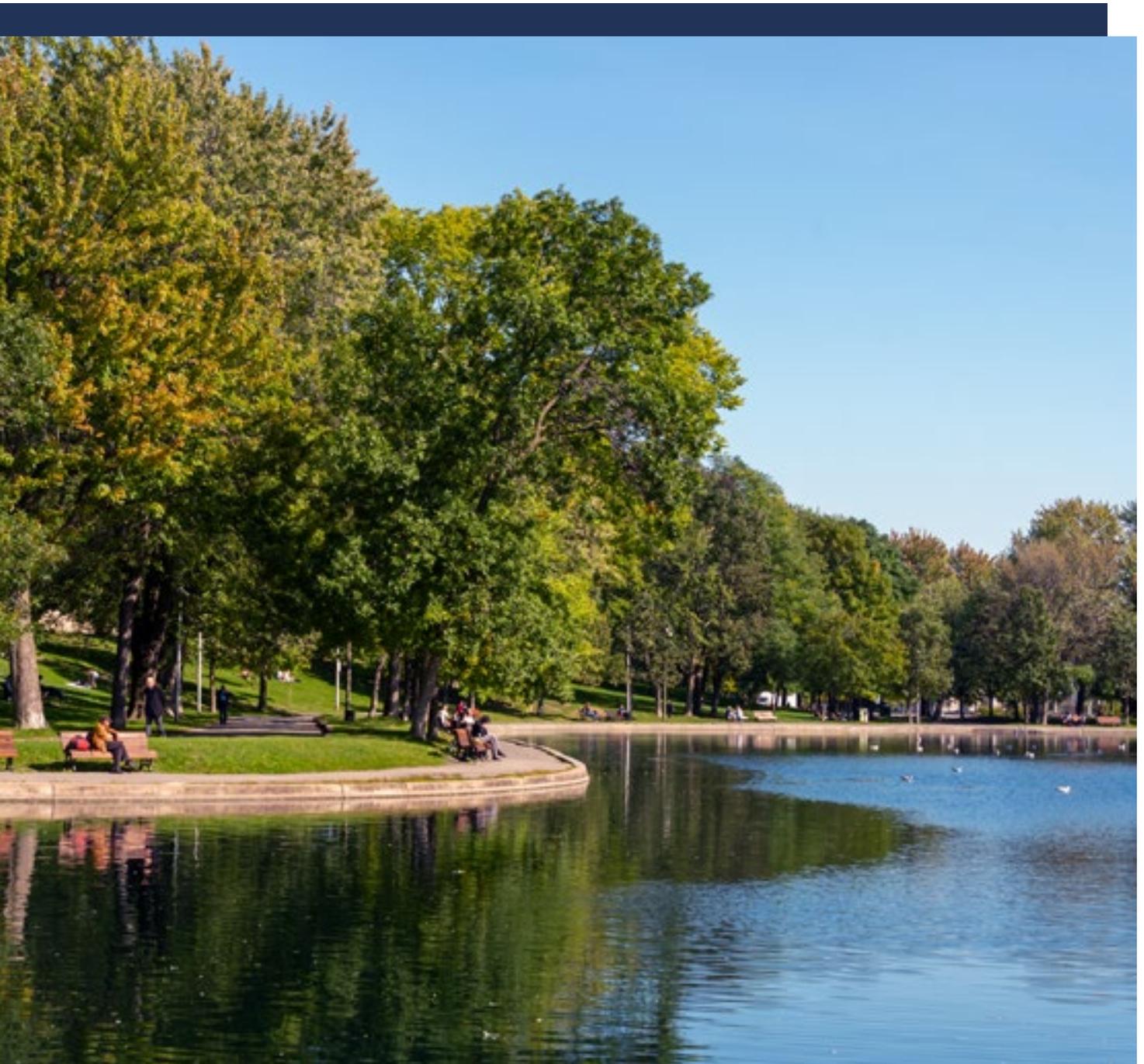


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LIST OF ACRONYMS

CCGPE	Comité corporatif de gestion des projets d'envergure
CCPE	Comité de coordination des projets d'envergure
ha	hectare (10,000 m ²)
IUCN	International Union for Conservation of Nature
NPO	Non-profit organization
TCEP	Three-year capital expenditures program
\$M	Million dollars



1. BACKGROUND

According to the ministère de l'Environnement et de la Lutte contre les changements climatiques, protected areas provide numerous environmental, ecological, social, economic and cultural benefits. Specifically, they help produce oxygen, provide soil protection, improve local and regional climatic conditions and ensure the control and purification of waterways. In economic terms, protected areas support an economic activity that relies largely on tourism.

In a municipal context in which the space available for development is limited and in which a very significant share of the administration's revenues come from property taxes,¹ it is a challenge for a city like Montréal to find a balance between the economic development of its territory and the protection of its natural environments. In 2004, the Ville de Montréal ("the City") adopted the *Policy respecting the protection and enhancement of the natural environment* ("the Policy"), which was based on the principle that "*the integration of natural environments² into the urban fabric can lead to both economic wealth and a high quality of life*". The Policy's three objectives, which were intended to be applicable across the Montréal agglomeration's territory, are as follows:

- Maximize biodiversity and expand the area of protected natural environments in Montréal;
- Ensure sustainability of the natural environment in existing parks and promote the consolidation and viability of park ecosystems;
- Foster better integration of ecosystems and natural landscapes into the built environment.

¹ The City's 2020 budget provides that property taxes will generate 49.4% of the City's revenues.

² The City adheres to the International Union for Conservation of Nature (IUCN) definition of a protected area: "an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means". At the level of the Montréal agglomeration, and within the meaning of its Schéma d'aménagement et de développement (2015), a protected area is interpreted to have the same meaning as a natural environment and includes woodlands, wetlands, natural brushlands and inland waterways.

In 2003, just before *the Policy* was adopted, 1,569 hectares (10,000 m²) (ha),³ or 3.1% of the land area of the Montréal agglomeration's territory, were considered protected natural environments, and through *the Policy*, the City aimed to increase this proportion to 6%.⁴ In 2013, the City produced the 2009–2013 assessment of *the Policy*'s implementation. Since *the Policy* came into effect, 1,303 ha of territory have been protected or are in the process of being protected, raising the agglomeration's total protected land to 2,885 ha, or 5.75% of its territory, which was 95.6% closer to *the Policy*'s objective of a 6% increase. During this period, most of the protected natural environments that were added, in terms of surface area (80.8%), were found in the ten ecoterritories⁵ that the City had defined for the agglomeration as a whole. These ecoterritories are:

- Forêt de Senneville;
- Corridor écoforestier de la rivière à l'Orme;
- Corridor écoforestier de l'Île Bizard;
- Rapide du Cheval Blanc;
- Coulée verte du ruisseau Bertrand;
- Sommet et flancs du Mont-Royal;
- Coulée verte du ruisseau De Montigny;
- Trame verte de l'Est;
- Rapides de Lachine;
- Falaise Saint-Jacques.

In 2008, the Direction des grands parcs et de la nature en ville (now the Service des grands parcs, du Mont-Royal et des sports (the "Service des grands parcs"⁶)) worked on creating a directory of protected natural environments in the Montréal agglomeration (the "Directory"). The idea behind the Directory was to compile and account for the total surface area of land in the Montréal agglomeration that was considered as belonging to protected natural environments. The Service des grands parcs had examined the natural character of 49 local parks⁷ and retained

³ For simplification purposes, all surface areas presented in this report are rounded to the nearest unit (except where more precision is required to explain a particular situation).

⁴ The total land area of the Montréal agglomeration is 50,089 ha. For information purposes, Rosemont–La Petite-Patrie borough has a surface area of 1,590 ha which is roughly equivalent to all the protected terrestrial territory in 2003.

⁵ An ecoterritory is an area containing natural spaces of ecological interest whose protection has been deemed a priority, existing protected areas and urban spaces.

⁶ For conciseness purposes, it's always about Service des grands parcs, even when it had a different name in the past.

⁷ Within the context of this report, the phrase "local park" designates solely the portion of a local park identified as a natural environment in the *Schéma d'aménagement et de développement*. The phrase is also used to designate a woodland under the responsibility of a borough or a related municipality.

a total of 25 of these, for a total surface area of 230 ha in eight boroughs,⁸ for which protection projects might be considered. Meetings were held with representatives from these eight boroughs from April to August 2008 to present them with the idea that each of them could contribute to the achievement of this objective as well as to raise their awareness of the concept of the ecological management of a park. At these meetings, the boroughs were given copies of a document entitled *“Programme-cadre de la stratégie de conservation et de mise en valeur des milieux naturels dans les parcs existants de l’agglomération de Montréal”*. According to this framework program, an ecological management plan includes acquisition of knowledge about ecosystems (ecological audits), synthesis and evaluation of this knowledge, actions to be taken and monitoring of ecosystems, so that human activities in parks are regulated and ecosystems can be maintained and renewed.

All the borough representatives we met showed that they were open to and interested in participating in achieving the natural environment protection target and entering local parks in the Directory. However, some boroughs, including Mercier–Hochelaga-Maisonneuve and Saint-Laurent stated at these meetings that they had very limited resources for park maintenance and management and that they would need both additional budget funding, in order to carry out ecological management of local parks entered in the Directory, and support from the Service des grands parcs, with its expertise, in developing their ecological management plans.

In November 2008, the Service des grands parcs presented to representatives of the boroughs concerned an assistance program for the ecological management of local parks aimed at supporting boroughs that wanted to protect certain local parks as natural environments, so that each borough could contribute to the maintenance and enhancement of biodiversity on Montréal’s territory, in keeping with *the Policy*. The assistance offered was to consist of consulting in ecological management provided by the Service des grands parcs, as well as financial assistance to conduct studies and award contracts for carrying out maintenance and development work. In return, boroughs were to make a request to enter designated parks in the Directory, commit to giving them a conservation mission, and practise ecological management of these parks. The Service des grands parcs was considering a \$20 million dollars (\$M) budget over a five-year period, from 2010 to 2014, after which the boroughs were to continue ecological management of the local parks covered out of their operating budgets. It should be stressed that since 2011, both the Service des grands parcs and boroughs have been putting great effort into the fight against the ash borer, establishing priorities and budgets accordingly.

In the summer of 2009, the City’s Executive Committee approved a proposal to continue to take steps to create the Directory of all municipal, government and private sites on the agglomeration’s territory dedicated to the protection, maintenance or enhancement of biodiversity. The decision-making summary

⁸ The boroughs covered were Ahuntsic-Cartierville, LaSalle, Mercier–Hochelaga-Maisonneuve, Pierrefonds-Roxboro, Rivière-des-Prairies–Pointe-aux-Trembles, Rosemont–La Petite-Patrie, Saint-Laurent and Verdun.

stated that such a Directory would make it possible to account for achieving the natural environment protection target set out in *the Policy*. In October 2009, the urban agglomeration council adopted Guidelines for entering and managing designated sites in the Directory (the “Guidelines”). These Guidelines set three conditions that must be met in order for a site⁹ to be eligible to be entered in the Directory, as follows:

- Meet the International Union for Conservation of Nature (IUCN) definition of protected area (see the footnote number 2);
- Have a predominantly natural character on at least 75% of its surface area, on which ecological management intended to protect, maintain or enhance biodiversity will be applied;
- Be assigned a specific type of zoning, called “conservation zoning” on which uses that are incompatible with the objectives of natural environment protection are to be prohibited.

