It must also establish special stipulations for situations where an act of bullying or violence is reported to police officers.

4. In the prevention context, the agreement must contain the following special stipulations:

(1) for the annual planning of prevention activities, an undertaking by the parties to communicate to each other, in writing, at the dates or on the conditions set in the agreement:

i. the needs of the institution, taking into account the situation of each facility;

ii. the services and tools likely to meet the facilities' needs, based on the expertise and experience of the police force in the field;

(2) for each school year covered by the agreement, the prevention activities that will be carried out by the police force, alone or in collaboration with a partner whose experience is recognized by the police force.

5. In the investigation context, the agreement must contain the following special stipulations:

(1) the criteria used to determine situations that may require police investigation;

(2) the roles, responsibilities and procedures to be followed during an investigation conducted by a police force, taking into account the respective mission of each party;

(3) a communications strategy applicable in the context and targeting the parents of students, the members of the school staff, the media and any other person concerned.

6. In the emergency context, the agreement must contain the following special stipulations:

(1) the roles, responsibilities and procedures to be followed when an event occurs that requires an emergency police intervention, taking into account the respective mission of each party and, where applicable, any applicable emergency plan or other mode of intervention;

(2) an undertaking by the parties to conduct a review following an emergency police intervention, focusing on the quality and effectiveness of the collaboration and the intervention;

(3) a communications strategy applicable in the context and targeting the parents of students, the members of the school staff, the media and any other person concerned.

7. The agreement must contain special stipulations for situations where an act of bullying or violence is reported to police officers:

(1) an undertaking by the police force to collaborate with the school authorities concerned, in particular in order to protect students;

(2) a description of the nature or type of information that may be communicated between the parties and of the applicable mode of communication in each case;

(3) an undertaking by the parties, if they jointly consider that it is necessary in the circumstances, to agree on actions to take with respect to the reported act of bullying or violence.

8. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

3607

Draft Regulation

Sustainable Forest Development Act
(chapter A-18.1)

An Act respecting the conservation and development of wildlife
(chapter C-61.1)

Environment Quality Act
(chapter Q-2)

Sustainable development of forests in the domain of the State

Wildlife habitats
— Amendment

Application of the Environment Quality Act
— Amendment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1) and section 124 of the Environment Quality Act (chapter Q-2), that the draft Regulation respecting the sustainable development of forests in the domain of the State and to amend the Regulation respecting wildlife habitats and the Regulation respecting the application of the Environment Quality Act, appearing below, may be made by the Government on the expiry of 60 days following this publication.

The main purpose of the draft Regulation is to establish a framework for forest development activities in the forests in the domain of the State so as to take into consideration

the environmental, social and economic aspects in connection with forests. It will impose, on anyone carrying on a forest development activity in the forests in the domain of the State, standards for the sustainable development of forests. Those standards are mainly intended to ensure the preservation or reconstitution of the forest cover, the protection of forest environment, the conciliation of forest development activities with the activities of Natives and other users of forests and the compatibility of forest development activities with the land use for lands in the domain of the State provided for in the land use plan referred to in the Act respecting the lands in the domain of the State (chapter T-8.1).

The impacts of the draft Regulation on the administrative and financial burdens of forest enterprises will be minor generally speaking since a number of provisions of the draft Regulation are already current practices, in keeping with the Regulation respecting standards of forest management for forests in the domain of the State (chapter A-18.1, r. 7) and the Forest Act (chapter F-4.1). In addition, a number of provisions of the draft Regulation are already covered by agreements between Native communities or other users of forests and stakeholders who develop the forest.

The analysis of the economic impact of the draft Regulation on forest enterprises shows that the provisions to maintain the free flow of fish in the works done to cross a watercourse during the construction, improvement and repair of roads will entail the following costs:

Enterprises	Annual costs ($/year)
– 138 forestry enterprises	9.2M ($66,667 per enterprise or $0.46/m^3)
– 428 other enterprises in the forest sector	71,890 ($168 per enterprise)
Subtotal	**9.27M**

The current assessment of the costs and impacts is maximized because the expertise that will be developed by the industry in the coming years will make it possible to reduce costs progressively.

Ensuring the free flow of fish in the works to cross a watercourse will achieve the following:

— ensuring consistency between the Fisheries Act (R.S.C., 1985, c. F-14), the Act respecting the conservation and development of wildlife (chapter C-61.1), the Environment Quality Act (chapter Q-2), the Regulation respecting wildlife habitats (chapter C-61.1, r. 18) and the Regulation respecting the application of the Environment Quality Act (chapter Q-2, r. 3);

— facilitating the forestry certification of Québec forests or the maintenance of certificates in force and ensuring compliance with the certification standard Forest Stewardship Council Canada (FSC-Canada), which will soon require the free flow of fish in the works done to cross a watercourse.

The draft Regulation should not impose on small and medium-sized businesses a burden greater than one imposed on large enterprises because the same standards will apply, but only a smaller scale.

Further information may be obtained by contacting Daniel Julien, Direction de la protection des forêts, Ministère des Forêts, de la Faune et des Parcs, 5700, 4e Avenue Ouest, bureau A-220, Québec (Québec) G1H 6R1; telephone: 418 627-8646, extension 4154; fax: 418 643-2368; email: daniel.julien@mffp.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments before the expiry of the 60-day period to Ronald Brizard, acting Associate Deputy Minister for Forests, Ministère des Forêts, de la Faune et des Parcs, 5700, 4e Avenue Ouest, bureau A-405, Québec (Québec) G1H 6R1.

LAURENT LESSARD,
Minister of Forests, Wildlife and Parks

Regulation respecting the sustainable development of forests in the domain of the State and to amend the Regulation respecting wildlife habitats and the Regulation respecting the application of the Environment Quality Act

Sustainable Forest Development Act
(chapter A-18.1, ss. 38, 39 and 44)

An Act respecting the conservation and development of wildlife
(chapter C-61.1, ss. 128.6 and 128.18)

Environment Quality Act
(chapter Q-2, ss. 2.1 and 31)

CHAPTER I
SCOPE AND INTERPRETATION

DIVISION I
SCOPE

1. This Regulation applies to forests in the domain of the State up to the northern limit of the forest tundra.

That territory is shown on the map "Vegetation areas and bioclimatic domains of Québec" reproduced in Schedule 1. The map is available on the website of the department.

DIVISION II
INTERPRETATION

2. In this Regulation,

"abutment" means the end support of a bridge that holds the approach fill. Abutments are made of reinforced concrete, wood or steel caissons or a combination of stakes crowned by a portal cap beam; (*culée*)

"accommodation centre" means a group of commercial buildings laid out on an area in a single block and having an accommodation capacity of at least 20 persons per day; (*établissement d'hébergement*)

"archaeological sector" means a place where archaeological sites are concentrated and the surrounding grounds whose geographical characteristics and situation offer an archaeological potential; (*secteur archéologique*)

"archaeological site" means any site indicating prehistoric or historic human occupation and registered in the Register of the domain of the State referred to in section 26 of the Act respecting the lands in the domain of the State (chapter T-8.1); (*site archéologique*)

"bank" or "shore" means the lateral part of variable steepness of the bed of a watercourse or lake that may be submerged without the water overflowing. The upper limit of the bank is located at the top of the angle of repose located at the lower limit of emerged grass or, if there is no such grass, at the low limit of shrubs. In the absence of emerged grass and shrubs, the top of the angle of repose corresponds to the level of the bankfull discharge; (*berge*)

"bear den" means a site where bears hibernate. The bear dens that are to be protected are those indicated in the numeric information layers used for forest planning; (*tanière d'ours*)

"bed of a watercourse" means a natural depression in the ground occupied by a permanent or intermittent watercourse, comprising the bottom and the banks. The bed of the watercourse is free of vegetation other than aquatic plants, if any. It shows signs or traces of waterflow, whether underground or not; (*lit d'un cours d'eau*)

"block cutting" means an area of total cutting or a group of areas of total cutting carried out in a given territory so as to preserve, within the limits of the block cutting harvest site, a residual forest having the characteristics set out in section 136; (*coupe en mosaïque*)

"block cutting harvest site" means a territory delimited by all the cutting areas for block cutting, with a distance of less than 2 km between the areas, and by a strip of land 2 km wide surrounding the whole site; (*chantier de récolte en mosaïque*)

"boat access route to trapping grounds" means a route that comprises rivers, lakes and portage trails leading to trapping grounds and recognized by a Native community that includes members who use it every year. The boat access routes to trapping grounds that are to be protected are those indicated in the numeric information layers used for forest planning; (*parcours d'accès en embarcation aux terrains de piégeage*)

"bridge" means a structure not built under embankments including abutments, sometimes piers, a deck and stabilizing materials and that allows a road to cross an obstacle, such as a watercourse; (*pont*)

"burial site" means a place where the body of a deceased person is interred. The burial sites that are to be protected are those indicated in the numeric information layers used for forest planning; (*site de sépulture*)

"canoe-kayak-camping course" means a marked route to go down watercourses in a canoe or kayak that includes rivers and lakes along the banks and shores of which a number of wilderness campgrounds are located, and often portage trails that are developed and maintained by a government body, a municipality, the Fédération québécoise du canot et du kayak or a club affiliated with that federation. The canoe-kayak-camping courses that are to be protected are those indicated in the numeric information layers used for forest planning; (*parcours de canot-kayak-camping*)

"caribou calving area north of the 52nd parallel" means a caribou calving area north of the 52nd parallel within the meaning of section 1 of the Regulation respecting wildlife habitats; (*aire de mise bas du caribou au nord du 52^{e} parallel*)

"cliff inhabited by a colony of birds" means a cliff inhabited by a colony of birds within the meaning of section 1 of the Regulation respecting wildlife habitats; (*falaise habitée par une colonie d'oiseaux*)

"commercial species" means a tree species referred to in Part A or Part B of Schedule 3; (*essence commerciale*)

"complementary vacation site" means a site comprising at least 3 vacation lots, at the rate of at least 1 lot per 0.8 ha. Complementary vacation sites are developed to complete the development of vacation sites on the shores of a lake where the biophysical characteristics of the

environment no longer make it possible to comply with the installation criteria for a grouped vacation site; (*site de villégiature complémentaire*)

"concentrated network of hiking trails" means a site criss-crossed by hiking trails developed for recreational purposes, except trails intended for motorized all-terrain vehicles, at a density equal to or greater than 2.5 km per square kilometer; (*réseau dense de sentiers de randonnée*)

"continuous forest cover" means a forest cover with a density of at least 25%, characterized by a relatively uniform space between its stems and not having any patch greater than the size of the dominant trees forming it; (*couvert forestier continu*)

"culvert" means a structure built under embankments including an arch or at least a conduit and stabilizing materials and that allows a road to cross an obstacle, such as a watercourse; (*ponceau*)

"cutting area" means an area in a single block where a single type of cut is used, during a single harvest year, comprised in a development unit or in another forest of the domain of the State; (*aire de coupe*)

"developed campground" means a site developed for the sojourn of campers, accessible by road and having service areas such as shelters, toilets and parking lots. Each camping site or group of sites including no more than 20 camping site is supplied with running water or electric power by a private or public distribution network offered by the lessor of camping space; (*camping aménagé*)

"developed trail" means a trail for which amounts were invested by the managers of an outfitting operation with exclusive rights, a controlled zone or a wildlife sanctuary, with a view to offering services to all the users of those territories; (*sentier aménagé*)

"dock site with a boat ramp" means a public site with the facilities required to facilitate the coming alongside and the launching of pleasure boats, as well as its service areas, such as shelters, toilets and parking lots; (*site de quai avec rampe de mise à l'eau*)

"downhill skiing station" means a site developed for the practice of downhill skiing and its service areas, such as shelters, toilets and parking lots; (*station de ski alpin*)

"dwelling" means any building intended for occupancy by human beings and provided with a water supply system and a waste water disposal system connected to the ground; (*habitation*)

"ecological or nature interpretation centre" means a site consisting of trails developed for educational purposes in connection with ecology or for purposes of discovering nature and service areas such as shelters, toilets and parking lots; (*centre d'écologie ou de découverte de la nature*)

"fish hatchery" means a site comprising the facilities and equipment required for the raising and breeding of fish with a view to seeding the lakes and watercourses of a region; (*station piscicole*)

"forest camp" means a place where dwellings and facilities are grouped mainly for the use of workers assigned to forest development activities authorized under a forest development plan (*camp forestier*)

"forest cover density" means the relative ground cover by the ground projection of the top of trees 7 m tall or higher; (*densité du couvert forestier*)

"forest development activity" means a forest development activity within the meaning of paragraph 1 of section 4 of the Sustainable Forest Development Act (chapter A-18.1); however, for the purposes of sections 3, 5, 18 to 21, 46, 49, 52 to 54, 56 and 58, it does not include the repair, maintenance and closure of forest roads or the control of fires, insect epidemics and cryptogamic diseases; (*activité d'aménagement forestier*)

"forest operations zone" means a maximum area of 250 ha, not necessarily in a single block, that is the subject of a single sylvicultural treatment during a single harvest year, comprised in a single development unit or other forest in the domain of the State; (*secteur d'intervention*)

"geotextile membrane" means a permeable textile, needle punched and nonwoven, having a minimum tensile strength of 1,000 newtons and interstices smaller than 150 micrometres; (*membrane géotextile*)

"grouped vacation site" means a site comprising at least 5 vacation lots, at the rate of at least 1 lot per 0.8 ha; (*site de villégiature regroupé*)

"harvest year" means the period comprised between 1 April of a year and 31 March of the following year; (*année de récolte*)

"heritage cultural landscape" means a land area recognized by a community for its remarkable landscape features, which are the result of the interaction of natural and human factors and are worth preserving and, if applicable, enhancing because of their historical or emblematic interest, or their value as a source of identity, within the meaning of section 2 of the Cultural Heritage Act (chapter P-9.002); (*paysage culturel patrimonial*)

"heritage site" means a place, a group of immovables or, in the case of a heritage site referred to in section 58 of the Cultural Heritage Act (chapter P-9.002), a land area that is of interest for its archaeological, architectural, artistic, emblematic, ethnological, historical, identity, landscape, scientific, urbanistic or technological value, within the meaning of section 2 of that Act; (*site patrimonial*)

"heronry" means a heronry within the meaning of section 1 of the Regulation respecting wildlife habitats; (*héronnière*)

"holder of a forestry permit" means the holder of a forestry permit referred to in section 73 of the Sustainable Forest Development Act (chapter A-18.1) or the third person to whom the permit holder entrusted the performance of the work authorized by the permit; (*titulaire d'un permis d'intervention*)

"improvement work on a road, bridge or culvert" means work performed to improve a road or road segment, including the bridges and culverts, in relation to the condition it was in at the time of its construction or latest improvement, as the case may be. In the case of a road, the work includes the following, among other things: operations to upgrade a road's class, particularly by making it wider; course correction; the reduction of slopes and the addition of safety devices such as safety slides. In the case of a bridge or culvert, the work includes, among other things: the replacement of the structure by a different structure, such as replacing a culvert with a conduit by a culvert with an arch, and alterations to the structure of a bridge to improve its bearing capacity; (*travaux d'amélioration d'un chemin, d'un pont ou d'un ponceau*)

"integrated forest development plan" means a tactical plan or an operational plan referred to in section 54 of the Sustainable Forest Development Act (chapter A-18.1); (*plan d'aménagement forestier intégré*)

"intermittent watercourse" means a watercourse whose flow is intermittent and whose bed consequently dries up during certain times of year; (*cours d'eau intermittent*)

"interregional trail" means a hiking trail developed for recreational purposes, linked to a concentrated trail network, excluding trails for motorized all-terrain vehicles; (*parcours interrégional de randonnées*)

"island or peninsula inhabited by a colony of birds" means an island or a peninsula inhabited by a colony of birds within the meaning of section 1 of the Regulation respecting wildlife habitats; (*île ou presqu'île habitée par une colonie d'oiseaux*)

"isolated vacation site" means land leased under section 47 of the Act respecting the lands in the domain of the State (chapter T-8.1) and intended for vacation, excluding land intended for the construction of a shelter; (*site de villégiature isolé*)

"landfill" means a landfill within the meaning of the Regulation respecting the landfilling and incineration of residual materials (chapter Q-2, r. 19); (*lieu d'enfouissement de matières résiduelles*)

"lichenous black spruce stand" means a stand of black spruce whose forest cover density is less than 40% and that grows on soil more than 40% covered by lichens; (*pessière noire à lichens*)

"lichenous grey pine stand" means a stand of grey pines whose forest cover density is less than 40% and that grows on soil more than 40% covered by lichens; (*pinède grise à lichens*)

"logging machine" means a machine, motorized or not, mobile or stationary, including machines pulled by a motor vehicle, used to carry out one or more forest development activities; (*engin forestier*)

"maintenance work on a road, bridge or culvert" means work performed to prevent the degradation of a road or road segment, including the bridges and culverts, so that it remains in the condition it was in at the time of its construction or latest improvement, as the case may be. In the case of a road, the work includes, among other things: the leveling and resurfacing of the roadway provided that it does not entail the road's reclassification; cleaning and digging ditches, the installation or replacement of drainage channels; the repair and stabilization of embankments; clearing the right-of-way of bushes to ensure visibility; spreading dust suppressants and spreading abrasives on roads during wintertime. In the case of a bridge or culvert, the work includes, among other things: clearing a culvert's entrance and repairing the roadway surface and kerbs of a bridge; (*travaux d'entretien d'un chemin, d'un pont ou d'un ponceau*)

"marsh" means land flooded permanently or temporarily, and dominated by grass growing on a mineral or organic soil. Shrubs and trees, if any, cover less than 25% of the swamp's area. A swamp is usually riparian, that is, adjacent to a lake or watercourse, or isolated; (*marais*)

"Minister" and "department" means the Minister responsible for the administration of the Sustainable Forest Development Act (chapter A-18.1) and the department within which the Minister discharges duties; (*ministre and ministère*)

"muskrat habitat" means a muskrat habitat within the meaning of section 1 of the Regulation respecting wildlife habitats; (*habitat du rat musqué*)

"Native gathering or sojourn area" means an area regularly frequented by Natives and located along a boat access route to trapping grounds or at the meeting point of a portage trail and a river or lake, identified by a Native community and indicated in the numeric information layers used for forest planning; (*aire de rassemblement ou de séjour autochtone*)

"natural drainage" means a soil's capacity to naturally discharge, by runoff or by infiltration into the soil, the waters brought by precipitations and the melting of snow; (*drainage naturel*)

"numeric information layers" means the most up-to-date numeric information layers used in the process of forest planning for the cartographic localization of places and territories in respect of which normative provisions are applicable; (*couches d'informations numériques*)

"observatory" means a site comprising facilities intended for astronomical observation and its service areas, such as shelters, toilets and parking lots; (*observatoire*)

"outdoor recreation centre" means a site developed to practise outdoor activities and its service areas, such as shelters, toilets and parking lots; (*base de plein air*)

"outlying circuit of a concentrated network of hiking trails" means a hiking trail developed for recreational purposes, connected to a concentrated network of hiking trails, except for trails for motorized all-terrain vehicles; (*circuit périphérique d'un réseau dense de sentiers de randonnée*)

"partial cutting" means a forest cutting that takes less than 50% of the basal area of a stand at each passage and that ensures at all times the maintenance of a forest cover at least 7 m high in commercial species; (*coupe partielle*)

"peat bog" means a piece of land covered with moss, resulting from the accumulation of partially decomposed organic matter. The organic matter is at least 30 cm thick. The water table is usually at the same level as the soil or close to its surface. A peat bog may be open (unwooded) or wooded; in the latter case, the trees are more than 4 m high with a cover equal to or greater than 25%. A peat bog with a pond is composed of one or more isolated bodies of water forming one or more ponds of various shapes; (*tourbière*)

"permanent watercourse" means a continuous watercourse whose flow is permanent and whose bed consequently does not dry up, except during exceptional periods of drought; (*cours d'eau permanent*)

"pier" means an intermediate support of a bridge's deck installed in the bed of a watercourse. Piers are made of reinforced concrete, wood or steel caissons or a combination of stakes crowned by a portal cap beam; (*pile*)

"piling area" means a site used to pile timber, bark, wood shavings or forest biomass, where lopping and sawing activities may take place; (*aire d'empilement*)

"public beach" means a site comprising a beach, a strip of land extending 300 m inland from the shoreline and the facilities necessary for swimming and relaxation; (*plage publique*)

"reception station" means a place where the principal building is located, used to register, inform and supervise users and visitors who want to have access to an outfitting operation with exclusive rights, a controlled zone or a wildlife sanctuary; (*poste d'accueil*)

"removable structure" means a structure that is installed on a temporary basis to cross a watercourse; (*ouvrage amovible*)

"repair work on a road, bridge or culvert" means work carried out to put a degraded road or road segment, including the bridges and culverts, back in the condition it was in at the time of its construction or latest improvement, as the case may be. In the case of a bridge or culvert, the work includes, among other things: replacing the conduit of a culvert by a new one of the same type, altering the structure of a bridge to increase its bearing capacity such as the repair or replacement of the deck, of a part of the structure or of a part of a bridge's abutments; (*travaux de réfection d'un chemin, d'un pont ou d'un ponceau*)

"residual forest" means a portion of forest that remains in place following a natural disturbance, such as fire, windfall and insect epidemics, or following a man-made disturbance; (*forêt résiduelle*)

"rest area" means a site developed along a road corridor for rest purposes or for picnicking and its service areas such as shelters, toilets and parking lots; (*halte routière*)

"restaurant or accommodation site" means a site that includes a dwelling offering restaurant or accommodation services on a commercial basis, or an area where an establishment has been constructed offering lodging for hunting and fishing activities on a commercial basis; (*site de restauration ou d'hébergement*)

"right-of-way of a road" means the surface occupied by the roadway, shoulders, ditches and embankments of a road, as well as the deforested strip of land on each side of the roadway. The roadway is generally located at the centre of the right-of-way; (*emprise d'un chemin*)

"riparian ecotone" means the transitional zone between the water environment and the forest, characterized by the muscinal, herbaceous or shrubby vegetation of wetlands and sometimes including a few scattered trees; (*écotone riverain*)

"road corridor" means a numbered public road appearing on the official map of the Ministère des Transports and located in the bioclimatic domains of the maple or fir forest referred to in Schedule 2, or such a road located in the bioclimatic domain of the spruce-moss forest that links 2 local municipalities or that covers a distance of no more than 50 km from the urban perimeter of a local municipality. That map is the map accessible on the website of the Ministère des Transports. A unnumbered public road giving access to an Indian reserve, to the settlements of Kitcisakik, Hunter's Point, Pakuashipi, Oujé-Bougoumou and Winneway, to an accommodation centre or a welcome centre in an outfitting operation, a controlled zone or a wildlife sanctuary within the meaning of sections 86, 104 and 111 of the Act respecting the conservation and development of wildlife (chapter C-61.1) is also considered a road corridor; (*corridor routier*)

"salt lick" means a salt lick within the meaning of section 1 of the Regulation respecting wildlife habitats; (*vasière*)

"sand pit" means an open-air site where unconsolidated substances such as sand, gravel and soil are extracted. Any site to extract unconsolidated substances transported by truck is deemed to be a sand pit for the purposes of this Regulation; (*sablière*)

"scenic outlook" means a site developed for the observation of nature; (*belvédére*)

"swamp" means land subject to seasonal floods or characterized by a soil permanently or temporarily saturated with water and dominated by a ligneous, shrub or arborescent vegetation growing on a mineral soil. The ligneous vegetal covers more than 25% of the marsh's area. A marsh may either be riparian, that is, adjacent to a lake or watercourse, or isolated; (*marécage*)

