

May 7, 2021

**Subject: House of Commons Standing Committee on Environment and Sustainable Development – Study on Freshwater in Canada**

The Mining Association of Canada (MAC) appreciates the opportunity to contribute to the Committee's study of freshwater in Canada.

MAC is the national organization representing the Canadian mining industry, comprising companies engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Our members account for most of Canada's production of base and precious metals, uranium, diamonds, steelmaking coal, and mined oil sands.

We have organized our input following the questions posed in the Committee's guidance. As noted in our comments on the government's *Toward the Creation of a Canada Water Agency Discussion Paper* (included as an appendix), our observations derive from our experience as a sector that is primarily in provincial jurisdiction but simultaneously impacted by federal legislation, regulations, and policies. In our comments, we cautioned that:

*the creation of a Canada Water Agency not add to the multiplicity of organizations engaged in freshwater, that it not detract from the resourcing of existing federal regulatory, management and science obligations, and that it not distract from efforts of already-stretched federal, provincial and territorial departments, agencies, conservations authorities and Indigenous governments. A Canada Water Agency should build on and strengthen existing organizations.*

We also urged the government to recognize that

*long-term resourcing is essential to success. Many ambitious initiatives fail to achieve their objectives for want of long-term staffing and funding. Many of the topics outlined in the Discussion Paper such as science, data, and innovation, require long-term support. In the absence of long-term commitment, the Canada Water Agency risks adding to uncertainty and confusion by creating a short-term distraction.*

The approach of MAC members to the protection of water resources is informed and guided by our commitment to water stewardship, as embodied in our *Towards Sustainable Mining Water Stewardship Protocol*. TSM is a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at our members' facilities. Details of TSM, including TSM Guiding Principles, suite of protocols and public reporting can be found at <https://mining.ca/towards-sustainable-mining/>. The TSM Water Stewardship protocol includes criteria for engaging with others in the watershed, participating in watershed-scale planning and assessing how operational

practices contribute to cumulative effects in the watershed. It incorporates a set of performance indicators to measure water governance, operational water management, watershed-level planning and water performance and reporting at the mine-site level and guides the development of water stewardship practices beyond legal compliance.

## **1. Introductory information**

### **a) Which issues related to protecting and managing freshwater does your organization work on?**

In relation to freshwater, the potential issues that MAC works on are fish habitat and water quality.

Linear infrastructure (roads, rail, bridges, transmission lines) needed by a mine require water crossings in most parts of Canada, and therefore may be subject to the *Fisheries Act* and the *Canadian Navigable Waters Act*. The *Species at Risk Act* (SARA) is also relevant where habitat of listed aquatic species may be impacted.

The design of mining projects endeavours to avoid disturbing fish habitat and minimize contamination of surface runoff and waterbodies. In most parts of Canada, complete avoidance is not possible, and waterbodies may be overprinted or diverted around the site. As with linear infrastructure, in addition to provincial permits, federal authorizations and permits may be required for mine and processing site infrastructure. Further, mine water<sup>1</sup>, process water<sup>2</sup>, and any contaminated surface contact water is collected, recycled, and treated on site. Any excess water (effluent) is discharged – the quality of water discharged is subject to provincial or territorial regulations or site-specific permits. Federally, effluent from metal and diamond mines is also subject to the *Metal and Diamond Mining Effluent Regulations* under the *Fisheries Act*.

## **2. Interaction and collaboration with federal departments and agencies**

### **a) Does your organization interact with federal departments and/or agencies on freshwater issues? If so, on which issues and with which departments and/or agencies?**

1. Fish habitat and aquatic species at risk – Fisheries and Oceans Canada
2. Water quality – Environment and Climate Change Canada
  - *Metal and Diamond Mining Effluent Regulations* and Environmental Effects Monitoring under the *Fisheries Act* (ECCC is designated Minister for S.36(3) of the FA)

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<sup>1</sup> Mine water is groundwater that has infiltrated into a mine, which must be pumped out to keep the operating areas dry.