In October 2009, Rivière-des-Prairies–Pointe-aux-Trembles borough passed a resolution to contribute to achieving *the Policy*’s objectives by supporting and associating itself with the creation of the Directory. According to the resolution, designated parks should be under ecological management and should be covered by conservation zoning.

In the fall of 2010, Saint-Laurent borough adopted a draft by-law amending the zoning by-law and authorizing Bois  du parc Marcel-Laurin to be entered in the Directory. At that time, the borough also created an ecological management plan for this woodland. This was the first entry in the Directory. At the time of our audit, even though more than 60 protected natural sites were under the responsibility of the Service des grands parcs, a borough or a related municipality, this was still the only entry in the Directory, and by that very fact, the only natural environment to comply with all the City’s requirements for being considered protected.

In 2015, the Montr al agglomeration adopted its Sch ma d’am nement et de d veloppement (the “Sch ma d’am nement”) in which it committed to the objective of increasing the proportion of the agglomeration’s land territory protected as natural environments to 10%, which represents a total surface area of 5,009 ha, or the equivalent of the total surface area of Riv re-des-Prairies–Pointe-aux-Trembles borough plus twice the surface area of Outremont borough. This protection target of 10% of the Montr al agglomeration’s land territory as natural environments (the “10% natural environment protection target”) is still in effect today.

⁹ The text does not refer solely to local parks, but to all municipal parks, depending on whether the decision to protect them falls under the authority of the urban agglomeration council, the City council or a borough council. Thus, all protected natural environments that come under the City’s authority, including those under the responsibility of the Service des grands parcs and the boroughs, should be listed in the Directory.

This concern for protecting natural terrestrial environments is not addressed solely in the Schéma d'aménagement and *the Policy*. The City also made this one of the ten collective targets set out in Sustainable Montréal 2016–2020 by reproducing the Schéma d'aménagement's objective of increasing, in the medium term, the share of protected land areas to 10% of the agglomeration's territory. No timeline was given for this target, in either this Plan de développement durable or the Schéma d'aménagement. Section 32 of the *Act respecting land use planning and development*¹⁰ specifies that the "plan creates no obligation in respect of the calendar or the terms and conditions of implementation of the public services and infrastructure provided for in the plan."

From the time *the Policy* was adopted (in 2004) until October 2019, the area of protected natural environments on the agglomeration's land territory rose from 1,569 ha (3.1%) to 3,070 ha (6.1%).¹¹ This increase of 1,501 ha was obtained through several methods:

- the acquisition of sites in ecoterritories: 314 ha;
- the protection of sites in ecoterritories (other than acquisitions by the City)¹²: 622 ha;
- the contribution of large urban parks: 441 ha;
- the protection of local parks under ecological management: 124 ha.

As of 2019, in order to reach the 10% natural environment protection target, it was necessary to protect an additional total surface area of 1,939 ha, or more than the progress made since 2004.

Table 1 shows the decision-making bodies and the business units responsible for management and maintenance according to the four types of parks that exist in the Montréal agglomeration. With the exception of local parks, all other parks are classified as large parks. It should be noted that not all large parks in the Montréal agglomeration meet the IUCN definition. For example, urban parks such as Jarry and Maisonneuve, or metropolitan parks, such as Jeanne-Mance, while they are significant green spaces in Montréal, either do not contain any or do not contain enough woodlands, brushlands or wetlands to be natural environments. The list of large parks that were considered protected natural environments at the time of our audit is given in Appendix 5.2.

¹⁰ Chapter A-19.1.

¹¹ In 2015, the protected surface area reached 3,003 ha (6%). Since then, progress has been very slow, reaching 3,070 ha in October 2019, equivalent to a 0.1% increase in three years.

¹² The ways of protecting a natural environment other than acquisition are land transfer, land donation, land exchange and placement of a conservation easement on a property.

Table 1 – Decision-Making Bodies and Business Units Responsible for the Different Types of Parks on the Territory of the Montréal Agglomeration

TYPE OF PARK		EXAMPLES OF PARKS	DECISION-MAKING BODY	BUSINESS UNIT RESPONSIBLE
Large parks	Urban parks	Angrignon, Jarry, Maisonneuve, des Rapides, La Fontaine	City council	Service des grands parcs, du Mont-Royal et des sports
	Nature parks	Anse-à-l'Orme, Bois-d'Anjou, Bois-de-Saraguay, Île de la Visitation	Urban agglomeration council	
	Metropolitan parks	Frédéric-Back, Mont-Royal, Jeanne-Mance, parc Tiohtià:ke Otsira'kéhne, pronounced djodjâgué otchira'guén (Troisième Sommet)		
Local parks		Thomas-Chapais, Marcel-Laurin, René-Masson, Terra-Cotta (Pointe-Claire)	Borough council or City council (related municipalities)	Boroughs or related municipalities

2. PURPOSE AND SCOPE OF THE AUDIT

Under the provisions of the *Cities and Towns Act*, we completed a value-for-money audit mission on the protection of natural environments. We performed this mission in accordance with the Canadian Standard on Assurance Engagement (CSAE) 3001, described in the CPA Canada Handbook, as well as other Canadian public sector certification standards issued by the CPA Canada Auditing and Certification Standards Board.

The purpose of this audit was to ensure that the City has developed a planned and structured procedure for increasing the proportion of protected natural areas on its territory in order to comply with the Schéma d'aménagement et de développement de l'agglomération de Montréal and the City's Plan de développement durable, as well as to maintain this conservation status.

The role of the Auditor General of the Ville de Montréal is to provide a conclusion regarding the objectives of the audit. To do so, we collected a sufficient amount of relevant evidence on which to base our conclusion and to obtain a reasonable level of assurance. Our assessment is based on criteria we have deemed valid for the purposes of this audit. They are presented in Appendix 5.1.

The Auditor General of the Ville de Montréal applies Canadian Standard on Quality Control (CSQC) 1 from the CPA Canada Handbook and, accordingly, maintains a comprehensive system of quality control, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. In addition, it complies with the independence and other ethical requirements of the *Code of ethics of chartered professional accountants*, which are founded on fundamental principles of integrity, professional competence and due diligence, confidentiality, and professional conduct.

Our audit work focused on the period from January 1, 2015, to June 15, 2019. However, for some aspects, data prior to these years was also considered. It was primarily completed from May to December 2019. We also took into account information that was sent to us up to February 2020.¹³

This work was mainly performed with the following business units:

- the Service des grands parcs;
- Mercier–Hochelaga-Maisonneuve borough;
- Rivière-des-Prairies–Pointe-aux-Trembles borough;
- Saint-Laurent borough.

Upon completing our audit work, we submitted a draft audit report to managers of each audited business unit for discussion purposes. The final report was then forwarded to the management of each business unit involved in the audit in order to obtain action plans and timelines for implementing the recommendations concerning it, as well as to the Direction générale, the deputy director general of Mobilité et attractivité, the deputy director general of the Service aux citoyens and the director of the Service de la concertation des arrondissements. A copy of the final report was also submitted, for information purposes, to borough directors not directly targeted by our audit, so they could implement recommendations if appropriate.

¹³ The month corresponding to the one in which the last audit letter of declaration was received.

3. AUDIT RESULTS

3.1. Natural Environment Protection Strategy of the Montréal Agglomeration

As mentioned above, in October 2019, 6.1% of the land surface of the Montréal agglomeration was protected as natural environments. From 2004 to 2018, the City's efforts resulted in a 3% increase in this proportion, from 3.1% to 6.1%. We tried to find out whether the City, as the entity responsible for implementing *the Policy* and the Schéma d'aménagement, had adopted a strategy for making an equivalent, or even greater, effort to raise this proportion by nearly 4% to reach the 10% natural environment protection target.

3.1.1. Knowledge of Natural Environments on the Territory of the Montréal Agglomeration

3.1.1.A. Background and Findings

In order to be able to manage natural environments on the territory of the Montréal agglomeration, it is necessary to know that they exist. That is why we sought to determine whether the Service des grands parcs had an inventory of currently protected natural environments that already contribute to achieving the 10% natural environment protection target and of natural environments that can potentially contribute to achieving this target. The Service des grands parcs has two georeferenced databases. The first, a compilation of protected and potentially protectable sites, was launched in 2004 when *the Policy* was developed, and it is continuously updated based on updates of the City's planning program or Schéma d'aménagement. The surface areas of the various sites compiled in this database show that a total of 6,455 ha of natural environments are already protected or potentially protectable. Not all the sites belong to the City. Without undertaking a comprehensive comparison between the natural environments in the Schéma d'aménagement and those appearing in the database of the Service des grands parcs, we identified natural environments that were missing from the database of the Service des grands parcs, including various local parks (non-exhaustive list) with a total surface area of 23 ha¹⁴, such as:

- Parc Docteur-Bernard-Paquet,
in Saint-Laurent borough (0.6 ha);
- Parc Mackenzie-King, in Côte-des-Neiges–
Notre-Dame-de-Grâce borough (1.7 ha);

¹⁴ The surface areas reported for these parks are not the total surface areas of the parks, but only the portions occupied by woodlands, brushlands and wetlands appearing in the City's open data portal.

- Parc Marien/5^e avenue, in Rivière-des-Prairies–Pointe-aux-Trembles borough (3.7 ha);
- Parc du Mail, in Anjou borough (0.8 ha);
- Parc Marie-Gérin-Lajoie, in Côte-des-Neiges–Notre-Dame-de-Grâce borough (1 ha);
- Parc Michel-Bourdon, in Mercier–Hochelaga-Maisonneuve borough (0.4 ha);
- Parc Philippe-Laheurte, in Saint-Laurent borough (0.5 ha);
- Parc du Centenaire (Williams-Cosgrove), in the related municipality of Dollard-des-Ormeaux (14.2 ha).

The fact that local parks considered in the Schéma d'aménagement are not listed in this database means that the Service des grands parcs does not have an overview of their protection potential, or the leeway it has for reaching the 10% natural environment protection target.

The second database of the Service des grands parcs covers protected natural environments that already contribute to achieving the 10% natural environment protection target. This is also a georeferenced database and contains 101 entries. Information extracted from this database, which we obtained on October 21, 2019, reveals that the total surface area of protected natural environments was 3,084 ha, or 6.1% of the land territory of the Montréal agglomeration. A total of 80.3% of the surface areas of these sites come under municipal authority (urban parks, nature parks, metropolitan parks and local parks). The sites that are referred to as protected in this database are found in the database of protected and potentially protectable sites. This second database is therefore a subset of the first.

The Service des grands parcs has a database of protected natural environments, but the information it contains is not complete. For 82 environments out of the 101 entered in the database (81.2%), the protection status is not specified. For the others, the information given specifies whether there is a conservation easement and conservation zoning or whether it is a natural reserve recognized by the government. If the Guidelines for entering a natural environment in the Directory require that the site meet the IUCN definition of a natural environment, this information is not provided for 77 of the sites in the database (76.2%). Lastly, for 53 sites (52.5%), the lot numbers for the sites are not documented.

In our opinion, the Service des grands parcs must have comprehensive, accurate information for all sites in the database of protected natural areas so that it can identify a site quickly and adequately and justify why it is considered protected.

