



# Engagement summary

Upper Athabasca Region Surface Water  
Quality Management Framework for the  
Upper Athabasca River



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Engagement Summary: Upper Athabasca Region Surface Water Quality Management Framework for the Upper Athabasca River  
| Environment and Protected Areas

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## Background

Alberta Environment and Protected Areas has developed a surface water quality management framework (SWQualMF) for the Upper Athabasca Region (UAR) and the North Saskatchewan Region (NSR). A SWQualMF establishes an approach to managing long-term cumulative impacts of human activities on water quality in the main stem river(s) in a region, supports proactive and collaborative management of water quality in a region and adds the regional-scale cumulative effects perspective to the current management system. Engaging Albertans is an important part of the planning process. Engagement for the UAR and NSR SWQualMF coincided.

## Engagement Process

Feedback gathered through engagement contributed to the creation of a SWQualMF for the UAR. SWQualMFs establish clear objectives for surface water quality and consider the impacts of all development activities in the watershed on the quality of water in the river. These frameworks include management response processes to be taken if monitoring shows that thresholds such as triggers and limits are exceeded. These management responses can range from voluntary actions, such as education and stewardship activities, to regulatory change.

Engagement was conducted through an online survey, a public webinar, Indigenous information sessions and a series of one-on-one meetings with Indigenous groups and key stakeholders. The online survey was open to all Albertans and was made available from June 22 – September 17, 2021. The webinars were aimed specifically at residents and stakeholders of the UAR, Treaty 6, 7, and 8 territories, and Métis Settlements and organizations. The public webinar for the UAR was held on July 8, 2021 and was later posted on YouTube. The webinars for Treaty 6/7 and Métis settlements and organizations were held on July 20<sup>th</sup> and 29<sup>th</sup>, respectively. No representatives from Treaty 8 were available to attend the planned Treaty 8 webinar. These activities were supported by one-on-one meetings with Indigenous communities and organizations and key stakeholders. Engagement efforts were promoted through social media posts released on YourAlberta accounts on July 28, July 30, August 13, August 27, September 10, and September 17, 2021.

## Engagement Data

Engagement generated three main sources of feedback: completed public surveys, correspondence from key stakeholders and Indigenous communities and organizations, and notes from one-on-one meetings with key stakeholders and Indigenous communities and organizations.

Engagement Data Source	Respondent	Number of Responses/Meetings
Public Survey	Public	34 Survey Responses
Correspondence (substantive letters with attachments)	Energy Industry	2 Letters
	Forestry	1 Letter
	Environmental Non-governmental Organizations	3 Letters
	Indigenous Communities and Organizations	1 Letter
Webinar	Public Information Webinar (live)	24 Attendees
	Online Information Webinar: (Public webinar posted on YouTube)	92 Views
	Treaty 6 and Treaty 7 Webinar	8 Attendees

	Métis Webinar	12 Attendees
One-on-One Meetings	Energy Industry	1 Meeting
	Forestry	1 Meeting
	Mining Industry	1 Meeting
	Environmental Non-governmental Organizations	4 Meetings
	Indigenous Communities and Organizations (Including communities and organizations from both the Upper Athabasca and North Saskatchewan regions)	7 Meetings

## Engagement Summary

All submissions and meeting minutes have been digitized based on themes and sentiments. A variety of sentiments on different elements of the draft framework, its development process, and its implementation post-approval were expressed. Key findings have been summarized in this report by sector; the major themes are:

- Generally, survey responses indicated that respondents were supportive of the key components of the draft framework;
  - A large majority of survey respondents strongly support the regional objective of protecting current and future water uses of surface water;
  - A large majority of survey respondents strongly or somewhat support:
    - The criteria used to identify the suite of surface water quality indicators;
    - The proposed list of indicators; and
    - The approach to setting management thresholds, including triggers and limits;
- Survey responses on the management response showed:
  - There was support for using all three approaches (i.e., regulatory, collaborative, and stewardship action);
- Survey responses on monitoring and reporting showed that:
  - The preferred method of accessing information about the status of surface water quality and management response is the alberta.ca website; and
  - The top three kinds of monitoring and response data that respondents would be interested in accessing were: investigations of cause, water quality trends, and maps;
- Common sentiments/themes identified across multiple sectors included:
  - Stakeholders and Indigenous communities and organizations were interested in being engaged throughout the framework development process;
  - Interest in collective management and collaboration between stakeholders, Indigenous communities and organizations, and government to support the success of management efforts;
  - Concern that the new framework needs to be clearer on how the framework is linked to approvals or whether it will affect approvals; and
  - Concern that the current number of monitoring stations is insufficient (i.e., spatial coverage) and that monitoring may not happen frequently enough;
- Common themes identified from Indigenous feedback included:
  - Need for robust monitoring, through Alberta Environment and Protected Areas and community programs, to reflect Indigenous concerns;
  - Need to reflect and integrate Indigenous values, knowledge, practices and rights in framework; and
  - Need for ongoing and effective engagement with Indigenous communities and organizations regarding framework development and implementation.

# Public Engagement Findings

Feedback was collected from members of the public through an online survey which covered themes including: human activities, regional objective, indicator selection criteria, proposed list of indicators and management thresholds. The survey was available from June 22 - September 17, 2021 and received 34 responses in total.

