

Technical Bulletin - DRAFT

OPERATING PLANS FOR DAMS



Ministry of Natural Resources

2026

The *Lakes and Rivers Improvement Act* (LRIA) provides a legislative framework for the regulation of construction, operation and alteration of dams in Ontario. The *Lakes and Rivers Improvement Act Administrative Guide* (2017) (the “*LRIA Administrative Guide*”) and supporting technical bulletins have been prepared to provide direction to Ministry of Natural Resources staff responsible for application review and approval and guidance to applicants who are seeking approval under Section 14, 16, 17.2, and 23.1 of the LRIA. All technical bulletins in this series must be read in conjunction with the *LRIA Administrative Guide*.

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1.0 General

This bulletin must be considered in conjunction with the **LRIA Administrative Guide (2017)**, **Location Approval for Dams Technical Bulletin (2015)** and **Plans and Specifications Approval for New Dams Technical Bulletin (2026) [draft]**. Where there is an inconsistency between this bulletin and the LRIA or its regulations, the Act and its regulations prevail. Nothing in this bulletin limits or replaces the Minister's discretion under the LRIA.

1.1 Purpose

Operating Plans guide the management of water levels and flows at new and existing dams while providing for the purposes of the LRIA. The Operating Plans for Dams Technical Bulletin provides guidance on the required contents and outlines the preparation and approval process for Operating Plans ordered under the authority of LRIA Section 23.1.

The LRIA provides the Minister with the authority, where it is considered necessary or expedient for the purposes of the Act, to order the **owner** of a dam, or a person applying for approval (i.e., the proponent) to prepare, amend, or participate in the preparation or amendment of a plan for the operation and maintenance of an existing or proposed dam. For the purposes of this Technical Bulletin, "owner" includes the owner of the facility/structure and the person(s) authorized by the owner to operate the facility/structure on the owner's behalf. LRIA Subsection 23.1(1) states:

If the Minister considers it necessary or expedient for the purposes of this Act, the Minister may order the owner of a dam or other structure or work that has been constructed on a lake or river, or a person who has applied under section 14 or 16 for an approval to construct, alter, improve or repair a dam, other structure or work on a lake or river, to, in accordance with the regulations and with guidelines approved by the Minister,

(a) prepare or amend a plan for the operation and maintenance of the existing or proposed dam, other structure or work; or

(b) participate in the preparation or amendment of a plan referred to in clause (a).

The LRIA Administrative Guide (2017) provides an overview of the LRIA, its application, and the process for seeking approval to construct, alter, improve or repair dam infrastructure in Ontario. This Technical Bulletin should be read in conjunction with the LRIA Administrative Guide. Guidance in this Technical Bulletin complements information contained in the *Location Approval for Dams Technical Bulletin (2015)* and *Plans and Specifications Approval for New Dams Technical Bulletin (2026) [draft]*. Information on how to implement an Operating Plan prepared in accordance with this Technical Bulletin (e.g., LRIA monitoring and reporting requirements, and Operating Plan amendments) can be found within the Maintaining Section 23.1 Plans Technical Bulletin (2026) [draft]. This Technical Bulletin should be read in conjunction with those documents.

The definition of bolded terms found throughout the text can be found in the Glossary of Terms.

1.1.1 Application of the Technical Bulletin

Subsection 1.4 of this Technical Bulletin outlines when an Operating Plan, ordered under the authority of LRIA Section 23.1, will typically be required.

This Technical Bulletin does not apply to all dams subject to LRIA approval, specifically:

- it does not apply to tailings dams, temporary dams, water crossings, channelizations, enclosures, or the installation of cables and pipelines; and
- it will not apply for new dams that have limited to no operational control over water levels and flows, or where the potential impacts to existing social, economic or environmental interests are minimal.

This Technical Bulletin does not apply to operational plans required under the *Mandatory Programs and Services Ontario Regulation 686/21*.

Generally, Operating Plans will also not be required for dams within waters managed under federal, international or inter-provincial control. Federally managed river or canal systems in Ontario include the Trent-Severn waterway and the Rideau Canal National Historic Site. Similarly, Operating Plans will not be required for dams located on any lake or river over which the International Joint Commission or any public authority exercising jurisdiction under the Parliament of Canada or The Lake of the Woods Control Board has jurisdiction with respect to water levels. Where other international or inter-provincial bodies have been established to collaboratively manage levels and flows, and which have existing decision-making processes, the Ministry may not require Operating Plans.

1.2 Objective of an Operating Plan

Dams are constructed and operated to meet a variety of purposes such as power generation, managing floods, providing recreation opportunities, navigation, and managing water supply. The objective of an Operating Plan is to provide clarity and certainty with respect to how water levels and flows will be managed at a dam under **normal operating conditions** (i.e., in the absence of flood or drought conditions, or in non-emergency situations) to address the impacts and benefits associated with the operations of a dam.

An Operating Plan will clearly identify the range of water levels and flows to be maintained throughout the course of the year. Documenting this information within an Operating Plan is intended to provide greater clarity around the management of water levels and flows and the commitments made to balance social, economic and environmental interests.

Operating Plans do not expire. They may be amended over time to respond to changes in social, economic, and environmental conditions. For information on making amendments to an Operating Plan, please refer to the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*.

1.3 Preliminary Operating Plan

As part of the submission requirements for **location approval**, outlined in the Location Approval for Dams Technical Bulletin (2015), a Preliminary Operating Plan is to be provided to help the Ministry understand the operational objectives and **normal operating conditions** associated with the site. This information is intended to support future engineering and design and may need to be revised as more technical information becomes available during the development process. Given the preliminary nature of the Operating Plan at this stage, some aspects of the plan will require completion closer to commencing operation of the dam.

Specific to location approval and/or **plans and specifications** approval for waterpower facilities (refer to subsections 1.4.1. and 1.4.4 of this Technical Bulletin), proponents may elect to include additional detail in their Preliminary Operating Plan consistent with the requirements in section 3.0 of this Technical Bulletin.

1.4 When will an LRIA Section 23.1 Operating Plan be ordered?

For the development of new dams that are complex, have significant control over water levels and flows and/or have significant impacts on social, economic or environmental interests, the Ministry will formalize requirements for preparing an Operating Plan through the issuance of an order under the authority of LRIA Section 23.1.

While the Minister retains the right to determine where the preparation or amendment of an Operating Plan is or is not necessary or expedient for the purposes of the Act, Operating Plans will typically be required in, but not limited to, the situations outlined in the subsections below.

1.4.1 Construction of New Dams – Waterpower Facilities

Proponents seeking approval under LRIA Section 14 to construct a dam for the purposes of waterpower generation, will be required to prepare an Operating Plan in accordance with this Technical Bulletin.

1.4.2 Construction of New Dams – Other

Proponents seeking approval under LRIA Section 14 to construct a dam that is not for the purpose of waterpower generation but is complex and has significant control over water levels and flows (e.g., water control), or where the potential impacts to existing social, economic, or environmental interests are significant, will be required to prepare an Operating Plan in accordance with this Technical Bulletin.

1.4.3 Existing Dams not Currently Subject to a Plan Approved Under LRIA S. 23.1

Operating Plans will be ordered for existing waterpower facilities not already subject to a plan approved under LRIA Section 23.1 (WMP or Operating Plan).

In other circumstances where the development of an Operating Plan is deemed by the Minister as being necessary or expedient to provide for the purposes of the LRIA, an existing non-waterpower dam may be ordered to prepare an Operating Plan. This decision will be made on a case-by-case basis.

1.4.4 Altering, Improving or Repairing an Existing Dam

Proponents seeking LRIA Section 16 approval to make alterations, improvements, or repairs to a dam **not currently subject** to a plan previously approved under LRIA Section 23.1 (e.g., a WMP or Operating Plan) may be ordered to prepare an Operating Plan in the following circumstances, including:

- converting an existing dam that does not generate electricity to a generating station/facility (i.e., a **retrofit**);
- making a modification to, or an extension of, a hydroelectric facility (i.e., **upgrade** or **redevelopment**);
- expanding the physical footprint of civil infrastructure of an existing non-waterpower dam or replacing an existing non-waterpower dam, that will result in significant changes to the existing water levels and flows.