RECOMMENDATION

3.1.1.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports undertake a comprehensive review of the content of the database of sites that are currently considered protected natural environments on the territory of the agglomeration so that there is comprehensive, accurate information on each site that the City can use for analysis and accountability purposes.

BUSINESS UNIT'S RESPONSE

3.1.1.B. *Service des grands parcs, du Mont-Royal et des sports*
[TRANSLATION] Review all the databases.

Develop a protocol that includes all the rules for identifying the different sites.

Develop a formal process to standardize the methodology for creating and updating data. (Planned completion: November 2020)

3.1.2. Development of the Natural Environment Protection Strategy

3.1.2.A. Background and Findings

Natural Environment Protection Strategy for Attaining the 10% Natural Environment Protection Target

The Service des grands parcs adopted a strategy aimed at eventually reaching this 10% natural environment protection target described in the Schéma d'aménagement. This strategy is in keeping with a comprehensive approach followed by the City, called *Vision 2020-2030*, which is aimed at defining major orientations for the coming decade, especially in the area of ecological transition. This strategy (the "Protection Strategy") was developed internally by the Service des grands parcs based on knowledge acquired since *the Policy* came into effect in 2004. This is how the Service des grands parcs went about identifying woodlands, brushlands and wetlands that were within the boundaries of ecoterritories as well as adjacent to nature parks with a view to annexing them to these parks, thereby increasing their surface areas. In 2018, the Service des grands parcs made several regulatory amendments to ensure that the sites covered are found within the boundaries of nature parks before proceeding to purchase them. That is how the boundaries of the Parc-nature de l'Anse-à-l'Orme were expanded in May 2018 as were those of the Parc-nature de Bois-d'Anjou in June 2018.

The Service des grands parcs identified 71 lots of interest at the edges of nature parks for which a right of preemption was approved by the urban agglomeration council in October 2018. This right grants the City, for 10 years, the option of purchasing a site under the same conditions as those appearing in an offer made by a third party that is accepted by the owner of the site. The total surface area of these lots is 163 ha for a 2017 property assessment roll value of \$25.3M. It should be stressed that the purchase price will reflect the market value more than the property assessment roll value, and that the right of preemption does not guarantee that the City will become the owner of the site. In fact, the owner has no obligation to sell, and in the event of a sale, the City has no obligation to purchase, for example if it considers the third party offer received by the owner too high. Considering that in early 2019, 1,939 ha still needed to be protected in order to attain the 10% natural environment protection target, the acquisition of the 71 lots would represent 8.4% of all the land that still needs to be protected. Of these 71 lots, 58 (81.7%) are shown on maps produced by the Service des grands parcs as natural environments for which a protection project is a priority or of interest, representing a total of 143 ha. The other lots covered by the right of preemption are not on these maps, because even though they could be used to expand nature parks, they are lesser priorities for the Service des grands parcs.

Since 2014, the Service des grands parcs has also been collaborating with the ministère de l'Environnement et de la Lutte contre les changements climatiques to make a portion of Île Bizard of roughly 1,000 ha the first humanized landscape in Québec. This status is granted by the Québec Government. According to the Ministry, this is an inhabited territory modified by human activity, and the preservation of its biodiversity is related to this type of activity, which is still practised there. This is a protection status recognized by the IUCN. A file initiating the request for recognition was submitted to the Ministry in January 2015, and a notice of admissibility was received in September of the same year. A conservation and enhancement plan was then developed by the Service des grands parcs in March 2017. At the time of our audit, however, the status had still not been obtained, because discussions with the Ministry concerning the surface area to be recognized were still ongoing – the Québec Government did not recognize a golf course that the Service des grands parcs included within the boundaries of the territory for which the status was requested. For the Service des grands parcs, the issue of obtaining humanized landscape status is an important one, because it would, in a single step, protect half the area that still needs to be protected to attain the 10% natural environment protection target without the City having to acquire properties.

In a presentation given by the Service des grands parcs to the Comité de coordination des projets d'envergure (CCPE)¹⁵ in October 2019¹⁶, achieving the 10% natural environment protection target was itemized as follows:

- Currently protected natural environments: 3,070 ha (6.1 %)¹⁷
- Humanized landscape of Île Bizard: 1,000 ha (2.0 %)
- Subsequent acquisitions: 500 ha (1.0 %)
 - 2019–2022 phase: 217 ha
 - 2023–2029 phase: 283 ha
- Protection of local parks: 180 ha (0.4 %)
- Protection of private and institutional land: 250 ha (0.5 %)

Theoretically, this strategy is feasible, because the database used by the Service des grands parcs to identify protected and protectable natural environments specifies a surface area equivalent to 6,455 ha, or 12.9% of the agglomeration's land territory, which gives the City leeway of just under 3%, or 1,446 ha.

Boroughs' Lack of Awareness of the Protection Strategy

In developing the Protection Strategy, the Service des grands parcs did not work together with boroughs to evaluate their possible additional contributions towards attaining the 10% natural environment protection target. During the exercise undertaken by the Service des grands parcs in 2008 to develop the Directory, 25 local parks, with a total surface area of 230 ha, had been identified as *"showing an interest in becoming conservation parks under ecological management to be entered in the Directory"*. At the time of our audit, only 16 of these parks, with a total surface area of 148 ha, contributed to achieving the 10% natural environment protection target. However, 12 more unidentified local parks were added to these 16 local parks in 2008, bringing the surface area of natural environments currently protected by boroughs to 195 ha.

¹⁵ The CCPE consists of the President of the Executive Committee, the Vice-President of the Executive Committee, elected officials, the director general of the City, the Deputy Director General of the Services institutionnels and the director of the Bureau des projets et des programmes d'immobilisation, and has the role of ensuring multidisciplinary cooperation, recommending that projects proceed to subsequent phases, ensuring monthly monitoring of project progress, formulating recommendations concerning certain issues that may arise during the project and recommending project phasing to the Executive Committee.

¹⁶ This presentation took place outside the period covered by our audit. However, we chose to take it into account because it provides the most up-to-date picture of the strategy considered by the Service des grands parcs to reach the 10% natural environment protection target.

¹⁷ The presentation uses the figure of 3,070 ha to designate the surface area that was already protected in October 2019, whereas in September 2019, the total protected surface area listed in the database of the Service des grands parcs is 3,084 ha. This discrepancy does not affect the percentage of protected natural environments and has no impact on our conclusions.

As mentioned above, we identified non-exhaustively 23 ha of natural environments that appear in the Schéma d'aménagement but neither currently contribute to achieving the 10% natural environment protection target nor appear in the database of the Service des grands parcs for protected and protectable natural environments. Considering that nine local parks identified in 2008 are not currently protected, and considering these additional 23 ha, 105 ha of natural environments could potentially be protected by boroughs and related municipalities. However, this value is lower (58.1%) than the 180 ha contribution expected by the Service des grands parcs, the boroughs and related municipalities.

The three boroughs audited say that they were aware of the 10% natural environment protection target under the responsibility of the Service des grands parcs but do not know how the City will go about reaching it, and have not received any information from the Service des grands parcs concerning local targets they need to reach in order to contribute to this overall target. At the time of our audit, the Service des grands parcs recognized that the boroughs had not been informed of the procedure and that a presentation tour on the Protection Strategy should eventually be held.

Since we know that the share of the boroughs and related municipalities in the Protection Strategy is 9.3% (180 ha out of 1,930 ha), we think that the City is at risk of not reaching the 10% natural environment protection target, because the Service des grands parcs does not have a comprehensive evaluation of potentially protectable local parks in the boroughs and related municipalities.

RECOMMENDATION

3.1.2.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports undertake an exercise of identifying all local parks in boroughs and related municipalities that can contribute to achieving the 10% natural environment protection target in order to increase the potential for achieving the natural environment protection target.

BUSINESS UNIT'S RESPONSE

3.1.2.B. Service des grands parcs, du Mont-Royal et des sports

[TRANSLATION] Update the list of local parks that show an interest in becoming conservation areas under ecological management.

(Planned completion: August 2020)

Review the database of local parks that can contribute to the achievement of the 10% target. (Planned completion: November 2020)

Boroughs' Lack of Awareness of Mechanisms for Contributing to Achieving the 10% Target

If the boroughs do not know what role the Service des grands parcs expects them to play in order for the City to attain its 10% natural environment protection target, then they cannot agree on the requirements that must be fulfilled in order for a local park to be considered as contributing to achieving this target.

For Saint-Laurent borough, in order for a local park to contribute to achieving this target, it must be entered in the Directory, and it must therefore meet the requirements set out in the Guidelines, i.e., in addition to being a natural environment within the meaning of the IUCN definition, it must be covered by conservation zoning, and at least 75% of its area must have a predominantly natural character to which ecological management is applied. This interpretation is in line with discussions that took place between the boroughs and the Service des grands parcs in 2008, when the Directory was developed.

Mercier–Hochelaga-Maisonneuve and Rivière-des-Prairies–Pointe-aux-Trembles boroughs, for their part, both consider it unnecessary for a local park to be entered in the Directory in order for it to be able to contribute to achieving the 10% natural environment protection target, since local parks for which they are responsible already contribute to this target without having an ecological management plan. Yet these two boroughs had also participated in the 2008 meetings with the Service des grands parcs. And furthermore, in the case of Rivière-des-Prairies–Pointe-aux-Trembles borough, the borough council had adopted a resolution to support the creation of the Directory, reiterating the requirements to be entered in it and the natural environment protection target.

Because of these diverging interpretations about the requirements for contributing to achieving the 10% natural environment protection target, out of the 14 local parks and municipal sites under the responsibility of one of the three boroughs audited, only one meets all the requirements (the Boisé du parc Marcel-Laurin in Saint-Laurent borough) (see Table 2). Neither of the two local parks under the responsibility of Mercier–Hochelaga-Maisonneuve borough has an ecological management plan or conservation zoning; instead they have zoning for community gardens, parks and walkways, which does not confer conservation status on a park. In Rivière-des-Prairies–Pointe-aux-Trembles borough, none of the 11 local parks and municipal sites that already contribute to achieving this target has an ecological management plan, and only half of them have conservation zoning.

Table 2 – Number of Local Parks in the Boroughs Audited Meeting the Requirements of the Guidelines for Entering and Managing Designated Sites in the Directory

BOROUGH	LOCAL PARKS/ MUNICIPAL SITES CONTRIBUTING TO ACHIEVING THE TARGET	LOCAL PARKS/ MUNICIPAL SITES UNDER ECOLOGICAL MANAGEMENT	LOCAL PARKS/ MUNICIPAL SITES WITH CONSERVATION ZONING
Mercier–Hochelaga- Maisonneuve	2	0	0
Rivière-des-Prairies– Pointe-aux-Trembles	11	0	6
Saint-Laurent	1	1	1
TOTAL	14	1	7

It can be seen that, despite the participation of the three boroughs audited in the 2008 meetings, and despite the resolutions passed by Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Laurent boroughs to support the process of creating and contributing to the Directory, only Saint-Laurent borough fully completed the process.

Considering that these local parks and municipal sites represent a total surface area of 81 ha, but that only the Bois  du parc Marcel-Laurin, with its 16 ha (or 19.8% of this total surface area), complies with the requirements for contributing to achieving the 10% natural environment protection target, there is reason to question the true protection status of local parks and municipal sites under the responsibility of the boroughs that already contribute to achieving the 10% natural environment protection target. By strictly applying the requirements of the Service des grands parcs in the Guidelines, and with the knowledge that only the Bois  du parc Marcel-Laurin is subject to an ecological management plan for its maintenance, out of the 317 ha of protected natural environments for which the boroughs are responsible, only 16 ha should actually be counted, which would make the proportion of land territory currently protected as natural environments drop from 6.1% to 5.6%.