## Human Activities that Influence Surface Water Quality in the Region

**Question 1:** What human activities in the Upper Athabasca River watershed do you feel are the most important to consider when developing the draft Upper Athabasca Region Surface Water Quality Management Framework? Below is a summary of the 34 survey responses to this question.

Surface mining (e.g., coal mining, sand and gravel), industrial wastewater (e.g., petrochemical industry), and oil and gas activity were identified most often by respondents as being very important to consider in the development of the framework, as they are human activities that influence surface water quality in the region.

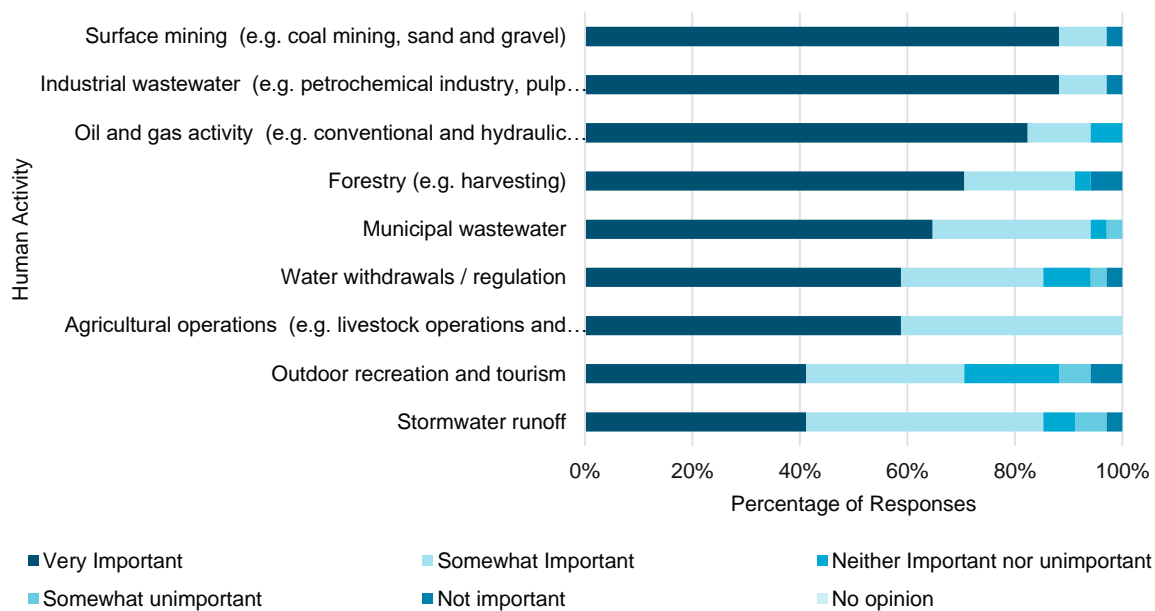


Figure 1. Activities considered most important in developing the SWQualMF.

**Question 2:** Are there other human activities that impact water quality in the region you feel should be considered in the draft framework? Below is a summary of the 34 survey responses to this question.

Forty four percent of respondents responded yes and felt that there were “Other” human activities impacting water quality that should be considered in the draft framework, followed by 32% who identified that they did not know. Note: some of the “Other” human activities that impact water quality identified by respondents, were previously identified as options in Question 1.

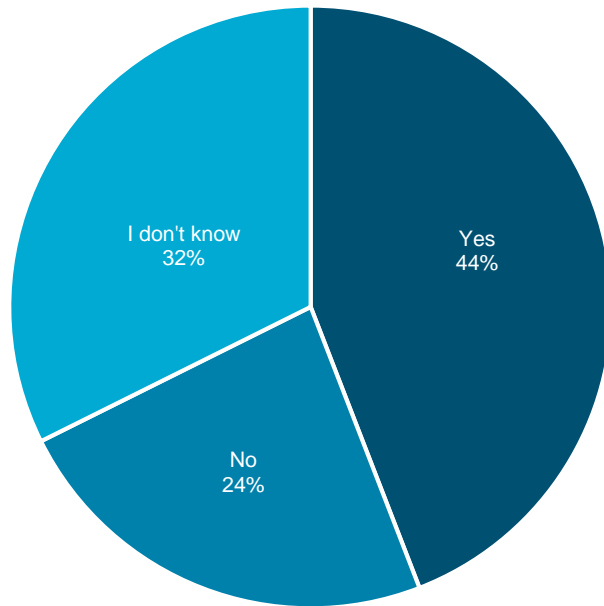


Figure 2. Knowledge of human activities impacting water quality.

**Question 3:** What other human activities that impact water quality do you believe should be considered? Below is a summary of the 15 survey responses to this question.

“Other” human activities identified by respondents as having the potential to impact water quality in the region included:

- Climate change and forest fires - human activities are having a direct impact on climate change and the increased frequency of drought and forest fires;
- Industry - existing or past contaminated facilities/sites that have discharged chemicals into the local tributaries or rivers or currently leaching via groundwater that may be connected to surface water;
- Forestry - clear cutting causes soil erosion, riparian problems, and wildlife extinction;
- Agriculture – runoff may have a negative impact on water quality;
- Mining/extraction - coal mining in the Rocky Mountains is of particular concern;
- Recreation - off-road vehicle usage should be addressed, new large recreation areas, such as RV parks on top of water supplies and in ceremonial grounds; and
- Development and population growth - adverse impacts to water quality and increased water use.