Dams **already subject** to a plan approved under LRIA Section 23.1 (WMP or Operating Plan) may be required to amend the existing plan where the completion of alterations, improvements, or repairs will result in a change to the existing water levels and flows or necessitate any other revisions to the previously approved plan. Amendments to an existing Operating Plan or a WMP are described in section 3.0 of the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*.

1.5 Scope of an Operating Plan

Operating Plans will provide for the purposes of the LRIA by identifying how water levels and flows will be managed, within the **zone of impact** of the dam, under normal operating conditions. As outlined in subsection 3.4.2 of this Technical Bulletin, it will not specify how levels and flows will be managed during a declared flood or low water condition or emergency.

A variety of social, economic and environmental interests may be affected by the operation of a dam. In developing an Operating Plan proponents must consider the potential for dam operations to affect:

- Aquatic ecosystems;
- Significant wildlife habitat;
- Flooding and erosion (upstream and downstream);
- Interests of adjacent property owners;
- Operations of existing dams;
- Recreational use of waterways;
- Natural amenities; and
- Aboriginal and treaty rights.

Consideration of these effects predominantly occurs during the associated planning process (e.g., Environmental Assessment) and the LRIA location approval process. For more information on the contents of an Operating Plan see section 3.0.

It is recognized that a proponent may design their operating regime to address other social, environmental, and economic commitments and/or requirements established under other legislation. For example, a proponent's operating regime, or specific operational commitments, may be designed to address requirements of the Federal *Fisheries Act*, the *Canadian Navigable Waters Act* or the provincial *Species Conservation Act, 2025* or to meet commitments to other users of water in proximity to the dam. It is the proponent's responsibility to ensure that the Operating Plan is consistent with these other commitments or requirements. Refer to section 3.4 of this Technical Bulletin for further guidance.

Operating Plans are predominantly intended to be specific to the operations of an individual dam. In certain circumstances, an Operating Plan may address the operations of more than one facility on the same river system when their levels and flows are inherently related. For example, a proponent may determine that a single, coordinated plan is most appropriate for "cascade" developments where multiple dams are being developed and will work together as a single operating system. Whether to prepare a single Operating Plan that incorporates more than one facility will generally be left to the discretion of the project proponent.

Operating Plans are not intended to be equivalent in scope to the operational content of an Operations, Maintenance, and Surveillance (OMS) Manual. An Operating Plan is intended to specify how water levels and flows will be managed under **normal operating conditions**, whereas the operational content of an OMS Manual is intended to specify operating limits and procedures for the safe operation of a dam under the full range of operating conditions (e.g. normal, flood, and drought). While not equivalent in scope, an Operating Plan can form part of the documentation regarding normal operating conditions contained within the operational content section of an OMS Manual.

1.6 Aboriginal and Treaty Rights

The Ministry respects the existing Aboriginal and treaty rights recognized and affirmed by Section 35 of the *Constitution Act, 1982* and is committed to meeting its constitutional and other legal obligations in respect of these rights, including the Crown's duty to consult and, where appropriate, accommodate. The duty to consult is triggered when the Crown has knowledge, real or constructive, of credibly asserted or established Aboriginal or treaty rights and there is a proposed Crown action or decision which may have an adverse impact on those rights.

Approvals under the LRIA may trigger the Crown's duty to consult. Where the duty is triggered, the Ministry may delegate procedural aspects of the duty to consult to proponents while maintaining appropriate oversight of the consultation process. Where procedural aspects of consultation are delegated, proponents should engage potentially-affected Indigenous communities in a meaningful way. This may include providing clear and timely project information, seeking input on potential effects to asserted or established Aboriginal or treaty rights, traditional uses, lands, resources, or other rights-related interests, and developing an engagement approach that is responsive to those potential effects and interests.

Where consultation and engagement will be completed as part of an associated planning process (e.g., Environmental Assessment), the Ministry will rely on the planning process to inform its decision under the LRIA.

Prior to issuing any approvals under the LRIA that trigger the duty to consult, the Ministry will assess the adequacy and sufficiency of consultation and accommodations. If the Ministry considers that there are outstanding concerns upon review of the proponent's consultation with Indigenous communities, the Ministry may provide additional direction as appropriate. Proponents are encouraged to work closely with the Ministry when seeking LRIA approvals to ensure that any consultation obligations owed to Indigenous communities are fulfilled.

1.7 Roles and Responsibilities

Proponents are responsible for ensuring that Operating Plans have been prepared by qualified competent persons with sufficient knowledge and experience to assess potential effects associated with the operation of a dam and to develop mitigation and monitoring measures commensurate with the significance of potential impacts of dam operations. Dam owner(s), dam operator(s), and dam proponents (individually or collectively, "Proponents") are required to operate their structures in accordance with their Operating Plan. As per Subsection 28(2) of the LRIA, failure to operate in accordance with an approved Operating Plan is an offence under the LRIA which, upon conviction, can result in fines and/or imprisonment. In addition to conditions related to LRIA monitoring and reporting of mandatory levels and flows for compliance purposes (subsection 3.4.1), offence provisions are also applicable to other sections in the Operating Plan that identifies a requirement (e.g., reporting conditions related to post-construction monitoring commitments (subsection 3.6)).

The dam proponent is responsible for coordinating their operations with existing dam owners upstream and/or downstream of the dam.

The Ministry reviews and approves Operating Plans to ensure proponents have prepared them in accordance with Ministry requirements outlined within this Technical Bulletin. The Ministry is not responsible for the operation of the dam or any unintended impacts that may occur as a result of the operation of the dam.

1.8 Relation to Water Management Plans

Many river systems in Ontario, or sections thereof, are subject to existing WMPs that establish "operating plans" or "operational plans" for dams located within their boundaries. In addition, WMPs contain provisions for plan amendments, optional mechanisms for ongoing public and Indigenous community involvement in plan implementation (Standing Advisory Committees) for some complex WMPs, Compliance Monitoring Programs, as well as data collection and Effectiveness Monitoring Programs.

Where an Operating Plan is being developed for a dam located within the boundaries of an existing WMP, the Operating Plan must be consistent with the WMP. Once the Operating Plan is approved it will be amended into the WMP, led by the Ministry, as per LRIA Subsection 23.1(6).

The WMP process for plan amendments, engagement through a Standing Advisory Committee where applicable, and monitoring and reporting requirements for compliance, will apply to the new dam. Please refer to the Maintaining Section 23.1 Plans Technical Bulletin (2026) [draft] for additional information.

1.9 Environmental Assessment or Other Applicable Planning Process

In most instances, the development of a new dam, or completion of major works on an existing dam, will be subject to the requirements of a planning process such as one required under the *Environmental Assessment Act* (EAA) (e.g., Class Environmental Assessment for Waterpower Projects, individual EA), or the *Federal Impact Assessment Act* (IAA).

A planning process promotes responsible environmental planning and facilitates the participation of interested persons in project planning. When planning, all facets of the environment (natural, social, cultural and economic) are considered. The EAA and IAA provide planning processes to ensure the environmental effects of a dam and its operating regime are evaluated and documented prior to the approval of an Operating Plan.

During a planning process, the Ministry will provide proponents with guidance and advice to assist in their consideration of the Ministry's mandate and interests. The Ministry will identify applicable legislative and regulatory requirements under the LRIA that must be satisfied prior to the approval of an Operating Plan for the proposed facility. This includes any Ministry-approved methodologies, standards, and/or guidelines and the requirements outlined within this Technical Bulletin (section 3.0).

Where no Ministry-approved standards, guidelines, or methodologies exist, the Ministry may provide scientific and/or technical advice on methodologies selected by the proponent.