RECOMMENDATION

3.1.2.C. We recommend that the Service des grands parcs, du Mont-Royal et des sports undertake an exercise of communicating with boroughs so that they understand the requirements as well as the commitments that must be made in order for a site under their responsibility to be considered as contributing to achieving the 10% natural environment protection target.

BUSINESS UNIT'S RESPONSE

3.1.2.C. *Service des grands parcs, du Mont-Royal et des sports*

[TRANSLATION] Reevaluate the tools available for protecting natural environments to ensure they are protected while maximizing investments.

Contact all the boroughs and related municipalities to share information with them on requirements and commitments when the tools are reevaluated.

(Planned completion: February 2021)

RECOMMENDATION

3.1.2.D. We recommend that Mercier–Hochelaga-Maisonneuve and Rivière-des-Prairies–Pointe-aux-Trembles boroughs assign a conservation status to sites under their responsibility that currently contribute to achieving the 10% natural environment protection target in order to meet the requirements set out in the City’s Guidelines for entering and managing designated sites in the Directory.

BUSINESS UNITS’ RESPONSE

3.1.2.D. Mercier–Hochelaga-Maisonneuve borough

Amendment of Urban planning by-law for Mercier–Hochelaga-Maisonneuve borough (01-275)

[TRANSLATION]

- *Category E.1(1) replaced by category E.1(2) (natural space).*
- *(Approval (construction and expansion) under title VIII, art. 387.2, under the designation of “woodland” (Parc du Boisé Jean-Milot and Parc Thomas-Chapais). (Planned completion: December 2020)*

Schéma d’aménagement et de développement de l’agglomération de Montréal

- *Area assignment of “Predominantly residential” replaced by “Conservation” (Parc du Boisé Jean-Milot). (Planned completion: 2021 and beyond)*

Plan d’urbanisme de la Ville de Montréal (04-047)

- *Area assignment of “Residential sector” replaced by “Conservation” (Parc du Boisé Jean-Milot). (Planned completion: 2021 and beyond)*

.....

Rivière-des-Prairies–Pointe-aux-Trembles borough

[TRANSLATION] Identification of land areas with conservation potential under the borough’s responsibility. (Planned completion: August 2020)

Tabling of draft amendments to the Zoning By-Law to create new conservation zones (use class P5) out of land areas under the borough’s responsibility.

(Planned completion: November 2023 (depending on progress made with respect to 3.2.1.D.)

3.1.3. Implementation of the Natural Environment Protection Strategy

3.1.3.A. Background and Findings

At the time of our audits, the Service des grands parcs was to develop a strategic plan for all its projects, including natural environment protection, as well as an action plan to implement it. The 2020–2030 strategic plan is structured mainly around the protection of natural environments, including an action plan being prepared for the Service des grands parcs that is structured around the following major activities:¹⁸

- Expanding the boundaries of nature parks;
- Submitting a financial strategy;
- Obtaining humanized landscape status for Île Bizard;
- Carrying out ecosystem restoration work in the networks of large parks.

Table 3 establishes the correlation between what the Service des grands parcs hopes to protect in order to reach the 10% natural environment protection target and what it plans to do, according to its strategic plan and the action plan it is currently developing. At the time of our audit, we noted that implementation of the Protection Strategy is planned only for elements that fall under the responsibility of the Service des grands parcs (1,500 ha of the 1,930 ha required, or 77.7%), while the Protection Strategy also relies on the private sector and boroughs to reach the 10% natural environment protection target.

¹⁸ No specific action had yet been entered in any of the major actions set out in the action plan of the Service des grands parcs, in the version that we obtained. This is more a draft framework than an actual action plan

Table 3 – **Alignment of Elements of the Protection Strategy with the Strategic Plan and the Action Plan of the Service des Grands Parcs, du Mont-Royal et des Sports**

ELEMENT OF THE PROTECTION STRATEGY	TOTAL AREA COVERED	ELEMENT COVERED IN THE STRATEGIC PLAN	ELEMENT COVERED IN THE ACTION PLAN UNDER DEVELOPMENT
Humanized landscape of Île Bizard	1,000 ha	Yes	Yes
Subsequent acquisitions	500 ha	Yes	Yes
Protection of local parks	180 ha	No	No
Protection of private and institutional land	250 ha	No	No
TOTAL	1,930 ha		

In our opinion, without an action plan outlining the actions to be carried out for each element of the Protection Strategy and for each site that needs to be protected over a given period, the Service des grands parcs cannot adequately prioritize the actions to be executed. In the absence of such an action plan, the Service des grands parcs cannot accurately and adequately monitor the progress of protection projects at every site.

RECOMMENDATION

3.1.3.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports establish and implement a detailed, specific action plan according to the different natural environments of interest to be protected so that the progress of work to be carried out can be monitored for the purpose of acquiring natural environments or, in the case of Île Bizard, obtaining humanized landscape status.

BUSINESS UNIT'S RESPONSE

3.1.3.B. *Service des grands parcs, du Mont-Royal et des sports*

[TRANSLATION] Develop a more specific action plan for achieving the 10% target in its 2020–2030 Montréal green strategy. (Planned completion: November 2020)

Carry out a public consultation in anticipation of its designation as a humanized landscape status by the government (following the adoption of Bill 46).

(Planned completion: May 2020)

Produce an action plan for implementing the humanized landscape.

(Planned completion: August 2020)

Budget

Nearly a quarter of the land covered by the Protection Strategy (500 ha out of the 1,930 ha) is based on acquisitions of sites by the City so that they can be turned into protected natural environments under the responsibility of the Service des grands parcs. In this context, we sought to determine, first, whether the Service des grands parcs had assessed the cost of acquiring 500 ha of land on the Montréal agglomeration's territory, and second, whether a budget had been established for these acquisitions.

The Service des grands parcs assessed, in inflation-adjusted dollars, the average cost per ha paid for all sites acquired since *the Policy* came into effect in 2004. Over a period this long, the fluctuation of costs paid per ha is so large from one transaction to the next that the Service des grands parcs and the Service de la gestion et de la planification immobilière consider this value to be not very representative.¹⁹

In October 2019, the City acquired a site on the territory of Ville de Sainte-Anne-de-Bellevue with a surface area of 9.8 ha for \$5.1M, or the equivalent of approximately \$520,000/ha. In December 2019, it made the major acquisition of a 140 ha site in Pierrefonds-Roxboro borough at a cost of \$73M, which is, again, the equivalent of \$520,000/ha.²⁰ Based on the assumption that these unit costs accurately reflect what the City can expect to pay on average to acquire sites in the future, it would need a total budget of \$260M for its anticipated acquisition of 500 ha between now and 2030.

This average unit cost per ha is of the same order of magnitude as what the Service des grands parcs anticipates it will need from 2019 to 2022 to carry out its first acquisition phase, which involves the addition of 217 ha of protected natural environments (see Table 4). We must therefore conclude that the assumption for evaluating investment needs is realistic. However, considering that for the 2019-2021 period, the Service des grands parcs has a Three-year capital expenditures program (TCEP) of \$20M a year, at the end of 2021, there would be a shortfall of nearly \$27M to finalize the 2021 acquisitions. By adding the projected investments for 2022, the Service des grands parcs should obtain approval for a \$50M long-term loan to complete the first phase of the acquisitions required for the Protection Strategy.

¹⁹ Out of 40 transactions conducted from 2004 to 2018, the lowest cost per hectare, adjusted for inflation, is 42 times lower than the average adjusted cost per ha, while the highest cost per ha adjusted for inflation is 39 times greater than the average adjusted cost per ha.

²⁰ These transactions were the subject of official press releases issued by the City, which specified the site surface area and the price of the transaction.

The loan by-law that was approved for this acquisition program is therefore too limited in relation to the objectives of the first phase of the Protection Strategy, or conversely, these acquisition objectives are too ambitious for the investments that were authorized by the Service des grands parcs.

When we drafted our audit report, the Service des grands parcs submitted its investment requirements for the 2020-2022 period to the Commission sur les finances et l'administration.²¹ For the natural environment acquisition program, the department says it needs \$37.98M in 2020, \$43.17M in 2021 and \$23.17M in 2022 for a total of \$104.32M over three years. With the addition of \$6.18M projected for 2019, the total investments for 2019-2022 with this new TCEP would be \$110.5M, which is of the same order of magnitude as the projected investments required shown in Table 4. Nonetheless, these are significantly greater investments for the City for 2020 and 2021 than those announced in the 2019-2021 TCEP.

If the 217 ha of natural environments are acquired by the end of 2022, in order to complete the acquisitions provided for in the Protection Strategy (283 ha), again, based on a presumed unit cost of around \$500,000/ha, investments of \$20.2M would be needed every year for a seven-year period, or up to 2029.

The annual amounts in the 2020-2022 TCEP are the most substantial that the Service des grands parcs has ever obtained for this natural environment acquisition program from 2004 to 2018, in which the annual amount approved in different TCEPs varied from \$3M to \$12M. Over this 2004-2018 period, the Service des grands parcs had obtained approval for investments of \$160.5M, but was able to make only 48.7% of the investments (\$78.1M). It has never been as important for the Service des grands parcs to have permission to invest in this program as it is in 2020-2022, but its performance objectives have never been on this large a scale, either.

²¹ On January 15, 2020, the Executive Committee of Ville de Montréal passed two loan by-laws totalling \$106.5M to finance development work on the Grand parc de l'Ouest and purchase properties in order to protect natural environments on the territory of the Montréal agglomeration.

Table 4 – **Budget Required for the 2019-2022 Phase and Theoretical Annual Balance of the 2019-2021 Three-Year Capital Expenditures Program**

YEAR	PROJECTED INVESTMENTS REQUIRED	TOTAL SURFACE AREA (ha)	ESTIMATED UNIT COST	2019-2021 THREE-YEAR CAPITAL EXPENDITURE PROGRAM	THEORETICAL BALANCE
2019	\$6,180,545	35	\$176,587/ha	\$20,000,000	\$13,819,455
2020 ^[a]	\$37,810,000	62	\$609,839/ha	\$20,000,000	-\$3,990,545
2021 ^[a]	\$43,000,000	82	\$524,390/ha	\$20,000,000	-\$26,990,545
2022	\$23,000,000	38	\$605,263/ha	N/A	N/A
TOTAL	\$109,990,545	217	\$506,869/ha		

^[a] Acquisitions planned for 2020 and 2021 include the 140 ha site that the City acquired in December 2019 for \$73M.

3.2. Management of Natural Environments for the Purpose of Maintaining Their Ecological Value

Protecting a natural environment is an ongoing task. It is not enough to enter it in a Directory. It must be maintained so that its ecological value is preserved and it is not invaded by harmful plants that could limit the growth of – and even eradicate – natural native species that make up the richness of the natural environment. For this reason, we sought to determine whether boroughs and the Service des grands parcs carry out ecological management of the protected natural environments in this way.