"territorial reference unit" means a development unit or other forest in the domain of the State or a subdivision thereof, forming a single block, measuring less than 100 km^2 in the bioclimatic domains of the maple forest, less than 300 km^2 in the bioclimatic domains of the fir forest and less than 500 km^2 in the bioclimatic domain of the spruce-moss forest. Those bioclimatic domains are shown in Schedule 2 per development unit and per territorial reference unit and they are indicated in the numeric information layers used for forest planning; (*unité territoriale de référence*)

"thalweg" means the line connecting the deepest points of the bed of a watercourse; (*thalweg*)

"total cutting" means a forest cutting carried out during one or more operations, spread over 10 years or less, that takes once all interventions are carried out more than 80% of the basal area of the species and diameters specified in the sylvicultural prescription of the stand; (*coupe totale*)

"tourist circuits or roads" means a road corridor recognized as a main interregional access road or as an itinerary proposed on one of the maps in the tourist guides published jointly by the Gouvernement du Québec and the regional tourist associations; (*circuits ou routes touristiques*)

"trail intended for motorized all-terrain vehicles" means a trail developed and maintained for users of motorized all-terrain vehicles. The trails intended for motorized all-terrain vehicles that are to be protected are those used year after year and indicated in the numeric information layers used for forest planning; (*sentier destiné aux véhicules tout terrain motorisés*)

"ungroomed road" means a road free of stumps and free in whole or in part of vegetal cover, that has undergone no earth-moving operation besides *what* is required to flatten its surface, and whose use is reserved for the harvest and transportation of timber in winter time; (*chemin sans mise en forme*)

"visual setting" means a part of the landscape visible from a site of interest over 360 degrees at a height of 1.5 m from the ground and whose limits are given by the surrounding topography; (*encadrement visuel*)

"water fowl gathering area" means a water fowl gathering area within the meaning of section 1 of the Regulation respecting wildlife habitats (chapter C-61.1, r. 18); (*aire de concentration d'oiseaux aquatiques*)

"water intake" means a site subject to the Regulation respecting the quality of drinking water (chapter Q-2, r. 40) that includes a structure to draw water from a watercourse, lake, reservoir or spring and the 60 m strip of woodland surrounding it; (*prise d'eau*)

"watercourse" means any permanent or intermittent watercourse of a hydrographic system flowing in a bed, excluding the water discharged by the natural draining of the soil; (cours d'eau)

"white-tailed deer yard" means a white-tailed deer yard within the meaning of section 1 of the Regulation respecting wildlife habitats; (*aire de confinement du cerf de Virginie*)

"wilderness campground" means a site established for the sojourn of campers, not supplied with running water or electric power by a private or public distribution network, and offering a lower quantity and quality of the other services; (*camping rustique*)

"winter period" means the period of the year provided for in Schedule 4 for each region of Québec; (*période hivernale*)

"wooden culvert" means a culvert with a wooden arch; (*ponceau de bois*)

"work to build a road, bridge or culvert" means work performed to build a road or road segment at a new place, including work to build bridges and culverts on that road; (*travaux de construction d'un chemin, d'un pont ou d'un ponceau*)

"work to close a road" means work to prevent access to a road or road segment on a permanent or temporary basis. (*travaux de fermeture d'un chemin*)

For the purposes of this Regulation, an outdoor recreation centre, a scenic outlook, a developed campground, a wilderness campground, an ecological or nature interpretation centre, a cottage with a capacity for at least 4 persons that offers lodging and operated on a commercial basis by the manager of an outfitting operation with exclusive rights, a controlled zone or a wildlife sanctuary, an outlying circuit of a concentrated network of hiking trails, an accommodation centre, a rest area, a landfill, an observatory, an interregional trail, a public beach, a reception station, a water intake, a concentrated network of hiking trails, a trail intended for motorized all-terrain vehicles, a dock site with a boat ramp, a restaurant or accommodation site, a vacation site, a downhill skiing station and a fish hatchery are those for which a right has been granted under a law or regulation of the Government.

CHAPTER II
PROTECTION OF PARTICULAR PLACES AND TERRITORIES

DIVISION I
GENERAL

§1. Prohibited forest development activities

3. No forest development activity may be carried out in the following places and territories:

(1) a protected area, proposed or permanent, of Category I, II or III of the International Union for Conservation of Nature, constituted in accordance with the Natural Heritage Conservation Act (chapter C-61.01) or the Parks Act (chapter P-9) and entered in the register of protected areas, unless the carrying out of the activity is authorized under one of those Acts or pursuant to them;

(2) an outdoor recreation centre;

(3) a scenic outlook;

(4) a developed campground;

(5) a wilderness campground;

(6) an accommodation centre;

(7) a rest area;

(8) an island whose area is less than 250 ha;

(9) an observatory;

(10) a public beach;

(11) a water intake;

(12) an archeological site;

(13) a dock site with a boat ramp;

(14) a restaurant or accommodation site;

(15) a burial site;

(16) a complementary vacation site;

(17) an isolated vacation site or other land leased under section 47 of the Act respecting the lands in the domain of the State (chapter T-8.1);

(18) a grouped vacation site;

(19) a projected site or place, referred to in subparagraphs 2 to 4, 6, 10, 13, 14, 16, 18 and 20, and indicated in a regional plan for the development of the public territory – recreation and tourism sector - or in a regional plan for integrated land and resource development;

(20) a downhill skiing station;

(21) a fish hatchery.

The first paragraph does not apply to archeological sites where the Minister has allowed, under the Sustainable Forest Development Act (chapter A-18.1), forest development activities to be carried out. The person carrying out the activities must however leave the soil intact.

Furthermore, that person must harvest trees during the winter period when the ground is frozen at a depth of at least 35 cm.

Before allowing forest development activities to be carried out on an archaeological site other than a site located in a classified heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act (chapter P-9.002), the Minister consults the Minister responsible for the administration of that Act to obtain his or her opinion on the cultural interest of the site.

The carrying out of forest development activities on a classified heritage site requires the authorizations provided for in the Cultural Heritage Act.

4. A person who carries out forest development activities in an archaeological sector must leave the soil intact. Furthermore, the person must harvest trees during the winter period when the ground is frozen at a depth of at least 35 cm.

The first paragraph does not apply to archeological sites where the Minister has allowed, under the Sustainable Forest Development Act (chapter A-18.1), forest development activities to be carried out on conditions different from those provided for in the first paragraph.

Before allowing forest development activities to be carried out on an archaeological site on conditions different from those provided for in the first paragraph, the Minister consults the Minister responsible for the administration of the Cultural Heritage Act (chapter P-9.002) to obtain his or her opinion on the cultural interest of the sector.

5. Where a trapping camp erected under section 88 of the Act respecting the conservation and development of wildlife (chapter C-61.1) is permanently installed in a development unit or other forest in the domain of the State, no forest development activity may be carried out over an area of 4,000 km2, including the camp area.

The camp must be indicated in the numeric information layers used for forest planning.

This section does not apply to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

6. Subparagraphs 2 to 10 and 13 to 21 of the first paragraph of section 3 do not apply to a holder of a forestry permit issued for forest development activities carried out by a holder of mining rights for the purposes of exercising his or her rights, unless the mining activities are to extract surface mineral substances, nor to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

§2. Strips of woodland

7. A strip of woodland at least 60 m in width must be preserved around the following places and territories:

(1) a protected area, proposed or permanent, of Category I, II or III of the International Union for Conservation of Nature, constituted in accordance with the Natural Heritage Conservation Act (chapter C-61.01) or the Parks Act (chapter P-9) and entered in the register of protected areas, except where the limit of the area is a road;

(2) an outdoor recreation centre;

(3) a scenic outlook;

(4) a developed campground;

(5) a wilderness campground;

(6) a cottage with a capacity for at least 4 persons that offers lodging and operated on a commercial basis by the manager of an outfitting operation with exclusive rights, a controlled zone or a wildlife sanctuary;

(7) an accommodation centre;

(8) a rest area;

(9) the facilities in place in an ecological or nature interpretation centre or a concentrated network of hiking trails;

(10) an observatory;

(11) a reception station;

(12) a refuge erected on land in respect of which a right has been issued under the Act respecting the lands in the domain of the State (chapter T-8.1) or under

section 88 and 118 of the Act respecting the conservation and development of wildlife (chapter C-61.1) and used as a shelter by users of an outlying circuit of a concentrated network of hiking trails, an interregional trail, a concentrated network of hiking trails and users of a trail intended for motorized all-terrain vehicles;

(13) a dock site with a boat ramp;

(14) a restaurant or accommodation site;

(15) a complementary vacation site;

(16) an isolated vacation site;

(17) a grouped vacation site;

(18) a classified heritage site entered in the register of cultural heritage referred to in section 5 of the Cultural Heritage Act (chapter P-9.002).

8. A strip of woodland at least 30 m wide must be preserved around the following sites and places:

(1) a sugar bush;

(2) a landfill;

(3) a burial site.

A strip of woodland at least 30 m in width must also be kept on each side of the following roads and trails:

(1) a road identified as a road corridor, unless the sylvicultural treatment carried out where the road is located is total cutting carried out according to the conditions of block cutting, or partial cutting;

(2) a hiking trail forming part of an ecological or nature interpretation centre or a concentrated network of hiking trails;

(3) an access trail to a scenic outlook, an outlying circuit of a concentrated network of hiking trails or an interregional trail, specifically deforested for those purposes;

(4) a portage trail included in a canoe-kayak-camping course, specifically deforested for those purposes;

(5) a developed trail.

The strip of woodland of a road identified as a road corridor must be maintained until regeneration is established in the cutting area adjacent to that strip of woodland and has reached an average height of 3 m.

9. A partial harvest not exceeding 40% of the merchantable stems, in the case of stands of species referred to in Part A of Schedule 3, or 40% of the basal area in the case of stands of species referred to in Part B of that Schedule, is however allowed in the strip of woodland when forest operations are carried out on the adjacent land.

However, the density of the stand may never be reduced to less than 700 merchantable stems/ha, in the case of stands of species referred to in Part A of Schedule 3, or the basal area may not be reduced to less than 16 m^2/ha, in the case of stand of species referred to in Part B of that Schedule.

Despite the first and second paragraphs of this section, where the sylvicultural prescription provides for partial cutting in the stand adjacent to the strip of woodland referred to in sections 7 and 8, the harvest level indicated in the sylvicultural prescription of the adjacent stand then applies to that strip of woodland.

Residual trees in the strip of woodland must be spread uniformly so as to constitute a visual screen and contribute to maintain the forest ambiance and the function of the place or territory concerned.

Total cutting is prohibited in the strip of woodland.

10. In a strip of woodland kept along a road identified as a road corridor, an outlying circuit of a concentrated network of hiking trails, an interregional trail or a portage trail included in a canoe-kayak-camping course, a hauling trail or other road may be constructed only at a distance of more than 250 m from another hauling trail or another road. Deforestation for that purpose may not exceed the width of the hauling trail or the width of the road, including the roadway, embankments and ditches.

§3. Visual setting

11. A visual setting of 1.5 km must be preserved along tourist circuits or routes and around the following places and territories:

(1) a rest area;

(2) a public beach;

(3) a dock site with a boat ramp when it includes in its service areas restaurant and accommodation facilities;

(4) a proposed site or place, referred to in paragraphs 2 and 3 and indicated in the regional plan for the development of the public territory – recreation and tourism sector – or in a regional plan for integrated land and resource development;

(5) a heritage site declared by the Government under the Cultural Heritage Act (chapter P-9.002).

12. A visual setting of 3 km must be preserved around the following places and territories:

(1) an outdoor recreation centre;

(2) a scenic outlook;

(3) a developed campground with at least 9 camping lots;

(4) an accommodation centre;

(5) the boundaries of a town;

(6) a reception station;

(7) a complementary vacation site;

(8) a grouped vacation site;

(9) a projected site or place, referred to in paragraphs 1 to 4, 6 to 8 and 10 and indicated in the regional plan for the development of the public territory – recreation and tourism sector – or in a regional plan for integrated land and resource development;

(10) a downhill skiing station.

13. Partial cutting with maintenance of a continuous forest cover is allowed throughout the visual setting or in a heritage cultural landscape. Partial cutting without maintenance of a forest cover is prohibited.

Total cutting is also allowed in a visual setting, except total cutting with a harvest pattern by harvest strips more than 6 m in width or by blocks with a straight contour. However, all the areas where the allowed total cutting is carried out must cover at least the third of the area of the visual setting during each third of the expected period of rotation of the stands, in order to preserve at all times the quality of the landscape.

Total cutting is prohibited in a heritage cultural landscape designated by the Government under the Cultural Heritage Act (chapter P-9.002).

§4. *Maintenance of an area of stands on islands, in outfitting operations with exclusive rights, controlled zones and wildlife sanctuaries*

14. At least 30% of the productive forest area in stands of 7 m or more must be preserved at all times on islands whose area ranges from 250 to 500 ha.

15. At least 30% of the productive forest area in stands of 7 m or more must be preserved at all times in outfitting operations with exclusive rights, in controlled zones and wildlife sanctuaries;

That percentage must be maintained throughout the territory and on all portions of territory whose area is 30 km^2 or more corresponding:

(1) in the bioclimatic domains of the maple forest and fir forest: to the reference territorial units or parts thereof comprised within the limits of the territory;

(2) in the bioclimatic domain of the spruce-moss forest: to the aggregated cut blocks or parts thereof comprised within the limits of the territory.

§5. *Protection of certain trails*

16. The following trails may not be used for hauling or trucking purposes:

(1) hiking trails forming part of an ecological or nature interpretation centre or of a concentrated network of hiking trails;

(2) access trails to a scenic outlook and hiking trails of an outlying circuit of a concentrated network of hiking trails or interregional trail, deforested specifically for those purposes;

(3) trails intended for motorized all-terrain vehicles, portage trails of boat access route to trapping grounds and portage trails comprised in a canoe-kayak-camping course, developed specifically or those purposes;

(4) developed trails.

17. All trees or parts thereof that fall on a trail during the carrying out of forest development activities must be removed. The pilling and windrowing of logging residues is prohibited on a trail.

Where a trail is damaged because of a forest development activity carried out near a trail, in particular during hauling, the trail must be put back in the condition it was in before the carrying out of the activity.

This section applies to all the trails referred to in section 16.

DIVISION II
SPECIAL PROVISIONS APPLICABLE TO NATIVE PORTAGE TRAILS, NATIVE CAMPGROUNDS AND NATIVE GATHERING OR SOJOURN AREAS

18. No forest development activity may be carried out on a Native portage trail. However, it is allowed to build or improve a road that crosses a Native portage trail.

A strip of woodland at least 30 m wide must be preserved around Native portage trails so as to create a visual setting and to maintain the forest ambiance of the site.

The provisions of section 9 respecting partial cutting applies to that strip of woodland kept around Native portage trails.

This section does not apply to the holder of a forestry permit issued for forest development activities carried out by the holder of mining rights to exercise those rights, unless the mining activities are to extract surface mineral substances, and does not apply to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

19. Where a campground established under the Act respecting hunting and fishing rights in the James Bay and New Québec territories (chapter D-13.1) is installed permanently on a trapping ground located in a development unit or other forest of the domain of the State, no forest development activity may be carried out over an area of 40,000 m2, including the campground area.

The foregoing also applies to a Native campground used to trap in beaver reserves, installed permanently in a development unit or other forest of the domain of the State.

This section applies to a maximum of one campground per 100 km^2 of trapping ground.

This section does not apply to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

20. Where a Native campground not referred to in the second paragraph of section 19 is installed on the territory of a beaver reserve, no forest development activity may be carried out over an area of 4,000 m2, including the area of the campground or group of campgrounds. This section applies to a maximum of 2 isolated campgrounds or 2 groups of campgrounds per 100 km2 of the territory.

This section does not apply to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

21. Where a Native gathering or sojourn area is located in a development unit or other forest in the domain of the State, no forest development activity may be carried out on an area 40 m wide and 100 m long alongside a lake or watercourse near those areas. That area includes the area of the strip of woodland kept alongside the lake or watercourse.

This section does not apply to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

22. Native portage trails and Native gathering or sojourn areas referred to in sections 18 to 21 must be indicated in the numeric information layers used for forest planning after having been recognized by the Native band council concerned.

CHAPTER III
PROTECTION OF AQUATIC ENVIRONMENTS, RIPARIAN AREAS, WETLANDS AND SOILS

DIVISION I
BEDS OF LAKES AND WATERCOURSES

23. The travel of logging machines is prohibited on the bed of a lake.

Despite the foregoing, the travel of logging machines is allowed on the bed of a lake to construct, improve or repair a road, bridge or culvert to cross a lake if such work is authorized as part of an activity or project for which a certificate of authorization was issued following a decision of the authority concerned made under section 31.5, 164 or 201 of the Environment Quality Act (chapter Q-2).

24. The travel of logging machines is prohibited on the bed of a watercourse, except to construct or remove a bridge or culvert or to place or remove a removable structure. In that case, only one round trip of the logging machine in the watercourse is then allowed on the site of the installation and no work may be done from the bed of the watercourse.

The travel of logging machines is also allowed on the bed of a watercourse to carry out work to install coffer dams and structures to temporarily divert the watercourse, in accordance with section 90.

This section does not apply to the travel of logging machines used to carry out vegetation control activities required for public utility works. However, passing through the fish habitat requires the prior issue of the authorizations required under the Act respecting the conservation and development of wildlife (chapter C-61.1).

DIVISION II
OPEN PEAT BOGS (UNWOODED) WITH A POND, MARSHES, RIPARIAN SHRUB SWAMPS, LAKES AND PERMANENT WATERCOURSES

25. A strip of woodland at least 20 m wide must be preserved alongside a peat bog with a pond, a marsh, riparian shrub swamp, lake or permanent watercourse.

The strip of woodland is measured from the limit of the stand bordering on the environment to be protected or the stand adjacent to the riparian ecotone if the latter is present. The strip must be linked to the residual forest.

26. A maximum partial harvest of 40% of merchantable stems, in the case of stands of the species referred to in Part A of Schedule 3, or 40% of the basal area, in the case of stands of the species referred to in Part B of that Schedule, is however allowed in the strip of woodland if the slope degree is less than 30%.

However, the density of the stand may never be reduced to less than 700 merchantable stems/ha, in the case of stands of the species referred to in Part A of Schedule 3, or the basal area may not be reduced to less than 16 m^2/ha, in the case of stands of the species referred to in Part B of that Schedule.

Despite the first and second paragraphs of this section, where the sylvicultural prescription provides for partial cutting in the stand adjacent to the strip of woodland referred to in section 25, the harvest level indicated in the prescription for the adjacent stand then applies to the strip of woodland.

The residual trees in the strip of woodland must be spread evenly to ensure the protection of aquatic environments, riparian areas and wetlands.

Total cutting is prohibited in the strip of woodland.

27. Sections 25 and 26 do not apply to the holder of a forestry permit issued for forest development activities carried out by a holder of mining rights where the holder carries out mining exploration work, nor to a holder of a forestry permit issued for wildlife, recreational or agricultural development projects, nor to a holder of a forestry permit issued for public utility works, nor if the construction, improvement or repair of a road is not prohibited by this Regulation.

However, the holder of a development permit issued for public utility works who installs a power transmission line or a gas pipeline requiring the deforestation of the strip of woodland must preserve the stumps, shrubs and grass in that strip, or reestablish such vegetation.

28. Despite section 25, the holder of a mining right to whom a forestry permit was issued who lays out an access to an open peat bog with a pond, to a marsh, to a riparian shrub swamp, to a lake or to a permanent watercourse in order to carry out mining exploration work or to install equipment required for such work may clear an opening not wider than 5 m in the strip of woodland.

The stumps, grass and advance growth must be preserved in that opening.

29. Despite section 25, a maximum of 3 visual openings may be cleared in the strip of woodland where a forest camp is established near a peat bog with a pond, a marsh, a riparian shrub swamp, a lake or a permanent watercourse. The width of each opening must not exceed 10% of the length of the strip of woodland separating the camp from those environments.

The stumps, grass and advance growth must be preserved in those openings.

Only one road not exceeding 5 m in width and leading to the environments referred to in the first paragraph may be developed for all the openings.

30. The travel of logging machines is prohibited in the riparian ecotone when the latter is present and within the first 20 metres of a strip of woodland kept alongside an open peat bog with a pond, a marsh, a riparian shrub swamp, a lake or a permanent watercourse, except in the following cases:

(1) to dig drainage ditches for sylvicultural purposes;

(2) to take a hauling trail across a watercourse by means of a removable structure;

(3) to carry out a wildlife development project authorized under a forestry permit, provided that the development project is carried out in accordance with the conditions set out in the permit;

(4) to construct, improve, repair or remove a structure used to cross a watercourse on a road or install infrastructures, provided that the person is authorized to do so under the Sustainable Forest Development Act (chapter A-18.1);

(5) to carry out vegetation control activities required for public utility works.

DIVISION III
RIPARIAN SHRUB SWAMPS, OPEN PEAT BOGS (UNWOODED) WITHOUT A POND AND INTERMITTENT WATERCOURSES

31. Harvesting is prohibited in the riparian shrub swamps whose ecological type is one of the following forests:

(1) silver maple, elm, ash forest (FO18);

(2) black ash, fir forest on hydric drainage (MF18);

(3) yellow birch, fir, sugar maple forest on hydric drainage (MJ18);

(4) fir, yellow birch forest on hydric drainage (MS18);

(5) fir, red maple forest on hydric drainage (MS68);

(6) fir, white cedar forest (RS18).

Harvesting is allowed in riparian shrub swamps whose ecological type is not one of those referred to in the first paragraph. However, the travel of logging machines during harvest may not result in the natural drainage of the soil being disturbed.

32. The travel of logging machines is prohibited over a width of at least 6 m alongside an open peat bog without a pond or an intermittent watercourse, except in any of the cases provided for in paragraph 1, 2, 4 or 5 of section 30. The 6 m-width is measured from the perimeter of the peat bog or from the upper limit of the bank of the intermittent watercourse.

Harvesting is however allowed in that 6 m strip of land. However, the vegetal cover and the stumps must be preserved to minimize disturbances in the soil and water regime.

DIVISION IV
SYLVICULTURAL DRAINAGE, WASHING WATER, CONTAMINANTS, EARTH AND TREE DEBRIS

§1. Sylvicultural drainage ditch

33. Despite section 25,an opening not wider than 5 m in the strip of woodland referred to in that section may be cleared to dig a drainage ditch for sylvicultural purposes.

34. A ditch or network of sylvicultural drainage ditches must have a settling pond at its outlet.

The ditch or network of sylvicultural drainage ditches and the settling pond must not allow for the introduction of sediments into an open peat bog with a pond, a marsh, a riparian swamp, a lake or a watercourse, nor over a width of 20 m, measured from the limit of the stand bordering on those environments or the stand adjacent to the riparian ecotone if the latter is present.

35. The settling pond must remain operational and be drained when the water height above the sediments is less than 30 cm over at least 50% of the settling pond's area.

§2. Discharge, recovery and treatment of washing water

36. Washing logging machines is prohibited in a forest where it takes place at 60 m or less from an open peat bog, a swamp, a riparian marsh, a lake or a watercourse. The 60-m distance is measured from the perimeter of the peat bog, marsh or swamp or from the upper limit of the shore of a lake or bank of a watercourse, or from the outside of the riparian ecotone if the latter is present.

37. Water for washing logging machines may be discharged in the forest only if all the following conditions are met:

(1) washing is not done at the top of a slope leading directly to an open peat bog, a marsh, a swamp, a lake or a watercourse;

(2) the washing is limited to the engine space;

(3) washing is done using high pressure equipment and without degreasing agents;

(4) a geotextile membrane is placed under the logging machine to collect the residues dislodged by washing;

(5) the geotextile membrane and dislodged residues must be recovered and disposed of in accordance with the Regulation respecting hazardous materials (chapter Q-2, r. 32).