Documentation prepared by the proponent in support of satisfying the EAA or other applicable planning requirements will be used by the Ministry, in addition to other knowledge of environmental effects of dams and waterpower facilities, to identify the range of potential impacts which may guide a dam's operating regime and any related monitoring commitments. The Ministry will review and provide comments to the proponent on documentation such as the proponent's Environmental Report (ER) or equivalent document. The Ministry encourages proponents to engage the local MNR District early in the planning process, ensuring the planning process meets the Ministry's needs to prevent delays in approvals (e.g. LRIA location approval, plans and specifications approval and Operating Plan approval).

2.0 Consultation on Operating Plans

To inform the development of an Operating Plan, including the operating regime and commitments to address potential social, economic, and environmental interests, proponents are responsible for consulting with the public, existing rights holders (e.g., trapper, lease holder, etc.), adjacent property owners, municipalities, Indigenous communities (where the procedural aspects of the duty to consult are delegated to the proponent) and upstream and downstream dam owners

and other interest groups and organizations, where applicable, that may be impacted by the operation of the dam.

Different levels of consultation may be required depending on whether the Operating Plan is for:

- a new dam where a planning process applies;
- a new dam where a planning process does not apply; or
- an existing dam not currently subject to a Section 23.1 plan;

and whether or not it has been part of other LRIA approvals with adequate consultation. Consultation requirements for each of these scenarios are laid out in the paragraphs below.

Generally, the Ministry relies on previous consultation unless significant changes have been made since the last consultation, or if significant time has lapsed. In those cases, the Ministry may require further studies and/or consultation with potentially-affected Indigenous communities, proponents or stakeholders.

A successful tool that has been used in the engagement of key interest groups in past water management planning processes is the use of public/stakeholder advisory committees. Subsection 4.1.2 and Appendix B of the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]* provides guidance and best management practices related to the establishment of an Advisory Committee. The creation and maintenance of an Advisory Committee is at the discretion of the plan proponent(s).

2.1 Consultation Requirements Where a Planning Process Applies

Where a new dam, or alterations to an existing dam not subject to a plan approved under LRIA 23.1 (subsection 1.4.4.), are subject to an Environmental Assessment (EA) or other applicable planning process and the Ministry determines that adequate/sufficient consultation has been completed through this process, the Ministry may determine that the proponent need not complete additional notification or consultation activities for Ministry approval of the Operating Plan. The Ministry may determine that the notification and consultation activities completed as part of the EA or other applicable planning process and/or LRIA approval, have provided affected parties with sufficient opportunity to review and comment on dam operations.

For new dams, a determination of whether consultation completed during the applicable planning process (e.g., EA) is sufficient will be made during the Ministry's review of the Preliminary Operating Plan as part of the location approval submission package. Preliminary Operating Plans that include the operating regime (i.e., levels and flows) and post-construction monitoring commitments, that are consistent with those determined in the planning process, will generally be deemed sufficient.

For Operating Plans that are consistent with the Preliminary Operating Plan, the completed consultation will remain sufficient.

For Operating Plans that are different than those described in the Preliminary Operating Plan, the Ministry will assess whether adequate consultation has been completed in regard to these changes. The Ministry may require further studies and/or consultation with potentially-affected Indigenous communities, proponents or stakeholders before Ministry approval of the Operating Plan can be provided.

For alterations to existing dams, the Ministry should be engaged early. If this does not occur the Ministry will determine whether consultation completed during the planning process is sufficient as part of the Ministry's review of the Operating Plan.

For more information on the location approval submission requirements and approval process, refer to sections 4.0 and 5.0 of the Location Approval for Dams Technical Bulletin (2015).

2.2 Consultation Requirements in the Absence of a Planning Process

In a situation where a new dam or alteration of an existing dam is not subject to a planning process, a determination of the public and Indigenous consultation scope and requirements will be made through discussions between the proponent and the Ministry and will include consideration of the following:

- the complexity of dam operations and degree of influence the dam has on the management of water levels and flows;
- the level of public, stakeholder, and Indigenous community interest in dam operations;
- social, environmental, and economic considerations which may be influenced by dam operations; and
- the significance of the potential impacts to Indigenous communities' Aboriginal and treaty rights.

Proponents must provide persons with an interest in participating in consultation opportunities a minimum of 30 business days to provide comments. Indigenous communities should be involved early in the process and should be provided a longer period of time to participate in consultations.

The type of consultation activities used will be at the proponent's discretion, and may include (but are not limited to):

- advisory committees (refer to subsection 4.1.2 and Appendix B of the *Maintaining Section 23.1 Plans Technical Bulletin (2026) [draft]* for more information)
- direct written notice
- open houses/information sessions
- public notice
- workshops/focus groups
- meetings with individual communities

To support the Ministry's review and decision on an Operating Plan, proponents are required to submit a record of consultation with affected parties, the public and Indigenous communities (as listed in section 2.0), identifying the type and form of feedback sought, concerns identified, and the steps taken by the proponent to address any concerns (if applicable/where possible).

The Ministry will assess whether adequate consultation has been completed and if not, may require further studies and/or consultation with potentially affected Indigenous communities, proponents or stakeholders before Ministry approval of the Operating Plan can be provided.

2.3 Consultation Requirements for Existing Dams not Currently Subject to a Plan Approved Under LRIA S. 23.1

Where the Minister orders the owner of an existing dam to prepare an Operating Plan (see subsection 1.4.3), and there is no applicable planning process (e.g., Environmental Assessment) to support its development, the Ministry will determine what level of public and Indigenous consultation is appropriate to help inform the development of the plan. The consultation requirements deemed appropriate by the Minister to help inform the development of the Operating Plan will be specified by Ministry staff.

To support the Ministry's review and decision on an Operating Plan, proponents are required to submit a record of consultation with affected parties, the public and Indigenous communities, identifying the type and form of feedback sought, concerns identified, and the steps taken by the proponent to address any concerns (if applicable/where possible).

The Ministry will assess whether adequate consultation has been completed and if not, may require further studies and/or consultation with potentially affected Indigenous communities, proponents or stakeholders before Ministry approval of the Operating Plan can be provided.

3.0 Operating Plan Contents

An Operating Plan is intended to be a technical document outlining the critical pieces of information necessary to identify how water levels and flows will be managed. The level of detail in the Operating Plan will depend on the complexity of the dam, including social, economic, and environmental considerations within the dam's **zone of impact**.

It is the responsibility of the proponent, based on site-specific conditions, to provide the appropriate level of detail in the Operating Plan. Where the proponent determines that certain requirements outlined in this section are not applicable to the dam, that should be stated in the Operating Plan with supporting rationale.

An Operating Plan will present information in a clear and logical manner. Any supporting documentation should be clearly referenced. Although the format and contents will vary from site to site, the following headings and sub-headings outline typical sections for an Operating Plan.

3.1 Project Overview (Section 1)

This section of the Operating Plan will provide an overview of the various components of the dam and how they affect its operation, as well as a general understanding of how dam operations have evolved over time (for existing dams) and who to contact within the **owner's** organization to obtain

more information on how water levels and flows are being managed under **normal operating conditions**.

The level of detail to be included within this section is intended to be general in nature and not intended to provide a detailed technical understanding of the dam's design or full account of the considerations that have informed dam operations.

3.1.1 Project Description

The Operating Plan will include a summary of project information such as the name and location of the dam and reservoir, the purpose and history of the project, and the ownership (current and historic), and nameplate capacity (where relevant). The major components of the dam system will be defined and documented to identify their characteristics and interactions and, where applicable, will include information on:

- type of dam/dam components (e.g. concrete, earth embankment etc.);
- number and size of turbines (e.g. MW);
- picture of the dam (where applicable);
- size of the dam (e.g. dam height, length of crest, etc.);
- quantity of water to be held (e.g. **storage volume** in m³);
- **Inflow Design Flood Level**
- area to be flooded (in km²);
- extent of the reservoir upstream (in km);
- **spillway** and outlet works; and
- a map of the river system showing the dam and its **zone of impact**
- minimum and maximum turbinable flow (for waterpower only)

3.1.2 Contact Information

The Operating Plan will identify a position, not the name of a person, within the owner's organization who will serve as the primary contact for the plan. The position is to be listed along with necessary contact information.