According to *the Policy*, the purpose of ecological management is to identify and recognize the natural heritage of a site, ensure its protection and its enhancement, maintain its plant and animal biodiversity, detect changes in biophysical resources on the territory and provide practical solutions to the consequences of human and natural disturbances in the ecological balance of the area. There is a planning component, which covers what must be done in the natural environment based on knowledge of the area, and a management component, which covers actions carried out in order to maintain the integrity of the natural environment.

3.2.1. Knowledge Update of Natural Environments

3.2.1.A. Background and Findings

Ecological Audits in Large Protected Parks

An ecological audit consists of an inventory of flora, birds (avifauna), mammals or herpetofauna.²² Both the *Programme-cadre de la stratégie de conservation et de mise en valeur des milieux naturels dans les parcs existants de l'agglomération de Montréal*, which the Service des grands parcs issued to boroughs in 2008, and the *Programme de gestion des écosystèmes des parcs-nature* specify the frequency at which these ecological audits should be conducted. For the record, flora audits should be conducted every ten years, while audits on mammals, birds or herpetofauna should be conducted every five years. These documents also recommend that the impact of trail use and degradation be evaluated every three to five years.

We obtained from the Service des grands parcs a 2017 assessment of the ecological audits conducted in nature parks and a list of contracts granted from 2015 to 2019 for such audits. We examined the last dates on which ecological audits were conducted in order to determine whether, based on the frequencies recommended by the Service des grands parcs, there were any delays in conducting these audits.

For all the parks for which we obtained information – 10 nature parks²³ plus one Parc métropolitain du Mont-Royal – at the time of our audit, there were delays in conducting at least one type of ecological audit (see Table 5). With the exception of the bird audit, there were delays in all the other types of ecological audits and trail impact studies in most of these large parks. In Parc-nature de l'Anse-à-l'Orme and Parc-nature du Bois-d'Anjou, vegetation audits go back to 2000, or nearly 20 years ago, whereas they should be conducted every 10 years.

At the time of our audit, the Service des grands parcs had just awarded a series of contracts to conduct ecological audits from 2019 to 2021 on vegetation, avifauna, herpetofauna and trail-use impact studies. According to the decision-making summary issued during the awarding of these contracts, the last audits go back to 2009, and for some parks, even back to 2000, which is confirmed by the information that we obtained. And even despite the fact that these ecological audits are planned, for some parks under the responsibility of the Service des grands parcs, the knowledge acquisition updates will still be late (black cells in Table 5).

²² Fauna consisting of amphibians and reptiles.

²³ The 2017 assessment of the ecological audits that we obtained did not contain any information on Parc-nature des Rapides-du-Cheval-Blanc.

There is therefore a risk, despite the intensification of ecological audits projected for the next few years, that the Service des grands parcs will not have accurate, up-to-date knowledge of the ecological quality of the natural environments under its protection. This could lead to delays in taking steps to maintain the ecological value of these parks.

Table 5 – Last Ecological Audits Conducted in Large Parks and Dates of Next Audits According to the Frequency Recommended by the Service des Grands Parcs, du Mont-Royal et des Sports

NATURE/ METROPOLITAN PARKS	VEGETATION		AVIFAUNA		HERPETOFAUNA		MAMMALS		TRAILS	
	DONE	DUE	DONE	DUE	DONE	DUE	DONE	DUE	DONE	DUE
Anse-à-l'Orme	2000	2010 ^[a]	2017	2022	N/A	Due	2015	2020	2008 ^[e]	2013
Bois-d'Anjou	2000	2010	N/A	Due	N/A	Due	N/A	Due		2013
Bois-de-l'Île-Bizard	2015	2025	2015	2020	2015	2020	N/A	Due		2013
Bois-de-Liesse	2012	2022	2015	2020	2015	2020	2015	2020		2013
Bois-de-Saraguay	2010	2020 ^[c]	2017	2022	2018	2023	N/A	Due	2017 2018	2023
Cap-Saint-Jacques	2003	2013	2017	2022	N/A	Due	2015	2020		2023
Île-de-la-Visitation	2006	2016	2017	2022	N/A	Due	2015	2020	2008 ^[e]	2013
Pointe-aux-Prairies	2015	2025	2015	2020	2015	2020	2015	2020		2013
Ruisseau-De-Montigny	N/A ^[d]	Due	2017	2022	N/A	Due	N/A	Due		2013
Bois-de-la-Roche	2017	2027	2015	2020	2017	2022	2017	2022		2013
Parc du Mont-Royal	2006	2016 ^[b]	2014	2019	2015	2020	N/A	Due	2013	

^[a] The ecological audit was due at the time of our audit, and is planned between now and 2021.

^[b] The ecological audit was due at the time of our audit, but no new audit is planned.

^[c] White cells with the year in boldface indicate that a new audit is already planned between now and 2021.

^[d] In the absence of information, we concluded that no ecological audit had ever been undertaken and that it was necessary to conduct one.

^[e] Studies were conducted in 1996, 2001 and 2007–2008 in the nature parks. We considered the last study (2008) to cover all parks (a conservative approach).

RECOMMENDATION

3.2.1.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports increase the pace at which it conducts ecological audits and trail-use impact studies in parks for which it is responsible, in order to ensure that knowledge acquisition work is carried out at a frequency that is in keeping with the values provided for in the ecological management program of nature park ecosystems and enables the Service des grands parcs, du Mont-Royal et des sports to adequately plan actions required to maintain their ecological value.

BUSINESS UNIT'S RESPONSE

3.2.1.B. *Service des grands parcs, du Mont-Royal et des sports*

[TRANSLATION] Continue to conduct 2019-2021 ecological audits in accordance with current plans.

(Planned completion: action is currently being taken)

Analyze and confirm these frequencies as well as the focus of ecological audits in order to optimize our practices while ensuring the achievement of objectives aimed at maintaining ecological integrity by 2022, when the awarding of the next ecological audit contracts is scheduled.

(Planned completion: November 2021)

Ecological Audits in Local Protected Parks

Of the three boroughs audited, Rivière-des-Prairies–Pointe-aux-Trembles borough is the one with the most local parks that already contribute to achieving the 10% natural environment protection target, but it did not have an ecological management plan for its protected parks, nor has it undertaken an ecological audit. The borough states that the natural environment of Parc René-Masson should be characterized, but at the time of our audit, no contract had been granted for this purpose.

Mercier–Hochelaga-Maisonneuve borough and Saint-Laurent borough both have a history of ecological audits of local parks that currently contribute to achieving the 10% natural environment protection target. Table 6 shows the history of ecological audits of local parks in the boroughs audited. In order to comply with the frequency recommended by the Service des grands parcs, ecological audits must be conducted for Parc du Boisé-Jean-Milot for birds, herpetofauna and mammals. In the case of Boisé du parc Marcel-Laurin, only the bird audit is late. It is worth highlighting, however, that new ecological audits for herpetofauna and mammals will already be due in 2020 and 2021, respectively. No recent ecological audit was brought to our attention for a local park, Parc Thomas-Chapais, in Mercier–Hochelaga-Maisonneuve borough, which is the second local park in this borough contributing to achieving the 10% natural environment protection target.

Just as we mentioned above, for the Service des grands parcs, there is a risk that the boroughs audited, and to a lesser extent Saint-Laurent borough, will not have accurate, up-to-date knowledge of the ecological quality of the natural environments under their protection. This could lead to delays in taking steps to maintain the ecological value of these parks.

Table 6 – Last Ecological Audits Conducted in Protected Local Parks of the Boroughs Audited

LOCAL PARKS CONTRIBUTING TO ACHIEVING THE 10% TARGET	VEGETATION		AVIFAUNA		HERPETOFAUNA		MAMMALS		TRAILS	
	DONE	DUE	DONE	DUE	DONE	DUE	DONE	DUE	DONE	DUE
Rivière-des-Prairies–Pointe-aux-Trembles borough	N/A ^[a]	Due	N/A	Due	N/A	Due	N/A	Due	N/A	Due
Parc Thomas-Chapais (Mercier–Hochelaga-Maisonneuve)	N/A	Due	N/A	Due	N/A	Due	N/A	Due	N/A	Due
Boisé Jean-Milot (Mercier–Hochelaga-Maisonneuve)	2015	2025	2004	2009 ^[b]	N/A	Due	2004	2009	2018 ^[c]	2023
Boisé du parc Marcel-Laurin (Saint-Laurent)	2014	2022 ^[d]	2009	2014	2015	2020	2016	2021	2018 ^[e]	2019

^[a] No information was available for this park for this type of ecological audit. In our analysis, it was treated as if no audit of this type had yet been conducted. It is therefore necessary to conduct one.

^[b] The ecological audit was due at the time of our audit.

^[c] Every year, non-profit organizations (NPOs) organize volunteer cleaning and trail-restoration activities in these local parks.

^[d] Under the ecological management plan for Boisé du parc Marcel-Laurin this audit should be conducted every eight years.

^[e] Under the ecological management plan for Boisé du parc Marcel-Laurin, trail-use impact studies should be undertaken twice a year.

RECOMMENDATION

3.2.1.C. We recommend that Saint-Laurent borough plan ecological audits starting immediately for Boisé du parc Marcel-Laurin in order to ensure that this knowledge acquisition work is carried out at a frequency that is in keeping with the values set out in the parks' ecological management plan.

BUSINESS UNIT'S RESPONSE

3.2.1.C. *Saint-Laurent borough*

[TRANSLATION] Saint-Laurent borough intends to plan ecological audits for Boisé du parc Marcel-Laurin in order to ensure that the knowledge acquisition work is carried out at a frequency in keeping with the values set out in the ecological management plan for this park.

(Planned completion: November 2020)

RECOMMENDATION

3.2.1.D. We recommend that Mercier–Hochelaga-Maisonneuve borough and Rivière-des-Prairies–Pointe-aux-Trembles borough establish an ecological knowledge acquisition program that complies with the frequency recommended in the *Programme-cadre de la stratégie de conservation et de mise en valeur des milieux naturels dans les parcs existants de l'agglomération de Montréal* for each park under their responsibility that contributes to achieving the 10% natural environment protection target in order to ensure that they maintain their ecological value.

BUSINESS UNITS' RESPONSE

3.2.1.D. Mercier–Hochelaga-Maisonneuve borough

[TRANSLATION] The borough plans to establish an ecological knowledge acquisition program that complies with the recommended frequencies for Parc du Boisé Jean-Milot and Parc Thomas-Chapais.

(Planned completion: studies for upgrading our knowledge April to December 2020)

Initially, in the course of 2020, the borough will upgrade its knowledge about the two parks in question. Ecological audits will be conducted in the areas that need to be studied for Parc du Boisé Jean-Milot (avifauna, herpetofauna and mammals) and for Parc Thomas-Chapais (vegetation, avifauna, herpetofauna, mammals and trails).

Subsequently, to maintain our level of knowledge about the ecological value of the two parks, audits will be conducted at the recommended frequencies: every ten years for vegetation studies and every five years for studies on avifauna, herpetofauna, mammals and the state of trails.

(Planned completion: renewal of studies at the recommended frequencies: starting in 2021, and every year thereafter, in accordance with the schedules provided for)

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Rivière-des-Prairies–Pointe-aux-Trembles borough

[TRANSLATION] Pursue ecological characterization studies covering from 10 to 15 local parks and sites, calling on the services of specialized outside firms, and provide for the budgets required for these contracts on the basis of budget availability.