<sup>2</sup> Process water is water used in processing ore in a mill.

- The *Canadian Environmental Protection Act* Part 3 (Information Gathering, Objectives, Guidelines and Codes of Practice) including the National Pollutant Release Inventory and Federal Environmental Quality Guidelines
  - The *Canadian Environmental Protection Act* Part 5 (Controlling Toxic Substances)
  - The *Canadian Environmental Protection Act* Part 8 (Environmental Matters Related to Emergencies)
3. Water Quality – Canadian Council of Ministers of the Environment (CCME) – Canadian Environmental Quality Guidelines. In recent years the CCME appears to have slowed the pace of developing and updating its guidelines. This is an area that MAC has flagged in need of resources that might benefit from a Canada Water Agency.
  4. Managing water and mine waste – Natural Resources Canada (NRCan) – Green Mining Innovation program and the multi-interest Mine Environment Neutral Drainage (MEND) program.
  5. Construction, placement, alteration, rebuilding, removal or decommissioning of works on navigable water – Transport Canada.
  6. In addition to provincial assessment processes, most new mining projects are also subject to the *Impact Assessment Act*.

**b) Do the specific freshwater issues targeted by your organization fit within the mandate of a given federal department and/or agency or do they relate to more than one department and/or agency? If more than one, have you been able to identify a lead department and/or agency with which to engage?**

In general, the mandates of Fisheries and Oceans Canada and Environment and Climate Change Canada are distinct. However, we have occasionally experienced confusion between the departments where application of the *Fisheries Act* sections 35 and 36 appears to overlap while using slightly different terminology. This is evident in the context of amendments to Schedule 2 of the *Metal and Diamond Mining Effluent Regulations* that differentiate “water frequented by fish” from “fish habitat” as well as in the matter of whether “sediment” is “fish habitat” or a “deleterious substance”.

However, the most problematic overlap lies between federal and provincial governments. Our members have sometimes received conflicting directives from the two levels of government, placing a mine operator in a very difficult position.

**c) Have you encountered notable successes in engaging with the federal government on freshwater issues? If so, please specify. If you have not had success in doing so, what in your opinion is the reason (e.g., no program available tailored to your needs, no identifiable service or unit within a department and/or agency with which to engage)?**

A notable success has been the collaborative Mine Environment Neutral Drainage (MEND) Program coordinated by [Natural Resources Canada](#)'s CanmetMINING research division. MEND has contributed world-leading advances in understanding how to prevent acid drainage.

Initiatives where we have not succeeded appear to arise from inadequate capacity, resources and priority within departments, resulting in frustratingly slow progress, notably on:

- Public access to Environmental Effects Monitoring information reported under the *Metal and Diamond Mining Effluent Regulations*.
- Access to information generated by government monitoring initiatives.
- Modernization of the Environmental Effects Monitoring program to reflect advances in the state of science.
- Development of essential guidance for Environmental Effects Monitoring.
- Development of effluent regulations for the coal mining and oil sands mining sectors under the *Fisheries Act*.
- Development and deployment of compliance instruments under the *Fisheries Act* for numerous routine low and no impact projects near water to encourage best practice, improve fish habitat protection, and free up Fisheries and Oceans Canada capacity for monitoring and for reviewing complex projects. Bill C-68 amendments to the Act came into force in mid-2019, yet at this time only six Interim Codes of Practice are in place and the expected date for *Prescribed Works and Waters Regulations* is 2023.

**d) Do you foresee engaging with the new Canada Water Agency? If so, in what way? What are your organization's expectations with respect to the Agency?**

MAC is committed to constructive engagement and will engage with the new Canada Water Agency. The extent and nature of our engagement will depend on the mandate of the Agency.

As highlighted in our introduction of this submission, we reiterate that, considering the number of federal organizations already involved in freshwater and existing provincial and sub-provincial entities, we fear that a new Canada Water Agency will add to complexity and siphon resources and attention away from line departments, further undermining their ability to administer their responsibilities.