A proponent may wish to identify multiple contacts for a plan where responsibility for managing the plan, including responding to requests from the public, will be divided between multiple individuals within the owner's organization.

3.1.3 Record of Amendments

This subsection will contain a record of approved amendments to the Operating Plan, and will include pertinent information such as the date, description, and rationale for the revisions.

3.2 Operating Objectives (Section 2)

Most dams are constructed and operated to meet more than one objective, and sometimes an array of objectives such as: power generation; recreation; navigation; flood management; retaining ecosystem function; domestic, municipal, and industrial water supply, etc.

Operating Plans are required to identify the operational objectives used to inform decisions around how levels and flows are to be managed and their relative priority. The Operating Objectives section will:

- a) Identify the primary operational objectives;
- b) Identify any secondary operational objectives, where applicable, and their relationship to primary operational objectives;
- c) Where applicable, identify how the dam's operations relate to social, economic, and environmental objectives relevant to the dam site including but not limited to:
 - I. Objectives contained within an existing WMP whose boundaries incorporate the location of the dam.
 - II. Fisheries management objectives where available.
 - III. Objectives established by upstream or downstream dam operations.
 - IV. Other objectives relevant to the dams operation in a manner consistent with levels and flows established within the **zone of impact** of the dam, including those established through other regulatory approvals (e.g., Permit to Take Water, Wastewater Discharge approvals, and associated assimilative capacity requirements for municipal/industrial discharges, federal approvals, etc.), especially those that specify a required baseflow in the river, downstream or upstream of the dam or waterpower facility in question.

Documenting the link between the dam's operations and other social, economic, and environmental objectives relevant to the dam site can help clarify the extent to which the owner's operations are influenced by previously established objectives pertinent to the dam's location. This information may already be available through the outcomes of the planning process and Location Approval.

3.3 Operating Constraints/Commitments (Section 3)

This section of the Operating Plan will identify specific actions (i.e., commitments for levels and flows), in text and/or table format, to be taken by the proponent(s) to prevent, mitigate, and/or avoid impacts associated with the operation of the dam, and will include the areas listed below. These actions may be informed by commitments made through a planning process, public and Indigenous consultation processes, or LRIA approval conditions imposed by the Ministry.

The range of interests listed below, beginning with subsection 3.3.1, may not be applicable to all dams. Where it is not necessary for a dam's operation to consider any one of the interests identified below (i.e. not applicable), the Operating Plan will indicate that specific actions are not being taken along with a short supporting rationale. Additionally, measures selected by the owner may provide for more than one area of interest.

Where commitments for levels and flows were made within the proponent's planning process documentation (e.g., Environmental Report) or previous LRIA approval (e.g., location approval) to address impacts to those areas outlined within this Technical Bulletin, the specific measures to be taken by the proponent to fulfill those commitments will be included within the Operating Plan, as appropriate. For example, if the planning process commits to the provision of certain levels and flows to support or enhance recreational uses of the waterway, the specific operational limits to be placed on the facility to fulfill this commitment will be documented within the Operating Plan.

Conversely, if the planning process identifies that recreational activities were not present, would not be negatively affected, or that preventing, avoiding, or mitigating certain impacts was not feasible in light of other competing interests, an associated statement to this effect will be included in the Operating Plan

Where commitments to address impacts to any of the areas outlined below were not made during any applicable planning process, it is the proponent's responsibility to determine the degree to which such measures should be adopted in the Operating Plan to address any remaining effects or outstanding concerns, such as those identified by the proponent following the preparation and submission of planning documentation or reports.

The Ministry recognizes that other social, environmental, and economic considerations and interests beyond those identified in this Technical Bulletin may influence how a facility operates. A proponent is not required to outline actions taken to address these other interests and considerations regulated exclusively by other agencies, however, the characterization of the dam's operating regime presented in the Operating Plan must be consistent with levels and flows established through other regulatory approvals. The level of specific information and details regarding these other considerations to be incorporated into this section of an Operating Plan will be left to the discretion of the proponent.

Outlined below are the range of interests as they relate to the purposes of the *LRIA*. Additional guidance specific to these interests can be found in the *LRIA Administrative Guide* and *Location Approval for Dams Technical Bulletin* (2015).

3.3.1 Aquatic Ecosystems

The ecological condition of an aquatic ecosystem is the result of a complex, interdependent set of physical, chemical, and biological elements. As such, characterizing the system can be facilitated by evaluating key ecosystem components which have important functions in determining ecosystem integrity. These include:

- biological components, as all development activities that alter the hydrologic and water quality characteristics of a river have some degree of effect on riverine biota and their habitat;
- hydrologic regime, as flow alterations will affect the form and function of a river modifying both upstream of the project and changing the natural flow regime downstream of the project;
- sediment regime, as changes in sediment regime can result in changes to quality, quantity, and distribution of habitat for biological components of aquatic ecosystems; and,
- thermal regime, as a river's thermal regime strongly influences ecological condition and changes can limit and/or determine the distribution and abundance of many riverine species (Metcalf, et al., 2013).

The proponent will identify any specific operational commitments to address impacts to the following key characteristics of aquatic ecosystems within the dam's **zone of impact**:

- biologic components;
- hydrologic regime;

- sediment regime; and
- thermal regime.

3.3.1.1 Instream flow requirements

Flow is the dominant variable determining the form and function of a river. Flow alteration changes the pattern of natural variation and disturbance on a river system. Understanding the ecological functions provided by the natural flow components is necessary for assessing the potential alteration to ecological condition and impacts to **Valued Ecosystem Components (VECs)**.

Each facility has a unique set of ecosystem values within the **zone of impact** with the potential to require seasonal instream flow management to support this. Establishing **instream flow requirements** is imperative to both sustaining VECs as well as ensuring that the general provisions and purposes the LRIA are addressed, including but not limited to the management, perpetuation and use of the fish, wildlife and other natural resources dependent on the lakes and rivers, protection of the interests of riparian owners, as well as the protection and equitable exercise of public rights in or over the waters of the lakes and rivers of Ontario.

The instream flow requirements must be determined using appropriate methods, such as those described in the Aquatic Ecosystem Assessment for Rivers (MNR, 2013) or the *Toolkit for Ecological Flows and Waterpower* (OWA, 2014). The methods must be applied in a fulsome manner, including providing a defensible rationale that demonstrates how the proposed flows are acceptable to address the purposes of the LRIA. Proponents are encouraged to work closely with the Ministry when determining the instream flow requirements, during the planning process and subsequent LRIA approvals.

The instream flow requirements are to be addressed in the main channel downstream of the generating station/facility. The minimum instream flow requirement may not be zero, and leakage flows are not considered to constitute an instream flow requirement. A minimum instream flow avoids dewatering of channels, riffles, wetlands and connected habitats to an extent that would compromise biological and ecological functions.

Where valued ecosystem components exist in the **bypassed natural channel reach**, and as applicable and appropriate, provision of instream flows will be required to sustain these values. The need for instream flow requirements in the bypassed natural channel reach shall be addressed on a site-by-site basis.

Where instream flow requirements continue to be addressed and provided for in the bypassed natural channel reach, they will not be required to be simultaneously discharged from the generating station/facility, when turbines are inactive. Details related to the discharge source providing the instream flow requirements (e.g., turbine(s), overflow weir, low flow gate, spillway gate, low flow valve/orifice), including its position and orientation will be determined through discussions between MNR and the proponent, as to how best address the VECs.

3.3.2 Wildlife Habitat

The Operating Plan should identify any specific operational commitments to address impacts to wildlife habitat.

3.3.3 Flooding and Erosion of Private and Public Land

This section of the Operating Plan describes operational commitment(s) to prevent flooding or erosion to lands located upstream and downstream of the dam. Sufficient detail is required to identify how the selected commitment(s) is anticipated to prevent damage to property owned by third parties upstream and/or downstream of the dam.

The analysis used by the proponent to determine the expected extent of flooding and erosion associated with operation of the dam must be prepared or reviewed by a Professional Engineer licensed to practice in Ontario. A professional geoscientist registered to practice in Ontario by Professional Geoscientists Ontario (PGO) may also be engaged to determine the expected extent of erosion associated with the operation of the dam, based on the flooding-related work undertaken by the Professional Engineer.