(Planned completion: in progress and on an ongoing basis – November 2023)

3.2.2. Development and Implementation of an Ecological Management Plan

3.2.2.A. Background and Findings

Ecological Management Plan for Large Protected Parks

According to Appendix 1 of the Guidelines, the ecological management plan regulates how the protected natural environment is managed. It must be based on previous ecological audits and present an environmental action program and a monitoring program to evaluate the evolution of the natural environment (a program for updating ecological audits, a trail-use study, more ad hoc observations of the presence of at-risk plant or animal species or the presence of invasive species). The plan must specify various types and frequencies of actions to be carried out in order to maintain the ecological value of the area.

For large parks that are considered protected natural areas, a process had been undertaken in 2014 to provide Parc Angrignon (an urban park), Parc-nature du Cap-Saint-Jacques and Parc-nature de la Pointe-aux-Prairies (nature parks), and Parc du Mont-Royal (a metropolitan park), with such ecological management plans, but the final result never saw the light of day because of changes in priorities and staff allocation. Consequently, at the time of our audit, no large park under the responsibility of the Service des grands parcs that contributed to achieving the 10% natural environment protection target had an ecological management plan.

Following the new ecological audits, which are scheduled to be conducted from 2019 to 2021 in various nature parks and one metropolitan park, the Service des grands parcs plans to develop ecological management plans for Parc-nature du Bois-de-Saraguay (2020) and Parc-nature du Cap-Saint-Jacques (2020) nature parks, one urban park, Parc Angrignon (2020), one metropolitan park, Parc du Mont-Royal (2021), and Parc-nature de l'Île-de-la-Visitation (2021) and Parc-nature de la Pointe-aux-Prairies (2022) nature parks.

The fact that there is currently no ecological management plan in parks under the responsibility of the Service des grands parcs does not mean that this department does not undertake upkeep and maintenance work in these protected natural areas to ensure their ecological value. In fact, we obtained a list of ecological maintenance contracts covering various parks under the responsibility of the Service des grands parcs from 2015 to 2019.

Despite the plan introduced by the Service des grands parcs to provide six parks under its responsibility with an ecological management plan by 2022, several other natural environments for which the Service des grands parcs is responsible will not be covered by such a plan at the end of the 2022 fiscal year. We know that the Service des grands parcs is responsible for 30 of the sites that currently contribute

to achieving the 10% natural environment protection target²⁴, only a fraction of which (20%) will be regulated by an ecological management plan if the Service des grands parcs adheres to its work plan. In order to ensure that the ecological value of protected natural environments is preserved, we think it is crucially important that the maintenance of all sites for which the Service des grands parcs is responsible be regulated.

RECOMMENDATION

3.2.2.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports develop an ecological management plan for each protected natural environment under its responsibility in order to ensure that they are maintained and monitored to preserve their ecological value.

BUSINESS UNIT'S RESPONSE

3.2.2.B. Service des grands parcs, du Mont-Royal et des sports

[TRANSLATION] Prepare two ecological management plans (Parc-nature du Bois-de-Saraguay and Parc-nature du Cap-Saint-Jacques) and have them adopted by the authorities. (Planned completion: November 2020)

Provide the planning for the production and adoption of ecological management plans for the entire network of large parks.

(Planned completion: May 2020)

Ecological Management Plan for Local Protected Parks

As mentioned above, Bois  du parc Marcel-Laurin in Saint-Laurent borough is the only natural environment already contributing to achieving the 10% natural environment protection target that has an ecological management plan. Some of the activities set out in the ecological management plan of Bois  du parc Marcel-Laurin are implemented annually by a NPO. The organization's work involves two components. First, it handles the ecological development (conservation and enhancement) of the woodland, helping to protect and increase the biodiversity of the area by controlling invasive species and planting native vegetation to restore wildlife habitats. Second, it handles maintenance of the woodland, i.e., upkeep of trails and interpretation panels and infrastructure repair.²⁵

²⁴ In addition to the 16 large parks presented in Appendix 5.2 as protected natural environments under the responsibility of the Service des grands parcs, the database of sites that currently contribute to achieving the 10% natural environment protection target contains 14 other protected sites under the responsibility of this department, including, for example, nature reserves of  le-Bonfoin,  le-M nard and  le Cadastre 150.

²⁵ A distinction must be made between the upkeep of trails, which can be described as physical maintenance, and the ecological maintenance covered by an ecological management plan or the ecological development done by the NPO.

None of the natural environments that contribute to reaching the 10% natural environment protection target under the responsibility of Mercier–Hochelaga-Maisonneuve and Rivière-des-Prairies–Pointe-aux-Trembles boroughs has such a management plan.

While there is no ecological management plan for Parc du Boisé-Jean-Milot in Mercier–Hochelaga-Maisonneuve borough, which is somewhat similar to the situation of Boisé du parc Marcel-Laurin, the borough has entrusted some of the maintenance activities of the woodland to an NPO since before 2015. This organization organizes and manages maintenance activities of the woodland and trails, including clean-up, development and planting work.

Since Boisé du parc Marcel-Laurin is the only one that both contributes to achieving the 10% natural environment protection target and has an ecological management plan, and considering that it is the only protected natural environment that falls under the responsibility of Saint-Laurent borough, we concluded that the other two boroughs audited did not follow the requirements established in 2008 in connection with the creation of the Directory and contribution to achieving this target.

We questioned whether the Service des grands parcs, as the entity responsible for *the Policy* and the Protection Strategy, ensured that boroughs carry out ecological maintenance supported by a plan for the ecological management of protected natural environments under their responsibility.

In the Background section, we described a process undertaken by the Service des grands parcs in 2008 to establish an assistance program for the ecological management of local parks for the purpose of supporting boroughs in the conversion of local parks into protected natural environments, largely through technical expertise, financing and assistance in carrying out development work. However, this initiative, which was to last from 2010 to 2014, was never launched. The Service des grands parcs states that it now wants to develop a guide, by 2020, to help boroughs manage their protected natural environments. Yet at the time of our audit, the Service des grands parcs was not supporting boroughs in the development of ecological management plans and did not require them to report on maintenance work in the protected natural environments for which they were responsible.

RECOMMENDATION

3.2.2.C. We recommend that Mercier–Hochelaga-Maisonneuve and Rivière-des-Prairies–Pointe-aux-Trembles boroughs develop and implement ecological management plans for each natural environment under their responsibility that contributes to achieving the 10% natural environment protection target in order to ensure that the ecological value of these sites is maintained.

BUSINESS UNITS' RESPONSE

3.2.2.C. *Mercier–Hochelaga-Maisonneuve borough*

[TRANSLATION] Ecological management plans for Parc du Boisé Jean-Milot and Parc Thomas-Chapais will be developed starting in April 2020. The plans will be prepared concurrently with the acquisition of knowledge during audits that will be conducted in 2020. (Planned completion: December 2020)

Ecological management plans will be implemented starting in 2021.

***Parc du Boisé Jean-Milot:** the ecological management plan will be implemented on an annual basis through a service contract with a non-profit organization specializing in ecological management.*

***Parc Thomas-Chapais:** the ecological management plan will be implemented by the borough's Division de l'horticulture et des parcs. In 2021, the employees assigned to this work will receive training that is in line with the requirements of the ecological management plan, in order to learn the appropriate work methods.*

(Planned completion: starting in 2021)

.....

Rivière-des-Prairies–Pointe-aux-Trembles borough

[TRANSLATION] Outsource contracts for the development of ecological management plans based on the results of ecological characterization studies showing the preservation and development potential of natural environments and provide for the budgets required on the basis of budget availability.

Implement a collaboration and follow-up protocol with the City's Direction des grands parcs et du verdissement.

Determine the stewardship and maintenance activities to be done internally or outsourced. (Planned completion: November 2023)

3.2.3. Budget Availability for Ecological Management

3.2.3.A. Background and Findings

Cost Evaluation of Ecological Management of Large Protected Parks

In order to be able to implement an ecological management plan and in order to conduct regular ecological audits and conduct ecological maintenance work in protected natural environments, it is necessary to have a recurring budget. We therefore sought to determine, first, whether the Service des grands parcs had evaluated the cost per ha that had to be provided for every year in order to carry out all these actions, and second, whether the department's budget provided for a recurring total amount for all the protected areas under its responsibility.

During a presentation given to the Comité corporatif de gestion des projets d'envergure²⁶ (CCGPE) in 2019, the Service des grands parcs stated that minimum annual expenditures of \$1,000/ha are necessary to maintain the value of natural environments by limiting encroachments and excessive degradation of these areas and to intervene in cases where public safety is threatened, for example, by felling dead trees that have become dangerous.²⁷ This cost also includes regular ecological audits.

In its 2019 presentation to the CCGPE the Service des grands parcs estimated that, based on this annual unit cost, with the 314 ha of natural areas acquired from 2004 to 2018, a recurring annual budget of \$314,000 would be needed. With the acquisitions projected between now and 2021, the Service des grands parcs estimated that it would need \$518,000 per year to conduct ecological maintenance work in all the natural environments that will have been acquired by then. Yet this evaluation takes into account only what the Service des grands parcs has acquired since *the Policy* came into effect in 2004, and it excludes large urban parks that contribute to achieving the 10% natural environment protection target (Parc Angrignon, Parc Frédéric-Back, Parc du Troisième Sommet, Parc du Mont-Royal, Parc des Rapides) and nature parks with the composition they had prior to 2004. As of October 2019, according to the database of the Service des grands parcs, this department was responsible for a total surface area of protected natural environments of 2,238 ha.²⁸ As of now, based on the estimate provided by the Service des grands parcs of the unit cost for ecological maintenance, an annual budget of \$2.2M would be needed to ensure that the ecological value of the protected natural environments under the responsibility of the Service des

²⁶ The CCGPE consists of the director general of the City, the deputy directors general, the director of the Service des finances and the director of the Bureau des projets et des programmes d'immobilisations. No elected official sits on this committee.

²⁷ This expenditure does not include maintenance of buildings, parking areas and picnic areas. In 2017, the Service des grands parcs granted a series of 36-month contracts for \$5.06M for this infrastructure maintenance in nature parks, of which 924 ha are accessible to the public. This yields an annual unit cost of \$1,823/ha-year.

²⁸ Total surface area listed in the database of the Service des grands parcs as of September 2019 for the 30 protected natural environments for which it is responsible.

grands parcs is maintained. Moreover, considering that this department intends, through the Protection Strategy, to eventually acquire an additional 500 ha, the annual maintenance costs would then climb to \$2.7M. But in an interview, the Service des grands parcs told us that these ecological maintenance costs are not specifically provided for in the department's operating budget. Furthermore, the exercise that we performed here to assess how much it would cost the Service des grands parcs per year, at the end of the period covered by the Protection Strategy, to carry out ecological maintenance of the natural environments under its responsibility, was not performed by this department when it developed the strategy. It should also be noted that when elected officials pass a resolution authorizing the City to acquire a site for the purpose of protecting a natural environment, the decision-making summary that is presented to them does not address the concept of recurring costs for ecological maintenance. In our opinion, this is relevant information that they should have in order to make an informed decision.

We also attempted to assess how much the Service des grands parcs would spend every year on ecological maintenance of the natural environments under its responsibility. This department had not performed such an exercise but provided us with ecological maintenance costs for each nature park, the metropolitan park Parc du Mont-Royal, and the urban parks Parc Angrignon, Parc des Rapides, Parc Frédéric-Back, Falaise Saint-Jacques and Coulée Grou, from 2015 to 2019, specifying whether the expense had been paid out of the operating budget or the TCEP. By weighting all these costs by the surface area of each of the natural environments concerned, we established an estimate of the annual unit cost of ecological maintenance of large parks (see Table 7).