### Regional Objective

**Question 4:** To what degree do you support the following draft objective statements for the Upper Athabasca Region Surface Water Quality Management Framework? Below is a summary of the 34 survey responses to this question.

The majority of respondents strongly supported the objectives to either meet stringent requirements for the protection of current and future water uses, or to improve water quality beyond what is required for the protection of these uses. A majority of respondents did not support the objective to aim to maintain water quality in its current state.

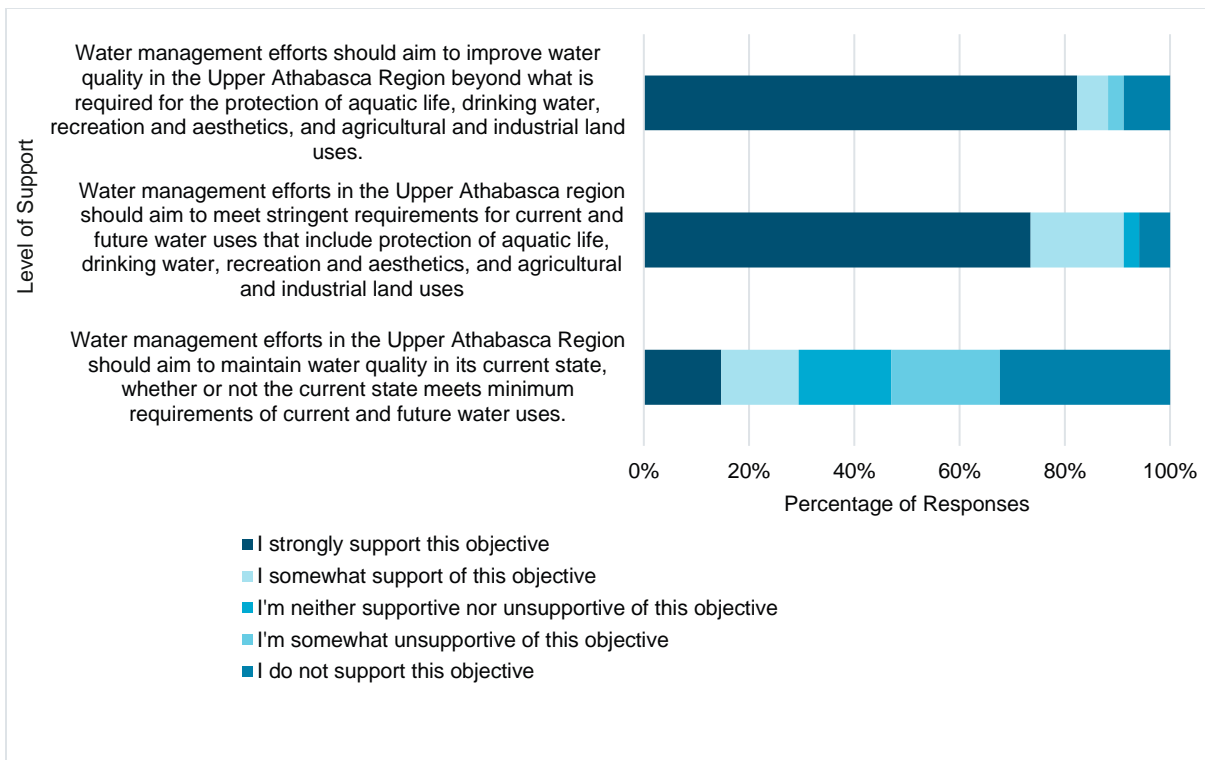


Figure 3. Level of support for the proposed objective statements.

### Indicator Selection Criteria

**Question 5:** To what degree do you support the criteria used to identify indicators in the draft Upper Athabasca Region Surface Water Quality Management Framework? Below is a summary of the 34 survey responses to this question.

The majority of respondents either strongly supported (44%) or somewhat supported (32%) the criteria used to identify the suite of indicators in the draft Upper Athabasca Region Surface Water Quality Management Framework.