**3. Federal water legislation, policies and regulations**

**a) Does your organization interact with federal departments and/or agencies on policies, legislation, regulations, or funding programs related to freshwater? If so, please specify.**

- *Fisheries Act* fish habitat provisions (S.35) and related policies, guidance, Codes of Practice and (in the future) regulations.

- *Fisheries Act* pollution prevention provisions (S.36(3)), the *Metal and Diamond Mining Effluent Regulations* and related policies and guidance.
- *Canadian Environmental Protection Act, 1999* and related regulations, policies and guidance.
- *Canadian Navigable Waters Act*.
- *Impact Assessment Act*.
- CCME and Federal Environmental Quality Guidelines.

**b) Can you identify any current gaps in federal water legislation, policies, regulations, and/or initiatives, or in general across jurisdictions? If so, please specify.**

Regarding *Fisheries Act* S.35, the main gaps lie with implementation. The envisaged codes, standards and regulations are not in place. The reduced number of regional offices lack local presence. Staff turnover and shortages create delays and confusion.

Regarding *Fisheries Act* S.36 and the *Metal and Diamond Mining Effluent Regulations*, promised Environmental Effects Monitoring guidance has not materialized, leaving regulated mines to guess how to comply. As well, the Environmental Effects Monitoring program has not kept up with the state of science, nor have the requirements been evaluated for effectiveness.

On both fronts, extensive overlap with provincial requirements is wasteful and leaves mines vulnerable to conflicting directives.

As noted, CCME Canadian Environmental Quality Guidelines efforts have not been adequate to expeditiously update Guidelines to reflect evolving science and data.

Data from government monitoring programs and research are not readily available nor accessible. Their unavailability can weaken legislative or policy initiatives, lead to inadvertent duplication of data collection efforts and compromise cumulative effects consideration and regulatory decisions.

**d) Are there areas of freshwater policy, legislation and/or regulation where you feel the federal government should play a greater role?**

A greater role in providing science and data management in support of provincial, territorial, Indigenous and other government and non-government organizations would be useful. In particular, updating of CCME Water Quality Guidelines would be helpful.

**e) Are there areas of freshwater policy, legislation and/or regulation that you feel the federal government should vacate and leave to another level of government or to the private sector?**

Recognizing the overlaps in jurisdiction, it would be helpful for federal departments and agencies to collaborate with and respect the work of other governments, rather than expecting the private sector to resolve inconsistencies between the requirements of different governments.

**f) Are you aware of instances where federal freshwater policy, legislation, regulations, and/or initiatives have clearly benefitted from your organization's input?**

It is difficult to separate the impacts of our organization's inputs from others' inputs or the internal expertise of government departments. On all the issues mentioned in this submission, MAC has endeavoured to engage constructively. That said, MAC has played a lead role in coordinating multiple industry associations' engagement with the Department of Fisheries and Oceans, which has helped to advance the publication of Interim Codes, though as noted above much work remains to be done. We have also worked very constructively and successfully with Transport Canada on its implementation of the Canadian Navigable Waters Act. Transport Canada has been excellent to work with, demonstrates a solid understanding of the legislation it manages and has worked hard to successfully implement the new Act.

**4. Collection of information and data**

**a) Do you believe that there is sufficient data collected and made available publicly about freshwater in Canada?**

It appears that data collection, notably water quality and flow, is not sufficient especially in remote areas of the country. However, the main challenge is that data collected by governments, Indigenous groups, industry and non-government organizations is not adequately shared, maintained, accessible and of sufficiently consistent quality.

**b) Do you believe there should be improvement in freshwater-related data-sharing?**

YES

**c) Is there any specific type of data or information you would like the federal government to provide to freshwater stakeholders?**

Our main interest would be in improved availability of water and aquatic ecosystem quality data.

**d) Has your organization experienced challenges obtaining well-organized data from the federal government on issues relating to freshwater?**

Yes, we have found it difficult to access environmental monitoring data, even though all stakeholders agree on the value of data accessibility. Information collected under the Environmental Effects Monitoring requirements of the MDMER continues to be treated by ECCC as confidential and is not accessible.