Overall, we noted that since 2015, there has been an increase in the ecological maintenance spending paid out of the operating budget of the Service des grands parcs.²⁹ In 2019, it was 5.4 times greater than in 2015. The year for which our estimate of the annual unit cost is the highest (\$328/ha-year) is 2019; this however, was only one third of the figure that the Service des grands parcs announced to the CCGPE in 2019. In our estimate, the average value for the last five years (\$152/ha-year) is 6.6 times lower than this target value of \$1,000/ha-year.

This estimate of the annual unit cost for ecological audits and maintenance of large parks, which are paid out of the operating budget of the Service des grands parcs, is in addition to expenses for other audits and ecological maintenance work that were carried out within the framework of development projects and were therefore paid by the Development TCEP. In the same way as we estimated the annual unit cost in the operating budget, we estimated an annual unit cost of \$217/ha-year paid by this TCEP for an estimated total of \$369/ha-year for the ecological maintenance of large parks that are considered protected natural environments.

²⁹ The unit cost of ecological maintenance paid out of the operating budget dropped significantly in 2018, not because the total maintenance expenses were low – they were the second highest over the 2015-2019 period – but because they were associated with a large number of parks and therefore with a much larger total surface area.

Considering that no expense is specifically provided for in the operating budget for ecological maintenance of protected natural environments, we think it is difficult for the Service des grands parcs to ensure that it will be able to maintain the ecological value of these natural environments in the future. Furthermore, while the Service des grands parcs spends significantly less on average for that ecological maintenance than what it says is the target value, it was unable to specify the manner in which this figure of \$1,000/ha-year had been established. We therefore think it is necessary for the Service des grands parcs to carry out an exercise to assess the actual financial requirements for ecological maintenance of these natural environments.

Table 7 – Estimate of Unit Costs of Ecological Audits and Maintenance Work in Nature Parks, Urban Parks and Metropolitan Parks

YEAR	OPERATING BUDGET	THREE-YEAR CAPITAL EXPENDITURES PROGRAM DEVELOPMENT	TOTAL
2015	\$61/ha-year	\$414/ha-year	\$475/ha-year
2016	\$113/ha-year	\$268/ha-year	\$381/ha-year
2017	\$168/ha-year	\$257/ha-year	\$425/ha-year
2018	\$92/ha-year	\$146/ha-year	\$238/ha-year
2019	\$328/ha-year	\$0/ha-year	\$328/ha-year
AVERAGE	\$152/ha-year	\$217/ha-year	\$369/ha-year

RECOMMENDATION

3.2.3.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports reevaluate the annual costs per hectare for the acquisition of knowledge and ecological maintenance of natural environments for which it is responsible, and provide for this recurring amount in its annual budget in order to ensure that it is able to carry out the work required to maintain the ecological value of these natural environments.

BUSINESS UNIT'S RESPONSE

3.2.3.B. *Service des grands parcs, du Mont-Royal et des sports*

[TRANSLATION] Evaluate the annual costs per hectare for the implementation of all the priorities of the ecosystem management program (knowledge acquisition, actions and monitoring):

- *Annual recurring budget;*
- *Budget associated with the restoration of ecosystems after ash trees were cut down (funded by the TCEP for urban forest land).*
(Planned completion: August 2020)

RECOMMENDATION

3.2.3.C. We recommend that the Service des grands parcs, du Mont-Royal et des sports add to its decision-making summary, with respect to the acquisition of sites for the purpose of protecting their natural environments, an estimate of the annual costs that must be provided for in the department's annual budget for ecological maintenance and knowledge acquisition about the sites in order to maintain their ecological value, so that elected officials have comprehensive information on the financial impacts resulting from the acquisition.

BUSINESS UNIT'S RESPONSE

3.2.3.C. *Service des grands parcs, du Mont-Royal et des sports*

[TRANSLATION] Enter the budgets for all acquisitions in the summaries, starting in 2020. (Planned completion: starting on August 31, 2020, for all subsequent summaries)

Cost Evaluation of Ecological Management of Local Protected Parks

Boroughs must assume the costs associated with the ecological management of protected natural environments for which they are responsible. Although maintenance expenditures are made both internally and externally, the three boroughs audited said that they have no specific budget item for ecological management of protected natural environments that fall under their responsibility. The absence of a defined budget allocated to ecological management of local parks puts boroughs at risk of being unable to acquire the knowledge required to plan subsequent maintenance work, let alone to carry out this maintenance work. Depending on the priorities assigned to various projects in the borough, excessive postponement of the ecological management of a natural environment due to lack of budget would lead to the loss of the site's ecological value, including as the result of a proliferation of invasive plants.

Some of the maintenance activities of Parc du Boisé-Jean-Milot in Mercier-Hochelaga-Maisonneuve borough, as well as some of the maintenance and development activities of Boisé du parc Marcel-Laurin in Saint-Laurent borough, as mentioned above, are undertaken by NPOs. We attempted to quantify the costs of these agreements in order to assess what it might cost a borough every year to maintain the ecological value of a site, knowing that in 2008, the Service des grands parcs presented boroughs the case of Verdun borough, which entrusted an NPO with the ecological maintenance of a park, involving maintenance and inspection of the park, detecting disturbances in the environment, organizing work and volunteers and seeking funding, for the amount of \$2,500/ha-year.

The agreement between the NPO and Saint-Laurent borough covers the physical maintenance of the woodland (upkeep of trails and interpretation panels, infrastructure repair and eradication of invasive plants in developed areas, which, according to the Service des grands parcs, is similar to the work that Verdun borough entrusted to an NPO in 2008), as well as the ecological development (ecological maintenance), conservation and ecological enhancement of the site (which is more in line with what the Service des grands parcs does through its ecological audits and its ecological maintenance activities). For Parc du Boisé-Jean-Milot, the agreement between the NPO and Mercier-Hochelaga-Maisonneuve borough is similar to the maintenance component of work carried out in Boisé du parc Marcel-Laurin Park. We examined the agreements with these NPOs for the period from 2015 to 2019 in order to identify their average annual unit costs (see Table 8).

Table 8 – Summary of Estimates of Unit Costs of Ecological Audits and Maintenance Work and Unit Costs of Physical Maintenance Work of Protected Large Parks and Local Parks

NATURE OF WORK	ESTIMATE OF UNIT COSTS FOR LARGE PARKS	ESTIMATE OF UNIT COSTS FOR LOCAL PARKS
Audits and ecological maintenance works	\$369/ha-year	\$878/ha-year
Physical maintenance	\$1,823/ha-year	\$3,258/ha-year ^[a]
TOTAL	\$2,192/ha-year	\$4,130/ha-year

^[a] The estimate of unit costs of the physical maintenance of local parks falling under the responsibility of the boroughs is of the same order of magnitude as the updated annual unit cost for Verdun borough.³⁰

Since the estimated annual unit cost of ecological audits and maintenance work in boroughs is more than double what the Service des grands parcs provides for on average, we think it is probable that an insufficient number of ecological audits are conducted and an insufficient amount maintenance work is undertaken in large parks that are considered protected natural environments. This is also borne out by the discrepancy between this estimate of \$369/ha-year and the projected cost of \$1,000/ha-year reported by the Service des grands parcs.

Considering that some ecological and physical maintenance activities are carried out by NPOs that can benefit from other sources of income (foundations and companies) to carry out the work, these unit costs must be considered the minimum amount that boroughs should invest. In view of this total annual unit cost of ecological audits and maintenance and physical maintenance, and in view of the total surface area of the protected natural environments for which the three boroughs audited are responsible, the minimum expenses provided for in these boroughs' operating budgets should be of the order of \$87,000/year for Mercier-Hochelaga-Maisonneuve borough (21.17 ha), \$178,000/year for Rivière-des-Prairies-Pointe-aux-Trembles borough (43.31 ha) and \$65,000/year for Saint-Laurent borough (15.97 ha).

³⁰ The cost of \$2,500/ha-year in 2008 was adjusted for 2018 to take into account the consumer price index for the services in the Montréal region, which saw a 22.8% increase from 2008 to 2018.

RECOMMENDATION

3.2.3.D. We recommend that Mercier–Hochelaga-Maisonneuve, Rivière-des-Prairies–Pointe-aux-Trembles and Saint-Laurent boroughs set aside a specific amount in their annual budgets for the ecological development and physical maintenance of local parks that are under ecological management and contribute to achieving the 10% natural environment protection target so that it is able to carry out, on an annual basis, the work required to maintain and preserve the ecological value of these natural environments.

BUSINESS UNITS' RESPONSE

3.2.3.D. *Mercier–Hochelaga-Maisonneuve borough*

[TRANSLATION] The borough has funds available for contracting professional firms to conduct the necessary studies so that it can decide on an action plan for maintaining natural environments.

Maintenance of these natural areas will be done by committed volunteers, non-profit organizations, and a team of blue-collar workers and foremen who are aware of the importance of these spaces.

(Planned completion: completed)

.....

Rivière-des-Prairies–Pointe-aux-Trembles borough

[TRANSLATION] Make representations and formulate recommendations to the management of Rivière-des-Prairies–Pointe-aux-Trembles borough.

Create separate budget allocations specifically for the ecological management of the sites identified.

Depending on budget availability, grant recurring budgets based on the ecological management plans that will have been developed.

(Planned completion: August 2020)

.....

Saint-Laurent borough

[TRANSLATION] Saint-Laurent borough plans to set aside a specific amount in its annual budget for ecological development and physical maintenance of local parks that are under ecological management and contribute to achieving the 10% natural environment protection target so that it will be able to carry out, on an annual basis, the work required to maintain and preserve the ecological value of natural environments.

(Planned completion: February 2021)

3.3. Accountability Reporting Regarding Protection of Natural Environments

3.3.1. Accountability Reporting Regarding Achieving the 10% Natural Environment Protection Target

3.3.1.A. Background and Findings

There is no obligation in connection with the Schéma d'aménagement to submit accountability reports on the progress made towards achieving the 10% natural environment protection target. Nonetheless, in view of the investments required by both the agglomeration and the City, we sought to determine whether the Service des grands parcs had established an accountability reporting process.

We were provided evidence that at least once a year, or even twice a year, the Service des grands parcs gives a presentation to a City authority – the City's Executive Committee, the CCPE or the CCGPE – on which various elected officials sit. During these presentations, the Service des grands parcs addresses developments in investments, developments in achieving the 10% target, and estimates of future financial needs. The Service des grands parcs also responds on an ad hoc basis to elected officials' questions about resolutions to be adopted by the City council or the urban agglomeration council.

The Guidelines for entering and managing designated sites in the Directory require that once a year, the Service des grands parcs submit to the urban agglomeration council a report describing the protection status of natural environments on the territory, progress made in making entries in the Directory and the monitoring of actions that may have been carried out on protected municipal sites. This monitoring involves a series of measures to be implemented in order to avoid any net loss of surface area if work is carried out in the natural environment. During the period covered by our audit, the Service des grands parcs did not produce any such annual report for the urban agglomeration council. Yet we obtained a record of some of the questions that mayors of related municipalities asked the Service des grands parcs, some of whom wanted to know how much progress the City had made towards reaching the 10% natural environment protection target. An annual report of this type would have provided them with this information.