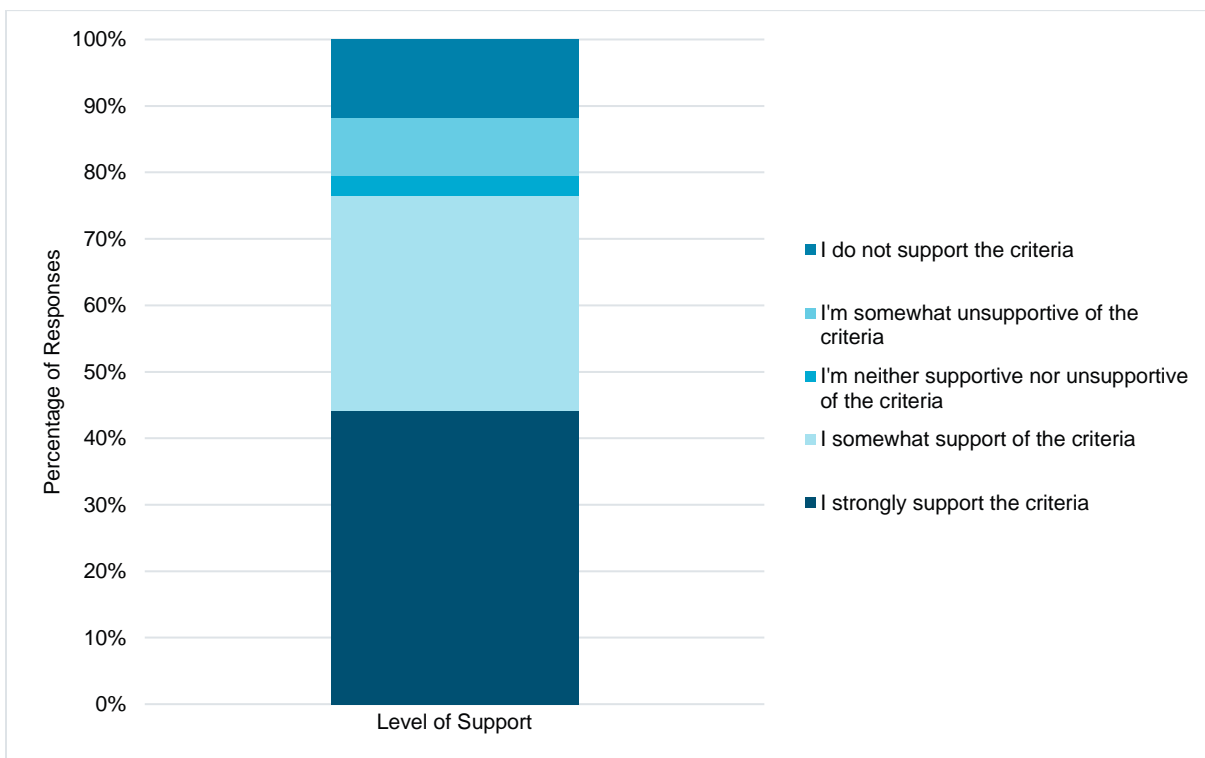


Figure 4. Support for the criteria used to identify indicators.



**Question 6:** Can you explain why you do not support or are somewhat unsupportive of the criteria? Below is a summary of the 8 survey responses to this question.

Some of the respondents felt that the proposed criteria were insufficient, and offered the following explanations:

- Innovative criteria - allow for new and more innovative criteria to be introduced in addition to historic ones;
- Indicators - proposed criteria should consider indicators such as stormwater, run-off, and the impacts of logging and clear-cutting practices;
- Anthropogenic vs. natural criteria - important to consider how to distinguish between anthropogenic forces and natural forces, and that the latter cannot be controlled;
- Mining/extraction - should carefully consider how to address selenium from coal mining when developing criteria; and
- Insufficient data - concerns that historical data is insufficient and may not be the best for developing criteria.

### Indicators – Proposed

**Question 7:** To what degree do you support the proposed indicators in the draft Upper Athabasca Region Surface Water Quality Management Framework? Below is a summary of the 34 survey responses to this question.

The majority of respondents either strongly supported (53%) or somewhat support (29%) the proposed suite of indicators in the draft Upper Athabasca Region Surface Water Quality Management Framework.

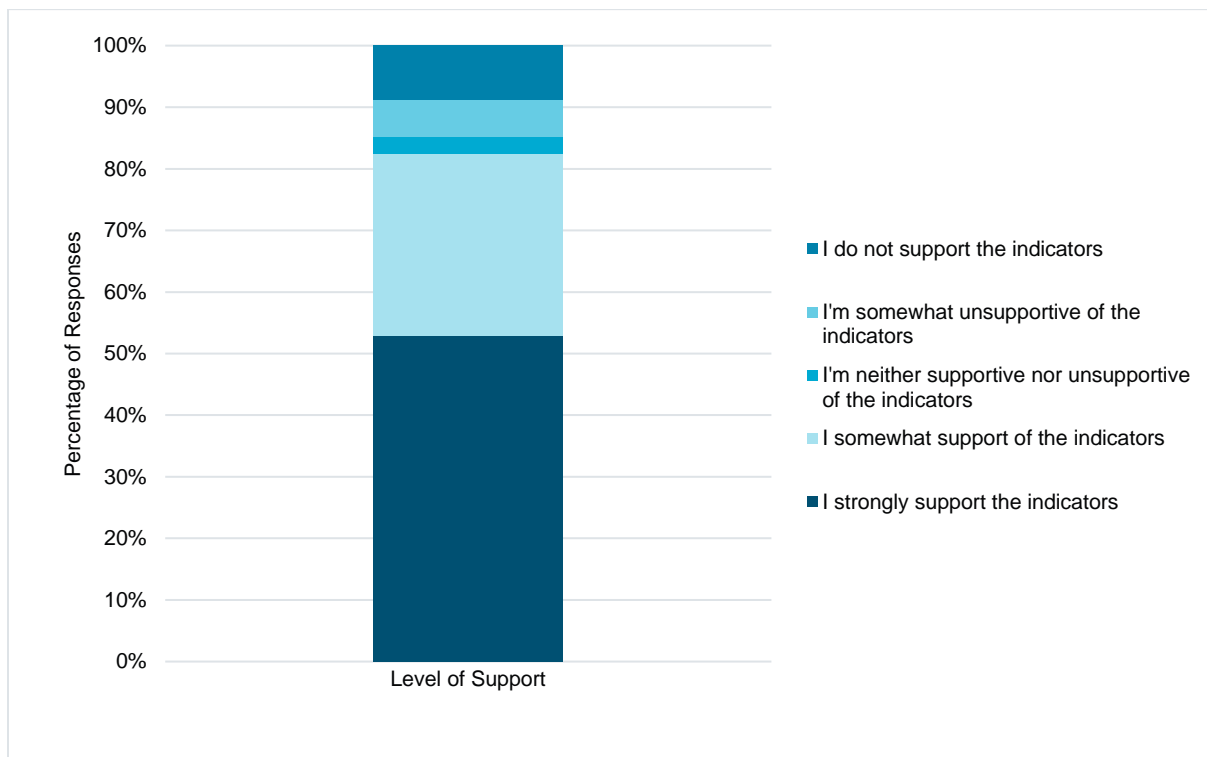


Figure 5. Support for the proposed indicators for the Upper Athabasca River.

