UNDERSTANDING THE LAW

A Guide To New Brunswick's

Water Classification Regulation

New Nouveau Brunswick

Department of the Environment and Local Government

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UNDERSTANDING THE LAW: A GUIDE TO NEW BRUNSWICK'S *WATER CLASSIFICATION REGULATION*

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Disclaimer

This document is intended for general guidance only and is not a legal text. Where apparent conflicts occur between the guide and the *Water Classification Regulation*, please note that the *Water Classification Regulation* takes precedence.

Who Should Read this Guide?

This guide to the *Water Classification Regulation* will be of interest to everyone in New Brunswick - all of us use water for various purposes and all of us have a role to play in the planning and protection of our waters. If your activities have an effect or a potential effect on the quality of the water, you may be affected directly by this *Regulation*. Water classification emphasizes the input of stakeholders and community groups from the very beginning of the classification process.

Stakeholders include anyone who is interested in or has an interest in water quality. This includes various levels of government, including provincial departments, municipalities, aboriginal peoples, and federal agencies. A stakeholder may be a concerned citizen, a landowner, a permanent or seasonal resident of a watershed, a person who works in the watershed such as a farmer or forester, or a person who represents a particular industry, development or commercial enterprise. A stakeholder may be a conservationist or an educator, someone who uses the water for recreation, or a member of a special interest group, a watershed group, or a community group with a related focus.

If you are a stakeholder in any respect, you will want to know how water quality standards will potentially change the way you undertake activities in a watershed. There are many opportunities for you to participate in the water classification of watercourses in the watershed. Reading this booklet is the first step towards participating in the protection of our water.

Introduction: Clean Water for New Brunswick

Water is one of New Brunswick's most important resources. We drink and bathe in it. We use it for agricultural, commercial and industrial purposes. We spend our leisure time around water when angling, camping, canoeing and swimming. As well, New Brunswick's plants and animals rely on water for their survival, using it as habitat and refuge.

In order for New Brunswick's existing surface and groundwater water resources to supply us with abundant clean water for the foreseeable future, they need to be protected and managed with care.

The *Water Classification Regulation* is a regulation under the *Clean Water Act*. The purpose of water classification is to set goals for water quality and promote management of water on a watershed basis. *The Water Classification Regulation* establishes the water quality classes, and the associated water quality standards, and outlines the administrative processes and requirements related to the classification of water.

Water classification places the water of lakes and rivers or segments of rivers into categories or classes based on water quality goals. Each class is then managed according to the goal. The goals associated with a specific class are set according to the intended uses of the water, and the water quality and quantity required to protect the intended uses.

Why This Guide?

In this guide, you will learn about the *Water Classification Regulation* and how it will be used to protect, maintain, or improve the water quality of New Brunswick's lakes and rivers.

The guide describes the various classes of water and describes the water quality standards associated with each Class. It also describes the steps that are followed to classify river systems, and how the water classification system is used to manage the water quality in a watershed once the watercourses have been classified.

The guide also tells about a class called Outstanding Natural Waters, outlines a nominating process for candidate waters, and lists the criteria by which they may be selected.

A glossary of technical terms appearing in the text is presented at the end of the guide.

Other information is also available to help you understand the water classification system and to assist watershed, other community groups and stakeholders to participate in water classification. This includes the **Water Classification Guidebook**, which was prepared by a community-based watershed group to guide other groups through the step-by-step process of classification. A series of **Guidance Documents** is also available for groups and stakeholders who want to become involved in the water classification process, on topics such as stakeholder involvement, mapping land cover and land use, and training volunteers for water quality monitoring.

What is Water Classification?

Water classification is a water management method used to harmonize the use and protection of watercourses. In general, it involves categorizing watercourses into classes, and then managing those watercourses in order to meet goals set for each class.

The *Water Classification Regulation* provides:

- raw water quality standards for watercourses that are used as public drinking water supplies
- standards for water quality for other watercourses
- standards for aquatic life (and the aquatic community) for all waters
- standards that can be used to prevent degradation of water
- an opportunity for New Brunswickers to participate in setting goals for water quality
- an opportunity to plan water quality for all the waters within a single watershed

The water quality standards established under the *Water Classification Regulation* complement the Department of the Environment and Local Government's existing process of approvals for the protection and management of water under the *Watercourse Alteration Regulation*, the *Water Quality Regulation*, and the *Pesticides Control Act*. Water quality standards under the *Water Classification Regulation* also complement the drinking water protection provided under the *Watershed Protected Area Designation Order*, which lists prohibitions and permitted activities within watersheds that are used as sources of water for public supply systems in New Brunswick.

What is Included in the *Water Classification Regulation*?

The *Regulation* contains criteria for classes, including water quality and biological (aquatic life) standards associated with each class, and administrative procedures for implementing water classification.

The *Regulation* also puts administrative features into place, so that water in the Province can be classified. Working with watershed and community-based groups, the Department will eventually classify all waters in the Province, watershed by watershed.

The *Regulation* also contains administrative procedures for nominating and designating Outstanding Natural Waters.

A process for altering a classification is also provided.

Which Waters are Included?

New Brunswick's *Water Classification Regulation* will be used to classify inland, surface waters. This will include water bodies in fresh water systems: rivers and their tributaries; lakes; ponds; impoundments; and waters associated with wetlands. It will also include estuarine waters where a river meets and dilutes marine water, and water in wetlands associated with these estuaries.

What are the Classes?