3.3.4 Use of Water by Adjacent Property Owners

The proponent will describe any specific operational commitments to address the interests of riparian and non-riparian owners of property adjacent to water bodies, including water takings, that may be affected by the operation of the dam.

Additional information on the interests of riparian owners which may be affected by the construction or operation of a dam is available within the Ministry's LRIA Administrative Guide (2017).

The analysis used by the proponent to determine the extent of changes in water levels and flows expected to occur at properties adjacent to water bodies as a result of operating a dam at the proposed location must be determined by a Professional Engineer licensed to practice in Ontario.

3.3.5 Use of Water by Existing Rights Holders

In some instances, operating a dam may affect public lands that are subject to an existing rights holder (e.g., trapper, lease holder, etc.). The proponent will describe any specific operational commitments to address the interests of existing rights holders that may be affected by the operation of the dam.

3.3.6 Use of Water by Existing Dam Operations

This section describes operational commitments to ensure coordination between the dam's operation and the use of water by existing dam owners.

The analysis used by the proponent to determine the extent of potential impacts to the use of water by upstream and downstream dam owners must be prepared by a Professional Engineer licensed to practice in Ontario.

3.3.7 Public Use of Water

This section describes operational commitments to support providing for the protection and equitable exercise of public rights in or over the waters of lakes and rivers including, but not necessarily limited to, existing use of water for purposes such as:

- fishing, hunting and fur trapping;

- recreational boating (e.g. boating, canoeing, kayaking, rafting, etc.);
- swimming and beaches;
- commercial tourism and recreational activities; and
- winter recreational activities such as snowmobiling, cross-country skiing and ice fishing.

3.3.8 Natural Amenities

The plan will describe operational commitments intended for the protection of the natural amenities of the lakes and rivers and their shores and banks upstream or downstream of the dam:

- shorelines and river banks (e.g., controlling erosion, ice scour etc.);
- trees (including merchantable timber);
- rare vegetation not subject to protection under the *Species Conservation Act, 2025*; and
- unique physical features (e.g., wetlands, beaches etc.).

Sufficient detail is required to identify how the selected action is anticipated to prevent the damage or loss of natural amenities.

3.3.9 Aboriginal and Treaty Rights

The Operating Plan will describe any specific operational commitments that support Aboriginal and treaty rights, which may include any of the areas of interest above, addressing concerns raised during consultation with Indigenous communities.

Sufficient detail is required to provide members of Indigenous communities whose rights may be impacted by the operation of the dam with a reasonable understanding of how the selected commitments/actions are anticipated to mitigate impacts to Aboriginal and treaty rights.

3.4 Operating Regime (Section 4)

All Operating Plans are required to include an operating regime identifying how water levels and flows will be managed. Documenting this information within an Operating Plan is intended to provide transparency to the public about dam operations.

Not all characteristics identified in the operating regime are intended for level and flow compliance purposes. Subsection 3.4.1 identifies the mandatory level and flow operating limits that will be subject to the Compliance Monitoring Program (subsection 3.5).

The Operating Plan will identify, as appropriate to the project scope, the following characteristics of the dam's operating regime:

- **Maximum Operating Level**
- **Normal Operating Range**
- **Minimum Operating Level**
- **Monthly or Seasonal* Operating Ranges** (e.g., summer, fall, winter, spring)
- Flood Conditions (e.g., High Water Indicator)
- Low-Water Conditions (e.g., Low Water Indicator)
- **Monthly or Seasonal* Instream Flow Requirements** in the main channel, including seasonal variations (where required)

- **Monthly or Seasonal* Instream Flow Requirements** in the **bypassed natural channel reach**, where applicable (for waterpower only)
- **Minimum and Maximum Turbinable Flow** (for waterpower only)
- **Minimum and Maximum daily range in water levels**, for both the head pond/reservoir and downstream (where required)
- **Ramping Rates** (where required)

*Note: Flexibility is provided for either monthly or seasonal instream flow requirements as decided during EA/planning phase of project.

The above information should be provided in both text/table and graph format. All levels must be presented in metres above sea level (masl). All flows must be provided in cubic metres per second (m³/s). In defining the above characteristics of the operating regime, supporting rationale should be provided (or referenced if discussed in more detail elsewhere in the Operating Plan).

Proponents must identify where flow and level limits have been set to meet other regulatory requirements. While these limits are important to understand the overall operation of the dam, they need not be included in the LRIA Compliance Monitoring Program for the Operating Plan. Proponents may wish to incorporate a compliance table to reflect requirements of the Operating Plan enforceable under the LRIA and those that are administratively reflected in the Operating Plan but enforceable under other regulatory approvals.

Where any of the above-identified characteristics of a dam's operating regime do not apply to the specific dam, that should be indicated with supporting rationale.

3.4.1 Mandatory Level and Flow Operating Limits

As applicable to the project scope, an Operating Plan is required to specify mandatory level and flow operating limits, showing seasonal variation, for compliance monitoring.

Where applicable, the text/table and graph format of the operating regime must clearly differentiate the following characteristics from the others, which will be subject to the Operating Plan's level and flow Compliance Monitoring Program (subsection 3.5):

- **Maximum Operating Level** (masl)
- **Minimum Operating Level** (masl)
- **Instream Flow Requirements** (main channel and **bypassed natural channel reach** where required) (m³/s)
- **Ramping Rates** (where required) (m³ sec⁻¹ hr⁻¹)

3.4.2 Level and Flow Compliance Exceptions

Operating Plans are required to define those conditions under which compliance with the operating regime and/or specific operational limits may not be required, examples of these conditions are described below.

a) Natural Variations in Water Supplies

It is recognized that weather conditions and their impacts on water supplies are a source of uncertainty in the management of water levels and flows at dams, and Operating Plans will recognize the expected variance of water conditions.

Aspects of the operating regime provisions of an Operating Plan may be waived by the Ministry in the following circumstances, as appropriate:

- Declared floods – when a flood emergency is declared by a local municipality, Conservation Authority, Indigenous community or MNR District
 - Impacts from these flood events are managed through local emergency response plans, and dam proponents will co-operate with local emergency response teams to address flooding issues.
- Low-water conditions – at or beyond a confirmed Level II condition (increased likelihood of drought conditions)
 - Proponents will co-operate with **Water Response Teams (WRTs)** to address the low-water conditions.

In high water conditions not involving a declared flood or in low water conditions where a watershed has not entered a Level II condition or beyond, a high or low water indicator may force a proponent to report that they can no longer operate within the approved operating range because a low or high water indicator has been met. In these situations, the proponent will file an incident notification with the Ministry and comply with any other conditions of the Operating Plan related to these circumstances.

As a requirement for defining the operating regime, Operating Plans will identify high and low water indicators, or equivalent conditions (i.e. conditional limits), for operating in high or low water conditions not involving a declared flood or low water condition. High and low water indicators are of relevance only when the operation of the facility is outside the approved mandatory level and flow operating limits not involving a declared emergency or condition.

b) Emergency Energy Shortages (waterpower facilities only)

NOTE: The text below will be included within the proponent's Operating Plan

In instances where, due to emergency energy shortages, the Independent Electricity System Operator (IESO) requests that an owner of a waterpower facility and associated dams seek relief from certain provisions of an Operating Plan, the Ministry will consider those requests expeditiously and after consultation with the IESO, may allow short-term relief from certain provisions of the Operating Plan.

c) Emergency Situations (all dams)

NOTE: The text below will be included within the proponent's Operating Plan

If in emergency situations, a proponent is requested to change operations by a police service or other recognized emergency organization, compliance requirements within the Operating Plan may be waived when deemed appropriate by the Ministry.