**Question 8:** Can you explain why you do not support or are somewhat unsupportive of the proposed indicators, and how you think they can be improved? Below is a summary of the 5 survey responses to this question.

Of the respondents who were either somewhat unsupportive or not supportive of the proposed indicators, the supporting explanations fell into the following categories:

- Indicator type - include more indicators, biologic, cumulative effects bio-indicators, dissolved and total metals, per- and polyfluoroalkyl substances (PFAS), physical indicators to be monitored;
- Monitoring frequency - indicators should be consistently monitored and reporting should occur frequently to ensure that short-term events and sudden changes are accurately captured;
- Public input - indicators should be developed with broader and inclusive involvement from the public; and
- Mining/extraction - mining and extraction activities should have specific indicators based on what is being mined/extracted (i.e., Lithium production should have different indicators to monitor than coal mining).

**Question 9:** Considering the indicator selection criteria, do you feel there are specific indicators that should be added to the draft Framework, or should be considered for future monitoring or focused studies? Below is a summary of the 34 survey responses to this question.

Thirty-five percent of respondents replied yes and 65% replied no or I don't know in relation to whether specific indicators that should be added to the draft framework.

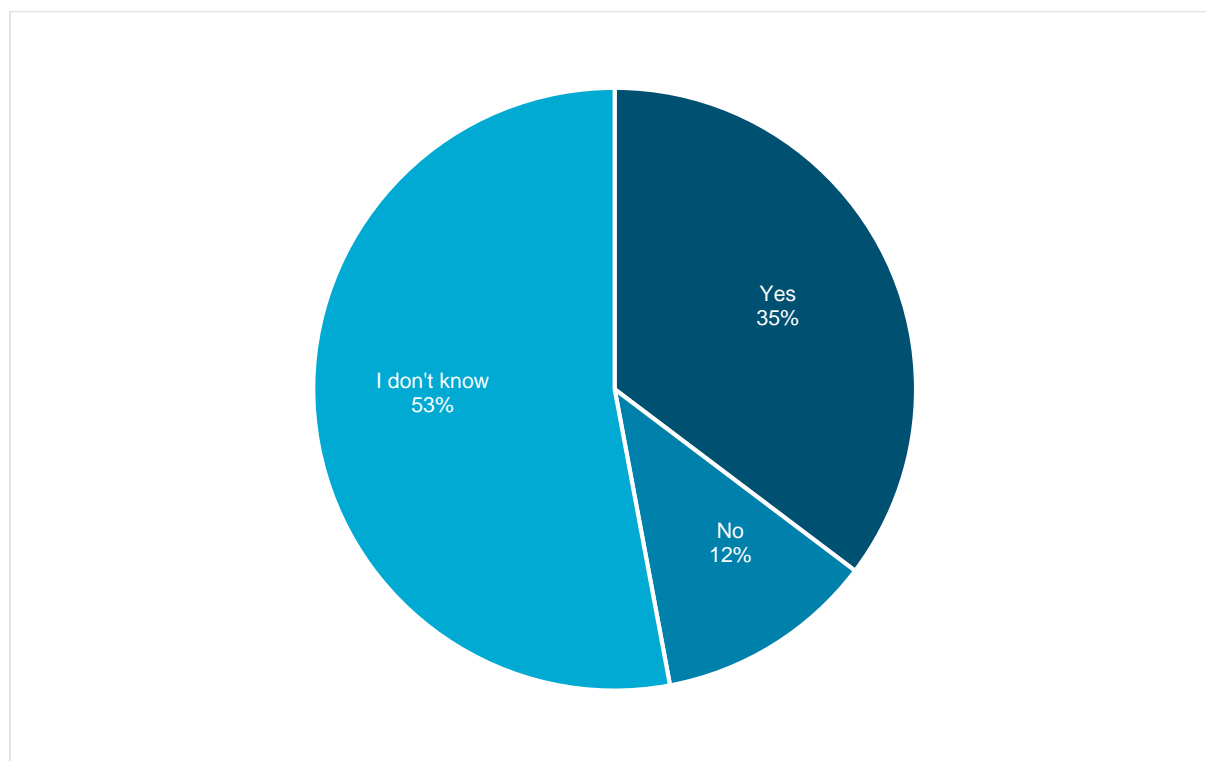


Figure 6. Consideration of other indicators.

**Question 10:** What other indicators do you feel should be added to the draft framework or considered in future monitoring or future studies, and why? Please use the indicator selection criteria. Below is a summary of the 12 survey responses to this question.