**e) Is the lack of standardized data or information across government jurisdictions a problem or challenge for your organization in accomplishing its objectives with respect to protecting and managing freshwater?**

Yes, too much effort is wasted on pointless duplication and the gathering of data of limited usefulness, while lack of access to data constrains robust policy development.

**Appendix**  
**MAC submission on the *Toward the Creation of a Canada Water Agency Discussion Paper***

February 26, 2021

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**Re: Toward the Creation of a Canada Water Agency Discussion Paper**

The Mining Association of Canada (MAC) appreciates the opportunity to comment on the Discussion Paper *Toward the Creation of a Canada Water Agency*. MAC is the national organization representing the Canadian mining industry, comprising companies engaged in mineral exploration, mining, smelting, refining and semi-fabrication. Our members account for most of Canada's production of base and precious metals, uranium, diamonds, steelmaking coal, and mined oil sands.

We offer below our thoughts in response to some of the questions posed by the Discussion Paper. We omit some sections and questions where they do not relate to our sector. As noted in our letter of November 16, 2020, our observations derive from our experience as a sector that is primarily in provincial jurisdiction but simultaneously impacted by federal legislation, regulations, and policies.

Our overarching caution is that the creation of a Canada Water Agency not add to multiplicity of organizations engaged in freshwater, that it not detract from the resourcing of existing federal regulatory, management and science obligations, and that it not distract the efforts of already-stretched federal, provincial and territorial departments, agencies, conservations authorities and Indigenous governments. A Canada Water Agency should build on and strengthen existing organizations.

As well, the government must recognize that long-term resourcing is essential to success. Many ambitious initiatives fail to achieve their objectives for want of long-term staffing and funding. Many of the topics outlined in the Discussion Paper such as science, data, and innovation, require long-term support. In the absence of long-term commitment, the Canada Water Agency risks adding to uncertainty and confusion by creating a short-term distraction.

**Section 2.2 Freshwater activity in the federal government**

The description of federal responsibilities omits an important contribution of Environment and Climate Change Canada (ECCC) through the development of Federal Environmental Quality

Guidelines and its engagement in the Canadian Council of Ministers of the Environment development of Canadian Environmental Quality Guidelines.

As well, the description of legislation, regulation, and departmental mandates is unclear on the respective roles of ECCC and Fisheries and Oceans Canada in pollution prevention.

### **Section 3.1 Freshwater objectives**

Section 2.2 notes more than 20 federal departments and agencies already have freshwater responsibilities. If a new agency is created, it should include in its foundational objectives:

- Identification and clarification of existing federal roles in freshwater protection and management, and particularly of the data each is collecting.
- Identification of opportunities to improve efficiency and reduce duplication and overlap within the federal government and between the federal government and provinces, territories and other organizations.
- Ensuring that federal agencies and departments have the resources and tools to deliver on their responsibilities.

Of the objectives proposed in this section, the highest priority should be placed on data and information being available to support informed freshwater decisions. Poorly informed decisions are unlikely to be sound.

We would also note that some of the objectives are unrealistically ambitious. It is not feasible or efficient for any one country to be a global leader in freshwater technology, innovation and infrastructure. Canada should build on its strengths but also recognize that it needs to adopt and disseminate leading global technologies and ideas. Timely technology adoption, as well as cutting edge science, will require nurturing expertise in Canada that can monitor global developments, recognize the best and effect their adoption domestically.

### **Section 3.2 Freshwater policy, coordination and multilateral engagement**

As mentioned previously, we would urge the government to build on existing organizations such as the Canadian Council of Ministers of the Environment.

We would also caution that while centralization promises efficiency, a whole-of-government structure can result in turgid indecision, and a “single window” portal can undermine transparency by complicating searches, obscuring detailed information, and creating distance between the public and source departments.