Despite the first paragraph, washing water may be discharged in the forest provided that it is treated on the site and that it does not contain more than 30 mg/l of suspended matter and 15 mg/l of hydrocarbons (C10-C50).

Residues from washing and water treatment on the site must be recovered and disposed of in accordance with applicable laws and regulations.

38. Water for washing logging machines that may not be discharged in the forest must be recovered and be treated in accordance with applicable laws and regulations.

39. The owner of the logging machine must obtain from the enterprise that treats the washing water on the site a certificate of compliance with the standards provided for in the second paragraph of section 37 before the washing water may be discharged in the forest.

The certificate must contain the name and address of the enterprise that has treated the washing water on the site and the signature of the person who, within that enterprise, has treated the water, the name, address and signature of the logging machine's owner or his or her representative, the GPS positioning data of the washing site and the volume of water treated and discharged in the forest.

The certificate must be preserved for at least one year and be submitted, upon request, to the Minister.

§3. Discharge of contaminants and earth and removal of trees or tree debris

40. The discharge of hydrocarbons, chemicals or other contaminants is prohibited in the forest.

41. Any person who discharges hydrocarbons, chemicals or other contaminants in the forest must immediately stop the discharge, recover the materials discharged and remove any contaminated matter that cannot be treated on the site.

Every logging machine must be equipped with a case containing confinement and recovery material, as well as devices or tools that make it possible to intervene effectively and without delay in case of discharge. The case must be adapted to the type and volume of contaminant found on the logging machine.

42. The discharge of earth is prohibited in an open peat bog, a swamp, a marsh, a lake or a watercourse.

This section does not apply to the discharge of earth during the construction, improvement or repair of a road where those activities are carried out in accordance with this Regulation.

43. Any person who carries out a forest development activity alongside an open peat bog with a pond, a marsh, a riparian shrub swamp, a lake or a watercourse must remove all trees or tree parts that fall into those environments during the carrying out of the activity.

DIVISION V
SOILS

44. The ruts created in the falling and hauling trails during forest operations must not appear over more than 25% of the length of trails per total cutting area.

For the purposes of this section, a rut is a trace dug in the ground by the wheels or tracks of logging machines assigned to land preparation or to operations to harvest, haul, pile or load timber, and that is at least 4 m in length. On organic soil, a torn vegetal cover is considered as a rut. On mineral soil, a rut is more than 200 mm deep, measured from the mineral soil that it not disturbed by the logging machine.

45. In forest stands belonging to the ecological subregions and ecological types indicated in Schedule 5, tree branches and tops must be left on the falling site, near the stump, to prevent a loss in soil fertility in the long term.

CHAPTER IV
WILDLIFE HABITAT PROTECTION

DIVISION I
PROHIBITED FOREST DEVELOPMENT ACTIVITIES

46. No forest development activity may take place in the following wildlife habitats:

(1) a caribou calving area north of the 52nd parallel;

(2) a cliff inhabited by a colony of birds;

(3) a muskrat habitat;

(4) the site where a heronry's nests are located;

(5) an island or peninsula inhabited by a colony of birds;

(6) a salt lick.

47. The following forest development activities are prohibited in a waterfowl gathering area:

(1) the application of pesticides to control insect epidemics and cryptogamic diseases;

(2) the application of phytocides;

(3) the construction of roads;

(4) the digging of a drainage ditch for sylvicultural purposes.

The foregoing also applies to tree pruning, felling or harvesting and preparatory work for forest production purposes in the floodplain of a waterfowl gathering area between 15 March and 15 December of each year.

Partial cutting not exceeding 30% of the merchantable stems present, carried out over a 10-year period, is allowed from 16 December to 14 March in waterfowl gathering areas.

48. Section 46 and the second and third paragraphs of section 47 do not apply to the holder of a forestry permit issued for forest development activities carried out by the holder of mining rights for the purposes of exercising his or her rights, unless the mining activities are to extract surface mineral substances, nor to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

DIVISION II
STRIPS OF WOODLAND

§1. White-tailed deer yards

49. Despite the provisions of sections 26 and 28 to 30, no forest development activity is allowed within the first 20 metres of the strip of woodland kept alongside an open peat bog with a pond, a marsh, a riparian shrub swamp, a lake or a permanent watercourse located in a white-tailed deer yard.

50. Where the strip of woodland referred to in section 49 is made wider than 20 m to fulfill the needs of the white-tailed deer habitat, only partial cutting not exceeding 40% of the merchantable stems, in the case of stands of species referred to in Part A of Schedule 3, or 40% of the basal area in the case of stands of species referred to in Part B of that Schedule, is allowed beyond the first 20 metres of the strip of woodland.

However, the density of the stand may never be reduced to less than 700 merchantable stems/ha, in the case of stands of species referred to in Part A of Schedule 3, or the basal area may not be reduced to less than 16 m^2/ha, in the case of stand of species referred to in Part B of that Schedule.

Despite the first and second paragraphs of this section, where the sylvicultural prescription provides for partial cutting in the stand adjacent to the strip of woodland referred to in section 49, the harvest level indicated in the sylvicultural prescription of the adjacent stand then applies to the widened part of that strip of woodland.

Residual trees in the widened strip of woodland where partial harvest takes place must be spread uniformly so as to favor the renewal of the forest cover and to maintain shelters and food for the white-tailed deer.

51. Sections 49 and 50 do not apply to the holder of a forestry permit issued for forest development activities carried out by the holder of mining rights where the holder carries out mining exploration work, nor to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects, nor to the holder of a forestry permit issued for public utility works, nor if the construction, improvement or repair of a road is not prohibited by this Regulation.

52. A strip of woodland at least 60 m wide and at least 7 m high linking a white-tailed deer yard to the residual forest must be preserved and kept in place until the adjacent stands have reached an average height of 7 m.

No forest development activity may be carried out in that strip of woodland.

In softwood and softwood-dominant mixed stands within a white-tailed deer yard, a strip of woodland at least 60 m wide must be preserved and kept in place between 2 areas of total cutting until the dominant forest cover in those cutting areas has reached an average height of 7 m.

§2. Heronries

53. A strip of woodland at least 200 m wide must be preserved within a strip of 500 m surrounding the site where a heronry's nests are located. The strip of woodland is measured from the beginning of the stand bordering on the site of the nests.

Forest development activities are prohibited within the first 200 m of the strip of woodland referred to in the first paragraph. They are allowed beyond the first 200 m of that strip of woodland, but only from 1 August to 31 March.

The maximum width of the roadway of a road located within the limits of a heronry is 5.5 metres.

The first and second paragraphs do not apply to the holder of a forestry permit issued for forest development activities carried out by the holder of mining rights for the purposes of exercising his or her rights, unless the mining activities are to extract surface mineral substances, nor to the holder of a forestry permit issued for wildlife, recreational or agricultural development projects.

§3. Salmon rivers

54. A strip of woodland at least 60 m wide must be preserved on both sides of the river or part of a river designated by the Minister as a salmon river. The width of the strip of woodland is measured from the limit of the stand bordering on the environment to be protected or the stand adjacent to the riparian ecotone if the latter is present.

Forest development activities are prohibited in that strip of woodland, unless prior authorization is obtained from the Minister in accordance with section 39 of the Sustainable Forest Development Act (chapter A-18.1).

In the case of land immersed following the construction of dams, the strip of woodland begins at the limit of the land where the trees have perished as a result of the immersion.

§4. Bear dens

55. A strip of woodland at least 60 m wide must be preserved around a bear den from 15 November to 15 April. The strip may be harvested outside that period.

§5. Salt licks

56. A strip of woodland at least 60 m wide and at least 7 m high linking a the salt lick to the residual forest must be preserved intact and kept in place until the adjacent stands have reached a height of 7 m.

No forest development activity may be carried out in that strip of woodland.

DIVISION III
OPERATIONS IN CERTAIN WILDLIFE HABITATS

§1. White-tailed deer yard

57. Total cutting, carried out in one or more operations or according to the terms of block cutting, is prohibited in a white-tailed deer yard on the following areas:

(1) in hardwood and hardwood-dominant mixed stands, over a single block greater than 25 ha once all operations are completed;

(2) in softwood and softwood-dominant mixed stands, over a single block greater than 10 ha once all operations are completed.

Total cutting may be carried out again on the areas harvested if regeneration has reached a height of 7 m over all the harvested area.

At the time of cutting, the vegetal elements used as shelter and food by white-tailed deer must be preserved.

Line cutting over a width greater than 2 metres is prohibited in a white-tailed deer yard.

The construction, improvement or repair of a road is prohibited in a white-tailed deer yard from 1 December to 1 May.

The first, second and third paragraphs do not apply to the holder of a forestry permit issued for public utility works who installs a power transmission line or gas pipeline.

§2. Woodland caribou habitat, woodland ecotype

58. In the application zone of the Plan de rétablissement du caribou forestier under a program referred to in paragraph 2 of section 7 of the Act respecting threatened or vulnerable species (chapter E-12.01), no forest development activity may be carried out in a territory of 4 ha or more in a single block, of the RE1 ecological type and occupied by a lichenous black spruce stand, a lichenous grey pine stand or a stand of lichens whose basal area is composed at a minimum of 75% of black spruce and grey pine. That plan is accessible on the website of the department within which the Minister responsible for the application of that plan carries out duties.

However, a forest development activity may be carried out there if it is authorized as part of an activity or project for which a certificate of authorization was issued following a decision of the authority concerned made under section 31.5, 164 or 201 of the Environment Quality Act (chapter Q-2).

This section does not apply to a person who, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), has been authorized by the Minister to build or improve a multi-purpose road in a forest stand referred to in the first paragraph of this section, nor to a person who has obtained such authorization under a forestry permit or a contract or agreement entered into under that Act.

59. In the application zone of the Plan de rétablissement du caribou forestier, exceptional roads, class 1 and class 2, whose characteristics are defined in Schedule 6, must be located at least 1 km from the limit of the timber stands for the protection of woodland caribou, woodland ecotype, that are indicated in the numeric information layers used for forest planning.

60. In the application zone of the Plan de rétablissement du caribou forestier, roads built in an aggregated cut block of 100 km2 or more designed to become a timber stand for the protection of woodland caribou, woodland ecotype, must be closed and put back into production at the end of the forest development activities. Closing the roads and putting them back into production must help the cutting areas to reach the requirements required to become timber stands for the protection of caribou so as to take the relay as soon as those timber stands will be cut.

The integrated forest development plan must indicate those roads, specify the means to be used to close and put them back into production, and describe the procedure to be followed.

CHAPTER V
ROADS, SAND PITS AND FOREST INFRASTRUCTURES

DIVISION I
SCOPE

61. The provisions of this Chapter apply to forests roads over all the territory referred to in section 1.

However, they do not apply to roads under the management of the Minister responsible for the Act respecting roads (chapter V-9) that are classified as autoroutes or national roads, regional roads or collector roads, except the provisions of Division V regarding sand pits comprised in sections 115 to 120.

DIVISION II
ROADS

§1. General

62. Where construction, improvement, repair, maintenance or closing work is carried out on a road or road segment, waste and other residual materials other than granular material must be collected and carried outside the forest to an appropriate site.

Where improvement work is carried out on a road or road segment, the bridges, culverts, safety devices and road signs of the road must be modified if need be so as to comply with the characteristics of the new class of roads, referred to in Schedule 6.

63. Every person who is authorized to carry out forest development activities and who, in the course of those activities, damages a road or renders it unusable must make the repairs required without delay to make the road usable. The road must be usable for all kinds of vehicles likely to take the class of road to which the road belongs.

64. Every person who intends to do repair work on a road, bridge or culvert must, at least 10 days before the work is to begin, send to the Minister a written notice describing the intended work and showing the place and date of beginning of the work.

§2. Prohibited construction, improvement or repair

65. The construction, improvement or repair of a road to cross a lake is prohibited, unless authorized as part of an activity or project for which a certificate of authorization was issued following a decision of the authority concerned made under section 31.5, 164 or 201 of the Environment Quality Act (chapter Q-2).

66. The construction or improvement of a road, other than a felling trail, a hauling trail or a trail not intended for motorized all-terrain vehicles, is prohibited within 60 m of an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse, as well as within 30 m of an intermittent watercourse. The distance from the lake or watercourse is measured from the upper limit of the shore or bank to the base of the embankment of the road closest to the lake or watercourse. For an open peat bog with a pond, a marsh or a riparian swamp, the 60-m distance is measured from its perimeter to the base of the embankment of the road closest to that environment.

In places where the soil is impervious hardpan, the distance between the road and the lake or watercourse to be considered for the purposes of the first paragraph must be at least 4 times the height of the lakeshore or the bank of the watercourse, with a minimum of 60 m. In those places, the hardpan must be left intact and the vegetal cover and stumps must be preserved.

The first and second paragraphs do not apply if the topography or hydrography of the site does not make it possible to comply with the distances prescribed in those paragraphs and, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), the construction or improvement of the road within a shorter distance has been authorized by the Minister, or the performance of such work is authorized under a forestry permit or a contract or agreement entered into under that Act. Those situations must be the subject of written applications justifying a departure from the first or second paragraph and indicating the alternative measures proposed to ensure the protection of the environment.

The Minister consults the ministers responsible for the administration of the Act respecting the conservation and development of wildlife (chapter C-61.1) and the Environment Quality Act (chapter Q-2) where the situations described in the third paragraph require the construction or improvement of the road less than 20 m from the lake or watercourse. In addition, the construction, improvement or repair of a road running along a lake or watercourse while encroaching on its bed or riparian ecotone requires the authorizations provided for in those Acts.

67. The repair of a road, other than a felling or hauling trail or other than a trail not intended for motorized all-terrain vehicles, is prohibited within 60 m from an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse and within 30 m from an intermittent watercourse. The distance from the lake or

watercourse is measured from the upper limit of the shore or bank to the base of the embankment of the road closest to the lake or watercourse. For an open peat bog with a pond, a marsh or a riparian swamp, the 60-m distance is measured from its perimeter to the base of the embankment of the road closest to that environment.

Despite the first paragraph, the repair of a road is allowed in the environments referred to in the first paragraph where all the following conditions are met:

(1) no tree cutting is carried out in the strip of woodland referred to in section 25, except the place occupied by the roadway, shoulders, ditches and embankments of the road under repair;

(2) no logging machine travels in the strip of woodland referred to in section 25, except the place occupied by the roadway, shoulders, ditches and embankments of the road under repair;

(3) the repair work is not carried out in the winter period;

(4) the road surface is profiled so that the runoff leaves the roadway on the side opposite to the environment to be protected;

(5) the water flowing at the foot of the embankments of a road is diverted towards vegetation areas more than 20 m away from the environment to be protected to prevent sediments from being carried into the environment or, if that condition cannot be met, settling ponds are built;

(6) measures are taken during the repair of the road to prevent at all times sediments from being carried into the environment to be protected.

68. The construction or improvement of a road segment longer than 100 metres is prohibited in an open peat bog, unless that work is carried out on a felling or hauling trail, a trail not intended for motorized all-terrain vehicles or an ungroomed road.

The first paragraph does not apply if the topography or hydrography of the site does not allow for the construction or improvement of a road elsewhere than in the open peat bog and, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), the construction or improvement of the road has been authorized by the Minister, or the performance of such work is authorized under a forestry permit or a contract or agreement entered into under that Act. Those situations must be the subject of written applications justifying a departure from the first paragraph and indicating the alternative measures proposed to ensure the protection of the open peat bog.

The Minister consults the Minister responsible for the administration of the Environment Quality Act (chapter Q-2) where the situations described in the second paragraph require the construction or improvement of the road over a distance of more than 100 metres in an open peat bog.

§3. Road implantation features

69. Subject to the second paragraph, the width of the right-of-way of a road may not exceed the width prescribed in Schedule 6 for the class of road to which it belongs. For the purposes of this paragraph, the class of road is assessed on the basis of the width of the roadway and road shoulders, as indicated in Schedule 6.

The maximum width of the right-of-way of a road located within the limits of a sugar bush operated for acericultural purposes or having a potential for maple production or within the limits of a white-tailed deer yard is 20 m. For the purposes of this paragraph, a hardwood stand at least 60% of which is composed of sugar maples or red maples or a combination of both species and allowing more than 150 tapholes per hectare constitutes a sugar bush with a potential for maple production. The sugar bushes with a potential for maple production to be protected are those indicated in the numeric information layers used for forest planning.

This first paragraph does not apply to a person who, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), has been authorized by the Minister to build or improve a road whose right-of-way is wider than the width provided for in the first paragraph, nor to a person who has obtained such authorization under a forestry permit or a contract or agreement entered into under that Act.

70. The soil may not be removed over a width greater than the width of the right-of-way of the road during the construction, improvement, repair or maintenance of a road.

The soil, organic debris and materials removed during the construction, improvement or repair of a road may not be deposited outside the right-of-way. Where they are deposited in the zone between the road shoulder and the limit of the right-of-way, they must be leveled.

In the case of a road crossing a watercourse, no material may be removed in the riparian ecotone or in a zone 20 m in width measured from the upper limit of the watercourse bank

§4. Stabilization of excavated soils and road embankments and diversion of runoff

71. The excavated soils and road embankments must be stabilized without delay during the construction, improvement or repair of a road, by means of soil stabilization techniques as much as possible in harmony with the natural setting of the environment, in places where the erosion of the road could bring sediments into an open peat bog with a pond, a marsh, a riparian swamp, a lake or a watercourse.

Stabilization techniques are, in particular: stabilization with vegetation, riprap and the construction of a retaining wall. A geotextile membrane must be placed under the riprap or retaining wall if there is a risk of bringing sediments into the environments referred to in the first paragraph.

72. A road other than a felling or hauling trail or other than a trail intended for motorized all-terrain vehicles must be built, improved, repaired or maintained while respecting the natural drainage of the soil in order to maintain, by the installation of a drainage channel, the normal flow of the water from one side of the road to the other.

73. During the construction, improvement, repair or maintenance of a road, the runoff from the roadway surface, other than a felling or hauling trail or other than a trail not intended for motorized all-terrain vehicles, must be discharged outside the roadway and shoulders towards vegetation areas located more than 20 m from the beginning of the stand that borders on an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse or towards vegetation areas located more than 20 m from an intermittent watercourse. The distance of 20 m from the intermittent watercourse is measured from the upper limit of the bank or outside the riparian ecotone if the latter is present.

74. During the construction, improvement, repair or maintenance of a road, the water flowing at the foot of the embankments of a road, other than a felling or hauling trail or other than a trail not intended for motorized all-terrain vehicles, must be regularly diverted outside the right-of-way of the road towards vegetation areas located more than 20 m from the beginning of the stand that borders on an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse or towards vegetation areas located more than 20 m from an intermittent watercourse. The distance of 20 m from the intermittent watercourse is measured from the upper limit of the bank or outside the riparian ecotone if the latter is present.

The maximum distance in meters to be respected between the diversions is calculated by dividing the number 500 by the percentage, in whole number rounded to the closest unit, of the road slope, or is calculated by any other technique ensuring that the diversions are in a sufficient number and laid out so as to prevent the erosion of the road infrastructure.

Where the slope of the road to be built or improved is greater than 9% and the foot of the slope is less than 60 m from an open peat bog with a pond, a marsh, a riparian shrub swamp, a lake or a watercourse, the slope of the embankments and the clearing of the road must be reduced to a ratio of at least 1 (V): 1.5 (H) and the embankment must be stabilized using the techniques mentioned in section 71. This paragraph does not apply to a person who, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), was authorized by the Minister to build or improve a road meeting other conditions, or to a person who has obtained such an authorization by a forestry permit or a contract or agreement entered into under that Act.

In the case of the repair of a road carried out under the same conditions as those provided for in the third paragraph, the slope of the embankments and the clearing of the road must be stable and not allow the carrying of sediments into the environment to be protected.

75. The water flowing in felling or hauling trails that channel surface water into the hydrographic system must be blocked and diverted towards vegetation areas located more than 20 m from the beginning of the stand bordering on an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse or towards vegetation areas located more than 20 m from an intermittent watercourse. The distance of 20 m from the intermittent watercourse is measured from the upper limit of the bank or outside the riparian ecotone if the latter is present.

76. The diameter of a drainage channel used to divert water from one side of a road to the other, other than a felling or hauling trail or other than a trail not intended for motorized all-terrain vehicles, must be sufficient to prevent the obstruction of the channel and maintain at all times the free flow of the water. The diameter of the channel may not be less than 300 mm.

The fill covering a drainage channel must be greater than 300 mm.

The end of the drainage channel must extend at least 300 mm beyond the base of the fill supporting the road and the fill in that location must be stabilized at the time of installation.

§5. Maintenance and closure of a road

77. During the maintenance of roads, measures must be taken to prevent materials from the roadway surface and abrasives spread on the roadway in winter from covering the stabilized embankments and end up in open peat bogs with a pond, marshes, riparian swamps, lakes or watercourses or within 20 m from the beginning of a stand bordering on one of those environments or outside the riparian ecotone if the latter is present.

Road maintenance work and the spreading of abrasives must be carried out so as to prevent sediments from being carried into the aquatic environments, wetlands and riparian environments.

78. The techniques used during the temporary or permanent closure of a road must prevent the obstruction of the water flow and the sedimentation in watercourses. They must also ensure the free flow of fish in crossing sites other than those referred to in section 100.

Bridges and culverts must be removed when the closure of the road is permanent. After their removal, the bed and banks of the watercourses must be stabilized. The vegetal cover in the strips of woodland or the strip of land referred to in section 25 or 32 must be reconstituted. The right-of-way of the road must be reforested over a minimum length of 250 m from the point of closure or up to the first bridge or culvert removed in order to make use impossible. Reforestation must be carried out within 2 years using species adapted to the site.

§6. Ungroomed roads

79. The earthwork of an ungroomed road must allow the preservation of the natural drainage of the soil and must not have the effect of channeling water on the surface of the road.

The installation of a drainage channel is prohibited in an ungroomed road.

80. Runoff from the surface of an ungroomed road must be blocked and diverted towards vegetation areas located more than 20 m from the beginning of the stand bordering on an open peat bog with a pond, a marsh, a riparian swamp, a lake or a permanent watercourse or towards vegetation areas located more than 20 m from an intermittent watercourse. The distance of 20 m from the intermittent watercourse is measured from the upper limit of the bank or outside the riparian ecotone if the latter is present.

§7. Control of the access of motorized vehicles to sugar bushes

81. The holder of a sugar bush management permit may, on the conditions provided for in section 82, control the access of motorized vehicles to the main building used for boiling the sap by means of a gate or any other safe means approved by the Minister and indicated in the permit, that the holder may install for that purpose.

82. Access of motorized vehicles may only be controlled on the following conditions:

(1) the main building used for boiling the sap must be located within the limits of the sugar bush that is the subject of the management permit;

(2) the road on which access is controlled must lead only to the main building;

(3) the control must take place within the limits of the sugar bush and less than 100 m from the main building;

(4) the device used for controlling the access of motorized vehicles must be visible at all times in order to ensure the safety of the public.

DIVISION III
BRIDGES, CULVERTS, REMOVABLE STRUCTURES AND RUDIMENTARY STRUCTURES

§1. General

83. Every person authorized to build or improve a road crossing a watercourse must ensure that the bridges, culverts or removable structures that are part of the road allow the free flow of the water. The foregoing also applies to a person who repairs a road crossing a watercourse.

Bridges, culverts and removable structures must prevent the contact of vehicles with the water and the bed of the watercourse and the carrying of sediments into the aquatic environment.

Bridges, culverts and removable structures must be stabilized as soon as possible during the work to prevent any possible risk of erosion.