Under the *Water Classification Regulation*, watercourses can be placed in one of six classes. Each class has:

- specific standards for water quality, set to protect suitable uses of the water;
- biological standards for aquatic life, set to protect the habitat function of the water and to help indicate the water quality; and
- management features designed to help achieve or maintain the desired water quality goals.

Following is a brief description of each of the six Classes. Additional information on the water quality standards and management features associated with each class can be found in Table 1.

There are three specific classes, designed to protect special uses of some of our waters:

Outstanding Natural Waters Class - a class for special lakes and rivers

These are waters that meet special criteria established in the *Regulation*. These waters remain relatively unaffected by human activities and possess an unaltered, natural water quality, quantity, and biology. They may be unique or they may represent good examples of typical natural water quality commonly found in New Brunswick. These lakes or rivers tend to be located at the headwaters of river systems. Their protection will safeguard downstream water quality and quantity. The goal of the Outstanding Natural Waters Class is to protect the water quality of these watercourses for posterity in their natural state. **These waters are classified through a nomination process, involving objective selection criteria and a Review Panel (see page 6).**

AP Class - a class for designated surface drinking water supplies (potable or drinking water)

These are waters of watercourses that are designated as Protected Areas under the *Watershed Protected Area Designation Order - Clean Water Act*. At the present time, there are 30

designated water supplies in the Province. **The water of these watercourses, and of all surface waters that drain into these watercourses, was placed into the AP Class automatically on passage of the *Regulation*.**

AL Class - a class for lakes, ponds and impoundments

These are lakes, ponds or impoundments that are not classified into the Outstanding Natural Waters Class or into the AP Class. **The water of all lakes, ponds and impoundments in the Province was placed into the AL Class automatically on passage of the *Regulation*.** In the *Regulation*, the Minister has the authority to exclude impoundments from the class, in cases where the impoundments have characteristics of riverine systems and would be better managed in one of the other classes. The Minister can also exclude lakes and ponds in peat bogs from the class, in cases where peat extraction is occurring.

There are also three additional classes, primarily for rivers and streams, or segments of rivers and streams that are not placed into one of the first three classes:

A Class

These are waters that can support use as habitat for aquatic life, use for primary contact activities such as swimming and secondary contact activities such as boating. These watercourses would be managed to have water quality and aquatic life as it occurs naturally;

B Class

These are waters that can support use as habitat for aquatic life, use for primary contact activities such as swimming and secondary contact activities such as boating. These watercourses would be managed to have water quality that would support all native species, and to maintain health in the resident aquatic community;

C Class

These are waters that can support use as habitat for aquatic life, and use for secondary contact activities such as boating, but not for primary contact activities such as swimming. These watercourses would be managed to have water quality that would support native fish species and, although changes to the aquatic community could occur, the resulting aquatic community would be viable.

Waters are classified into these last three Classes through a step-by-step public process.

Whenever possible, all the waters within a particular watershed are classified at the same time (see Figure 1). This is to enable the information to be considered in a comprehensive way and to acknowledge that the watershed is a system where activities and decisions in one part of the watershed have an influence on the watershed as a whole. Also stakeholders who live downstream in the watershed need to be able to interact with stakeholders in upstream portions of the watershed and vice-versa.

Figure 1. Water Classification of a Typical Watershed

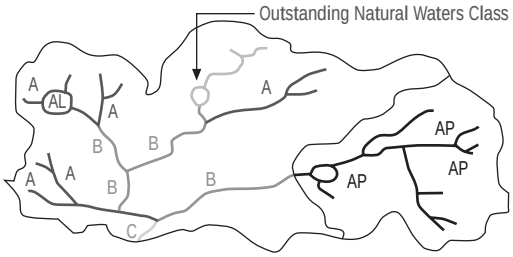

Figure 1. Water Classification of a Typical Watershed. The boundaries of this watershed are represented by the thin black line. To the right is a sub-watershed within the larger watershed. These waters supply drinking water to a downstream municipality and are classified AP The lake at the left of the map is classified AL. A small lake and tributary at the top of the map is classified in the Outstanding Natural Waters class. Other waters in the watershed are classified A, B or C.

What is the "Bottom Line" for all Waters in the Province?

The *Water Classification Regulation* establishes a "bottom line" management goal for the water quality of all classified waters in the Province. At the very least, for all Classes of water, the goal is to protect aquatic life. Even in C Class, where some changes to the biological community may occurs as a result of water quality, the water must be of acceptable quality and support native fish species and a viable aquatic community.

There is no class for waters degraded below C Class standards. If, during the evaluation process, the water quality of a particular watercourse or section of a watercourse is shown to be degraded below C Class standards, the water will be put into a class which makes it the goal to improve water quality. For example, a severely degraded stream could be put into the C Class, and, through various decisions and actions, the water would be gradually improved in quality.

What are Water Quality Standards?

The *Water Classification Regulation* establishes water quality standards (including biological standards) for classified lakes and rivers in the Province to protect the water for existing and planned uses.

Standards in the *Regulation* have been kept few and simple. Each class has standards for:

- dissolved oxygen
- bacteria
- aquatic life
- trophic status (for lakes)

The standards are based primarily on the Canadian Environmental Quality Guidelines. These Guidelines list acceptable concentrations for water quality. They include physical, chemical, radiological and microbiological characteristics of water for various uses including drinking, recreation and aesthetics, freshwater aquatic life, and other activities.