“Other” indicators that respondents felt should be included in future monitoring or future studies are:

- Climate change impacts - glacial melting resulting from climate change should be monitored as melting will likely lead to biological and nutrient changes;
- Public input - important to survey local people who have knowledge of the area being discussed and incorporate their input where possible;
- Cumulative indicators - indicators should include the monitoring of cumulative long-term effects and aquatic population levels to track how they fluctuate in relation to other indicators; and
- Water quality effluent standards - consider restricting and scheduling the release of materials from industrial operations and ensure that areas immediately downstream are closely monitored. Monitor indicators, such as, PFAS, Arsenic, and lead and other total and dissolved metals.

## Management Thresholds – Limits

**Question 11:** To what degree do you support the approach used to set limits? Below is a summary of the 34 survey responses to this question.

The majority of respondents either strongly supported (50%) or somewhat support (29%) the limits.

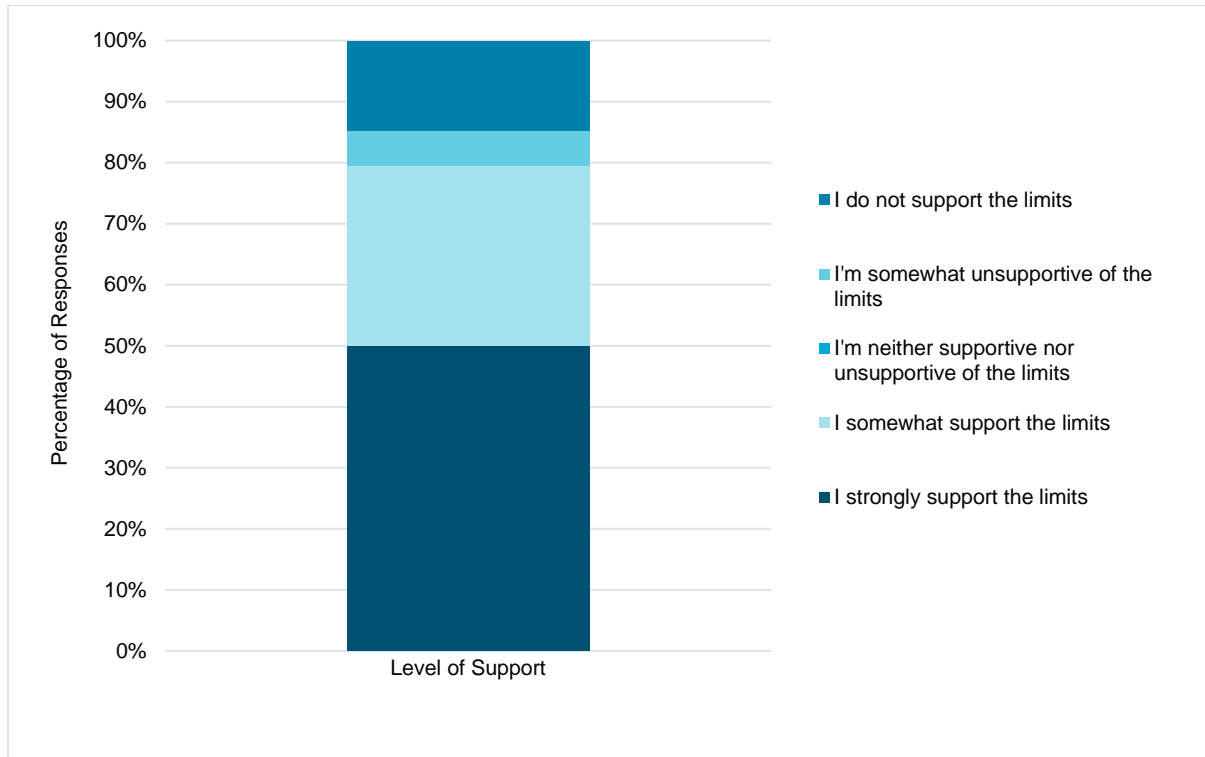


Figure 7. Support for the approach used to set limits.

**Question 12:** Can you explain why you do not support or are somewhat unsupportive of the approach used to set limits and how it could be improved? Below is a summary of the 7 survey responses to this question.

The concerns that were identified are categorized as follows:

- Natural fluctuations - natural fluctuations should be considered when setting limits;
- Monitoring stations - members of the public are unsure where monitoring stations are located, and whether they are actively monitored;
- Population growth – limits are too stringent; important to consider the need to develop resources and build infrastructure to accommodate population growth if Alberta is to prosper; and
- Mining/extraction - concerned that mining operations may potentially influence what is seen as acceptable regarding limits.

## Management Thresholds – Triggers

**Question 13:** To what degree do you support the approach used to set triggers? Below is a summary of the 34 survey responses to this question.

The majority of respondents either strongly supported (50%) or somewhat support (26%) the approach used to set triggers.