§2. Prohibited construction, improvement or repair

84. The construction, improvement or repair of a bridge or culvert to cross a lake is prohibited, except if it is authorized as part of an activity or a project for which

a certificate of authorization was issued following a decision of the authority concerned made under section 31.5, 164 or 201 of the Environment Quality Act (chapter Q-2).

85. The construction of a bridge or a culvert is prohibited on an ungroomed road or in felling or hauling trails.

86. The construction of a bridge or a culvert or the installation of a removable structure is prohibited in a spawning ground. Such work is also prohibited within the first 100 meters upstream from a spawning ground indicated in the numeric information layers used for forest planning.

87. The construction, improvement or repair of a bridge or a culvert or the installation of a removable structure in a salmonid watercourse must be carried out at all times by using techniques that allow to limit the carrying of sediments outside the work area and thus preserve the attributes of the habitats present such as spawning grounds. The techniques must be adapted to the conditions of the site. The techniques include the drying of the work area, the performance of the work during the period of minimum flow and the installation of a sediment confinement curtain.

The first paragraph does not apply where all the construction, improvement or repair work of a bridge or a culvert or the installation work of a removable structure are done outside the upper limit of the bank.

A spawning ground affected by sediment deposition following work must be restored as soon as possible.

88. Sections 86 and 87 do not apply if the work referred to in those sections are authorized as part of an activity or a project for which a certificate of authorization was issued following a decision of the authority concerned made under section 31.5, 164 or 201 of the Environment Quality Act (chapter Q-2).

89. The construction, improvement or repair of a bridge or a culvert between the banks of a watercourse containing any of the species of fish referred to in Schedule 7 is allowed only during the periods of work provided for in that Schedule, which vary depending on the regions and the species of fish present. The work may be carried out outside the periods if all the work is carried out outside the upper limits of the banks or if all the work carried out on the bed of the watercourse is done in less than 72 hours.

Excavation, installation of the conduit, backfilling, stabilization of embankments located between the banks of the watercourse and work on the piers of a bridge are covered by this section.

This section does not apply to a person who, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), was authorized by the Minister to build or improve a bridge or a culvert outside the periods of work provided for in Schedule 7 or to a person who obtained such an authorization under a forestry permit or a contract or agreement entered into under the Act.

§3. Drying of work area

90. Every person who installs coffer dams and structures for the temporary diversion of a watercourse, such as a diversion canal, to dry all or part of the work area during the construction, improvement, repair or removal of a bridge or a culvert must, in situations other than those described in section 100, ensure that the coffer dams and diversion structures do not prevent the flow of fish during more than 5 days and that they limit the carrying of sediments into the watercourse. Where the period exceeds 5 days, the coffer dams and diversion structures must not reduce the width of the watercourse by more than 1/3. The width of the watercourse is measured at the level of the upper limit of the banks.

At the end of the work, the coffer dams must be removed and the diversion canal used during the diversion of the watercourse must be filled by restoring the vegetal cover.

91. The person must also ensure that the coffer dams and the piers installed in a watercourse frequented by salmonids are composed of clean materials, free from fine particles less than 5 mm, except if mitigation measures limiting the carrying of sediments are applied. The purpose of the measures is to preserve the attributes of the habitats present, such as spawning grounds.

§4. General provisions applicable to bridges or culverts

92. The embankments of a road that crosses a watercourse must be stabilized between the banks up to above the conduit or the arch, during the construction, improvement or repair of the road, with a geotextile membrane covered with riprap or a retaining wall.

The slope of the embankments located between the banks and above the conduit or the arch and the slope of the embankment located within 20 m of the watercourse, measured from the upper limit of the bank, must be reduced to a ration of 1 (V):1.5 (H) and the embankment must be stabilized using the usual techniques, such as those referred to in the second paragraph of section 71. The reduction of the slope is not required if the embankment is stabilized with a geotextile membrane covered with riprap or a retaining wall.

93. During the construction, improvement or repair of a road, the bed of the watercourse upstream and downstream of a bridge or a culvert must be stabilized at the time of the work with adequate materials to prevent the scouring of the bed and ensure the free circulation of water and fish if the free flow of fish must be ensured by reason of the absence of any of the situations described in section 100.

94. Every person carrying out a forest development activity that regularly uses a road crossing a watercourse must ensure that the bed of the watercourse is stabilized at the entrance and exit of the culvert and that the condition of the culvert allows free circulation of the water in order to ensure the durability of the road. The foregoing also applies to the manager of an outfitting operation, a controlled zone or a wildlife sanctuary within the meaning of sections 86, 104 and 111 of the Act respecting the conservation and development of wildlife (chapter C-61.1) or an enterprise carrying on mining activities or public utility works.

95. Every person authorized to build or improve a bridge or a culvert on the watercourse of a canoe-kayak-camping course and downriver canoeing course or boat access route to trapping grounds must ensure that the minimum clearance of the bridge or culvert is 1.5 m above the upper limit of the bank. The foregoing also applies to a person who repairs a bridge or a culvert on the watercourse of a canoe-kayak-camping course and downriver canoeing course or boat access route to trapping grounds.

96. The construction, improvement or repair of a bridge or a culvert must be carried out so that it is stable and remains operational regardless of the period the work is carried out and the work methods used. The stabilization must be done as the work progresses and any defect of the bridge or the culvert must be corrected as soon as it is detected.

The fill must be compacted in successive layers up to above the conduit or arch.

To ensure the durability of the culvert, special measures must be taken during the winter period to ensure compaction and an adequate stabilization.

Every person authorized to build or improve a culvert in the winter period must inspect the culvert after the spring flood and correct any defect within 7 days after the inspection. The foregoing also applies to a person who repairs a culvert during the winter period. The inspection must be carried out not later than 90 days following the end of the winter period.

97. Every person authorized to build or improve a culvert must ensure that the end of the conduit or arch extends from the base of the embankment after its stabilization by not more than 300 mm. The foregoing also applies to a person who repairs a culvert.

Except culverts with a reinforced concrete rectangular conduit and wooden culverts, the person must also fill above the conduit or arch of the culvert up to the following height:

(1) for conduits or arches having a diameter or span of 600 mm or less, up to a height corresponding to the diameter or the span of the conduit or the arch divided by 4, plus 300 mm;

(2) for conduits or arches having a diameter or span of more than 600 mm to 3,600 mm, up to a height corresponding to the diameter or the span of the conduit or the arch divided by 4, with a minimum of 600 mm;

(3) for conduits or arches having a diameter or span greater than 3,600 mm, up to a height of at least 1,500 mm.

For a wooden culvert, the person must fill above the arch to a minimum height of 300 mm up to a maximum of 1,000 mm.

98. The minimum discharge capacity that a culvert must possess is determined on the basis of the peak flow calculated using the method provided for in Schedule 8 for drainage basins having an area equal to or less than 60 km2 or in Schedule 9 for drainage basins having an area greater than 60 km2 and on the basis of the size of circular conduits provided for in Schedule 10. Conduits that are not circular or conduits with outlets, culverts with an arch or bridges must have a discharge surface sufficient to discharge the peak flow calculated using the method provided for in Schedule 8 or 9 as the case may be.

Every person authorized to build or improve a bridge or a culvert must, at the request of the Minister, give to the Minister within 48 hours of the request the calculations of the peak flow performed prior to the work. The foregoing also applies to a person who repairs a bridge or a culvert.

99. During the construction, improvement or repair of a road, a culvert may not have more than 2 parallel conduits. The conduits may be of different diameters provided that, according to Schedule 10, their diameters vary only by one class of diameter and provided that the total minimum discharge capacity determined according to the method of calculation of the peak flow for drainage basins provided for in Schedule 8 or 9, as the case may be, is met.

The minimum distance between the conduits is 1 m.

A device for guiding debris must be installed upstream from a culvert with parallel conduits.

100. During the construction, improvement or repair of a road that crosses a watercourse, a culvert must be installed so as to ensure the free flow of fish, except if, less than 250 m upstream or 500 m downstream of the crossing site, any of the following situations is present:

(1) there is the presence of a vertical fall more than 1 m high, measured from the surface of the water, and no spawning ground identified on the land or indicated in the numeric information layers used for forest planning is present between the fall and the crossing site;

(2) the bed of the watercourse has a section of smooth bedrock with an average slope of 5% or more over a minimum distance of 3 m and the depth of the water flowing over the entire section is less than 10 cm;

(3) a section of the watercourse has a slope equal to or greater than 20%, evaluated using the department's topographical maps or observed on the site over a distance of more than 20 m.

A culvert need not be installed to ensure the free flow of fish where, less than 250 m upstream from the crossing site, the bed of the watercourse disappears over a distance of more than 5 m.

Subparagraphs 1 and 2 of the first paragraph do not apply to a watercourse frequented by Atlantic salmon, ouananiche, Arctic char of the *oquassa* subspecies and anadromous brook trout.

For the purposes of this section, beaver dams, wood debris and anthropogenic obstacles are deemed not to be obstacles to the free flow of fish.

101. On crossing sites where the free flow of fish needs not be ensured by reason of the presence of any of the situations described in section 100, the installation of the culvert must meet the following conditions:

(1) the diameter or span of the conduit or arch must be at least 450 mm;

(2) the conduit must be installed following the natural slope of the watercourse and be buried under the bed of the watercourse at a depth equivalent to 10% the height of the conduit, without exceeding 500 mm regardless of the size of the conduit;

(3) the culvert may not reduce the width of the watercourse by more than 50%, measured from the upper limit of the bank.

On a crossing site where the free flow of fish need not be ensured, a culvert may include 1 smooth wall conduit or 2 in the case of parallel conduits.

102. On crossing sites where the free flow of fish must be ensured, a culvert may be installed only if it includes a circular conduit and if its installation meets the conditions provided for in Schedule 11.

During the installation of a culvert, the installation of smooth wall conduits is prohibited in a watercourse where the free flow of fish must be ensured.

103. Despite section 102, the following culverts may be installed where the conditions provided for in Schedule 11 may not be met:

(1) a culvert including a conduit with outlets, designed and installed according to the conditions provided for in Schedule 12;

(2) a culvert that meets other conditions the installation of which was authorized by the Minister under section 41 of the Sustainable Forest Development Act (chapter A-18.1) or the installation of which is authorized under a forestry permit or by a contract or an agreement entered into under the Act.

§5. *Special provisions applicable to bridges or culverts with an arch*

104. Despite sections 100 to 103, a bridge or a culvert with an arch may be installed on a crossing site, on the conditions provided for in section 105, regardless of the slope of the watercourse and whether or not the flow of fish must be ensured.

105. The construction, improvement or repair of a bridge must meet the following conditions:

(1) the bridge must not have the effect of reducing the width of the watercourse, measured from the upper limit of the bank;

(2) the piers and caissons of a bridge must be installed outside the upper limit of the bank and be buried at least 60 cm under the level of the upper limit of the bank.

Subparagraph 1 of the first paragraph does not apply to a bridge including 1 or a number of piers. The piers and materials used for their stabilization must not have the effect of reducing the width of the watercourse by more than 20%, measured from the upper limit of the bank.

The construction, improvement or repair of a culvert with an arch must meet the following conditions:

(1) the work area must be dried;

(2) the length of an arch must be not more than 24 m;

(3) an arch must be installed in the natural axis of the watercourse, in a relatively straight section whose banks are well defined. The length of an arch must be greater than 80% of the length of the thalweg of the section of the watercourse that will be disrupted by the work;

(4) an arch must not have the effect of reducing the width of the watercourse, measured from the upper limit of the bank;

(5) the walls of a wooden arch or the shoes of an arch other than wooden must be installed outside the upper limit of the bank and be buried under the thalweg, where the banks are not disrupted by the work, or be buried at a depth of at least 30 cm in relation to the thalweg, where the banks are disrupted by the work. Where there is the presence of rock before reaching those depths, the walls or shoes of the arch must be anchored thereto;

(6) the parts of each shoe of an arch other than wooden must be installed so as to form a continuous shoe and be attached over the whole length of the arch. Where bases, in particular in millwork wood, are installed between the foundations and the shoes of an arch other than wooden, they must be continuous and attached to the shoes;

(7) the walls or shoes of an arch must be installed on level foundations consolidated over the whole length of the arch. For ground with weak bearing capacity, the walls or shoes of an arch must be installed over a granular blanket at least 400 mm thick;

(8) the walls, shoes, bases and foundations of an arch must be adequately protected with riprap that is flood resistant in order to prevent scouring. The riprap of a culvert must not encroach on the bed of the reconstituted watercourse;

(9) a section of watercourse disrupted by the construction, improvement or repair work of a culvert with an arch must be reconstituted by meeting the following conditions:

(a) the reconstituted section of the watercourse must have the same width as that measured from the upper limit of the bank before the work;

(b) the bed must be reconstituted with heterogeneous materials similar to that constituting the bed of the natural watercourse to which big rocks must be added;

(c) wood debris, organic matter and topsoil may not be used to reconstitute the bed. The materials that may be used must include enough fine particles to seal the reconstituted bed. Where materials from the bed excavated during the work are used to reconstitute the bed, only surface materials may be used;

(d) a canal must be laid out in the reconstituted section of the watercourse in order to concentrate the flow during the low flow period;

(e) the water of the watercourse must be gradually re-circulated in the work area to allow the adjustment and imbrication of the materials of the reconstituted bed and thus ensure the imperviousness of the bed;

(f) in a salmonid watercourse, the devices used to temporarily dry the work area must be removed gradually so that 2/3 of the flow of the watercourse is re-circulated in the work area;

(g) in a salmonid watercourse, the arch, riprap, bed and banks located in the work area must be cleaned to remove fine particles deposited on the surface;

(h) in a salmonid watercourse, roily water must be pumped outside the work area to vegetation areas located more than 20 m from the beginning of the stand bordering on the watercourse. The water must be clear before opening the coffer dam located downstream from the culvert with an arch and removing all the devices used to temporarily dry the work area;

(10) a wooden culvert must also meet the characteristics provided for in Schedule 13.

This section does not apply to a person who, in accordance with section 41 of the Sustainable Forest Development Act (chapter A-18.1), was authorized by the Minister to build a bridge or a culvert with an arch meeting other conditions or to a person who has obtained such an authorization under a forestry permit or by a contract or an agreement entered into under the Act.

106. Every person authorized to build or improve a bridge must, in addition to the conditions concerning bridges provided for in section 105, meet the conditions relating to bridges provided for in Schedule 14. The foregoing also applies to a person who repairs a bridge.

§6. *Special provisions applicable to removable structures and rudimentary structures*

107. The installation of a removable structure is allowed exclusively in a felling or hauling trail or in an ungroomed road.

The structure must be installed so as to prevent the contact of the motorized vehicle with the watercourse while ensuring the free flow of the water and of the fish where the free flow of fish must be ensured by reason of the absence of a situation described in section 100.

108. The installation of a removable structure whose supports are located outside the upper limit of a bank is allowed all year long. However, that type of structure must not be in contact with the watercourse.

In the winter period, the following types of removable structures may also be installed:

(1) a structure composed of 1 or more conduits at least 600 mm in diameter installed on the bed of a watercourse and whose fill is constituted of tree trunks or snow and covered if needed with a geotextile membrane and granular materials;

(2) a structure composed of compacted snow or frozen water, covered if needed by a geotextile membrane and granular materials, in particular where there is a risk of carrying sediments into the watercourse;

(3) an ice bridge, that is a structure composed only of frozen water and reinforced if needed by log mats that are interconnected.

Any type of removable structure other than those described in the second paragraph is prohibited during the winter period.

Where a removable structure is installed during the winter period, the banks must be stabilized over the whole width of the trail regardless of the type of removable structure installed. The removable structure installed must be appropriate for the crossing site in order to minimize the disruptions of the bed of the watercourse when it is used and removed.

109. Removable structures whose supports are located outside the upper limit of the bank must be removed from the watercourse not later than 6 months after their installation.

The types of removable structures described in the second paragraph of section 108 must be removed from the watercourse at the end of their use, not later than the end of the winter period, so as to prevent the carrying of sediments into the watercourse and the creation of an ice jam.

Where log mats that are interconnected to stabilize the banks have been used, they must be stabilized and left in place. The granular materials used for the roadway surface near the removable structures that have been removed must be recovered over a distance of at least 20 m, measured from the upper limit of the bank and they must be deposited further than that distance.

110. The installation of rudimentary or light structures to cross a watercourse, such as foot bridges or small structures made of logs, is only allowed in a trail that is not intended for motorized all-terrain vehicles, in particular in a cross-country ski trail, a bike trail and a hiking trail.

The structure must allow the free flow of water and its supports must be outside the banks.

§7. Stabilization of the bed, banks and riparian zone of a watercourse

111. The bed, banks, riparian ecotone of a watercourse and the strip of woodland and land strip referred to in section 25 or 32 that have been disrupted during the construction, improvement, repair or removal of a bridge or a culvert or during the installation or removal of a removable structure must be stabilized immediately. The soil stabilization techniques used must allow the rapid reconstitution of the vegetal cover of the affected basal areas.

Materials with a sufficient gauge and stable enough to be flood resistant must be used when stabilizing the bed and banks of a watercourse.

DIVISION IV
ROAD SIGNS

§1. Provisions applicable to roads

112. Every person authorized to build or improve a road must, at the end of the work, post the following elements: mandatory stops, dangerous curves and intersections, steep slopes, level crossings, rock fall areas; truck crossings, unsawn timber transportation areas, narrow passages and restricted visibility areas, the number of the road, kilometre markers, the maximum speed on main roads and all situations potentially dangerous for the users of the road. The foregoing also applies to a person who repairs a road.

Every person authorized to close a road must, at the intersection of the road crossing the closed road, signal the closure of the road, the presence of gates or obstacles, if applicable, and the removal of bridges or culverts where the closure of the road is permanent.

Road signs must comply with, as the case may be, the standards in chapter 2 or 3 of Volume V of the *Signalisation routière* manual determined and set out by

the Minister of Transport under the second paragraph of section 289 of the Highway Safety Code (chapter C-24.2) or the standards of the *Guide de signalisation routière sur les terres du domaine de l'État*, published by the Minister responsible for the administration of the Sustainable Forest Development Act (chapter A-18.1).

All road and traffic signs must be installed with care, facing vehicles, so as to be perfectly visible even at night. No obstacle such as vegetation or a snow bank must reduce the visibility of the signs.

113. Every person who carries out forest development activities that regularly uses a forest road must see to the adequate maintenance of the road and traffic signs in order to ensure the safety of users and the protection of road infrastructures. The foregoing also applies to the manager of an outfitting operation, of a controlled zone or of a wildlife sanctuary within the meaning of sections 86, 104 and 111 of the Act respecting the conservation and development of wildlife (chapter C-61.1) or of an enterprise that carries out mining activities or public utility works.

§2. Provisions applicable to bridges

114. Every person authorized to build or improve a bridge must, at the end of the work, post at each end of the bridge the following elements: hazard markers signalling the limits of the bridge deck, the indication of a narrow crossing, the maximum load the bridge may support based on the types of vehicles and the speed allowed for crossing the bridge. The foregoing also applies to a person who repairs a bridge.

All signs and tab signs must be installed with care, facing the vehicles, so as to be perfectly visible even at night. No obstacle such as vegetation or a snow bank must reduce the visibility of the signs or tab signs. They must comply with the standards in the *Guide de signalisation routière sur les terres du domaine de l'État*, published by the Minister responsible for the administration of the Sustainable Forest Development Act (chapter A-18.1).

A vehicle whose total loaded mass exceeds the mass posted on site pursuant to the first paragraph may not travel on the bridge of a road.

DIVISION V
SANDPITS

§1. Scope

115. This Division applies to sandpits used for the construction, improvement, repair, maintenance or closure of forest roads.

§2. Sandpit operating area and organic matter storage area

116. A sandpit operating area and the storage area for the organic matter that covered the sandpit must be at a distance of more than 30 m from an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse.

Runoff from a sandpit operating area or the storage area for the organic matter that covered the sandpit must be diverted to a vegetation area located at a distance of at least 20 m from an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse.

The distances referred to in this section are measured from the perimeter of the peat bog, marsh or swamp or from the upper limit of the shore of the lake or the bank of the watercourse or from outside the riparian ecotone if the latter is present.

117. The holder of a lease to mine surface mineral substances referred to in section 140 of the Mining Act (chapter M-13.1) must, before the expiry of the lease, restore the site to allow its integration into the environment and, for that purpose, clear the surface of the site of machine parts, waste, debris and other litter, reduce the slopes to a ratio of 1 (V) in 1 (H) or to a lesser ratio and respread the organic matter that has been piled up since its opening. The site must be left in conditions conducive to the rapid establishment of the natural regeneration.

118. A sandpit may not be opened or operated within 35 m from a numbered public road appearing on the official map of the Ministère des Transports, within 150 m from a dwelling on public or private land, within 150 m from a developed campground with at least 9 campsites or within 1,000 m from a municipal water intake.

119. A minimum distance of 100 m must be kept between a sandpit operating area and the boundaries of a park established under the Parks Act (chapter P-9), the boundaries of a proposed or permanent protected area, categories I, II or III of the International Union for Conservation of Nature, established in accordance with the Natural Heritage Conservation Act (chapter C-61.01) or the Parks Act and entered in the register of protected areas and the boundaries of the habitat of a threatened or vulnerable wildlife or plant species identified under the Act respecting the conservation and development of wildlife (chapter C-61.1) or the Act respecting threatened or vulnerable species (chapter E-12.01).

120. The bottom of the sandpit must be above the level of groundwater at all times.

DIVISION VI
PILING AREAS, FOREST CAMPS AND FACILITES USED TO OPERATE A SUGAR BUSH

§1. Piling area

121. The setting up of a piling area is prohibited on a 30-m strip located along a road corridor and in its right-of-way.

The setting up of a piling area is also prohibited within 20 m of an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse.

The organic matter from the scraping of soil for the laying out of a piling area must be piled more than 20 m from an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse for its reuse. Runoff from a piling area must be diverted to a vegetation area located more than 20 metres from those environments.

The distance of 20 m referred to in the second and third paragraphs is measured from the perimeter of the peat bog, swamp or marsh or from the upper limit of the shore of the lake or bank of the watercourse or from outside the riparian ecotone if the latter is present.

122. In the case of a partial cutting or a harvesting passage by total cutting that maintains a forest cover equivalent to the cover of a partial cutting, the person carrying out the cutting must ensure that the total length of the piling areas set up on the side of a road does not exceed 20% of the length of the side of the road in front of the cutting area.

The depth of the piling area may not exceed 30 m. It is measured from the foot of the embankment of the road bordering on it.

123. In the case of a total cutting of whole trees, the person who carries out the cutting must aggregate logging residues in windrows over an area that does not exceed 30% of the total area of the piling area or spread the logging residues evenly over the entire cutting area so that the residues decompose quickly and do not affect the pre-established regeneration.

Windrowing of logging residues in the piling area or the spreading of the logging residues over the cutting area must be carried out within 30 days following the end of the cutting or within 90 days following the end of the winter period where the cutting was carried out during that period. Where the recovery of forest biomass is authorized in the cutting area, windrowing of logging residues in the piling area or the spreading of the logging residues over the cutting area must be performed after the recovery.

Windrowing of logging residues in the piling area must not affect the visibility and the safety of the users of the road.

For the purpose of calculating the area of the piling area, the length of the edge of the cutting area facing the road is considered as the distance that may be occupied by the piling area. The depth of the piling area may not exceed 30 m. It is measured from the foot of the embankment of the road bordering on it.

124. A person who has carried out the timber cutting and has set up a piling area must, within 30 days following the end of the cutting or within 90 days following the end of the winter period if the cutting was carried out during that period, spread over the piling area the organic matter piled during the laying out and leave the site in conditions conducive to the rapid establishment of the natural regeneration.

This section does not apply to a piling area referred to in section 122 where it is planned that the area will be used again within a period of 25 years or less.