The water quality standards in the *Regulation* apply to the water in the watercourse and are designed to provide protection for various uses of the water (see Table 1 for a list of the standards.)

Standards for bacteria help protect drinking water and recreational uses of water by limiting the numbers of harmful microbiological species that can be released to the water. Standards for dissolved oxygen, when used in combination with aquatic life standards, are a good indicator of general water quality that will help protect the fish and other species living in the water.

The standards for dissolved oxygen and bacteria are based on the Canadian Environmental Quality Guidelines and on guidelines and standards used in other Canadian provinces.

Biological or aquatic life standards for each class of water are also included in the *Regulation*. These standards are based on measures of the health of aquatic species such as insects (e.g. mayflies) and fish. Insect communities respond quickly to shifts in water quality by altering their species mix and numbers and are therefore excellent indicators of changes in water quality.

How is a River System Classified? Step-by-Step!

The *Regulation* sets out the step-by-step process for classifying watercourses within a watershed. The *Regulation* enables stakeholders, watershed and other community groups, and residents to take an active role in the classification of watercourses within a watershed. Water classification helps these groups to work, with the active involvement of all stakeholders, to set goals for the water quality in the watershed.

Once the goal-setting step of water classification is completed, the resulting action plan will help the group and regulators to take strategic actions to manage the watershed far into the future. Watershed and community groups are assisted in the process of water classification by the New Brunswick Department of the Environment and Local Government, through its Outreach and Partnering Initiative.

The Classification of a watercourse involves four main steps:

- identifying and involving stakeholders and the public;
- evaluating the river system;
- establishing a vision for the watershed and selecting appropriate classifications for various lakes and rivers in the watershed;
- implementing classification, including developing an action plan.

Who are the Stakeholders?

Many people have an interest in the management of water in a watershed: landowners; permanent and seasonal residents; people who work in the watershed such as farmers, miners, educators, foresters, and conservationists; manufacturers, and those involved in various businesses and industries; people who use the water for recreation such as boaters, canoeists and swimmers; people from all walks of life. These people are considered to have an interest in the water quality - they are stakeholders in the water management decisions that may be made.

You are a stakeholder and therefore, it is important that you become involved throughout the process of setting water quality goals through water classification. As stakeholders interact during the process, they will become involved as true partners in the process of making decisions on watershed management issues. This approach allows all stakeholders an opportunity to express their opinions, to participate in the process of developing consensus on the goals to be set under water classification, and to avoid difficult conflicts that may result if stakeholders are not able to participate throughout the process.

As a means of bringing the stakeholders together, the Department of the Environment and Local Government has encouraged the development and participation of watershed-based community groups. These groups of stakeholders are encouraged in their development and assisted in the process of water classification with services provided by the Department's Outreach and Partnering Initiative.

How Can You Be Involved in Water Classification?

The *Regulation* ensures that the public is involved in the classification of New Brunswick's waters. This begins when the Department first considers a watershed for classification.

The process of water classification can be initiated by Government or by any group or individual by sending a request to the Minister. Wherever possible, water classification should be undertaken for all the waters within a common watershed. A written request may also be made to the Minister to have a lake, pond or impoundment excluded from the AL Class. The forms for making these requests may be obtained from any office listed in Appendix B of the guide.

Early in the process of water classification in a particular watershed, the public is notified in newspapers of the area (and perhaps by other means) that the evaluation step of classification has begun and that stakeholders may become involved. Existing watershed-based community groups often create a nucleus of involvement where many different stakeholders can participate in the process of water classification. Since the evaluation process and the eventual water classification may take a few years, there are many opportunities for the public and for various stakeholders to become knowledgeable about classification and to get involved.

Public involvement may include meetings with watershed-based community groups, other stakeholder groups, and individuals who have an interest in the particular watershed. Volunteers can assist with activities such as water quality monitoring, providing valuable local information, and helping to develop consensus on the classification.

The purpose of public involvement is to enable interested individuals and groups to help develop a vision for the future management of the water, and to participate in setting water quality goals.

How is a Watershed Evaluated?

Before the water of a watercourse can be classified, the *Regulation* requires its suitability for a particular Class to be evaluated, through a process of public participation and involvement, as described above. This includes:

- making an assessment of the quality of the water: this involves use of historical information, and monitoring the water quality in order to understand its chemical, physical and biological properties; aquatic insects and other aquatic life are also used as an indicator of water quality.
- assessing past, present and potential uses of the land and water, to determine existing and potential discharges and their impacts. The geology, soil, vegetation, and other landscape features are examined to determine their influence on water quality and land use.

This information will help to assess which class is best suited to the water so that realistic goals are set for water quality and quantity. Eventually, this information can be used to help develop an action plan and to provide a basis for various projects.

Again, watershed groups are encouraged to participate in the evaluation of the watershed. People can become involved in water quality monitoring and in describing land uses in the watershed.

How is an Appropriate Class Selected?

An appropriate class for the water of a watercourse is selected by examining the existing water quality, by understanding how land characteristics and uses contribute to the water quality observed, and by considering what would be the ecological, economic, and social consequences of classifying the water in a particular class.

Once the existing quality of a watercourse is known, the community can work to establish a vision for future water quality and to select a class for the water which would help to achieve the vision.

One possible vision is to maintain the water quality as it presently exists; in order to achieve this, the water would be given a class that reflects its current water quality.