Considering that the Guidelines state that the Directory is intended “to formally identify all sites[...], with varying surface areas and compositions, that are dedicated to the protection, maintenance and/or enhancement of biodiversity on the territory of the Montréal agglomeration” and that all sites under the responsibility of the Service des grands parcs or a borough that currently contribute to achieving the 10% natural environment protection target should therefore be entered in it (assuming that all these sites meet the three conditions set out in these Guidelines), and not just one site, as is currently the case, then the accountability reports that the Service des grands parcs submits to the urban agglomeration council should be much more extensive.

RECOMMENDATION

3.3.1.B. We recommend that the Service des grands parcs, du Mont-Royal et des sports submit a report every year to the urban agglomeration council, as required in the Guidelines for entering and managing designated sites in the Directory in order to comply with this requirement and provide the agglomeration’s elected officials a periodic overview of the progress made towards reaching the target of protecting 10% of the natural environment.

BUSINESS UNIT’S RESPONSE

3.3.1.B. Service des grands parcs, du Mont-Royal et des sports

[TRANSLATION] The Service des grands parcs, du Mont-Royal et des sports will have to undertake a review of the Guidelines and the additional tools in the Directory.

After that, a report will be submitted to the urban agglomeration council on a yearly basis. (Planned completion: November 2020)

RECOMMENDATION

3.3.1.C. We recommend that the Service des grands parcs, du Mont-Royal et des sports undertake to enter in the Directory the protected natural environments for which it is responsible in order to comply with the Guidelines for entering and managing designated sites in the Directory.

BUSINESS UNIT’S RESPONSE

3.3.1.C. Service des grands parcs, du Mont-Royal et des sports

[TRANSLATION] Review the Guidelines for registering and managing sites designated as protected natural environments in order to update the process.

Have the revised Guidelines approved by the urban agglomeration council.

Produce a plan for registering designated sites that is consistent with the production of ecological management plans.

(Planned completion: November 2020)

3.3.2. Accountability Reporting Regarding Ecological Management

3.3.2.A. Background and Findings

As mentioned above, according to *the Policy*, one of the objectives of carrying out ecological management of a natural environment is to maintain its plant and animal biodiversity, i.e., its ecological value. Considering that natural environments were acquired through a loan by-law, and that, according to the ministère des Affaires municipales et de l'Habitation, a capital project within the framework of a TCEP is associated with the acquisition of an asset for the purpose of achieving a specific objective, natural environments under the City's responsibility that are protected in this way, either by the Service des grands parcs or the boroughs, should be considered assets that must be maintained in the same way as a building or vehicle.

In this context, since November 2018, a new administrative framework³¹ on knowledge of the state of assets requires that each business unit evaluate, at least every five years, the state of all its assets and, on a yearly basis, produce an assessment of the state of assets based on data collected the previous year. This assessment must be submitted to the Direction générale. The directive is the responsibility of the Bureau des projets et programmes d'immobilisations.

However, unlike a building or vehicle, which has a theoretical service life and a replacement value, a natural environment lends itself less well to such an assessment exercise, or at least not with the same parameters. Since this is a new directive, the first assessments must be submitted to the Direction générale no later than January 30, 2020. We think it is necessary to clarify what is meant by an asset in order to determine whether protected natural environments belonging to the City are subject to this new directive.

Concerning the boroughs, all three that we audited state that they are not required to submit accountability reports either to the Direction générale or the Service des grands parcs in connection with ecological management of protected natural environments for which they are responsible. In this context, we think it is difficult for the Service des grands parcs to obtain assurance that the natural environments under the responsibility of the boroughs that contribute to achieving the 10% natural environment protection target are still of adequate ecological value and are covered by the objectives of the *Politique de protection et de mise en valeur des milieux naturels*.

³¹ C-OG-BPPI-D-18-001.

RECOMMENDATION

3.3.2.B. We recommend that the Direction générale give a verdict on whether a protected natural environment belonging to the City should be considered an asset and is therefore subject to the *Directive sur la connaissance de l'état des actifs*, and if so, ask the business units concerned to provide an annual assessment of the state of protected natural environments for which they are responsible, so that the Direction générale will have an accurate picture of whether the ecological value of these protected natural environments is being maintained.

BUSINESS UNIT'S RESPONSE

3.3.2.B. Direction générale

[TRANSLATION] The Direction générale is in agreement with this recommendation. In collaboration with the Service des grands parcs, du Mont-Royal et des sports, a reflection process is under way to determine which protected natural environments should be considered as assets and should therefore be subject to the Directive sur la connaissance de l'état des actifs. In view of the special nature of this type of asset, some aspects, including the frequency and the methodology that should be advocated, must be examined in more depth. (Planned completion: November 2020)

RECOMMENDATION

3.3.2.C. We recommend that the Service des grands parcs, du Mont-Royal et des sports obtain assurance from boroughs that ecological maintenance work has been done on each natural environment for which they are responsible that contributes to achieving the 10% natural environment protection target in order to ensure that these environments preserve their ecological value and continue to contribute to achieving this target.

BUSINESS UNIT'S RESPONSE

3.3.2.C. Service des grands parcs, du Mont-Royal et des sports

[TRANSLATION] Implement a toolbox (specifications, protocols, operational methodologies, etc.) for supporting ecological management and preserving the ecological integrity of protected natural environments under the responsibility of boroughs. (Planned completion: August 2020)

Establish an ecological maintenance monitoring process for local parks registered as protected. (Planned completion: February 2021)

4. CONCLUSION

The Ville de Montréal (“the City”) wants to protect 10% of all the land on the agglomeration’s territory as natural environments. As of October 2019, 6.1% of the territory is protected in this way. To reach the 10% target, the City alone, through the Service des grands parcs, du Mont-Royal et des sports (“the Service des grands parcs”), aims to protect 1,500 of the 1,930 hectares (10,000 m²) (ha), or 77.7% of the effort, by 2030.

Our audit leads us to conclude that the City’s Protection Strategy could theoretically enable it to reach the 10% natural environment protection target in accordance with what is set out in Schéma d’aménagement et de développement de Montréal and the City’s Plan de développement durable. The Service des grands parcs carried out several important actions, in particular, by filing a suit to enforce a right of preemption on 71 lots on the edges of nature parks, which, if the City acquired them, would expand these natural environments, and by acquiring roughly 150 ha of natural environments in Sainte-Anne-de-Bellevue and in Pierrefonds-Roxboro borough in the fall of 2019. However, in the course of these actions, the City did not seek to acquire comprehensive knowledge of potentially protectable natural environments since various local parks under the responsibility of the boroughs or related municipalities identified in the Schéma d’aménagement as having characteristics of natural environments were not recorded by the Service des grands parcs as potentially protectable sites. This knowledge would give the City more leeway in reaching the 10% natural environment protection target. We stress that the Service des grands parcs now needs to establish a specific action plan to implement this process and to communicate to the boroughs and related municipalities the role they will have to play between now and 2030 in order to contribute to achieving the 10% natural environment protection target.

Our audit also leads us to conclude that neither the Service des grands parcs nor the boroughs are adequately equipped, mainly in terms of budget but also in terms of planning work, to undertake ecological maintenance of protected natural environments for which they are responsible and thereby ensure that they maintain their ecological value, which is why there was an interest in protecting these natural environments in the first place.

With the exception of one local park that has a conservation status and an ecological management plan in Saint-Laurent borough, no other natural environment under the responsibility of either the Service des grands parcs or a borough has such an ecological management plan or is entered in the Directory of protected natural environments of the Montréal agglomeration (the “Directory”). This is a case of non-compliance with the Guidelines for entering and managing designated sites in the Directory and the objectives governing the creation of the Directory.

In view of the investments that will be required in the next few years, acquisition of the natural environments required to reach the 10% target could have a major economic impact. Moreover, neither the boroughs nor the Service des grands parcs have recurring budgets allocated to providing ecological maintenance of the protected natural environments, nor did the Service des grands parcs perform the exercise of assessing the recurring financial impact associated with maintaining the ecological value of all the protected natural environments that will fall under the City's responsibility once the 10% natural environment protection target is reached.

In light of these findings, and for the purpose of promoting the protection of natural terrestrial environments in an achievable, economically planned way, we have recommended, in particular, that the business units audited:

- undertake an exercise of identifying all local parks in boroughs and related municipalities that can meet the three conditions set out in the Guidelines for entering and managing designated sites in the Directory of protected natural environments in the Montréal agglomeration, so that they can contribute to achieving the 10% natural environment protection target;
- assign a conservation status to sites for which they are responsible that already contribute to achieving the 10% natural environment protection target (boroughs);
- establish a detailed action plan to implement the Protection Strategy and make all business units aware of the role they must play in it;
- make sure they conduct ecological audits at the prescribed frequencies;
- establish an ecological management plan for each protected natural environment for which they are responsible;
- evaluate the annual costs required to ensure that the ecological value of each protected natural environment for which they are responsible is maintained, and make sure that they have budgets allocated accordingly to carry out this ecological maintenance work;
- submit to the urban agglomeration council annual accountability reports regarding natural environment protection and progress in making entries in the Directory, and produce for the Direction générale, on an annual basis if necessary, an assessment of the state of natural environments, just as they do for any other asset belonging to the City.

Natural environments play several ecological, social and economic roles. In the era of climate change, it is important to preserve them. In the past 15 years, the City has made major progress in this area, but a great deal of effort still needs to be made in order to reach the target that the agglomeration has set for itself in its Schéma d'aménagement et de développement. If the City still hopes to succeed in protecting a sizeable surface area in order to reach this target, we think it is just as important that it acquire the tools and financial resources it will require in order to maintain the ecological value of all these sites over time.

5. APPENDICES

5.1. Objective and Evaluation Criteria

Objective

Ensure that the City has developed a planned and structured procedure for increasing the proportion of land areas that are protected natural environments in order to comply with the Schéma d'aménagement et de développement de l'agglomération de Montréal and the City's Plan de développement durable, and maintain this conservation status.

Evaluation Criteria

- The City has an up-to-date inventory of protected and potentially protectable natural terrestrial environments on the agglomeration's territory.
- There is an existing strategy for reaching the target of protecting 10% of the agglomeration's land territory as natural environments, as discussed in the Schéma d'aménagement et de développement.
- An ecological management plan exists, is applied and is documented for sites the City controls in order to ensure that its mission of ensuring land identified as protected natural environments is preserved as such.
- Accountability mechanisms are in place to ensure that the progress towards achieving natural environment status is reported.
- Sufficient recurring budget credits are allocated for the maintenance of existing assets and new assets acquired.

5.2. List of large parks considered as protected natural environments

Metropolitan Parks

- Frédéric-Back
- Mont-Royal
- Tiohtià:ke Otsira'kéhne, pronounced djodjâgué otchira'guén (Troisième Sommet)

Urban Parks

- Angrignon
- des Rapides

Nature Parks

- L'Anse-à-l'Orme
- Bois-d'Anjou
- Bois-de-l'Île-Bizard
- Bois-de-Liesse
- Bois-de-Saraguay
- Bois-de-la-Roche (agricultural park)
- Cap-Saint-Jacques
- Île-de-la-Visitation
- Pointe-aux-Prairies
- Ruisseau-De Montigny
- Rapides-du-Cheval-Blanc