§2. Forest camps

125. A forest camp area may not be set up within 30 m of an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse. Organic matter from the setting up of a forest camp area must be piled more than 20 m from those environments for its reuse.

The distances are measured from the perimeter of the peat bog, the swamp or the marsh or from the upper limit of the shore of the lake or the bank of the watercourse or from outside the riparian ecotone if the latter is present.

126. The area of a forest camp must be cleaned at the end of its use by removing all the installations, equipment, debris and waste found there. The organic matter piled must also be spread over the area. The site must be left in conditions conducive to the rapid establishment of the natural regeneration.

§3. Facilities used to operate a sugar bush

127. The installation of a building and the motorized equipment necessary for the cultivation and operation of a sugar bush is prohibited within 30 m from an open peat bog, a swamp, a riparian shrub marsh, a lake or a watercourse. The distance is measured from the perimeter of the peat bog, swamp or marsh or the upper limit of the shore of the lake or the bank of the watercourse or from outside the riparian ecotone if the latter is present.

CHAPTER VI
ALLOCATION OF FOREST OPERATIONS AND RESIDUAL FOREST

DIVISION I
GENERAL PROVISIONS APPLICABLE TO THE BIOCLIMATIC DOMAINS OF THE SUGAR BUSH, THE BALSAM FIR FOREST AND THE SPRUCE-MOSS FOREST

128. A minimum of 30% of the productive forest area in residual forest of 7 m or more in height must be maintained at all times in a territorial reference unit where harvesting is carried out.

Where the limits of a territorial reference unit are changed, in particular following a change of the limits of a development unit, the first paragraph applies to the new territorial reference unit.

129. The provisions of section 128 do not prevent deforestation carried out in order to build, improve or repair a road giving access to another territorial reference unit.

DIVISION II
SPECIAL PROVISIONS APPLICABLE TO THE BIOCLIMATIC DOMAINS OF THE SUGAR BUSH AND THE BALSAM FIR FOREST

§1. Total cutting

130. In the development units or in the territorial reference units located in the bioclimatic domains of the sugar bush referred to in Schedule 2, the total cutting areas must

(1) have a size less than or equal to 25 ha over at least 70% of the harvested area for that type of cutting;

(2) have a size less than or equal to 50 ha over at least 90% of the harvested area for that type of cutting;

(3) have a size less than or equal to 100 ha over 100% of the harvested area for that type of cutting.

131. In the development units or in the territorial reference units located in the bioclimatic domains of the balsam fir stand referred to in Schedule 2, the total cutting areas must

(1) have a size less than or equal to 50 ha over at least 70% of the harvested area for that type of cutting;

(2) have a size less than or equal to 100 ha over at least 90% of the harvested area for that type of cutting;

(3) have a size less than or equal to 150 ha over 100% of the harvested area for that type of cutting.

132. The total cutting areas to which sections 130 and 131 apply are those indicated in the integrated forest development plan and whose planned harvest is carried out during a harvest year.

§2. Total cutting other than block cutting

133. A strip of woodland in a single block must be maintained between the total cutting areas other than block cutting, until the regeneration of the cutting areas has reached an average height of 3 m. The strip of woodland between 2 cutting areas must be at least 60 m wide where each cutting area covers an area of less than 100 ha or at least 100 m wide where one of the cutting areas covers an area of 100 to 150 ha.

The strip of woodland must be composed of trees, shrubs or brush over 3 m in height and must be used as a visual screen and a corridor for the movement of wildlife.

The travel of logging machines is prohibited in that strip of woodland, except during the construction or improvement of a road.

134. Any cutting, total or partial, is prohibited in the strip of woodland referred to in section 133 until the regeneration is established in the cutting areas in accordance with the first paragraph of that section.

The construction or improvement of a road crossing the strip of woodland is allowed to the extent that the deforestation carried out for that purpose does not exceed the width of the right-of-way provided for in Schedule 6 for the class of road to which it belongs.

§3. Block cutting

135. The cutting areas of a block cutting must be of variable size and form.

136. The residual forest of a block cutting must have the following characteristics:

(1) have, inside the limit of the block cutting harvest site, an area at least equivalent to the area of the cutting areas of a block cutting;

(2) have a width of at least 200 m;

(3) be composed in a proportion of at least 80% of forest stands 7 m or more in height and, in a proportion not exceeding 20% of its area, forest stands of 4 m to less than 7 m in height;

(4) be composed of stands having a forest cover density greater than 40% over at least 80% of its area and from 25 to 40% over its remaining area. It may also be composed of stands having a forest cover density of 25 to 40% over more than 20% of its area, provided that that proportion is equal to or less than the proportion of the stands with such a density that are located in forests 7 m or more in height of the block cutting harvest site before the operation;

(5) be composed of forest stands that can produce in commercial species a volume of mature rough merchantable timber of at least 50 m^3/ha or, where they cannot produce such a volume, be composed of forest stands equivalent in composition and in area to those harvested;

(6) be composed of forest stands belonging in a proportion of at least 20% to the same type of forest cover as those harvested;

(7) not have been the subject, in the last 10 years of harvesting, of a commercial harvest other than a sylvicultural treatment referred to in the second paragraph of section 139.

137. Each block cutting harvest site must be indicated in the integrated forest development plan. The foregoing also applies to the residual forest of a block cutting.

Once indicated in the plan, the residual forest of a block cutting may not be used again as residual forest for as long as the harvesting cannot be carried out in accordance with the first paragraph of section 139.

138. A forest area composed of trees, shrubs or brush having an average height of 3 m or more must be preserved on the perimeter of a cutting area of a block cutting. Its width must be at least 200 m or at least 100 m if the cutting area is less than 25 ha.

The first paragraph does not apply to the part of the perimeter of a cutting area adjacent to a strip of woodland preserved along a lake or a watercourse whose width, measured at the level of the upper limit of the shores or banks, exceeds 35 m.

A forest area composed of trees, shrubs or brush having an average height of 3 m or more that is at least 200 m wide must also be preserved between a residual forest and the cutting areas of a block cutting and between a residual forest and the other total cutting areas in order to be used as a corridor for the movement of wildlife.

The forest areas referred to this section must be preserved until the regeneration in the block cutting areas reaches an average height of 3 m or more.

139. The residual forest of a block cutting must be preserved inside the limit of the harvest site until it may be harvested. It may be harvested only on the expiry of a 10-year period after the date on which block cutting was carried out or, if the regeneration has not yet reached after that period the average height of 3 m, until that regeneration has reached such a height.

The first paragraph does not apply to the following sylvicultural treatments carried out in a residual forest:

(1) a commercial thinning or selection cutting carried out according to the applicable sylvicultural prescriptions;

(2) a partial cutting in a mature tree stand or in a stand that will reach maturity in less than 15 years where not more than 35% of the marketable basal area of the stand is harvested, provided that after harvesting, a marketable basal area of at least 15 m^2/ha of well-spaced trees composed of species and proportions similar to those of the initial stand, is maintained.

A residual forest of a block cutting may be crossed by a road whose deforestation width does not exceed the width of the right-of-way provided for in Schedule 6 for the class of road to which it belongs or by a watercourse whose width at the limits of the riparian ecotone does not exceed on average 35 m. At the time of indicating a residual forest in the integrated forest management plan, neither the area nor the width of the road or the watercourse may be considered in calculating the area and the width of the residual forest for the purposes of paragraphs 1 and 2 of section 136.

140. During a harvest year, at least 60% of the total area of the total cutting areas of a development unit or other forests in the domain of the State must be planned and carried out in accordance with the provisions of this Regulation applicable to block cutting.

DIVISION III
SPECIAL PROVISIONS APPLICABLE TO THE BIOCLIMATIC DOMAIN OF THE SPRUCE-MOSS FOREST

141. In the development units or in the territorial reference units located in the bioclimatic domain of the spruce-moss stand referred to in Schedule 2, forest operations are carried out on the basis of an approach including aggregated cut blocks and timber stands.

142. Aggregated cut blocks are portions of the territory located in a development unit in which total cutting areas with or without recent natural disturbance zones are concentrated. They must have variable forms and an area

less than or equal to 150 km2. They may reach a greater area in the case of plans for the protection of woodland caribou, woodland ecotype.

A minimum of 30% of the productive forest area in residual forest stands 7 m or more in height must be maintained at all times in an aggregated cut block where the trees are harvested and that area must be well distributed in the cut block.

143. Timber stands are forest areas at least 30 km² in a single block located in a development unit. In those stands, the productive forest is composed of at least 70% of forest stands of 7 m or more in height.

Timber stands must occupy at least 20% of the area of a development unit and be well distributed in the unit.

CHAPTER VII
HARVEST OPTIMIZATION, FOREST REGENERATION AND SOIL PROTECTION

DIVISION I
HARVEST AND OPTIMUM USE OF LIGNEOUS MATTER

144. Tree cutting must be carried out at a height not exceeding 25 cm above the highest level of the soil.

Where snow depth on the ground reaches a height equivalent to a column of water at least 20 cm high, the maximum height of the stumps must be less than 45 cm.

145. During the construction, improvement or repair of a road, the construction of a power transmission line, the setting up of a piling area, the installation of a forest camp or the setting up or expansion of a sandpit, the trees that have the characteristics indicated in the forestry permit, the sylvicultural prescription or other document authorizing the activity must be harvested.

146. For all sylvicultural treatments requiring marking according to the requirements of the sylvicultural prescription, the marking must be carried out by a person holding a certificate of conformity or an apprenticeship card for the trade of tree marker issued by the Bureau de normalisation du Québec under the certification program BNQ 9800-911 “Reconnaissance des compétences - Métier de marteleur en milieu forestier”.

In addition, where a person holds an apprenticeship card for the trade of tree marker, the person must be supervised by a person holding a certificate of qualification of tree marker and recognized as a journeyman for the purposes of the person’s apprenticeship under that certification program.

147. During a partial cutting, only the tree stems covered by the sylvicultural treatment or prescription may be cut.

148. The usable ligneous matter from trees or parts of trees of a species or group of species indicated in the forestry permit, the harvest agreement or in a contract entered into under the Sustainable Forest Development Act (chapter A-18.1) must be harvested by taking into account section 149, including previously felled trees, lodged or overturned trees and trees affected by fire, insects or disease.

The usable ligneous matter from a tree is the ligneous matter found at least 15 cm above the highest ground level that must be harvested according to the criteria indicated in the forestry permit, the harvest agreement or in a contract entered into under the Sustainable Forest Development Act, relating to the harvesting diameter at a height of 1.3 m above ground, the species or the minimum usable diameter of the stems.

149. In a piling area, a forest operations zone having an area less than 4 ha or in any portion in a single block of 4 ha or more included in a forest operations zone, the volume of usable ligneous matter left on the ground or not harvested that exceeds 3.5 m3/ha in the case of a total cutting or that exceeds 1 m3/ha in the case of a partial cutting must be recovered on each of those areas within 30 days following the end of the cutting or within 90 days following the end of the winter period if the cutting was carried out during that period.

Where the sylvicultural prescription associated to the treatment to be carried out provides for a recovery standard different from that provided for in the first paragraph for the purposes of maintaining biodiversity, the threshold above which the volume of usable ligneous matter left on the ground or not harvested must be recovered is that provided for in the sylvicultural prescription.

For the purposes of this section, the volumes of commercial species that may be left on the cutting area according to the Minister’s directions and deadwood and rejected wood are excluded from the volume of usable ligneous matter.

Deadwood is quality M wood.

Rejected wood is a log or part of a log of a merchantable size that contains such a quantity of defects that it no longer has any value for the forest product industry, except for the development of forest biomass. Logs or parts of logs that meet the criteria provided for in Schedule 15 are deemed to have no value.

DIVISION II
PROTECTION OF FOREST REGENERATION AND SOILS AND PREPARATORY WORK FOR FOREST PRODUCTION

150. Any cutting without regeneration and soil protection is prohibited.

During felling, processing and hauling operations, measures limiting injury to the forest regeneration in place and stems that are not harvested must be taken to ensure that they are adequately protected.

This section does not apply where the sylvicultural prescription specifies special management procedures adapted to the cutting sector with a view to ensuring forest regeneration.

151. Where forest development activities are carried out by the holder of a forestry permit issued for public utility works, the permit holder must remove waste, debris and other litter from the surface of the site. The site must be left in conditions conducive to the rapid establishment of the natural regeneration.

152. The follow-up of the forest regeneration after the operations must be carried out in accordance with the sylvicultural prescriptions.

CHAPTER VIII
OFFENCES

153. Every person authorized to harvest timber in the forests in the domain of the State or a third person to whom the person has entrusted the harvesting work who contravenes any of sections 7 to 9, section 18, except the first paragraph, sections 25 and 26, the first paragraph of sections 29 and 31, sections 33 and 50, the first and third paragraphs of section 52, the first paragraph of sections 53 and 54, sections 55 and 56, the first and second paragraphs of section 57, section 133, except the third paragraph, sections 134, 144 and 145 commits an offence and is liable to the fine provided for in paragraph 1 of section 245 of the Sustainable Forest Development Act (chapter A-18.1).

Every holder of a mining right referred to in section 28 who contravenes the first paragraph of that section also commits an offence and is liable to the same fine as that referred to in the first paragraph.

154. Every person authorized to harvest timber in the forests in the domain of the State who contravenes section 149 commits an offence and is liable to the fine provided for in paragraph 2 of section 245 of the Sustainable Forest Development Act (chapter A-18.1).

155. Every person authorized to harvest timber in the forests in the domain of the State or a third person to whom the person has entrusted the harvesting work who contravenes any of sections 44, 45, 147 and 150 commits an offence and is liable to the fine provided for in paragraph 3 of section 245 of the Sustainable Forest Development Act (chapter A-18.1).

156. Every person who contravenes any of the first paragraph of sections 3 and 5, section 16, the first paragraph of section 18, sections 19 to 21, 23, 24 and 30, the first paragraph of section 32, sections 36 to 38 and 40, the first paragraph of section 41, sections 42 and 46, the first paragraph of section 47, section 49, the second paragraph of sections 52 to 54, sections 58 and 65, the first and second paragraphs of section 66, section 67, the first paragraph of section 68, sections 84, 85, 86 and 121, sections 125 to 127, and the third paragraph of section 133, commits an offence and is liable to the fine provided for in paragraph 4 of section 245 of the Sustainable Forest Development Act (chapter A-18.1).

The following persons also commits an offence and are liable to the same fine as the fine referred to in the first paragraph:

(1) every person referred to in the second paragraph of section 3, the first paragraph of section 4, sections 63, 64, 83, 90, 91, 94 and 95, the fourth paragraph of section 96, section 97, the second paragraph of section 98, sections 106, 112 and 113, the first and second paragraphs of section 114, and sections 122 to 124 who contravenes any provision of those sections concerning the person;

(2) every person having the right to carry out a forest development activity or the third person to whom the person has entrusted the carrying out of that activity who contravenes any provision of sections 10 to 15 and 17, the second and third paragraphs of section 29, the second paragraph of sections 31 and 32, sections 34 and 43, the second and third paragraphs of section 47, section 50, the third paragraph of section 53, the third, fourth and fifth paragraphs of section 57, section 59, the first paragraph of section 60, sections 62 to 80, 87, 89, 92 and 93, the first, second and third paragraphs of section 96, the first paragraph of section 98, sections 99 to 103, 105, 107 to 111, 128, 130, 131, 138 to 140, 142, 143 and 146;

(3) every holder of a forestry permit referred to in the second paragraph of section 27 and sections 81, 82 and 151 who contravenes any provision of those sections concerning the permit holder;

(4) every holder of a mining right referred to in section 28 who contravenes the second paragraph of that section;

(5) every owner of logging machines who contravenes any of section 39 and the second paragraph of section 41;

(6) every person opening or operating a sandpit referred to in section 115 who contravenes any of sections 116 and 118 to 120;

(7) every holder of a a lease to mine surface mineral substances referred to in section 140 of the Mining Act (chapter M-13.1) who contravenes section 117.

157. Every person who contravenes the third paragraph of section 114 commits an offence and is liable to the fine provided for in paragraph 3 of section 244 of the Sustainable Forest Development Act (chapter A-18.1).

CHAPTER IX
AMENDING PROVISIONS

158. The Regulation respecting wildlife habitats (chapter C-61.1, r. 18) is amended by replacing section 8 by the following:

"**8.** A person may, in a wildlife habitat, other than the habitat of a threatened or vulnerable wildlife species, carry on a forest development activity within the meaning of section 4 of the Sustainable Forest Development Act (chapter A-18.1), provided that the person complies with the standards applicable to those activities and prescribed in the Regulation respecting standards of forest management for forests in the domain of the State, made by Order in Council (enter the number and date of the Order in Council), and any other forest development standard applicable to those activities that the person must comply with pursuant to the Sustainable Forest Development Act.

The following forest development activities are excluded from the application of the first paragraph and remain subject to the prohibition referred to in section 128.6 of the Act respecting the conservation and development of wildlife (chapter C-61.1):

(1) the construction, improvement and repair of roads whose management is under the Minister responsible for the Act respecting roads (chapter V-9) and that are classified autoroute or a national, regional or collector road;

(2) the construction, improvement and repair of a road that skirts a lake or a watercourse by encroaching on the fish habitat.".

159. The Regulation is amended by replacing the words "surrounding the site" wherever they appear in sections 11, 14, 15, 23 and 24 by "surrounding the site where the nests are found"

160. Sections 37, 38 and 39 of that Regulation are revoked.

161. The Regulation respecting the application of the Environment Quality Act (chapter Q-2, r. 3) is amended by replacing paragraph 1 of section 1 by the following:

"(1) the activities, constructions and work whose carrying out is subject to the Regulation respecting standards of forest management for forests in the domain of the State, made by Order in Council (*enter the number and date of the Order in Council*), except

(a) the construction, widening and straightening of a road whose management is under the Minister responsible for the Act respecting roads (chapter V-9) and that is classified autoroute or a national, regional or collector road;

(b) the construction, improvement and repair of a road that skirts a lake or a watercourse by encroaching on its bed or "riparian ecotone" within the meaning of section 2 of the Regulation respecting standards of forest management for forests in the domain of the State;".

162. Section 2 of that Regulation is amended

(1) by replacing paragraph 3 by the following:

"(3) the construction, widening and straightening of a road, a route or another road infrastructure, except

(a) a project located less than 60 m from a lake or a constant watercourse and that skirts it over a distance of 300 m or more, to the extent that the carrying out of the project is not subject to the Regulation respecting the sustainable development of forests in the domain of the State, made by Order in Council (*enter the number and date of the Order in Council*);

(b) a project that has any of the following characteristics:

— a roadway having 4 lanes or more;

— a right-of-way having an average width of at least 35 m;

— a length of at least 1 km;

The exclusion provided for in subparagraph *b* of paragraph 3 does not apply to the following projects:

— a project whose carrying out is subject to the Regulation respecting the sustainable development of forests in the domain of the State;

— a project intended for forest development, mining or energy purposes that is planned elsewhere than in a forest in the domain of the State;

— all or part of a project located inside an urbanization perimeter established in a land use and development plan or inside a metropolitan perimeter established in a metropolitan land use and development plan;";

(2) by replacing the part preceding subparagraph *a* of paragraph 13 by the following:

"(13) subject to the application of another provision of this Regulation, "forest development activities" within the meaning of section 4 of the Sustainable Forest Development Act (chapter A-18.1) carried out in a forest in the domain of the State or in a private forest, except";

(3) by replacing subparagraph a of paragraph 13 by the following:

"*(a)* the spreading of fertilizers other than manure, mineral fertilizers, wood waste from cutting areas or lime applications complying with the most recent version of the standard *Amendements calciques ou magnésiens provenant de procédés industriels* (BNQ 0419-090);";

(4) by striking out subparagraphs *b* and *c* of paragraph 13.

163. Section 3 of this Regulation is amended

(1) by replacing paragraph 2 by the following:

"(2) subject to the application of another provision of this Regulation, "forest development activities" within the meaning of section 4 of the Sustainable Forest Development Act (chapter A-18.1) carried out in a peat bog, excluding

(a) the spreading of fertilizers other than manure, mineral fertilizers, wood waste from cutting areas or lime applications complying with the most recent version of the standard *Amendements calciques ou magnésiens provenant de procédés industriels* (BNQ 0419-090), whether the spreading is planned in a forest in the domain of the State or in a private forest;

(b) work involving the use of pesticides that are referred to in subparagraphs *b* to *d* of paragraph10 of section 2, whether the work is planned in a forest in the domain of the State or in a private forest;

(c) the construction, widening and straightening of a road, a route or another road infrastructure located less than 60 m from a lake or a constant watercourse that skirts it over a distance of 300 m or more, to the extent that those activities are planned elsewhere than in a forest in the domain of the State;

(d) the construction, widening and straightening of a road or a road in the unwooded part of a peat bog where the ground is frozen to a depth of less than 35 cm, to the extent that those activities are planned elsewhere than in a forest in the domain of the State;

(e) the digging of a ditch, the installation of a drain or reforestation work carried out in the unwooded part of a peat bog, to the extent that those activities are planned elsewhere than in a forest in the domain of the State;";

(2) by replacing paragraph 4 by the following:

"(4) the construction, maintenance, repair and demolition of culverts.".

164. The Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains (chapter Q-2, r. 35) is amended by replacing the words "forest management standards that apply to forests in the domain of the State", "standards of forest management for forests in the domain of the State" and "standards of forest management in forests in the domain of the State" wherever they appear in sections 2.2, 3.2 and 6.1 by "standards for the sustainable development of forests in the domain of the State".

165. Section 2.8 of the Policy is amended by replacing "Regulation respecting standards of forest management for forests in the domain of the State (chapter A-18.1, r. 7)" in paragraph b by "Regulation respecting the sustainable development of forests in the domain of the State, made by Order in Council (enter the number and date of the Order in Council)".

166. Unless the context indicates otherwise, a reference in a regulation to the Regulation respecting standards of forest management for forests in the domain of the State (chapter A-18.1, r. 7) or any of its provisions is deemed to be a reference to this Regulation or the corresponding provision of this Regulation.

CHAPTER X
TRANSITIONAL AND FINAL

167. Despite section 116, the holder of a lease to mine surface mineral substances may continue to operate at a distance of 30 m or less from an intermittent watercourse a sandpit referred to in section 115 opened before 1 April 2015, as long as the lease has not expired.

168. Despite section 118, the holder of a lease to mine surface mineral substances may continue to operate at a distance of 150 m or less from a dwelling located on private land a sandpit referred to in section 115 opened before 1 April 2015, as long as the lease has not expired.

169. Section 119 does not apply to a sandpit opened before 1 April 2015 that, on that date, is the subject of a lease to mine surface mineral substances, as long as the lease has not expired.

Despite the foregoing, a minimum distance of 100 m must be kept between the operation area of a sandpit referred to in the first paragraph and the limits of an ecological reserve or a proposed ecological reserve.