### **Section 3.3 Freshwater prediction to inform climate change adaptation and disaster risk reduction**

This section potentially creates confusion between short-term forecasting of events like floods, and projections of longer-term changes in climate and potential impacts associated with those changes. These topics are both relevant to this section. Although related, they are distinctly different in terms of the information and tools used to develop short-term forecasts vs. long-term projections, and the way in which those forecasts/projections are used to make decisions.

For example, the second potential opportunity described is: “Improve water prediction at regional and local levels to better support decision-making by pursuing innovations in atmospheric, ocean, ice, and water prediction using new observation technologies, earth

observation data, and models that can better characterize terrestrial snow, surface, and groundwater, and the integration of climate change scenarios.” There are two related, but different, opportunities, with the reference to climate change scenarios seeming like a bit of an add-on.

It is recommended that the potential opportunities be split to clearly distinguish between short-term forecasts and associated management decisions, versus long-term projections and associated management decisions.

### **Section 3.6 Economic sectors and fresh water**

MAC’s Towards Sustainable Mining (TSM) initiative is a set of tools and indicators to drive performance and ensure that key mining risks are managed responsibly at our members’ facilities. Details of TSM, including TSM Guiding Principles, suite of Protocols and public reporting can be found at <https://mining.ca/towards-sustainable-mining/>.

TSM includes tailings management and water stewardship components. Tailings are a byproduct of mining, consisting of the processed rock or soil left over from the separation of the commodities of value from the rock or soil within which they occur. They include fine, sand-like material and varying amounts of water. Tailings are managed through permanent disposal in tailings facilities, which are carefully planned, designed, constructed, operated, and closed in a manner intended to prevent the release of any tailings, and prevent any uncontrolled, untreated release of water that could potentially impact downstream water quality and ecosystems.

The TSM Water Stewardship protocol includes criteria for engaging with others in the watershed, participating in watershed-scale planning and assessing how operational practices contribute to cumulative effects in the watershed. It incorporates a set of performance indicators to measure water governance, operational water management, watershed-level planning and water performance and reporting at the mine-site level. It guides the development of water stewardship practices beyond legal compliance.

### **Section 3.7 Freshwater science**

This section should recognize the importance of science to support the development of environmental quality guidelines and the effort required to update environmental quality guidelines to reflect improvements in knowledge. ECCC is to be commended for continuing to update guidelines through new and revised Federal Environmental Quality Guidelines. However, both levels of government and the CCME itself appear to have inadequate resources and priority to advance expeditiously revisions to the CCME Canadian Water Quality Guidelines, many of which have fallen decades behind scientific progress.

### **Section 3.8 Freshwater data**

As noted above, we would suggest data generation, access, management and maintenance as the biggest priority in need of attention. A lot of freshwater data has been and continues to be generated, but insufficient effort has been allocated to consistency, quality assurance, sharing, and access. Maintaining data bases and interoperability, and quality assurance require sustained resourcing, which is often ignored as an invisible backbone.

In particular, the extensive data sets generated by industry monitoring such as under the *Metal and Diamond Mining Effluent Regulations*, is not easily accessible. Some federal monitoring

data is also inaccessible for extended periods awaiting scientific publication or is permanently stymied by lack of resources necessary to format the data for publication.

Historic data can be very valuable to assess trends but requires careful quality assurance as sampling or testing methods and detection limits change over time.

### **Section 3.12 Overarching discussion questions**

As noted above, we recommend building on and strengthening existing organizations, and ensuring long-term resourcing sufficient for the delivery of federal regulatory, management and science obligations.

Noting the fragmentation of the federal government's involvement in water, acknowledged in the Discussion Paper, it would be very valuable to improve understanding of existing work and data within federal departments. This in turn would assist in identifying opportunities to improve efficiency and reduce overlaps within the federal government and between the federal government and provinces, territories and other organizations.

The highest priority should be placed on data and information generation, access, management and maintenance.

### **Section 4.0 Governance considerations for a Canada Water Agency**

As noted above, we recommend building on existing organizations including inter-governmental coordination mechanisms such as the CCME. The objective should be to avoid disruption and increased fragmentation.