Another possible vision is to improve the water quality; in order to achieve this, the water would be given a class with more stringent water quality standards. The *Regulation* is written in such a way to promote gradual improvement in water quality and to discourage "backsliding".

If needed, the Department will assist the community to establish consensus on the selection of an appropriate classification.

Once an appropriate class has been selected for the water, a recommendation is presented to the Minister. Recall that, where possible, an appropriate class should be selected for all of the watercourses within a particular watershed.

How are Outstanding Natural Waters Selected?

Another evaluation process, carried out in part by an Outstanding Natural Waters Review Panel, is in place for potential candidates for the Outstanding Natural Waters Class.

In order for a water to be designated into the Outstanding Natural Waters Class, waters must meet special criteria:

- The water quality and quantity should be as it occurs naturally, allowing for barely measurable changes to water chemistry or flow caused by atmospheric inputs or land and water use activities;
- The aquatic community must be as it naturally occurs, allowing for barely measurable changes by atmospheric inputs or land and water activities. Non-indigenous species may be present if they are ecologically stable; and
- There should be no release of contaminants into the water other than those causing barely measurable changes.

As well as meeting the above criteria, the water must also have one or more of the following characteristics:

- The quality of its water or the nature of its aquatic community is representative of waters common in the Province;
- A chemical or physical quality if its water is unique (for example, a very cold water or a stream with high concentrations of salt);
- It contains a rare, unique, threatened or endangered aquatic community;
- It possesses outstanding recreational, aesthetic or historical qualities; or
- The quality of the water is such that protecting it in its natural state would, in the Minister's opinion, help promote clean water for New Brunswick or the integrity of the ecosystem.

How is the Public Involved in the Outstanding Natural Waters Review Process?

The *Water Classification Regulation* enables the public to play a role in the nomination, classification and long-term protection of Outstanding Natural Waters.

Interested individuals or groups may identify and nominate special lakes and rivers, or other watercourses, to the Outstanding Natural Waters Class by submitting a nomination to an Outstanding Natural Waters Review Panel. The Panel or the Minister may also request other documentation or information. The nomination form may be obtained from any office listed in Appendix B of the guide.

The Outstanding Natural Waters Review Panel will examine all nominations to the Outstanding Natural Waters Class. This Panel, which will be established by Government, may include up to eleven members who sit on the Panel for two-year terms. The Panel will include a member from a watershed association; a member of a conservation group; members representing the perspective of the forest, mining and agriculture industries; a member from a university; and a member of the Department of Natural Resources and Energy. The Department of Environment and Local Government will provide a Chairperson and a Secretary to the Panel. A maximum of two other members may be named to the Panel.

The Panel will receive nominations, provide opportunities for public comment, evaluate the nominated waters (using the criteria), and recommend further study when necessary. The Panel will endeavor to reach consensus, and it may consult with the public and stakeholders concerning its recommendations. Residents of a watershed containing the nominated lake or river will be consulted. This will give owners of property adjacent to a nominated lake or river an opportunity to comment on the classification and to participate in the long-term protection of the water.

When the Panel's evaluation is completed, it will make recommendations regarding the classification and present a report of its findings to the Minister, including the outcome of its consultation with the public.

What Additional Public Involvement Occurs?

Once the evaluation step is over, and a proposed water classification has been provided to the Minister, landowners and people who use or enjoy the water and land are informed in local newspapers that the water in a watershed is proposed for classification. Stakeholders are again given an opportunity to be involved in the classification process.

Public information sessions and other communications enable the public and the various stakeholders to examine the ecological, social and economic consequences of the proposed classification. People are given an opportunity to review the proposed classification and to submit additional information or comments.

The *Regulation* states that, if possible, consensus among stakeholders should be reached concerning the classification that is finally recommended to the Minister of the Environment and Local Government.

Following the evaluation and public consultation processes, the Minister of the Environment and Local Government considers the results of the

consultation process and any recommendations for the classification of the water of watercourses within a given watershed. If the classification involves a nomination to the Outstanding Natural Waters Class, the Minister must be satisfied that the watercourse could be reasonably expected to continue to meet the criteria for the Class.

The Minister then makes the final decision and informs the public of the final result of the classification process.

Classifications under the *Regulation* are done by an Order of the Minister, following approval of the Lieutenant-Governor in Council. *A Water Classification Order* contains a description of the watercourse to be classified or a plan showing the watercourse, the identity of the classification, and the date when the classification becomes effective. Other information concerning any special social, economic or environmental significance of the watercourse may also appear in the *Order*.

Once the Water in a Watercourse is Classified, What are the Requirements of the *Water Classification Regulation*?

Once a watercourse is classified, the water quality standards associated with the class will apply. In a classified water, it will be an offence to use the water, or the land within the watershed associated with the watercourse in a way that will, directly or indirectly:

- cause the quality of the water to cease to meet the class standards;
- cause the quality of the water to degrade in relation to the class standards
- impede or stop any progress that the quality of the water may have been making toward meeting the class standards

In most cases, the existing water quality will meet the standards set for water quality, and most activities in the watershed will already be in compliance.

Activities that may impact water quality of classified waters will be controlled using existing regulatory processes. Permits and approvals for watercourse alterations or discharges will be written in such a way that the standards are not exceeded. New activities will also have to meet the water quality standards. Existing activities will be able to continue, as long as they do not prevent the water quality standards from being met.