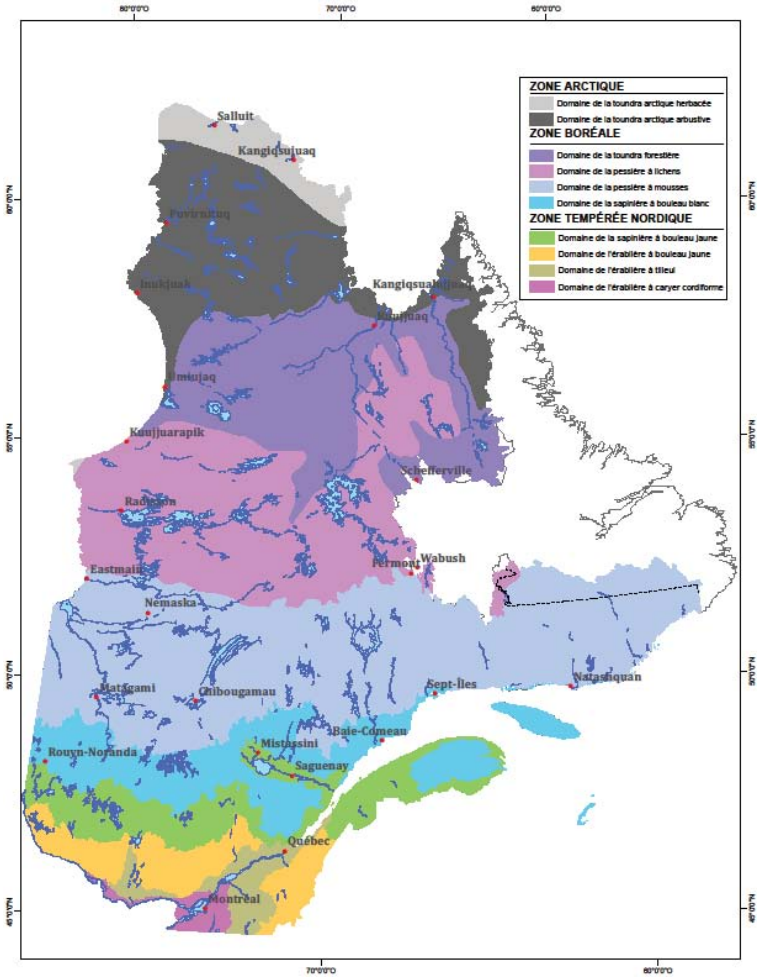
170. This Regulation governs forest development activities after 31 March 2015.

171. This Regulation replaces the Regulation respecting standards of forest management for forests in the domain of the State (chapter A-18.1, r. 7).

172. This Regulation comes into force on 1 April 2015.

SCHEDULE 1

VEGETATION AREAS AND BIOCLIMATIC DOMAINS OF QUÉBEC



SCHEDULE 2

LIST OF DEVELOPMENT UNITS (DU) AND TERRITORIAL REFERENCE UNITS (TRU) IN THE VARIOUS BIOCLIMATIC DOMAINS

Bioclimatic domain of the spruce-moss stand	
Development units (DU)	**Territorial reference units (TRU)**
2352	3003
2451	2003–2004–2006–2007–2009–2012–3001 to 3021*
2452	2005–2011–2012–3013 to 3031
2551	3001 to 3058
2651	2001–3001 to 3009
2661	3001 to 3012
2662	3001 to 3009–3011 to 3015
2663	3001 to 3009
2664	3001 to 3008
2665	3001 to 3007
2666	3001 to 3004
2751	3001 to 3019
8551	2060–2070–2080–3120–3130–3140–3150–3160–3170–3180–3190–3230–3240–3250–3260–3270–3280–3290–3300–3310–3320–3330–3340–3350–3360–3370–3380–3390–3400–3410–3420–3430–3440
8562	3010–3020–3030
8652	3010–3020–3030–3040–3050–3060–3070–3080–3090–3100–3110–3111–3120–3130–3140–3160–3170–3171
8663	3010–3020–3030–3040–3050–3060–3070–3080–3090
8664	3010–3020–3030–3040–3050–3060
8665	3010–3020–3030–3040–3050–3060–3070
8666	3010–3020–3030–3040–3050–3060–3070-3080-3090–3100
8751	2020–3030–3040–3050–3060–3090–3110–3120–3130–3140–3150–3160–3170–3180–3190–3210
8762	3010–3020–3030–3040–3050–3060–3070–3080–3090
8763	3010–3020–3030–3040–3050-3060–3070
8764	3010–3020–3030–3040-3050–3060–3070–3080
9351	3023 to 3060
9352	3001 to 3031
9451	3001 to 3006–3009–3011–3013–3014–3016 to 3018–3020 to 3028–3030 to 3035
9452	3001 to 3024
9551	3001 to 3012
9751	2028–3001 to 3016–3022 to 3027–3030–3031–3040–3041

** : in this table, the sequence includes the last number of the TRU*

Bioclimatic domain of the balsam fir stand (yellow birch; white birch)	
Development units (DU)	**Territorial reference units (TRU)**
1151	2001 to 2010*
1152	2001 to 2008
1251	2001 to 2007
1252	2001 to 2005
1253	2001 to 2013
1254	2001 to 2008
2251	2001 to 2023
2351	2001 to 2012
2352	2001 to 2018–2020 to 2033–3001 to 3009
2451	2001, 2002, 2005, 2008, 2010 to 2013
2452	2001 to 2004–2006 to 2010
2551	2001 to 2032
2651	2002
2751	2001 to 2020
3151	1001–1003–1111–1114–2008–2009–2012–2110–2121
3152	2118–2119–2222–3117–3220–3221
3153	3001 to 3008
3351	2001 to 2024
3551	2021–2024
4151	1018–2022 to 2027–2031 to 2034–2051
4251	1017–2004 to 2013–2019–2021–2022–2026 to 2033–3001 to 3003
4351	2001–2002–2016 to 2038–2201to 2210
4352	2001 to 2029
6152	1020–2019–2021 to 2025
6252	2001 to 2011–2013–2016
6451	2202 to 2228–2301 to 2310
7152	2122–2124 to 2126–2128 to 2130–2230 to 2232
7351	2033 to 2035
7352	2001 to 2019
7451	2001 to 2035
8152	1010–1060–1130–1170–1300–1420–1440–1500–1550–1570–2510–2520–2530–2540–2560–2580–2590–2600–2610–2620–2630–2640–2650–2660–2670–2680–2690–2700–2710–2720–2730–2740
8251	1110–1120–1130–2010–2020–2030–2040–2050–2060–2070–2080–2090–2100–2140–2150–2160–2170–2180–2190–2200–2210–2220–2230–2240–2250–2260–2270–2280
8351	2010–2020–2030–2040–2050–2060–2070–2080–2090–2100–2110–2120–2130–2140–2150–2160–2170–2180–2190–2200–2210–2220–2230–2240–2250–2260–2270–2280–2290–2300–2310–2320–2330–2340–2350–2360–2370–2380–2390–2400–2410–2420–2430–2440–2450–2460–2470–2480–2490–2500–2510–2520–2530–2540–2550–2560–2570–2580–2590–2600–2610–2620–2630–2640–2650–2660–2670
8451	2020–2030–2040–2050–2060–2070–2080–2090–2100–2110–2120–2130–2140–2150–2160–2170–2180–2200–2210–2220–2230–2240–2250–2260–2280–2300–2310–2320–2330–3010–3190–3270–3290
8462	2010–2060–3020–3030–3040–3050
8551	2010–2020–2030–2040–2050–2450–3090–3100–3110–3200–3210–3220
8651	2010–2020–2030–2040–2050–2060–2070–2080–2090–2100–2110–2120–2130–2140–2150–2160–2170–2180–3190–3200–3210–3220–3230–3240–3250–3260–3270–3280
8652	3150
8751	2010–3070–3080–3100–3200
9351	2001 to 2022
9451	2007–2008–2010–2012–2015–2019–2029
9751	1049–1051–1057–1061–1063–1064–1066 to 1069–2017 to 2021–2029–2032 to 2039–2042 to 2048–2050–2052 to 2056–2058 to 2060–2062–2065
11151	2001 to 2007

11152	2001 to 2008
11153	2001 to 2026
11154	2001 to 2007
11255	2001 to 2019
11256	2001 to 2016
11257	2001 to 2007

** : in this table, the sequence includes the last number of the TRU*

Bioclimatic domain of the sugar bush (hickory; linden tree; yellow birch)	
Development units (DU)	**Territorial reference units (TRU)**
3151	1001–1004 to 1006*–1113–1115–1116
3451	1101 to 1105
3452	1002 to 1010–2001–2011 to 2013
3551	1001 to 1020–1022–1023–1025–1201 to 1204
4151	1001 to 1021–1029–1030–1035 to 1050
4251	1014 to 1016–1018–1023 to 1025–2020
6151	1001 to 1030
6152	1001 to 1018
6251	2001 to 2036
6252	1014–1015–1017–1018–2012
6451	1101 to 1125
6452	1001 to 1023
7151	1101 to 1112–1201 to 1217
7152	1101 to 1123–1203 to 1229–2127
7251	1001 to 1040
7351	1001 to 1032–1038 to 1048–2036–2037
8151	1010–1020–1030–1040–1050–1060–1070–1080–1090–1100–1110–1120–1130–1140–1150–1160–1170–1180–1190–1200–1210–1220–1230–1240–1250–1260–1270–1280–1290–1300–1310-1320–1330–1340–1350–1360–1370–1380–1390–1400–1410–1420–1430–1440
8152	1020–1030–1040–1050–1070–1080–1090–1100–1110–1120–1140–1150–1160–1180–1190–1200–1210–1220–1230–1240–1250–1260–1270–1280–1290–1310–1320–1330–1340–1350–1360–1370–1380–1390–1400–1410–1430–1450–1460–1470–1480–1490

** : in this table, the sequence includes the last number of the TRU*

SCHEDULE 3

COMMERCIAL SPECIES

Part A

Softwood species	*Hardwood species*
White spruce	White birch
Black spruce	Balsam poplar
Red spruce	Big-toothed aspen
Norway spruce	Trembling aspen
Tamarack	Other poplars
Jack pine	
Canadian hemlock	
Fir	
White cedar	

Part B

Softwood species	*Hardwood species*
White pine	Yellow birch
Red pine	Hickory
	Red oak
	Black cherry
	Burr oak
	Swamp white oak
	White oak
	Silver maple
	Sugar maple
	Red maple
	Black maple
	Ash
	American beech
	Walnut
	American elm
	Slippery elm
	Ironwood
	Basswood

SCHEDULE 4

WINTER PERIODS TO BE CONSIDERED IN EACH REGIONS OF QUÉBEC

Region	Period	
	from [1]	to [1]
Bas Saint-Laurent	15 December	31 March
Saguenay – Lac-Saint-Jean	1 December	31 March
Capitale-Nationale – Chaudière-Appalaches	1 December	31 March
Mauricie – Centre-du-Québec	1 December	31 March
Estrie – Laurentides – Montérégie – Montréal – Laval –Lanaudière	15 December	15 March
Outaouais	15 December	15 March
Abitibi – Témiscamingue	15 December	15 March
Côte-Nord	1 December	31 March
Nord-du-Québec	1 December	31 March
Gaspésie – Îles-de-la-Madeleine	1 December	31 March

[1] : inclusively

SCHEDULE 5

SITES HAVING LONG-TERM SOIL FERTILITY PROBLEMS

In forest stands belonging to the ecological sub-regions and ecological types indicated in the table below, branches and tree tops must be left in the felling areas, near the stumps, in order to prevent a long-term loss of soil fertility.

Ecological sub-region	Ecological type	Type of potential vegetation
2aT	FC10	Red oak forest on very shallow soil
2bT, 4cT	FE30	Sugar maple-yellow birch forest
3aS, 4bT, 4cM, 4dT	FE31	
4cM	FE35	
4dM	FE40	
2bT	FE42	Sugar maple, yellow birch, beech forest
2bT	FE50	Sugar maple-ironwood forest on very shallow soil
2aT, 3cM	FE60	Sugar maple, red oak forest on very shallow soil
1aT	FO14	Elm, black ash forest
3aM, 3bM	FO18	
1aT, 2aT, 3cT	MF14	Black ash, fir forest
3cS, 3cT, 4aT	MJ11	Yellow birch, fir, sugar maple forest
3cT	MJ14	
4dM	MS11	Yellow birch, fir forest
4cT	MJ26	
3cM, 4bT	MJ21	Fir, yellow birch forest
3cM	MS20	Fir, white birch forest
3aM, 6dT	MS21	
3bM	RC38	White cedar, fir forest on organic soil
3cS	RE24	Black spruce, feathermoss, ericaeous forest
1aT, 2aT, 2bT, 2cT, 3aM, 3aS, 3aT, 3bM, 3bT, 3cM, 3cS, 3cT, 3dM, 3dT, 4aT, 4bM, 4bS, 4bT, 4cM, 4cT, 4dM, 4dT, 4eT, 4fS, 4fT, 4gT, 4hT, 5aT, 5bT, 5cM, 5cS, 5cT, 5dM, 5dT, 5eS, 5eT, 5fS, 5fT, 5gT, 5hT, 5jT, 6aT, 6bT, 6cT, 6dT, 6eT, 6fT, 6gT, 6hT, 6iS, 6iT, 6jS, 6jT, 6kT, 6iT, 6mT, 6nT, 6pT	RE39	Black spruce, sphagnum forest on ombrotrophic, hydric, organic soil
2aT	RP14	White or red pine forest
3cM	RS11	Fir, white cedar forest
3cT	RS14	
1aT, 2aT, 2bT, 2cT, 3aM, 3aS, 3aT, 3bM, 3bT, 3cM, 3cS, 3cT, 3dM, 3dT, 4aT, 4bM, 4bS, 4bT, 4cM, 4cT, 4dM, 4dT, 4eT, 4gT, 4hT, 5aT, 5bT, 5cM, 5cS, 5cT, 5dM, 5dT, 5eT, 5fS, 5fT, 5gT, 5hT, 5iS, 5iT, 5jT, 6aT, 6cT, 6dT, 6eT, 6fT, 6gT, 6hT, 6iS, 6iT, 6jS, 6jT, 6kT, 6iT, 6mT, 6nT, 6pT	RS39	Fir, black spruce, sphagnum forest on ombrotrophic, hydric, organic soil
3cS	RT10	Hemlock forest
3cM	RT11	
3cS	RT12	

Source: Ouimet, R, et L. Duchesne. 2009. Évaluation des types écologiques forestiers sensibles à l'appauvrissement des sols en minéraux par la récolte de biomasse. MRNF, Direction de la recherche forestière. Rapport hors série. 26 p.

SCHEDULE 6

CHARACTERISTICS OF ROADS ACCORDING TO THEIR CLASSIFICATION

	Classes of road								
	Unclassified	**1**	**2**	**3**	**4**	**5**	**Path intended for motorized all-terrain vehicles**	**Path not intended for motorized all-terrain vehicles**	**Ungroomed**
Design criteria									
Duration of use	50 years	25 years	25 years	10-15 years	3-10 years	1-3 years	Variable	Variable	3 months
Speed posted	70 km/h	70 km/h	60 km/h	50 km/h	40 km/h	20 km/h	–	–	–
Minimal stopping sight distance (design)	170 m	110 m	85 m	65 m	45 m	30 m	–	–	–
Dimensions of the road									
Right of way	35 m	35 m	30 m	25 m	20 m	15 m	less than 8 m	less than 3 m	15 m
Roadway	9.1 m or more	8.5 m to < 9.1 m	8 m to < 8.5 m	7.5 m to < 8 m	5.5 m to < 7.5 m	4 m to < 5.5 m	–	–	–
Shoulder (each side)	1.0 m	1.0 m	1.0 m	1.0 m	0.75 m	0.5 m	–	–	–
Vertical and horizontal alignment									
Horizontal curve (minimum radius)	340 m	190 m	130 m	90 m	50 m	50 m	–	–	–
Maximum adverse slope	4%	6%	7%	8%	10%	–	–	–	–
Maximum favourable slope	6%	9%	11%	14%	16%	–	–	–	–
Material used									
Foundation	Natural gravel	Natural gravel	Natural gravel	Mineral soil	Mineral soil, organic soil (thin layer) and plant residue	Mineral soil, organic soil (thin layer) and plant residue	–	–	Grubbed ground bare of all or part of the vegetation cover
Road surface	Rock chips	Rock chips or screened gravel	Natural gravel	Natural gravel	Mineral soil	Mineral soil	–	–	Snow
Works allowed									
Type	Bridge[1] and culvert	Bridge[1] and culvert	Bridge[1] and culvert	Bridge[1] and culvert	Bridge[1] and culvert	Bridge[1] and culvert	Bridge[1] and culvert	Culvert and rudimentary structure	Removable structure

[1] usable width of the bridge = 4.3 m

SCHEDULE 7

PERIODS DURING WHICH THE WORK BETWEEN THE BANKS WILL BE CARRIED OUT (EXCAVATION, INSTALLAITION OF A CONDUIT, BACKFILLING, SLOPE STABILIZATION AND WORK CONCERNING BRIDGE PIERS)

Region	Species of interest[1]	Presence of salmonids[2]	Salmon or ouananiche[3]	Threatened or vulnerable species [4]
1	1 June to 31 March	1 June to 30 September	1June to 30 September	Work is prohibited, subject to the third paragraph of section 89 of this Regulation
2	1 August to 15 April	1 June to 15 September	1 July to 15 September	
3	15 July to 15 April	15 June to 15 September	1 July to 15 September	
4	15 July to 31 March	1 June to 15 September	15 June to 15 September	
5	15 June to 31 March	15 June to 15 September	15 June to 15 September	
6	1 August to 31 March	15 May to 15 September	15 May to 15 September	
7	15 July to 31 March	1 June to 30 September	1 June to 30 September	
8	15 June to 15 April	15 May to 30 September	1 January to 31 December	
9	1 August to 15 April	1 June to 15 September	1 July to 15 September	
10	15 July to 15 April	1 July to 31 August	1 July to 31 July	
11	1 July to 30 April	1 June to 15 September	1 August to 30 September	
12	1 July to 31 March	15 June to 15 September	15 June to 15 September	
13	1 August to 31 March	15 May to 15 September	15 May to 15 September	
14	15 July to 31 March	1 June to 15 September	1 June to 15 September	
15	1 July to 31 March	1 June to 30 September	1 June to 31 August	
16	1 August to 31 March	15 May to 15 September	1 January to 31 December	
17	15 July to 31 March	1 June to 15 September	15 June to 30 September	

[1] Presence of the following species of interest: smallmouth bass, walleye, sand pike, rainbow smelt, northern pike, muskellunge, yellow perch

[2] Presence of the following salmonids: lake whitefish, brook trout, lake trout

[3] Presence of salmon and/or ouananiche

[4] Where work concerns an occurrence or is carried out in the first 100 metres upstream of an occurrence of a species registered in the list of wildlife species designated threatened or vulnerable or likely to be designated as such. Occurrence is the term used by the network of conservation data centres associated to NatureServe. The word designates a territory (point, line or map polygon) sheltering or having sheltered a biodiversity element. An occurrence has a conservation value (quality designation) for the biodiversity element. When talking about a species, the occurrence corresponds generally to the habitat occupied by a local

population of the species concerned. The occurrence and criteria selected to allocate the quality designation associated to the occurrence vary according the biodiversity element considered. The occurrence may correspond to a single map polygon (or observation point) or a group of nearby polygons. http://www.cdpnq.gouv.qc.ca/methodologie.htm

Note: Where there is the presence of species of interest and salmonids, the period for carrying out the work to meet corresponds to the period in which coincide the two periods concerning the species provided for in the table above. In the case where the person who intends to carry out the work is unable to meet that period, the person must obtain from the Minister the authorization to carry out the work outside that period as provided for in the third paragraph of section 89 of this Regulation. In this case, the period for carrying out the work for one species over the other could be prioritized and the period determined on the basis of the characteristics of the environment and knowledge on the watercourses in the region concerned.

SCHEDULE 8

PEAK FLOW CALCULATION METHOD FOR DRAINAGE BASINS WHOSE AREA IS EQUAL TO OR LESS THAN 60 KM^2

The so-called rational method is used to calculate the 10-year interval peak flow. The method was validated for drainage basins whose area is less than 25 km^2. Thus, where the area of the drainage basin covers between 25 and 60 km^2, the result must be validated in the field by looking for signs indicating the water level reached by the floods of previous years or by establishing a relationship with basins that were measured on the same territory or near it.

STEPS IN CALCULATION

1. Delimitation of the drainage basin;
2. Calculation of the average slope of the drainage basin;
3. Identification of the use of the territory and of the surface deposits in the drainage basin;
4. Calculation of the total area of the basin, of the proportion of each type of surface deposits per land use type and of the percentage of the basin covered by lakes and bare and semi-bare wetlands;
5. Determination of the watercourse's length and calculation of the "85-10" slope of the watercourse;
6. Calculation of the weighted runoff coefficient of the drainage basin;
7. Calculation of the drainage basin's concentration time;
8. Determination of rainfall intensity;
9. Calculation of the correction coefficient for rainfall intensity;
10. Determination of the reduction coefficient for peak flow;
11. Calculation of the 10-year interval peak flow.

EXPLANATION OF THE STEPS TO BE FOLLOWED WITH AN EXAMPLE

Step 1 - Delimitation of the drainage basin

The drainage basin that supplies the watercourse with water at the crossing point is delimited using a topographic map at a scale of 1: 20 000. Figure 1 shows, as an example, the delimitation of a drainage basin under study.

Step 2 - Calculation of the average slope of the drainage basin (S_b)

The average slope is calculated using a grid (1 cm X 1 cm) superimposed on the drainage basin. The number of times each horizontal and vertical line of that grid crosses a contour line must be determined. The length of those lines is also recorded. The calculation made to determine the average slope of the drainage basin under study is given in figure 2.

Step 3 - Identification of the use of the territory and of the surface deposits in the drainage basin

With the help of the surface deposit maps, the forest maps and knowledge of the territory, the use of the lands comprised within the drainage basin must be identified. They may be woodlands, pasturelands or croplands. Then the surface deposits for each land use type must be identified. Bare and semi-bare wetlands must also be located.

Figure 3 identifies the surface deposits and locates the bare and semi-bare wetlands in the drainage basin under study, which is completely wooded.

Step 4 - Calculation of the total area of the basin, of the proportion of each type of surface deposits per land use type and of the percentage of the basin covered by lakes and bare and semi-bare wetlands

In the case of the basin under study, according to figure 3, the results are the following:

Land use type	Identification[1]	Area (ha)	Proportion
Wooded	2AR	238	57%
Wooded	2BEM	127	31%
Wooded	2BE	19	5%
-	Lakes and bare /semi-bare	30	7%

	wetlands		
-	Total area	414	100%

[1] Identification of surface deposits and location of lakes and bare and semi-bare wetlands

Step 5 - Determination of the watercourse's length (L_c) and calculation of the "85-10" slope of the watercourse (S_c)

The length of the watercourse is measured from the crossing point, following the course of the main watercourse extended to the watershed divide, that is, to the most distant point in the drainage basin determining the longest route a drop of water must travel to reach the crossing point.

The "85-10" slope of the watercourse is defined as the average slope of the section of the watercourse between 2 points located respectively 10% upstream from the crossing point and 15% downstream from the farthest limit of the drainage basin.

Figure 4 locates the line determining the length of the watercourse (L_c) and figure 5 shows the calculation method for the "85-10" slope of the watercourse (S_c) for the drainage basin under study.

Step 6 - Calculation of the weighted runoff coefficient of the drainage basin (C_p)

Firstly, using table 1, the various types of surface deposits in the drainage basin are classified on a hydrological basis.

Table 1: Hydrological classification of surface deposits

Types of surface deposits (designation)	Hydrological classification
1AB-1BF-1BI-1BN-1BP-1AB-1BF-1BI-1BN-1BP-1BPY-1BR-1P-2-2A-2AE-2AK-2AT-2B-2BD-2BE-2BP-3AC-4GS-5S-6-6A-8AP-8APM-8APY-8AY-8AYP-8CM-8CY-8E-8F-8M-8P-8PM	AB
8Y-9-9A-9R-9S-1BD-1BDY-1BIM-1BIY-2AM-2AR-2AY-2BEM-2BER-2BEY-2BR-3-3AN-3ANY-4P-6S-6SM-6SR-6SY-8A-8AM-8AR-8C-M6S-M8A-M8AP-M8C-M8PY	B
3AE-3D-4-4A-4GSR-4GSY-5SM-5SR-5SY-6R-8-8G	BC
1AA-1AAM-1AAR-1AM-1ASY-1AY-1AYR-4AR-4AY-4GA-4GAM-4GAY-4GAR-4GD-5A-5L-5R-5Y-M1A-M1AA-R1-R1A-R2A-R2BE-R3AN-R4-R4GS-R5S-R6S-R8A-R8C-RS	C
1AAY-5AM-5AR-5AY-5G-5GR-R-R1AA-R4GA-R5A	CD
7-7E-7R-7T-7TM-7TY-AN-R7T	n.a.