3.5 Level and Flow Compliance Monitoring Program (Section 5)

All Operating Plans are required to specify that the plan proponent(s) are responsible for the following:

- operating the facility within the mandatory flow and level limits prescribed within the Operating Plans operating regime (see subsection 3.4.1 of this Technical Bulletin);
- self-monitoring, recording, and maintaining measurements of water levels and flows, hourly (every 60 minutes) at a minimum, or more frequent (i.e., sub-hourly) depending on the characteristics of the dam; to demonstrate compliance with the Operating Plan;
- self-reporting, through incident notification within 24 hours, to the Ministry of any deviation from mandatory water level and flow limits as prescribed within the operating regime (see subsection 3.7 of this Technical Bulletin);
- facilitating Ministry inspections and providing relevant data on levels and flows when requested by MNR;
- providing data to the Ministry upon request to demonstrate compliance with the Operating Plan; and
- maintain records on compliance monitoring, including relevant data on water levels and flows, for a period of no less than 10 years.

The Ministry will review all incidents where the operations are reported to have deviated from the mandatory flow and level requirements of the Operating Plan. These reviews may include a range of actions from reviewing the report and discussing the issue with the owner/operator to a site visit. The review will consider a number of factors including weather, the intent of the deviation and extent of the incidents, failure of equipment and unforeseen events.

In situations where the incident has been determined to be non-preventable, the review will not proceed further. If an incident is determined to have been preventable, it will be considered a non-compliance event, and the Ministry may consider whether compliance/enforcement action is necessary. Please refer to subsection 5.2.1 of the *Maintaining Section 23.1 Plans Technical Bulletin* (2026) [draft] for details on incident notification and reporting.

If an Operating Plan is being amended into an existing WMP, proponents will be required to complete compliance monitoring program requirements as defined within the WMP and subsection 5.1.1 of the *Maintaining Section 23.1 Plans Technical Bulletin* (2026) [draft] as a minimum standard.

3.6 Post-Construction Monitoring Program (Section 6)

Post-construction monitoring programs may be required where commitments were made through the applicable planning process (e.g., the Environmental Assessment process), or through requirements or conditions of any applicable LRIA approvals for the dam. As applicable to the project scope, post-construction monitoring programs will include the following:

1. the purpose and rationale for the monitoring;
2. description of monitoring to be completed;
3. the key components and indicators being monitored;
4. the methods and procedures (e.g., sampling frequency, duration of monitoring, etc.) to be used in completing the monitoring;

5. where appropriate, proposed actions to be taken by the proponent in response to the findings;
6. reporting and data availability requirements; and
7. where appropriate, clear criteria for the termination of monitoring.

3.7 Compliance Reporting Requirements (Section 7)

Operating Plans are required to specify that plan proponents will adhere to the Monitoring and Reporting requirements as outlined in subsection 5.2.1 of the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*. This includes self-monitoring and data collection, incident notification and reporting, and annual compliance reports.

Operating Plans are required to specify a date by which the annual compliance report must be submitted to the Ministry.

If an Operating Plan is being amended into an existing WMP, the new plan proponent(s) will be required to complete reporting requirements for compliance monitoring purposes, as defined within the WMP and subsection 5.1.1 of the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*

3.8 Operating Plan Amendments (Section 8)

Operating Plans are long-term documents which may require periodic amendments to ensure that the plans remain current, to implement **adaptive management**, and/or to provide clarity and certainty on how water levels and flows are managed.

Any change to an approved Operating Plan requires an amendment. All amendments require approval by the Ministry. Where the Ministry decides to amend an Operating Plan, the Ministry may amend an Operating Plan at any time or issue an Order for the plan proponent(s) to amend the Operating Plan.

Operating Plans are required to specify that any proposed changes to the Operating Plan will follow the amendment process outlined in section 3.0 of the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*.

Where a dam's Operating Plan, prepared in accordance with this Technical Bulletin, has been amended into an existing WMP, future amendments will follow the process outlined within the Maintaining Section 23.1 Plans Technical Bulletin (2026) *[draft]*.

4.0 Coordination with Other Required Approvals

Operating dams in Ontario may be subject to requirements established under other federal, provincial, and municipal regulatory schemes. While it is not mandatory for proponents to demonstrate compliance with other legislation in an Operating Plan, they may reference instruments or requirements under other legislation.

Arrangements and protocols may be established, where deemed appropriate, between the Ministry and other government agencies to facilitate the coordination of approvals.

Generally, the Ministry will not withhold or defer the approval of an Operating Plan simply because a proponent has not fulfilled applicable requirements under other federal and provincial legislation, unless specified in this Technical Bulletin or through an additional arrangement/protocol. Proponents must ensure the Operating Plan is consistent with any operational constraints established under the authority of other federal, provincial, municipal, or other agency approvals.

Approval of an Operating Plan does not relieve the proponent from compliance with the provisions of any other applicable federal, provincial, municipal, conservation authority, or other agency's regulatory requirements and does not provide proponents with any guarantee that other required permits and approvals will be obtained to proceed with the proposed project. Proponents should not assume that operating a dam in accordance with an approved Operating Plan will address the regulatory interests of other agencies. Proponents are responsible for ensuring all necessary approvals have been obtained for the project.

5.0 Operating Plan Approval Process

5.1 LRIA Section 23.1 Order

Following receipt of an application for LRIA Section 14 or Section 16 approval for waterpower facilities (refer to subsections 1.4.1 and 1.4.4 of this Technical Bulletin) and the scoping meeting, the Ministry will formalize the requirements to prepare an Operating Plan with the project proponent through the issuance of an order under Section 23.1 of the LRIA.

In situations where a new dam is constructed for purposes other than waterpower, is complex and has significant control over water levels and flows, or where the potential impacts to existing social, economic, or environmental interests are significant (refer to subsection 1.4.2 of this Technical Bulletin), the issuance of an order under Section 23.1 of the LRIA will be delayed until after the Ministry's review of the location approval submission package. Section 5.5.1 of the *Location Approval for Dams Technical Bulletin* (2015) outlines the scope of the Ministry's review of the submission package.

Subsection 1.4.3 describes in what situations existing dams not currently subject to a plan approved under LRIA 23.1, will be ordered to prepare an Operating Plan. The timing of these orders will be determined on a case-by-case basis.

Issuance of orders under the LRIA is a two-step process.

5.1.1 Step 1: Notice of Intent to Issue an Order

Section 11 of the LRIA requires the Ministry to provide advance written notice to a person of its intent to issue an order to them if the order directs any act that will incur costs and is not immediately necessary to protect any person from injury or property from damage.

Where required, a notice of intent will be sent to the affected person informing them that they are entitled to an **inquiry** if a written request for an inquiry is delivered within fifteen (15) calendar days after the notice is received. If the proponent requests an inquiry, the matter will be referred to an inquiry officer. Additional information on the inquiries may be found at Section 11 of the LRIA and is referenced in the *LRIA Administrative Guide* (2017).

5.1.2 Step 2: Issuance of an Order

If a request for an **inquiry** is not received, or following the completion of the inquiry process, the Ministry may issue an order directing the proponent to prepare a plan for the operation of the dam under the authority of Section 23.1. The order may specify that:

- An Operating Plan will need to be approved prior to the operation of the proposed facility or prior to altering the operations of the existing facility, if applicable.
- Failure to comply with the order will be grounds for the Ministry to lay a charge under Subsection 28(2)(a) of the Act and that every person who is guilty of an offence under Subsection 28(2)(a) is liable, on conviction to the penalties outlined in Subsection 28(2.2).
- Failure to comply with the order within the times specified will be grounds for the Ministry to take such steps as are necessary to achieve the result intended by the order and the cost thereof is a debt due by the owner to the Crown and is recoverable with costs in any court of competent jurisdiction.

5.2 Operating Plan Approval

The following subsections describe the Operating Plan approval process for new dams and alterations to existing dams (Figure 1).