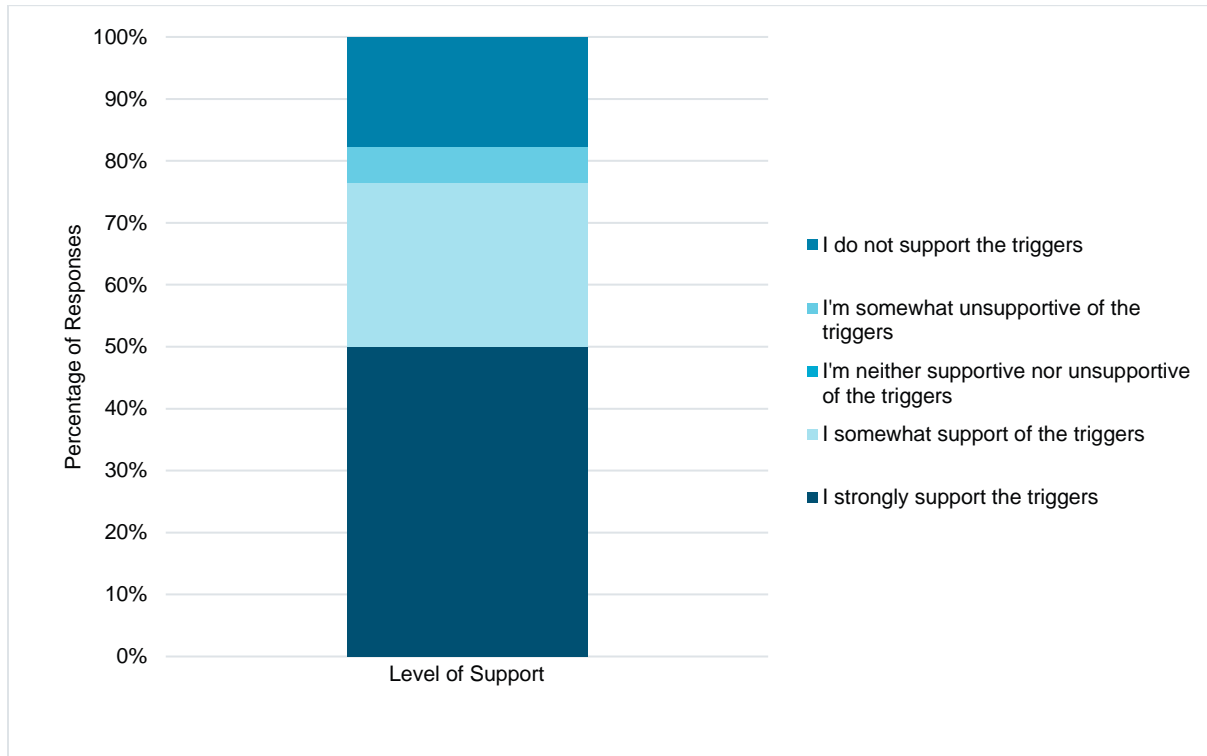


Figure 8. Support for the approach used to set triggers.

**Question 14:** Can you explain why you do not support or are somewhat unresponsive of the approach used to set triggers and how it could be improved? Below is a summary of the 8 survey responses to this question.

The concerns that were identified are categorized as follows:

- Historically poor water quality/insufficient data - historical data in some areas may have been collected from already polluted water and triggers are already at an unacceptable quality or there may be insufficient data and triggers have been set too low, thus, concern is that use of historical data is not an effective method;
- Climate change impacts (anthropogenic) - important to account for changes brought on by glacial melting when setting triggers;
- Data - concerned that data collection was stopped for the past three years since 2018, and some respondents feeling as though monitoring will not be conducted properly; and
- Mining/extraction - triggers should not be adjusted to be less sensitive and enable industry and mining pollution.

## Management Thresholds – Targets

**Question 15:** Who do you feel should be included in the process to set targets? (Select all that apply). Below is a summary of the 34 survey responses to this question.

Watershed stewardship groups, academics, municipal governments, and First Nations were the top four groups that respondents felt should be included in the process for setting targets.