For those individuals, groups or industries undertaking land-use activities that do not require specific permits or approvals, but which could affect water quality, information on Best Management Practices will be provided and land users will be asked to implement these Best Management Practices voluntarily. Should voluntary approaches not be succeeding in a particular section of water, directives may be issued using legal authority to ensure that standards are met.

In some cases, the stakeholders in a watershed may agree that improvements in water quality are desirable, and the water should be placed into a class which has higher water quality standards than the existing water quality.

To give time for improvements in water quality, a date will be set to indicate when the water quality standards are meant to be achieved. In order to make headway toward the water quality goal, all activities will have to be carried out in such a way as to make progress toward the meeting of water quality standards. The Department of Environment and Local Government will use both regulatory and non-regulatory tools to help ensure this.

Does the Regulation Control Specific Activities?

Some activities are prohibited or limited in certain classes of water (see Table 1.) These management features are designed to maintain the water quality within the standards:

• Point Source Activities

Effluents that discharge directly from a pipe or other localized origin are known as point source discharges. In the Outstanding Natural Waters Class and in the AL Class for lakes, ponds and impoundments, release of contaminants is not allowed. Point source activities in the AP Class are regulated under the *Watershed Protected Area Designation Order*. In other Classes, discharges are allowed, as long as the receiving water meets the standards associated with the classification.

Once waters are classified, effluents associated with point source activities will continue to be managed through a system of approvals with conditions under the *Water Quality Regulation*.

Mixing zone standards are also included in the *Regulation* for industries with point source effluents (see below).

• Non-Point Source Activities

Non-point source impacts are generally associated with broad-based, land-use activities such as forestry, agriculture or residential activity. These sources are presently managed through regulatory processes under the *Clean Water Act*. The *Watercourse Alteration Regulation*,

for example, requires a permit for vegetation removal or ground disturbance within 30 meters of a watercourse.

The *Water Classification Regulation* does not specifically limit non-point source activities. However, once waters are classified, land-use activities must be done in such a way that the standards associated with the classification are met.

The Department of the Environment and Local Government will continue to work with stakeholders in the agriculture, commercial, forestry, industrial, residential, recreational and transportation sectors to develop Best Management Practices (BMP).

Best Management Practices are guidelines that show how land-use activities can be carried out in an environmentally responsible and sustainable manner. The information will be made available to stakeholders and groups across the Province, and people will be encouraged to use BMP guidelines voluntarily.

• Flow Alterations

Flow alterations include such activities as building dams or diversions, or withdrawing water for agricultural or industrial purposes. Since water quality depends directly on water quantity, flow alterations will be considered in relation to water quality standards.

The *Water Classification Regulation* limits significant withdrawals of water for lakes and rivers in the Outstanding Natural Waters Class. There are no specific limits on withdrawals in other classes, although water withdrawals must be done in such a way that the standards associated with the classification are met. The approval processes of both the *Water Quality Regulation* and the *Watercourse Alteration Regulation* will be used to regulate flow alterations for all classes of lakes and rivers, based on class goals.

• Mixing Zones

When water quality standards are set for watercourses, it is usually unreasonable to expect industry to meet in-stream water quality standards immediately upon discharge. Instead, some initial zone of mixing is applied to the discharge. The *Water Classification Regulation* permits mixing zones in some classes of water. It also requires these mixing zones to meet standards which will protect aquatic life and existing uses of the water.

Mixing zone standards are meant to be applied to all discharges, and approvals would be written to ensure that mixing zones would have the characteristics outlined in the standards.

Mixing zone standards address:

- protection of existing uses of the receiving water
- definable, quantifiable limits for linear distance, surface area, volume, etc.
- restrictions on where mixing zones can occur
- effects of mixing zones on organisms (including protected and endangered species) and their habitat, including spawning grounds, nursery areas, passage of species, etc.
- accumulation of contaminants in sediments or biota
- concentrations of toxic or other materials
- overlap of adjacent mixing zones

Within a mixing zone, the water quality standards outlined in Table 1 do not have to be met.

Under the *Regulation*, it is also an offence to create or use a mixing zone unless the mixing zone standards are followed.

How Can the Public Participate in Achieving the Goals Set Through Water Classification?

In part, the implementation of the water quality goals set through water classification will be achieved through compliance and enforcement activities. However, an important component of achieving the goals set by classification will be through the continued interaction of the stakeholders in community and watershed groups.

These groups will be encouraged to undertake **action planning** for their watershed, in order to help them determine steps that should be taken to protect water quality and to achieve the goals set through water classification. An action plan recommends actions that should be taken, describes the objective of the action, and provides details on how the activity would be carried out, who is responsible for the action and how much it would cost. An action plan also prioritizes actions so that a group can be efficient when they undertake projects to mitigate the causes of water quality problems.

Monitoring will help determine if water quality standards are being met. The Department of the Environment and Local Government proposes carrying out the monitoring, in cooperation with stakeholder groups, with an emphasis on volunteer monitoring.

How Can You Find Out if the Waters in Your Watershed Have Been Classified?

When waters are classified in a *Water Classification Order*, the public is notified in local newspapers and, in some cases, by other means.

A register of *Water Classification Orders* is maintained in the head office of the Department of the Environment and Local Government and in the appropriate Regional Offices. A list of these offices is provided in Appendix B of the guide.

This information will also be available by electronic means and may be available from local watershed groups involved in the water classification process.

To find out if a body of water in a watershed has been classified, you may call the numbers given or contact us by e-mail (see below).

Other Questions

Once a water is classified, can the classification be changed?