Note: Type 7 deposits are classified as bare and semi-bare wetlands.

When the hydrological classification of surface deposits is completed, the runoff coefficient for each type of deposit is determined using table 2 based on land use and the average slope of the drainage basin.

Table 2: Runoff coefficients(C)

Land use type	Average slope of drainage basin (S_b)	Hydrological classification of surface deposits				
		AB	B	BC	C	CD
Croplands	< 3%	0.30	0.36	0.41	0.47	0.51
	3 to 8%	0.34	0.43	0.51	0.59	0.67
	> 8%	0.43	0.51	0.61	0.67	0.73
Pasturelands	< 3%	0.12	0.17	0.25	0.34	0.43
	3 to 8%	0.17	0.25	0.33	0.43	0.51
	> 8%	0.22	0.39	0.47	0.56	0.64
Woodlands	< 3%	0.09	0.15	0.21	0.29	0.37
	3 to 8%	0.12	0.19	0.26	0.34	0.43
	> 8%	0.18	0.26	0.34	0.43	0.51
Lakes and bare/semi-bare wetlands		0.05				

Then the weighted runoff coefficient for the drainage basin may be calculated (C_p). In the case of the basin under study, the data and calculations are the following:

Land use type	Identification	Proportion of drainage basin	Hydrological classification	Slope of drainaige basin (S_b)	Runoff coefficient (C)
Woodlands	2AR	57%	B	-	0.26
Woodlands	2BEM	31%	B	> 8%	0.26
Woodlands	2BE	5%	AB	-	0.18
Lakes and bare/semi-bare wetlands		7%	-	-	0.05

Weighted runoff coefficient

$$(C_p) = (57\% \text{ X } 0.26)+(31\% \text{ X } 0.26)+(5\% \text{ X } 0.18)+(7\% \text{ X } 0.05)=0.24$$

Step 7- Calculation of the drainage basin's concentration time (t_c)

The concentration time of the drainage basin is determined using one of the following 2 formulas:

If $C_p < 0.40$

$$t_c = \frac{3.26\ (1.1 - C_p)\ L_c^{0.5}}{S_c^{0.33}}$$

where:

t_c : concentration time (minutes)
C_p : weighted runoff coefficient for the basin
L_c : length of watercourse (m)
S_c : "85-10" slope of the watercourse (%)

if $C_p \leq 0.20$, S_c minimum to be used = 0.1%

if $0.20 < C_p < 0.40$, S_c minimum to be used = 0.5%

t_c minimum = 10 minutes

If $C_p \geq 0.40$

$$t_c = \frac{0.057\ L_c}{S_c^{0.2}\ A_b^{0.1}}$$

where:

t_c : concentration time (minutes)
L_c : length of watercourse (m)
S_c : "85-10" slope of watercourse (%)
A_b : area of drainage basin (ha)
t_c minimum = 10 minutes

In the case of the basin under study, the C_p is equal to 0.24. Consequently, the first formula must be used.

$$t_c = \frac{3.26\ (1.1 - 0.24)\ \text{x}\ 3.600^{0.5}}{1.9^{0.33}} = 136 \text{ minutes}$$

Step 8 - Determination of rainfall intensity (I)

Rainfall intensity is determined using figures 6 and 7. In figure 6, average total rainfall of a 1-hour duration for the basin under study is indicated by the contour line closest to that basin. Figure 7 indicates the standard deviation for the total rainfall of a 1-hour duration.

The rainfall intensity applicable to the drainage basin is determined as follows:

I = average total rainfall of a 1-hour duration + (1.305 X standard deviation for total rainfall of a 1-hour duration).

In our example, which is located on sheet 21M/6 N.E., the average is 22 mm/hour and the standard deviation is 8 mm/hour. The rainfall intensity applicable to that drainage basin is therefore 32.4 mm/hour, that is, 22 + (1.305 X 8).

Step 9 - Calculation of the correction coefficient for rainfall intensity (F_I)

Depending on the concentration time of the drainage basin, the correction coefficient for rainfall intensity is calculated using one of the following 2 formulas:

$$F_I = \frac{12.25}{t_c^{0.612}} \quad \text{for } 10 \text{ minutes} \leq t_c < 60 \text{ minutes}$$

$$F_I = \frac{17.07}{t_c^{0.693}} \quad \text{for } t_c \geq 60 \text{ minutes}$$

where:

t_c: concentration time (minutes)

In the case of the basin under study, the second formula must be used (t_c = 136 minutes).

$$F_I = \frac{17.07}{136^{0.693}} = 0.567$$

Step 10 - Determination of the reduction coefficient for the peak flow (F_L)

The retention zones such as lakes and bare and semi-bare wetlands entail a significant reduction in the peak flow. The reduction coefficient for peak flow is evaluated using the proportion of lakes and bare and semi-bare wetlands calculated at step 4 and figure 8. In the case of the basin under study, that coefficient is 0.69 (curve B, 7% covered by lakes and bare and semi-bare wetlands).

Step 11 - Calculation of the 10-year interval peak flow (Q_{10})

That flow is calculated using the following formula:

$$Q_{10}\,(m^3/s) = \frac{C_p F_I I A_b F_L}{360}$$

where:

C_p = Weighted runoff coefficient for the drainage basin
F_I = Correction coefficient for rainfall intensity
I = Rainfall intensity (mm/hour)
A_b = Area of the drainage basin (ha)
F_L = Reduction coefficient for peak flow

For the basin under study:

$$Q_{10} = \frac{0.24 \text{ X } 0.567 \text{ X } 32.4 \text{ X } 414 \text{ X } 0.69}{360}$$

Q_{10} = 3.5 m^3/s

A weighted factor of at least 5% is then applied to the flow obtained in order to take into account exceptional climatic events.

i.e.: 3.5 m^3/s X 1.05 = 3.67 m^3/s

Figure 1
Délimitation d'un bassin versant au point de traversée d'un cours d'eau

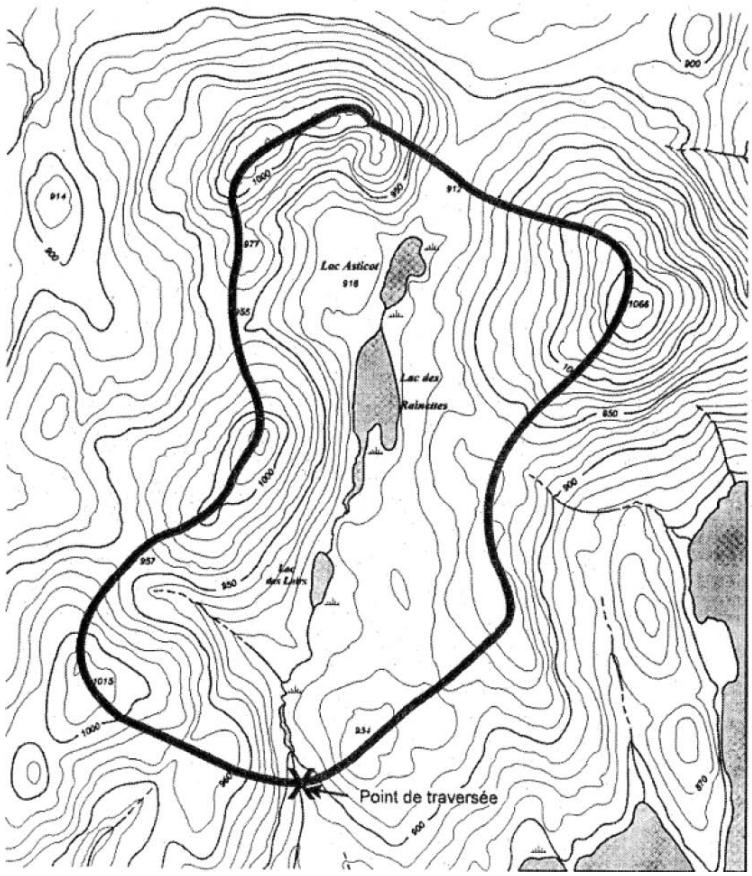
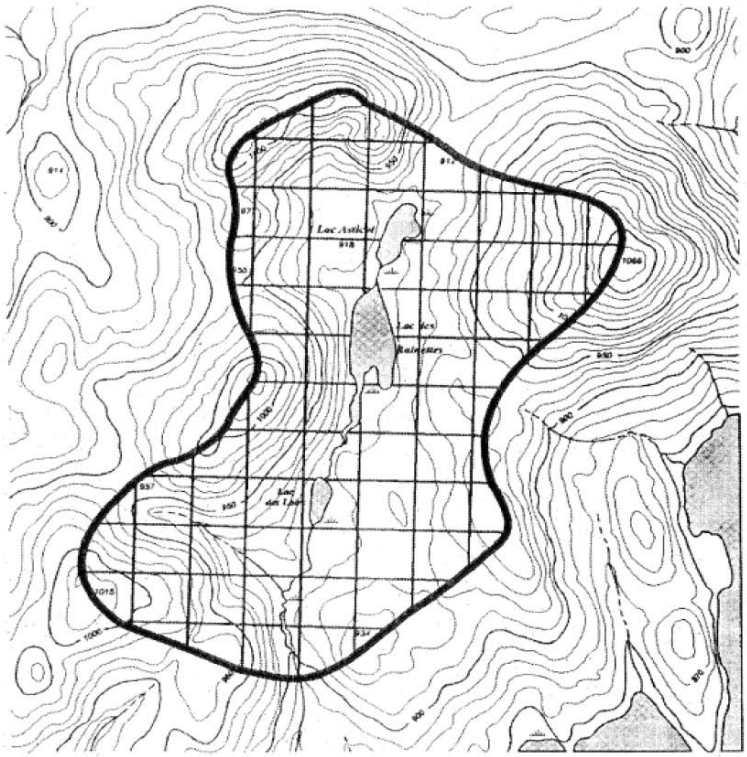


Figure 2
Calcul de la pente moyenne du bassin versant (S_b)



$$S_b = \frac{(N_h + N_v) \times Eq.}{(L_h + L_v)}$$

S_b : Pente moyenne du bassin versant
$N_{h,v}$: Nombre de fois que les lignes horizontales, verticales coupent une courbe de niveau
$Eq.$: Équidistance des courbes de niveau (m)
$L_{h,v}$: Longueur des lignes horizontales, verticales (m)

$$S_b = \frac{(180 + 111) \times 10}{(16\,450 + 16\,410)} = 0{,}089 \text{ ou } 8{,}9\%$$

Figure 3
Identification of surface deposits in the drainage basin and location of lakes and bare and semi-bare wetlands

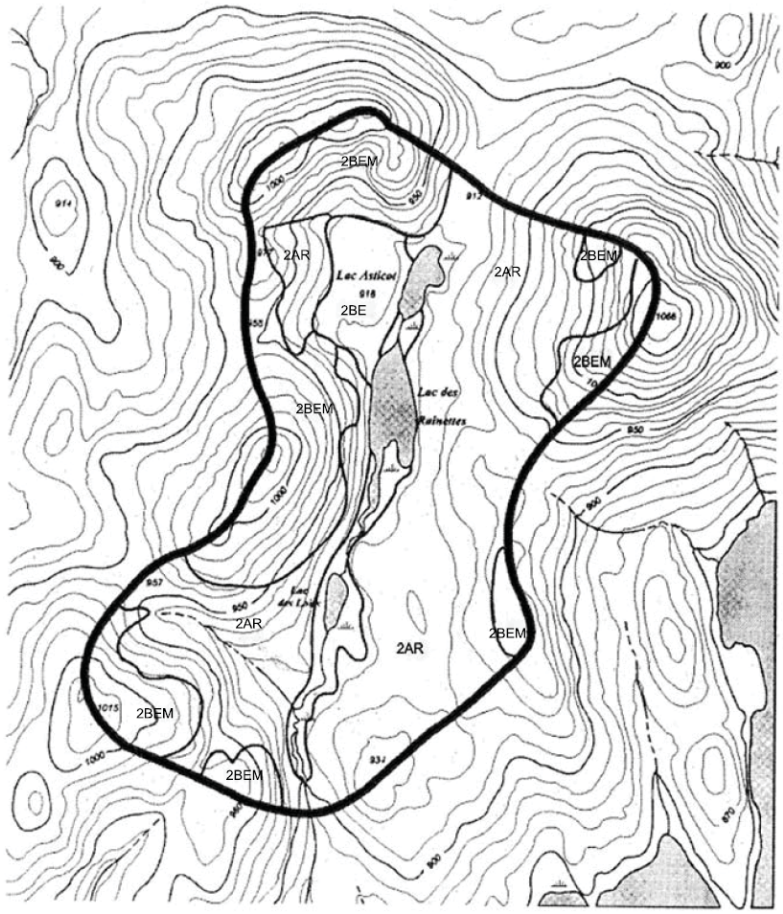


Figure 4
Détermination de la longueur du cours d'eau (L_c)

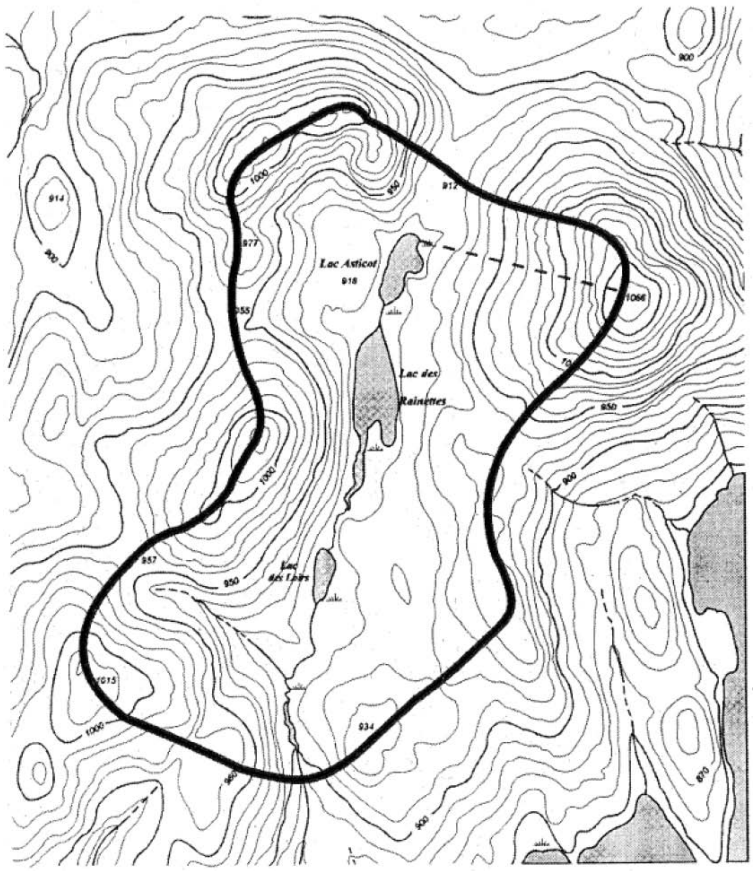


Figure 5
Calcul de la pente «85-10» du cours d'eau (S_c)

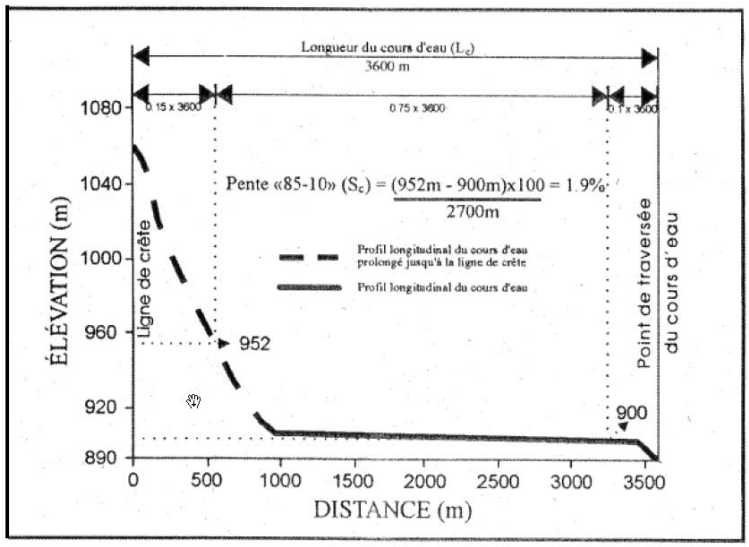


Figure 6
Isohyète de la moyenne de la précipitation totale (mm) d'une durée de 1 heure

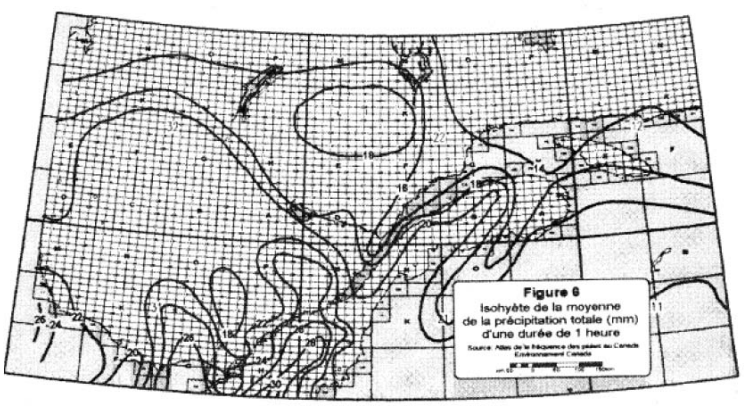


Figure 7
Isohyète de l'écart-type de la précipitation totale (mm) d'une durée de 1 heure

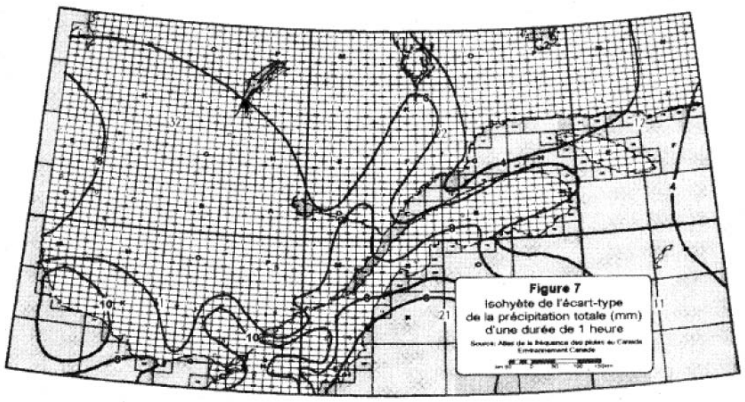
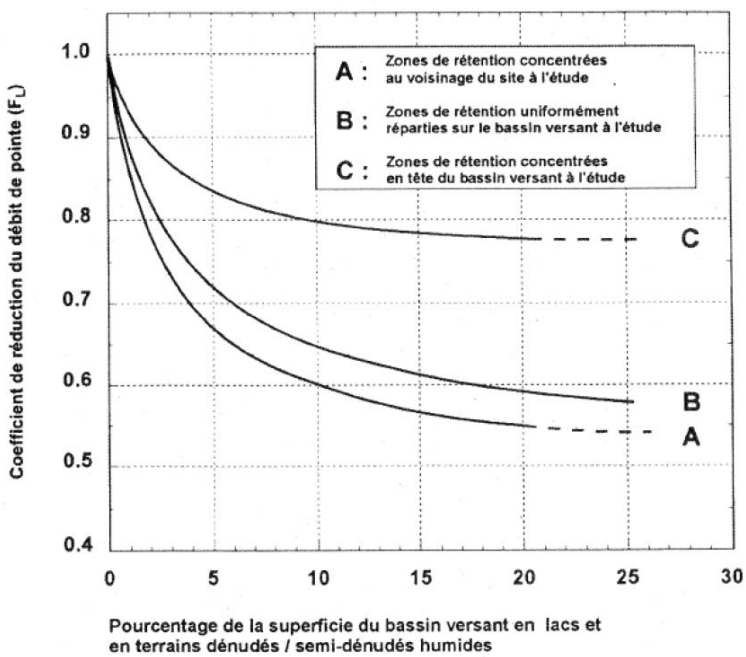


Figure 8
Effet de laminage des lacs et des terrains dénudés / semi-dénudés humides



Source : Manuel de conception des ponceaux, MTQ

SCHEDULE 9

CALCULATION METHOD FOR THE PEAK FLOW OF A DRAINAGE BASIN OF AN AREA GREATER THAN 60 km^2

The HP-40 statistical method is used to calculate the 20-year interval maximum daily flow. The method was validated for drainage basins whose area is greater than 150 km^2. Thus, where the area of the basin covers between 60 and 150 km^2, the result must be validated in the field by looking for signs indicating the water level reached by the floods of previous years or by establishing a relationship with basins that were measured on the same territory or near it.

STEPS IN THE CALCULATION

1. Delimitation of the drainage basin with a topographic map at a scale of 1:20 000;
2. Calculation of the drainage basin's area;
3. Calculation of the "85-10" slope of the watercourse;
4. Calculation of the proportion of the basin covered by lakes and bare and semi-bare wetlands;
5. Calculation of the 20-year interval maximum daily flow.