S. 23.1 Operating Plan

Legend

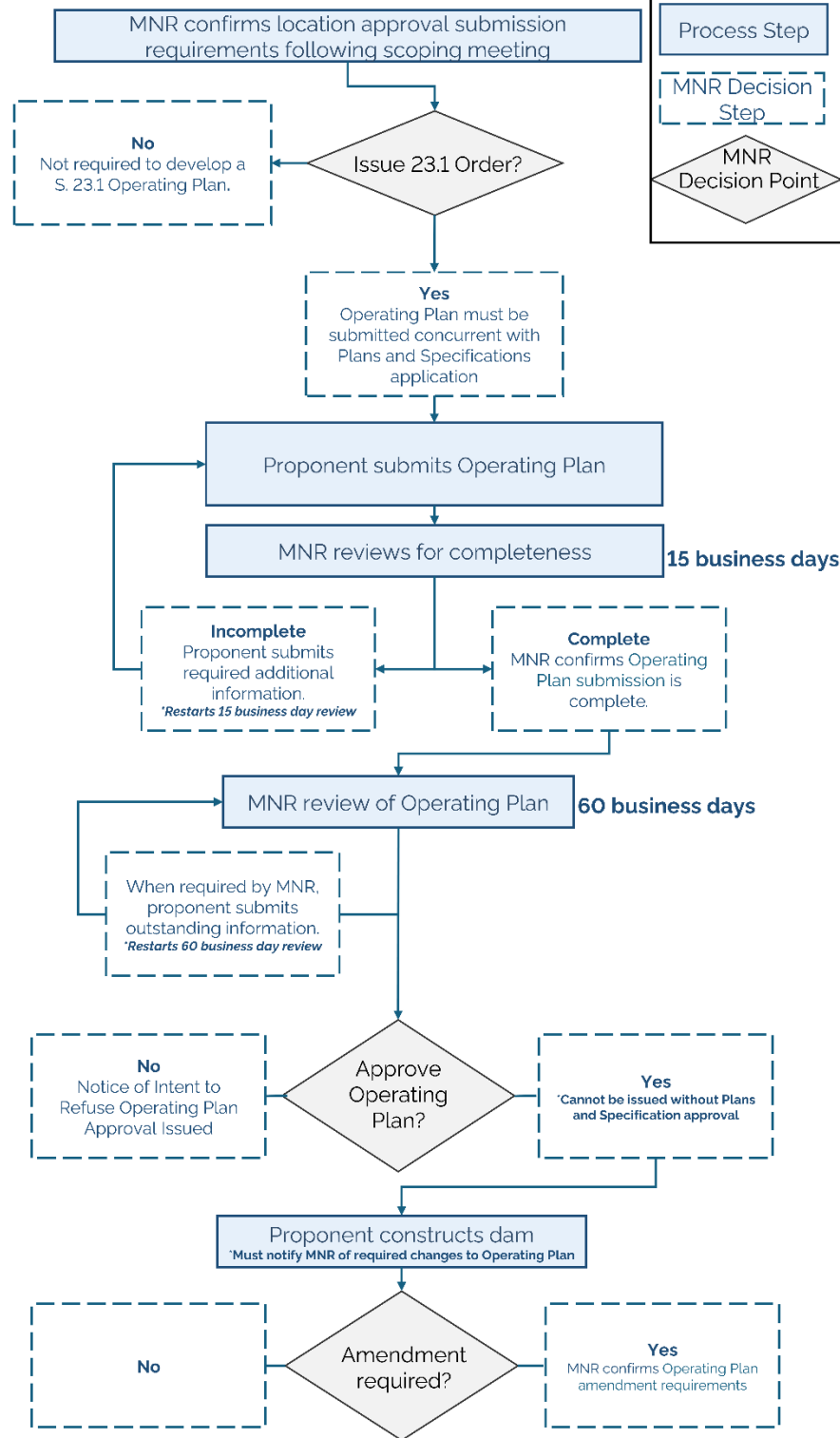


Figure 1: S.23.1 Operating Plan Review and Approval Process

5.2.1 Submission of the Operating Plan

Proponents submit the Operating Plan to the Ministry for review, along with any documentation used to support the development of the Operating Plan. This submission should be concurrent with applications for plans and specifications approval for new dams (LRIA Subsection 14(3)) or for LRIA Section 16 plans and specifications approval where proponents are making alterations, improvements, or repairs to an existing dam.

Where there is an associated planning process, supporting documentation may include the results of public and Indigenous community consultation activities completed and documentation associated with the applicable planning process (such as an Environmental Report and Statement of Completion, where the construction or alteration of a dam triggers requirements under the *Environmental Assessment Act*). In the case where an Operating Plan is ordered for an existing dam and there is no associated planning process, this will include the result of any consultation activities completed by the owner in accordance with Ministry direction.

5.2.2 Confirmation of Receipt of the Operating Plan and Supporting Documentation

Within fifteen (15) business days of receipt of the Operating Plan and supporting documentation, the Ministry will advise on whether the submission is complete. If the Operating Plan is incomplete, the Ministry will notify proponents in writing of additional information required. If complete, the Ministry will confirm that the 60-business day review period has commenced.

5.2.3 Review of the Operating Plan

The Ministry will complete a review of the Operating Plan within 60 business days. The Ministry's review of the Operating Plan will ensure that:

- the Operating Plan has met the requirements outlined within this Technical Bulletin;
- the information is consistent with documentation prepared during a planning process (e.g., Class EA), where applicable, and/or with conditions established through LRIA approvals;
- the documentation clearly identifies how water levels and flows will be managed;
- the analysis used by the proponent in support of addressing the following considerations has been prepared or reviewed by a Professional Engineer licensed to practice in Ontario:
 - areas to be flooded by the dam and the lands of persons other than the proponent that may be affected by the flooding;
 - impacts to the use of water by adjacent property owners; and
 - impacts to the use of water by existing proponents.
- the dam operations information submitted to support plans and specifications approval is consistent with the information contained in the Operating Plan, and that the Ministry is prepared to approve the plans and specifications application.

Upon MNR's review of the Operating Plan, MNR may approve, approve with modifications, reject or request missing information as outlined below.

5.2.4 Requests for Outstanding Information

During and/or following the review of the Operating Plan, the Ministry may request any outstanding information to support the review requirements. In these situations, the Ministry will write to the proponent identifying the missing information, the rationale for the request, and when

the requested information is to be provided. In such circumstances, the 60 business-day review timeline will stop, and restart when the Ministry receives the requested information.

Upon receiving a request for outstanding information from the Ministry, the proponent may:

- agree to provide the information by the specified time;
- request a change to the specified time for submitting the information;
- request a review by the applicable Regional Director; or
- refuse to provide the information.

Where a proponent objects to the information request, they may, within fifteen (15) business days of receiving the request, submit a written request for a review of the required information by the applicable MNR Regional Director. Following the review, the Ministry will provide the proponent with a copy of the Regional Director's decision which will include a list of outstanding information required, if any, together with the supporting rationale and a timeframe for providing the required information.

Upon receipt of the written decision, the proponent has fifteen (15) business days to respond to the Ministry with their intent to comply with the request.

If a proponent wishes to refuse the request (prior to or following a review of the request by the Regional Director) or fails to respond within fifteen (15) business days of notice from the Regional Director, the Ministry will issue the proponent a Notice of Intent to Refuse approval of the Operating Plan. This notice will identify that unless a request for an **inquiry** is received from the proponent within fifteen (15) days, the approval will be refused. Requests for an inquiry under the LRIA are referred by the Ministry to an inquiry officer.

5.2.5 Issuance of a Decision on the Operating Plan

The Ministry will complete a review of the Operating Plan within 60 business days. If no outstanding information is required, the Ministry may:

- approve the Operating Plan;
- approve the Operating Plan with modifications; or
- reject the Operating Plan.

Where MNR intends to reject an Operating Plan, a letter of Intent to Refuse Operating Plan approval will be issued to the proponent identifying the supporting rationale. The letter of intent will notify the proponent that unless the Ministry receives a request from the proponent for an inquiry within fifteen (15) calendar days, MNR will refuse approval of the Operating Plan. If the Operating Plan is rejected, the Ministry may consider re-issuing an order for the proponent to prepare a new Operating Plan. If the proponent requests an inquiry, the matter may be referred to an inquiry officer. Additional information on inquiries may be found in Section 11 of the LRIA and is referenced in the *LRIA Administrative Guide* (2017).