The *Regulation* provides a systematic process for revising classifications, if necessary. Shifting economic, social and environmental priorities, improvements in water quality, and ongoing input from stakeholders may make such changes desirable.

Reclassification can occur only after careful evaluation and public consultation, following a process similar to the normal step-by-step procedure that was used to classify the water.

Reclassification can result in water being classified to a class with more or less stringent standards.

Once a water is classified, can the classification be removed?

Once a water is classified, it can be reclassified into another class. A lake, pond or impoundment may be excluded from the AL Class by a *Water Classification Order*. Also, waters only remain in the AP Class as long as the *Watershed Protected Area Designation Order* applies to that water. For waters in other classes, there is no specific provision for removal of a classification.

Once a body of water is classified and water quality standards apply, how are the goals achieved?

Once water quality goals are set through the classification of the water, various activities in the watershed can be managed to help achieve the goals.

Action to achieve water quality goals can include design of activities to meet the water quality standards, conditions on permits and approvals issued by the Department, voluntary use of Best Management Practices by citizens and stakeholders in the watershed, and various community-based activities aimed at improving or maintaining water quality.

Watershed groups will be encouraged to identify and prioritize proposed actions, with the participation of all the stakeholders.

How to Contact Us

To have your questions answered, or to obtain more information, please contact us:

Sustainable Planning Branch
Sciences and Planning Division
Department of the Environment and Local Government
P. O. Box 6000
Fredericton, New Brunswick E3B 5H1

Telephone : 506 457-4846

Or any Regional Office of the New Brunswick Department of the Environment and Local Government (See Appendix B for contact information).

Table 1. The Classes and Associated Water Quality and Management Standards

Name of Class	Suitable Uses	Aquatic Community Standards	Dissolved Oxygen Standards	Bacteria Standards	Standards for Trophic Status (lakes, ponds and impoundments only)	Prohibited Activities
Outstanding Natural Waters	habitat for aquatic life; primary and secondary contact activity; other appropriate uses.	the aquatic life shall be as naturally occurring.	the concentration of dissolved oxygen shall be as naturally occurring.	the faecal coliform organisms and *E. coli* shall be as naturally occurring.	the trophic status shall be as naturally occurring.	release of a contaminant; creation of a new mixing zone; release of a contaminant into a mixing zone; significant withdrawals.
AP (designated surface drinking water supplies)	raw drinking water (treated or untreated); uses permitted under the *Watershed Protected Area Designation Order* (WPADO).	the aquatic life shall be as naturally occurring.	the concentration of dissolved oxygen shall be as naturally occurring.	*E. coli* shall be as naturally occurring; the total coliform organisms shall be as naturally occurring.	the trophic status shall be as naturally occurring.	see the *Watershed Protected Area Designation Order*
AL (lakes, ponds and impoundments)	habitat for aquatic life; primary and secondary contact activity (see glossary); other appropriate uses.	the aquatic life shall be as naturally occurring.	for cold water species: ≥ 9.5 ppm (early life stages) and ≥ 6.5 ppm (other life stages); for warm-water species: ≥ 6.0 ppm (early life stages) and ≥ 5.0 (other life stages); for estuarine waters: ≥ 80% saturation.	the faecal coliform organisms and *E. coli* shall be as naturally occurring.	the trophic status shall be stable or naturally changing; the water shall be free of algae blooms that impair use as habitat for aquatic life, or use for primary or secondary contact activity.	direct discharge of a contaminant that is not being released, or any increase in the volume or concentration of a contaminant that is being directly discharged, on the date of commencement of the *Regulation*; creation of a new mixing zone.

Table 1. The Classes and Associated Water Quality and Management Standards continued

Name of Class	Suitable Uses	Aquatic Community Standards	Dissolved Oxygen Standards	Bacteria Standards	Standards for Trophic Status (lakes, ponds and impoundments only)	Prohibited Activities
A	as habitat for aquatic life; primary and secondary contact activity; other uses that will not prevent the standards from being met.	the aquatic life shall be as naturally occurring.	for cold water species: ≥ 9.5 ppm (early life stages) and ≥ 6.5 ppm (other life stages); for warm-water species: ≥ 6.0 ppm (early life stages) and ≥ 5.0 (other life stages).; ≥ 80% of saturation in estuarine waters.	*E. coli* shall be as naturally occurring.	the trophic status shall be stable or naturally changing; the water shall be free of algae blooms that impair use as habitat for aquatic life, or use for primary or secondary contact activity.	creation of a new mixing zone; release of a contaminant into a mixing zone.
B	as habitat for aquatic life; primary and secondary contact activity; other uses that will not prevent the standards from being met.	releases shall not cause adverse impact to the aquatic community in that the receiving water shall be of sufficient quality to support all indigenous aquatic species without detrimental changes to resident biological community.	for cold water species: ≥ 9.5 ppm (early life stages) and ≥ 6.5 ppm (other life stages); for warm-water species: ≥ 6.0 ppm (early life stages) and ≥ 5.0 (other life stages); ≥ 80% of saturation in estuarine waters.	the faecal coliform organisms shall be less than 14 per 100 ml for estuaries with identified shellfish beds, and E. coli shall be less than 200 per 100 ml for all other watercourses (geometric mean of a minimum of 5 samples in a 30 day period).	the trophic status shall be stable or naturally changing; the water shall be free of algae blooms that impair use as habitat for aquatic life, or use for primary or secondary contact activity.	
C	as habitat for aquatic life; secondary contact activity; other uses that will not prevent the standards from being met.	releases that may cause some changes to the aquatic community are permitted if the receiving water is of sufficient quality to support indigenous fish species and maintain the structure and function of the resident biological community despite the releases.	for cold water species: ≥ 9.5 ppm (early life stages) and ≥ 6.5 ppm (other life stages); for warm-water species: ≥ 6.0 ppm (early life stages) and ≥ 5.0 (other life stages); ≥ 80% of saturation in estuarine waters.	the faecal coliform organisms shall be less than 14 per 100 ml for estuaries with identified shellfish beds, and *E. coli* shall be less than 400 per 100 ml for all other watercourses (geometric mean of a minimum of 5 samples in a 30 day period).	the trophic status shall be stable or naturally changing; the water shall be free of algae blooms that impair use as habitat for aquatic life, or use for primary or secondary contact activity.	