The delimitation of a drainage basin is shown as an example in step 1 of Schedule 8. The calculation method for the "85-10" slope of the watercourse is the same as that used for drainage basins of 60 km^2 or less (Schedule 8 — step 5). The 20-year interval maximum daily flow ($Q_{1.20}$) is determined using the following formula:

$$Q_{1.20}(m^3/s) = \frac{0.7882\,(A_b/100)^{0.93}\,(S_c)^{0.30}}{S_t^{0.24}}$$

where:

A_b = area of the drainage basin (ha)
S_c = "85-10" slope of the watercourse (%)
S_t = percentage of the area of the drainage basin covered by lakes and bare and semi-bare wetlands (%)

Example:

$A_b = 75\ km^2$ $\qquad Q_{1.20} = \frac{0.7882\,(75)^{0.93}\,(1)^{0.30}}{(5)^{0.24}} = 29.7\ m^3/s$

where:

$S_c = 1\%$
$S_t = 5\%$

A weighted factor of at least 5% is then applied to the flow obtained in order to take into account exceptional climatic events.

i.e.: 29.7 m^3/s X 1.05 = 31.2 m^3/s

SCHEDULE 10

Diameter required for round conduits according to the peak flow[a] (Q_{10}; $Q_{1.20}$), the type of intake and the burial

		Round conduit (0% ≤ slope ≤ 2%)												Round conduit with outlets (2% < slope ≤ 6%)			
		Burial 10%				Burial 20%				Burial 30%							
	Type of intake	Projection		Bevelled or straight		Projection		Bevelled or straight		Projection		Bevelled or straight		Projection		Bevelled or straight	
	Diameter of conduit (mm)	Flow classes (m^3/sec)[b]															
Round conduits	450	0.00	0.13	0.00	0.15	–	–	–	–	–	–	–	–	–	–	–	–
	500	0.14	0.17	0.16	0.19	–	–	–	–	–	–	–	–	–	–	–	–
	600	0.18	0.27	0.20	0.30	–	–	–	–	0	0.19	0	0.22	–	–	–	–
	700	0.28	0.40	0.31	0.44	–	–	–	–	0.20	0.25	0.23	0.28	–	–	–	–
	750	0.41	0.47	0.45	0.52	0.00	0.32	0.00	0.35	0.26	0.32	0.29	0.35	–	–	–	–
	800	0.48	0.56	0.53	0.62	0.33	0.39	0.36	0.43	0.33	0.39	0.36	0.43	–	–	–	–
	900	0.57	0.75	0.63	0.83	0.40	0.56	0.44	0.62	0.40	0.53	0.44	0.60	–	–	–	–
	1,000	0.76	0.97	0.84	1.08	0.57	0.76	0.63	0.85	0.54	0.69	0.61	0.78	–	–	–	–
	1,125	0.98	1.30	1.09	1.44	0.77	1.08	0.86	1.20	0.70	0.93	0.79	1.04	–	–	–	–
	1,200	1.31	1.53	1.45	1.70	1.09	1.29	1.21	1.44	0.94	1.10	1.05	1.23	0	0.82	0	0.82
	1,400	1.54	2.25	1.71	2.49	1.30	1.93	1.45	2.15	1.11	1.61	1.24	1.80	0.83	1.51	0.83	1.51
	1,500	2.26	2.67	2.50	2.96	1.94	2.29	2.16	2.55	1.62	1.91	1.81	2.14	1.52	1.95	1.52	1.95
	1,600	2.68	3.14	2.97	3.48	2.30	2.69	2.56	3.00	1.92	2.25	2.15	2.52	1.96	2.46	1.96	2.46
	1,800	3.15	4.21	3.49	4.67	2.70	3.61	3.01	4.02	2.26	3.15	2.53	3.52	2.47	3.68	2.47	3.68
	2,000	4.22	5.48	4.68	6.08	3.62	4.70	4.03	5.24	3.16	4.31	3.53	4.81	3.69	5.21	3.69	5.21
	2,200	5.49	6.96	6.09	7.71	4.71	5.97	5.25	6.64	4.32	5.70	4.82	6.35	5.22	6.88	5.22	7.07
	2,400	6.97	8.65	7.72	9.59	5.98	7.42	6.65	8.26	5.71	7.32	6.36	8.15	6.89	8.72	7.08	9.28
	2,700	8.66	11.61	9.60	12.87	7.43	10.20	8.27	11.35	7.33	10.20	8.16	11.35	8.73	12.04	9.29	12.83
	3,000	11.62	15.12	12.88	16.76	10.21	13.69	11.36	15.21	10.21	13.69	11.36	15.21	12.05	15.92	12.84	16.98
	3,300	15.13	19.17	16.77	21.26	13.70	17.77	15.22	19.74	13.70	17.77	15.22	19.74	15.93	20.44	16.99	21.85
	3,600	19.18	23.83	21.27	26.43	17.78	22.51	19.75	25.00	17.78	22.51	19.75	25.00	20.45	25.58	21.86	27.45
Structural plates	3,670	23.84	25.01	26.44	27.74	22.52	23.72	25.01	26.35	22.52	23.72	25.01	26.35	25.59	26.88	27.46	28.95
	3,990	25.02	30.82	27.75	34.18	23.73	29.71	26.36	32.98	23.73	29.71	26.36	32.98	26.89	33.33	28.96	35.92
	4,300	30.83	37.16	34.19	41.22	29.72	36.30	32.99	40.29	29.72	36.30	32.99	40.29	33.34	40.39	35.93	43.57
	4,610	37.17	44.25	41.23	49.03	36.31	43.72	40.30	48.45	36.31	43.72	40.30	48.45	40.40	48.24	43.58	52.07
	4,920	44.26	52.05	49.04	57.72	43.73	51.93	48.46	57.59	43.73	51.93	48.46	57.59	48.25	57.00	52.08	61.51
	5,230	52.06	61.01	57.72	67.64	51.94	61.01	57.60	67.64	51.94	61.01	57.60	67.64	57.01	66.62	61.52	71.83
	5,540	61.02	70.97	67.65	78.53	61.02	70.97	67.65	78.53	61.02	70.97	67.65	78.53	66.63	77.10	71.84	83.08
	5,850	70.98	81.89	78.54	90.52	70.98	81.89	78.54	90.52	70.98	81.89	78.54	90.52	77.11	88.62	83.09	95.43
	6,160	81.90	93.72	90.53	103.46	81.90	93.72	90.53	103.46	81.90	93.72	90.53	103.46	88.63	101.05	95.44	108.74
	6,470	93.73	106.51	103.47	117.45	93.73	106.51	103.47	117.45	93.73	106.51	103.47	117.45	101.06	114.46	108.75	123.12
	6,780	106.52	120.33	117.46	132.54	106.52	120.33	117.46	132.54	106.52	120.33	117.46	132.54	114.47	128.92	123.13	138.60

a: calibrated so that the height of the water in the conduit is always less than or equal to 85% of the clearance after burial of the conduit;
b: the numbers correspond to the flow interval (class) in which a conduit, having a given size and characteristics, discharges optimally up to the maximum capacity of the class.

Source: Plamondon, André P. Février 2013. *Capacité d'écoulement des conduits circulaires enfouis et munis de déversoirs – Application au milieu forestier*. 88 p. Unpublished report.

SCHEDULE 11

CONDITIONS TO MEET FOR A CULVERT WITH A ROUND CONDUIT WHERE FREE FLOW OF FISH MUST BE ENSURED

Length of conduit (L)	Maximum slope of watercourse at the site of crossing[1]	Minimum diameter of conduit (mm)	Burial of conduit over its entire length [2]			Maximum narrowing of the width of the watercourse[4]	
			Proportion of diameter	Minimum	Maximum	Slope[5] upstream > 1%	Slope[5] upstream ≤ 1%
0 < L ≤ 9 m	2%	600	30%	250 mm[3]	500 mm	20%	50%
9 < L ≤12 m	2%	750	30%	250 mm	500 mm	20%	50%
12 < L ≤ 18 m	1%	750	20%	250 mm	500 mm	20%	20%
18 < L ≤ 24 m	0.5%	750	20%	250 mm	500 mm	20%	20%

[1] The slope is the inclination of the section of the watercourse included between the first natural thresholds not touched by the work (excavation, installation of conduit, rockfill, etc.) and located upstream and downstream of the culvert. It is measured from the thalweg of each threshold.

[2] The depth of the burial to the invert downstream is measured with relation to the thalweg of the threshold of the natural bed of the watercourse, located at a distance of over three times the diameter of the conduit downstream. The slope of the conduit will be the same as the slope of the watercourse.

[3] Except 600-mm diameter conduits that must be buried at a depth of 180 mm.

[4] The width of the watercourse is measured at the level of the upper limit of the banks.

[5] Corresponds to the slope of a watercourse measured between two natural thresholds that are not touched by the work and are located upstream at a distance equivalent to twice the length of the conduit.

SCHEDULE 12

CONDITIONS TO BE MET FOR A CULVERT WITH A CONDUIT HAVING OUTLETS WHERE THE CONDITIONS PROVIDED FOR IN SCHEDULE 11 FOR THE LAYOUT OF A CULVERT WITH A ROUND CONDUIT MAY NOT BE MET

SLOPE OF WATERCOURSE

Conduits with outlets must be installed in watercourses whose slope is greater than 2%. In addition, the slope of the watercourse may not exceed the percentage appearing in table 1, which varies on the basis of the length of the conduits.

Table 1. Maximum slope of the watercourse on the basis of the length of the conduits

Length of the conduit (m)	Maximum slope of the watercourse [1]
Less than 15	5
Equal to or greater than 15	6

[1] The slope is the inclination of the section of the watercourse between the first natural thresholds not touched by the work (excavation, installation of conduit, rockfill, etc.) and located upstream and downstream of the culvert. It is measured from the thalweg of each threshold.

NARROWING AND WIDENING OF THE WATERCOURSE

Maximum narrowing of the width of the watercourse: 20%

Widening of the watercourse: where required by the calculation of the flow

DIMENSIONS OF CONDUITS

Minimum diameter of the conduits: 1,200 mm

Minimum length of the conduits: 9 m

Maximum length of the conduits: 24 m

DESIGN OF OUTLETS

Characteristics of outlets

The outlets must be manufactured to remain in good working order and be functional for the expected life of the conduit. The outlets must not reduce the expected life of the conduit.

The outlets must have a height of 500 mm or more and dull edges. They must be equipped with abutments. The material of the outlets must be corrosion resistant.

The outlets must not be inclined by more than 9 degrees in relation with the transverse axis of the conduit. The joints between the outlets and the conduit must be leakproof. The number of outlets and their location in the conduits must comply with the standards in table 2, which vary according to the length of the conduit.

Table 2. Number and location of the outlets in relation with the length of the conduit

Length of the conduit (m) [1]	Number of outlets	Space between outlets (mm)	Distance of the ends of the conduit (mm)
6	3	2,000	1,000
9	5	1,800	900
12	6	2,000	1,000
15	8	1,900	900

[1] Conduits greater than or equal to 12 m in length may be obtained by connecting conduits with a lesser length presented in table 2.

Characteristics of notches in outlets

Notches in outlets must be rectangular with dull edges. Notches may be located in the centre of the outlets or off-centre alternating from one outlet to the other. The dimensions of the notches in the outlets must comply with the standards in table 3, which vary according to the diameter of the conduit.

Table 3. Dimensions of notches in outlets according to the diameter of the conduit

Diameter of the conduit (mm)	Dimensions of notches	
	Width (mm)	Height (mm)
Less than 2,200	150	200
2,200 to < 2,700	200	250
2,700 to < 3,300	250	300
3,300 to < 3,600	300	300
3,600 and over	400	300

PROCEDURE FOR INSTALLATION

Burial depth of downstream invert

The downstream invert of the conduit must be buried at a depth of 500 mm in relation with the thalweg of the control sill not touched by the work. The control sill is located downstream of the energy dissipation basin at a distance equal to or greater than three times the diameter of the conduit. The first outlet downstream of the culvert will be submerged under water.

Burial depth of the upstream invert

The upstream invert of the conduit must be buried at a depth of 200 mm in relation with the thalweg of the bed of the watercourse before the installation.

Energy dissipation basin

An energy dissipation basin is required downstream of the conduit. The downstream limit of the energy dissipation basin must be the control sill not touched by the work located at a distance equal to or greater than three times the diameter of the conduit. The depth of the energy dissipation basin must be ≥ 500 mm.

Slope for the installation of the conduit

The slope for the installation of the conduit depends on the slope of the watercourse, the length of the conduit and the burial depth of the upstream and downstream inverts. The installation slope must therefore be greater than the slope of the watercourse.

Culvert with parallel conduits

If outlets are installed in both conduits, the inverts of the conduits must be buried at the same depth.

If outlets are installed in only one conduit, the invert of the conduit without outlet must be located 500 mm higher than the invert of the conduit with outlets.

PROHIBITED PRACTICES

The following practices are prohibited:

- on-site welding;
- torch cutting of steel elements;
- cutting holes with a torch.

SCHEDULE 13

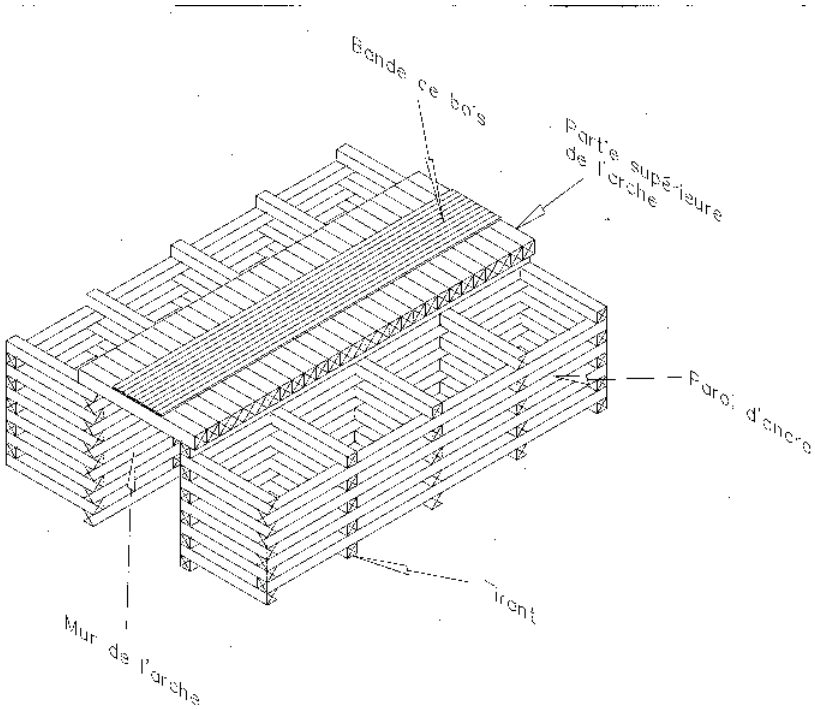
CHARACTERISTICS OF WOODEN CULVERTS

Characteristics		Span of wooden arch	
		≤ 1,000 mm	**> 1,000 mm and ≤ 2,000 mm**
Upper part[1] of the arch	**Dimension of wooden parts**	200 mm x 200 mm	250 mm x 250 mm
	Length of nails	350 mm	400 mm
	Assembly	• Wooden parts forming the upper part of the arch are placed one beside the other and nailed to each wall. Each wooden part must exceed the outside sides of the walls by at least 100 mm. • A strip of wooden parts, a total width of 1 000 mm and a minimum thickness of 38 mm, is nailed on the top at the centre of the arch, transversally to wooden parts forming the upper part of the arch.	
Walls[2], tie beams and anchoring walls	**Dimension of wooden parts**	200 mm x 200 mm	
	Length of nails	350 mm	
	Assembly	• Both walls of the arch skirt the watercourse; they are made of wooden parts nailed together to form a full surface. • Each wall is linked to an anchoring wall by tie beams placed perpendicularly to the beams. Tie beams are nailed to the wall and the anchoring wall. • Tie beams and wooden parts of the anchoring wall are alternated so that the tie beams of two consecutive rows are not directly one above the other. • Tie beams have a minimal length of 1,200 mm and are spaced over the length of the wall by not more than 2,000 mm. • For grounds having a low bearing capacity (loam, clay, organic soils and loose alluvions), the walls and anchoring walls must be installed on a granular blanket at least 400 mm thick.	
Clearance of arch		From 800 to 2 000 mm	
Fill material		Sand or gravel (particles from 0 to 20 mm in diameter)	
Thickness of fill[3]		From 300 to 1 000 mm	
Width of road		The width of the road above the culvert may not be reduced.	

1. The wooden parts of the upper part of the arch are no. 1 quality and of a species recognized in standard CAN/CSA-S6-06 (pine, hemlock, spruce, fir or tamarack).
2. The wooden parts of the walls are no. 1 or 2 quality and of one of the species recognized in standard CAN/CSA-S6-06 (pine, hemlock, spruce, fir or tamarack).
3. A geotextile membrane is placed on the top of the arch and on the outside side of the walls before filling all the wooden parts of the culvert.

Figure 1

Wooden culvert



Bande de bois = strip of wood
Partie supérieure de l'arche = upper part of the arch
Paroi d'ancrage = anchoring wall
Tirant = tie beam
Mur de l'arche = Arch wall

SCHEDULE 14

CONDITIONS RELATING TO BRIDGES

General requirements

Every intervention on bridges must comply with standard CAN/CSA-S6, Canadian Highway Bridge Design Code, that applies at the time the work is carried out.

Plan and specifications

Before the work:

For every construction, improvement and repair of bridges in forests, the design plans and specifications must be given to the department. The design plan contains the location map, the overall plan, the structure and foundation unit detailed plans, the geotechnical investigation (if the engineer or forest engineer who drew up the design deems it necessary or if the department so requires) and the topographical plan of the site. The drawing rules are those in the Manuel de conception des structures – volume 1 of the Ministère des Transports.

The design plans and specifications of bridges must be signed and sealed by an engineer or a forest engineer and, in the case of the bridges mentioned below, signed and sealed by an auditor (engineer or forest engineer):

- steel-concrete;
- with beams reinforced by bolting;
- with beams including splices;
- continuous span;
- on a bed of piles;
- Bailey;
- bowed structure;
- with laminated-glued beams.

The shop plans must also be signed and sealed by an engineer or forest engineer and given to the department before the start of the work.

During the work

All the plans and specifications of provisional works (cofferdam, timbering, erection system, temporary bridge, formwork, assemblies, etc.) must be signed and sealed by an engineer or forest engineer. The plans must be provided on request from the Minister.

After the work:

The final plan sealed, signed and dated by the engineer or forest engineer in charge of the work follow-up is given to the department. The plan represents the works as they are immediately after their carrying out.

The posting notice indicating the maximum load that a bridge may support and bearing the seal and signature of an engineer or forest engineer (and auditor if required), for CL3-W, CL2-W and CF3E-W trucks, must be provided to the department. The calculation notes must be provided on request to the Minister.

The final plan and the posting notice must be given to the department not later than 30 days following the end of the work.

Geometry

The minimum usable width of a bridge is 4,300 mm measured face to face with the curbs (one traffic lane).

The vertical clearance of a bridge is equal to or greater than 1,000 mm above the banks.

For wooden bridges and steel-wood bridges with only one traffic lane

(1)° a three-beam system is allowed for the CF3E-W configuration with a load less than or equal to 750 KN;

(2)° a four-beam or more system must be used for the CF3E-W configuration with a load greater than 750 KN.

Loads considered

The design and evaluation load configurations used are CL3-W, CL2-W and CF3E-W.

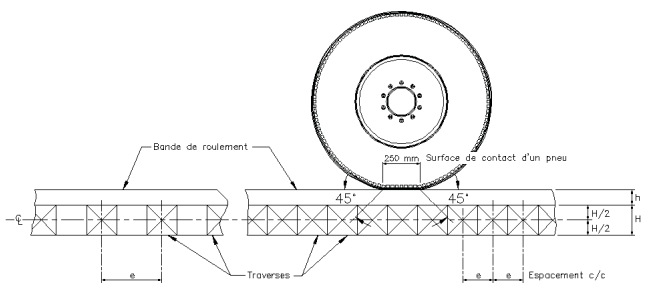
The impact factor on the bridge may not be reduced by considering a reduced speed posting or a mandatory stop.

Laminated-glued wood beams are calculated considering the resistance in wetlands.

The number of wood stretchers taking part in the stress under a tire is calculated using the following method:

$$\text{Number of stretchers taking part in the stress under a tire} = \frac{250 + 2h + H}{e}$$

h = height of the running strips
H = height of the stretchers
e = space between the stretchers (measured centre to centre)



A stretcher may be added to the calculation obtained where 25% or more of the stretcher is used. See example in table 1.

Table 1 - Number of stretchers to be used

Number of stretchers obtained by calculation	Number of stretchers to be used
3.25	4
2.56	3
2.17	2
1.63	2
1.08	1

In design, the limits for the allowable deflections to be used are L/400 for the calculation of wood-wood bridges, L/600 for steel-wood bridges (determined under standard CAN/CSA-S6-88) and L/800 for all other types of bridges.

Material

The wood used for the construction of the abutments, piers and restraint system of a bridge is Eastern or Western hemlock, grey or red pine, spruce, tamarack or Douglas fir.

The wooden parts constituting the various elements of the bridge must meet the following requirement:

(1) foundation units (abutments and piers) are constructed using quality 1 and 2 wood parts, whatever the proportion. The dimensions of the abutments comply with the Manuel de conception des structures - volume 1 of the Ministère des Transports.

(2) the construction of skeleton abutments is allowed for the CF3E-W configuration with a load less than or equal to 750 KN;

(3) for the CF3E-W configuration with a load greater than 750 KN, the abutments are closed on three sides, except in the back, and they are constituted at least of 200 mm x 200 mm parts and at least 4 supports of 200 mm x 200 mm for the supports of the beams;

(4) the floor joists are always made of quality 1 Eastern hemlock;

(5) the running strip, curbs and guard rails are constructed with quality 1 and 2 parts, namely, 65% minimum quality 1 parts and 35% maximum quality 2 parts.

All the wooden parts constituting the floor joists are stamped (engraved stamp) at one end to recognize the quality, even when parts are treated.

The use of used steel in good condition is allowed if there is a quality control that determines its resistance. The minimum resistance allowed is 230MPa.

The beams and plates are made of 350 AT or 350 W steel.

Assembly bolts, rings and nuts are type A-325.

Construction

The wood or steel abutments and piers loaded with rocks must be buried at least 60 cm under the upper limit of the bank, except in the presence of rock. If the ground is very hard (cannot be excavated by a backhoe), it may be used as bankseat. No wood abutment may have less than 8 rows from the bottom to the level of the supports of the beams.

All the bases of the reinforced concrete foundation units, except those on solid rock, must be extended under the frost level (minimum depth of 1.5 metres).

The natural ground (mineral) used as the seat of the foundation unit must not be disturbed or reworked.

The curbs, at a height at least 400 mm above the running strip, include a minimum of 200 mm x 200 mm continuous parts supported on support blocks 300 mm x 300 mm x 600 mm long. The blocks are at a maximum distance of 1,800 mm c/c. the curbs are attached by bolts having a diameter of 19 mm.

The running strip is full width and composed of parts 100 mm high X 200 mm wide.

For a deck made of wood parts, at least one stretcher out of three is attached to the beams.

If the bridge requires piers in the watercourse, a ballast is required all around to counter underwashing.

The ripraps or ballasts are made of rocks and pebbles of various sizes of a minimum of 200 mm placed in locations indicated in the plans and on the sand and gravel bank. The ripraps at the abutments must protect the embankment up to a minimum height of one metre above the banks.

Prohibited material and practices

The material and practices listed below are prohibited:

(1) beam reinforcements, splices, braces and stiffeners by on-site welding on existing steel structures;

(2) structures without braces;

(3) vehicle chassis (trailer, railway car, etc.);

(4) railroad tracks;

(5) reclaimed riveted beans;

(6) reclaimed lattice girders;

(7) overlapping decks;

(8) torch cutting of steel elements (girder, brace, etc.);

(9) holes cut using a torch.

Bridges located on trails for all terrain vehicles

All the above conditions apply to bridges located on trails for motorized all terrain vehicles, except for the following:

The maximum load capacity is posted on all bridges. The notice bearing the seal and signature of an engineer or forest engineer (and auditor where required) for the CL3-W configuration is provided to the department at the end of the work. The calculation notes are provided on request to the Minister.

The design and evaluation load configuration used is CL3-W.

Wood or steel abutments and piers loaded with rocks must extend at least 300 mm under the natural land where the abutments are installed. If the ground is very hard (cannot be excavated by a backhoe), it may be used as bank.

A bridge located on a trail for motorized all terrain vehicles will have to be designed for a minimum load of 10 tonnes for the CL3-W configuration.

The running strip must be full width and made of parts at least 50 mm thick. A space may be left between the parts without exceeding 75 mm.

SCHEDULE 15

REJECTED WOOD

Description

Rejected wood is a log or part of a log of a merchantable dimension that has such a quantity of defects that it no longer has value for the forest industry, except for forest biomass conversion. A log or part of a log is deemed to be worthless and is rejected when the reduction of the cut of one or both ends is caused by rot in the proportion provided for in the following table:

Criteria for the rejection of a log or part of a log

End of the log or part of the log affected by rot	Proportion of the surface of each cut reduced by rot	
	Softwood	Hardwood and white cedar
Both ends	50% and more (≥ 1/2)	66.7% and more (≥ 2/3)
Only one end	66.7% and more (≥ 2/3)	75% and more (≥ 3/4)

Every log longer than 3.74 m that is not rejected on the basis of the rejection criterion for "both ends" but that would be rejected on the basis of the criterion for "only one end", must be bucked in two separate parts, including one 2.50 m containing the part affected by rot that will be considered rejected wood.

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