5.2.6 Changes to the Operating Plan After Approval

If changes are required to the approved Operating Plan during and/or post construction, the proponent must notify the Ministry.

The Ministry will assess whether adequate consultation has been completed in regard to these changes. The Ministry may require further studies and/or consultation with potentially affected Indigenous communities, proponents or stakeholders.

Depending on the timing, scope and complexity of the change, the Ministry will confirm amendment requirements, which can range from Ministry-led amendments, to following the amendment process outlined in the *Maintaining Section 23.1 Plans Technical Bulletin* (2026) [draft].

5.2.7 Amendment of an Operating Plan into a Water Management Plan

For a dam located within the boundaries of an existing WMP, approved Operating Plans will be incorporated into the existing WMP through an amendment pursuant to LRIA Section 23.1(6).

Future amendments of the plan will follow the processes outlined in the WMP and in section 3.0 of the *Maintaining Section 23.1 Plans Technical Bulletin* (2026) [draft].

5.3 Public Viewing of Approved Operating Plans

It is the responsibility of the proponent to make approved Operating Plans available to members of the public upon request (e.g. by email, on a website, etc.).

Glossary of Terms

Adaptive Management: a process for continually improving management policies and practices through a formal, systematic and rigorous program of learning from the outcomes of new studies and operational programs.

Bypassed Natural Channel reach: the portion of the natural channel from which water is diverted, often to flow through a penstock and associated turbine; water is returned to the natural channel some distance downstream.

Baseline conditions: used to define the environmental setting or context against which proponents assess the potential impacts of proposed waterpower developments. For the purposes of this Technical Bulletin, proponents should assess the impacts of the proposed waterpower development against existing conditions at the time of the proposed development.

Flow: the rate at which a volume of water passes a given point (expressed in m³/s); often referred to as discharge or streamflow.

Full Supply Level: the target water level for a reservoir to optimize power production balancing head (water level) and storage. Typically, optimization occurs under constant conditions. Therefore, a FSL is constant or near constant level with the exception of the spring freshet.

Inflow Design Flood: the most severe inflow flood (peak, volume, shape, duration, timing) for which a dam and its associated facilities are designed.

Inquiry: process in which the Ontario Land Tribunal or appointed delegate will consider whether the refusal was fair, sound and reasonably necessary to achieve the purposes of the LRIA.

Instream Flow Requirement: The amount of water flowing through a watercourse that is needed to sustain the ecological functions of a stream in terms of hydrology, biology, water quality and connectivity.

Location approval: approval requirements for the location of a new dam under Section 14 of the *Lakes and Rivers Improvement Act*.

Maximum Operating Level: the maximum water level to which the reservoir or storage lake is operated under **normal operating conditions** at a given time of the year (component of compliance monitoring program)

Maximum Turbinable Flow: the maximum flow which the whole of a Generating Station/Facility can utilize in continuous operation. It defines the maximum discharge from a Generating Station in relation to **peaking**, under normal inflow conditions. Often also referred to as plant capacity flow or maximum operating flow.

Minimum / Maximum Daily Range in Water Levels: A measurement of the total difference in water levels within the **normal operating range** over a day (calculated on daily 24 hr basis) that

results from operation of the facility to produce electricity or as affected by other water management decisions made by the Generating Station/Facility. This includes water levels in the headpond/reservoir and water levels downstream as affected by power production (between baseflow and **maximum turbinable flow**).

Minimum Operating Level: the lowest level to which the reservoir is drawn down under **normal operating conditions**. The lower limit of active storage (component of compliance monitoring program).

Normal Operating Conditions: Those normal conditions that can be expected throughout much of the life of the facility and might also be defined as routine or typical conditions. These incorporate seasonal variability, but exclude unusual and emergency conditions.

Normal Operating Range: The target range within which the facility will operate during normal conditions; between the **Full Supply Level** and **Minimum Operating Level**. The range is required to account for variances between reservoir inflow and response by facility operations as well as allowing for water level fluctuations in response to typical rainfall, snow melt and associated runoff under normal watershed conditions.

Owner: includes the owner of the facility/structure and the person(s) authorized by the owner to operate the facility/structure on the owner's behalf.

Peaking: refers to a mode of operation in which the generating station operates for specific periods of high energy demand, typically daytime use on weekdays and stores the remainder of the water during off-peak times in its forebay and/or in an upstream reservoir

Plans and specifications: approval of the engineered plans for a new dam under Section 14 of the LRIA and approval for alterations, improvements or repairs to existing dams under Section 16 of the LRIA.

Proponent: a person who carries out or proposes to carry out a project; or is the owner or person having charge, management or control of a project. In this Technical Bulletin, proponent refers to dam owner(s), operator(s) or project proponent(s), individually or collectively.

Ramping rates: the rate of change of flow from one magnitude to another that occur during increasing and decreasing waterpower generation and flow discharge, expressed in volume per second per hour (m³/sec/hr).

Redevelopment/extension: Redevelopment involves a major modification to, or an extension of, a hydroelectric facility. A redevelopment is normally carried out on a facility that is beyond economic maintenance/repair and is often at the end of its useful life. Redevelopment involves the replacement of a facility or a substantial portion thereof. Facility redevelopment may result in the construction of a new facility and retirement of the existing one. The redevelopment of generation facilities may not necessarily occur at the same locations, but may take place in the same general area as the existing facilities. An extension to a generating station traditionally refers to the addition of one or more complete generating unit(s) which increases the name plate

capacity of the facility. This extension may be in the same general area or near the existing facilities.

Retrofit: The conversion of existing infrastructure (e.g. dam, canal, conduit, or similar) that either previously did or did not produce electricity so that it does produce electricity (e.g. a Generating Station/Facility).

Seasonal Operating Ranges: Seasonal target water levels defined in LRIA Approvals typically depicting a variation in water levels throughout the year, often referred to as a 'rule curve', identifying target water surface elevations within each season, typically to meet specific objectives (e.g. recreation, ecological etc.). During periods of flooding or low water, water levels, may be above or below the normal seasonal operating range.

Spillway: the channel or passageway around or over a dam through which excess water is released or spilled without passing through the turbines; a safety valve for the dam. Flows through the spillway and the generating station are combined to represent the total downstream flow.

Storage Volume: the volume of water contained between the maximum and minimum allowable levels within a reservoir.

Subsistence Flow: Monthly 95% exceedance flow magnitude of total streamflow. Infrequent, naturally occurring low flow events of long duration (occurring over seasons). These flows maintain water tables for riparian vegetation (lateral connectivity), provide longitudinal connectivity, and provide a range of suitable habitat conditions that maintain the diversity of the natural biological community.

Upgrade/refurbishment: Uses existing water management infrastructure that produces electricity to produce more electricity.

Valued Ecosystem Components (VECs): A general term to describe species of particular ecological and/or social value (e.g., benthic organisms, gamefish, species at risk),

Water Management Plan (WMP): a plan prepared in accordance with the *Water Management Planning Guidelines for Waterpower* (2002) and approved under Section 23.1 of the LRIA. Complex WMPs were prepared for an entire river system with a number of waterpower facilities or water control structures with significant control over water levels and flows or with significant issues to resolve. Simple WMPs were plans prepared for a river section based on limited control over water levels and flow by the waterpower facilities or control structures, with few issues to resolve.

Water Response Teams (WRTs): Watershed-based water response teams are proposed to coordinate local activities. Teams will consist of local water users and local and provincial water managers. In cases of extreme drought, the Water Response Team will ensure that key local and provincial decision-makers participate actively in the process to see that water management decisions are understood, supported and enforced.

Zone of impact: study area(s) for the project (upstream and downstream) used to identify all potential impacts of water level and flow management, both positive and negative and direct and indirect. These include environmental, social, cultural and economic effects. The zone(s) of impact should be informed through early and ongoing dialogue with regulatory agencies. There may be multiple zones of impact for any one project in order to reflect different risks to the various features being studied. The zone(s) of impact may change throughout the planning phase in response to new information or design considerations.

References

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<https://www.ontario.ca/page/aquatic-ecosystem-assessments-rivers#section-4>