Appendix A.

Glossary

aquatic insects
insects that spend at least part of their life cycle in streams, lakes, rivers and other bodies of water; include life stages of mayflies, stoneflies and caddisflies.

aquatic community
the full assemblage of plants, animals and other biota living together in an aquatic setting in a definable area, that, together with their habitat, form a functional unit with an identifiable structure.

aquatic life
plant and animal species that live all or part of their lives in an aquatic community, such as fish, amphibians and aquatic invertebrates.

benthic macro-invertebrate
an aquatic insect or other invertebrate that spends part or all of its life cycle in or on the bottom of a watercourse and is capable of being seen with the naked eye, or retained in a U. S. standard No. 30 sieve.

Best Management Practices (BMP)
a method, measure or practice that, when installed or used, is consistent with an efficient, practical, technically and environmentally sound activity. A BMP designed specifically with respect to water quality will prevent, reduce or correct water pollution.

Canadian Environmental Quality Guidelines
guidelines for the quality of water, soil, sediment, tissue residue, and air. The water guidelines are designed to support various water uses as determined by a technical committee of provincial and federal representatives operating under the direction of the Canadian Council Ministers of the Environment.

dissolved oxygen
a measure of the gas oxygen dissolved in water, expressed in parts per million. Sufficient dissolved oxygen is one of the fundamental requirements for a healthy aquatic system.

estuary
the waters at the lower end of a river system where the system meets with and measurably dilutes saltwater, and where the biotic community, including the vegetation, is characteristic of waters ranging in salinity from five to twenty parts per thousand.

impoundment
an artificially created watercourse with the characteristics of a lake.

indigenous species
a species which is native or belongs naturally in a place.

invertebrates
animals without backbones, including freshwater clams, leeches, sponges, worms and insects, including those that live in fresh water for part of their lives (e.g., dragonflies and mayflies).

lake
a watercourse which occupies a basin, including impoundments, ponds or bodies of water that flush in the manner of lakes. Lakes do not include artificially created ponds or excavations or containment structures used for agricultural purposes, or for the purpose of wastewater treatment, fish culture, or fire protection, or ponds constructed on golf courses.

mixing zone
the area of initial dilution of a contaminant in a watercourse at the point where the contaminant is released into the watercourse.

naturally occurring
referring to an aquatic community or a watercourse which displays physical, chemical and biological characteristics that are not affected or are only minimally or temporarily affected by human activity.

non-point source discharge
pollution that is broadly-based with respect to its origin. Usually results when land-use activities (such as residential, forestry, agriculture or construction activities) contribute pollutants in a diffuse manner, often after precipitation events.

Outreach and Partnering Initiative
an initiative within the Department of the Environment and Local Government to provide services to watershed and other community groups to help them develop knowledge, expertise and other capability within the group. Other help is provided with obtaining funding, group dynamics, long range planning, training volunteers for water quality monitoring, data and information storage and interpretation, and so on.

Panel
the Outstanding Natural Waters Review Panel established to consider nominations for the Outstanding Natural Waters Class.

point source discharge
pollution discharged directly into the environment, usually through a discharge pipe. Includes industrial and commercial process effluent, and collected human wastes.

primary contact activity
a recreational or other activity in or on a watercourse in the course of which there is usually a risk of contact with, or of ingestion of, the water. These activities include swimming, wading, diving, water-skiing and shoreline contact.

river system
surface waters contained within a given watershed , including the mainstem, associated tributaries, and contained lakes, ponds and wetlands, as well as associated estuaries.

secondary contact activity
a recreational or other activity in or on a watercourse in the course of which there is not a high risk of contact with, or of ingestion of, the water. These activities include fishing and boating.

significant withdrawal
a withdrawal of water from a watercourse at a rate of more than forty five litres per minute, or at a rate of more than ten per cent of the flow of water in a watercourse at the time of withdrawal, whichever is the lower rate.

trophic status
the status of the biological productivity of the water of a watercourse, based on measures of the secchi depth, chlorophyll a, phosphorus or a combination of them.

Water Classification
a regulated administrative procedure that can be used to set goals for water use and protection. Rivers, tributaries, and lakes, or segments of rivers are placed into categories based on the desired level of protection.

Water Classification Order
an Order made under the *Water Classification Regulation*, which identifies the class of the water of a watercourse and the date when the classification comes into effect.

watercourse
the *Clean Water Act* defines a watercourse as the full width and length, including the bed, banks, sides and shoreline, or any part, of a river, creek, spring, stream, brook, lake, pond, reservoir, canal, ditch, or other natural or artificial channel open to the atmosphere, the primary function of which is to convey or contain water whether or not the flow be continuous.

Watercourse Alteration Regulation
New Brunswick Regulation 90-80 under the *Clean Water Act*. The main objective of the *Regulation* is to protect the banks and bed of a watercourse from activities which will unduly affect the function of the watercourse. Limitations exist on the applicability of the regulation where large rivers meet the ocean (e.g., the regulation does not apply below the Reversing Falls on the Saint John River, or below the Morrisey Bridge on the Miramichi River). Persons wishing to remove gravel from the bed or bank of a watercourse, or install a bridge, culvert, etc., must obtain a permit from the Minister. Also, the disturbance of soil or the cutting of trees within 30 metres of a watercourse requires a permit to do so. Minor alterations which do not require the input of the Department of Fisheries and Oceans or the Department of Natural Resources and Energy may be allowed through provisional permits. The Minister must provide a response to the applicant of a provisional permit within two weeks of the application. A watercourse alteration permit, if granted, frequently states what may be done, how it is to be done, and whether or not activities are limited to certain times of the year due to flow conditions or fish migration issues.

Watershed Protected Area Designation Order
New Brunswick Regulation 2001-83 under the *Clean Water Act*. This Regulation lists prohibitions and permitted activities, things and uses within Protected Areas designated within watersheds or portions of watersheds that are used as sources of water for public supply systems in New Brunswick.

water quality
a measure of the chemical, physical and biological characteristics of water, including measurements of temperature, dissolved oxygen content, microbiology, the concentrations of numerous chemical substances, and biological measures such as fish passage or habitat quality.

water quality standards
legally enforceable limits for the quality of water established by *Regulation*.

Water Quality Regulation
New Brunswick Regulation 82-126 under the *Clean Environment Act* directs a process for the approval of industrial operations that discharge to water. Applications for approvals are submitted to the Minister and an environmental review is conducted by staff of the Department of the Environment and Local Government. Approvals are accompanied by conditions which control construction and operating

activities including the quality and quantity of contaminants which may be discharged from a facility.

water quantity
a measure of the volume of water, including measurements of water during various conditions of flow. Water quantity and quality are interrelated. During high flow periods, more water is available to dilute concentrations of substances in the water. During low flow periods, substances may become more concentrated, as a lesser volume of water is available for dilution.

watershed
the surface area of land that ultimately drains into one particular river, stream, creek or other flowing body of water.

Appendix B: Offices of the Department of the Environment and Local Government

Central Office
New Brunswick Department of the Environment and Local Government
P.O. Box 6000, E3B 5H1
20 McGloin St.
Fredericton, N.B., E3A 5T8
Tel: 506-457-4846
Fax: 506-457-7823

Region 1
E-mail: elg.egl-region1@gnb.ca

BATHURST
159 Main St., Suite 202
Bathurst, N.B., E2A 1A6
Tel: 506-547-2092
506-547-7443
Fax: 506-547-7655

CAMPBELLTON
157 Water St., 7th Floor
Campbellton, N.B., E3N 3L4
Tel: 506-789-2353
Fax: 506-789-4878

TRACADIE-SHEILA
3518 - 2 Main St.
Tracadie-Sheila, N.B., E1X 1G5
Tel: 506-394-3868
Fax: 506-394-3897

Region 2
E-mail: elg.egl-region2@gnb.ca

MIRAMICHI
316 Dalton Ave.
Miramichi, N.B., E1V 3N9
Tel: 506-778-6032
506-778-6686
Fax: 506-778-6796

Region 3
E-mail: elg.egl-region3@gnb.ca

MONCTON
428 Collishaw St.
Moncton, N.B., E1C 3C7
Tel: 506-856-2374
Fax: 506-856-2370

RICHIBUCTO
Carrefour Provincial Building
9239 Main St.
Richibucto, N.B., E4W 5R5
Tel: 506-523-7604
Fax: 506-523-7648

Region 4

E-mail: elg.egl-region4@gnb.ca

SAINT JOHN
8 Castle St.
Saint John, N.B., E2L 3B8
Tel: 506-658-2558
Fax: 506-658-3046

ST. STEPHEN
Carrefour Provincial Building
41 King St.
St. Stephen, N.B., E3L 2C1
Tel: 506-466-7370
Fax: 506-466-7373

HAMPTON
27 Centennial Dr., Unit 2
Carrefour Centennial Building
Hampton, N.B., E5N 6N3
Tel: 506-832-6000
Fax: 506-832-6007

Region 5

E-mail: elg.egl-region5@gnb.ca

FREDERICTON
565 Priestman St., Suite 103
Priestman Centre
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506-453-2838
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Region 6

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GRAND FALLS
65 Broadway Blvd.,
Grand Falls, N.B., E3Z 2J6
Tel: 506-473-7744
Fax: 506-475-2510

EDMUNDSTON
Carrefour Assomption, 121 Church St.
3rd Floor
Edmundston, N.B., E3V 3L3
Tel: 506-735-2763
Fax: 506-735-2310

WOODSTOCK
113 Cedar St.
Woodstock, N.B., E7M 2Y3
Tel: 506-325-4465
Fax: 506-325-4541

Note: Mailing addresses may differ from street addresses. Please check with the regional office you wish to write to, to confirm the postal address.

New Nouveau
Brunswick

Department of the Environment
and Local Government