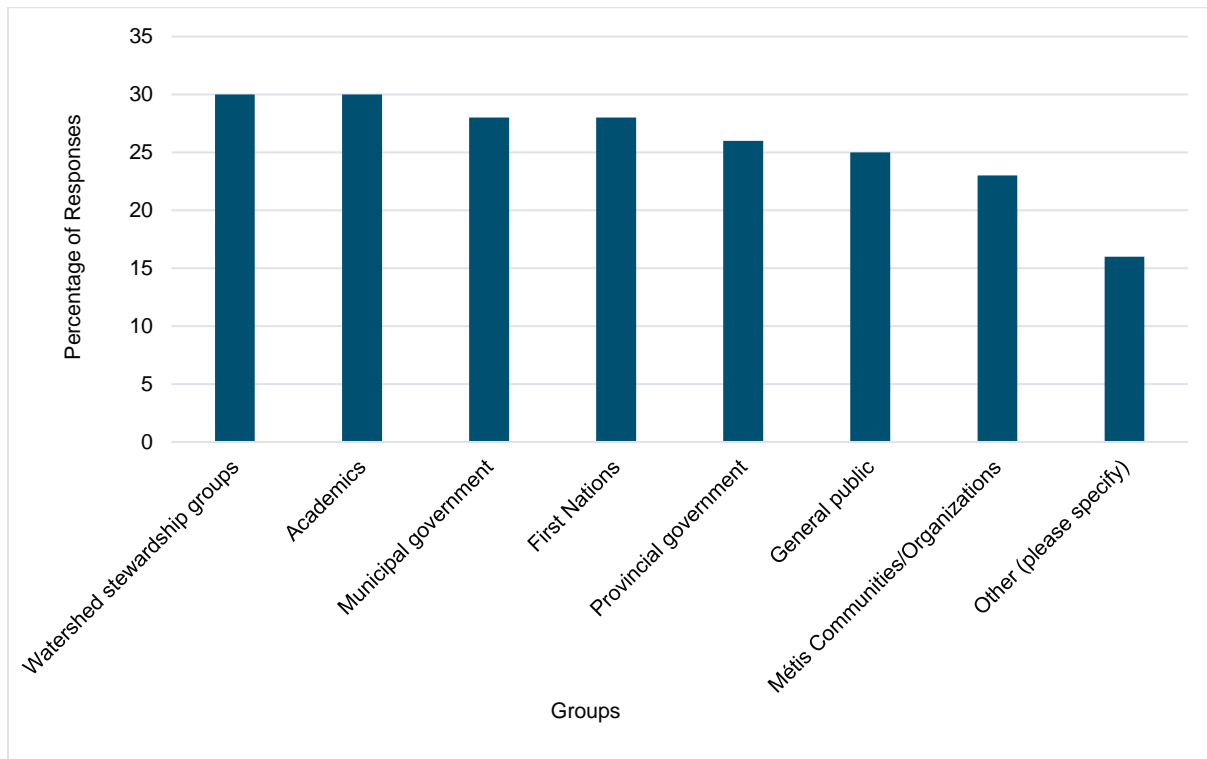


Figure 9. Groups that should be included to set targets.

Below are fifteen survey responses received from those who felt that “Other” groups should be involved in the process of setting targets.

“Other” groups suggested by respondents for inclusion in the process of setting targets included:

- Federal government;
- Industry and industry partners;
- Advisory Councils;
- Recreation groups;
- Scientists, Specialists;
- Individuals with differing views; and
- Local residents.

## Management Responses

**Question 16:** When do you feel it is appropriate to use regulatory, collaborative, or stewardship action? (Check all that apply). Below is a summary of the 34 survey responses to this question.

There was support for using all three approaches (i.e., regulatory, collaborative, and stewardship action).

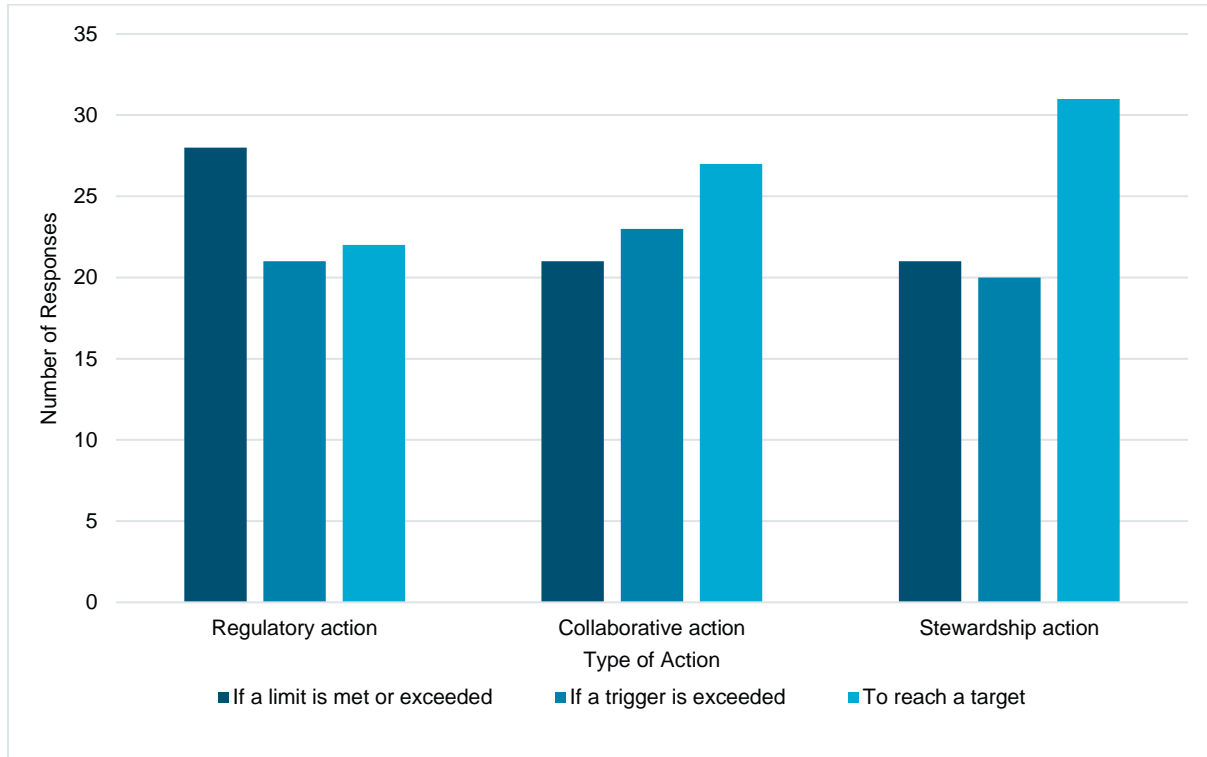


Figure 10. Management responses with associated actions.

**Question 17:** Are there other actions (regulatory, collaborative or stewardship) you feel should be considered in a management response? Below is a summary of the 34 survey responses to this question.

The majority of respondents (50%) did not know if there were any other regulatory, collaborative, or stewardship actions that should be considered in management responses, followed by 35% who felt that there were other actions that should be considered.

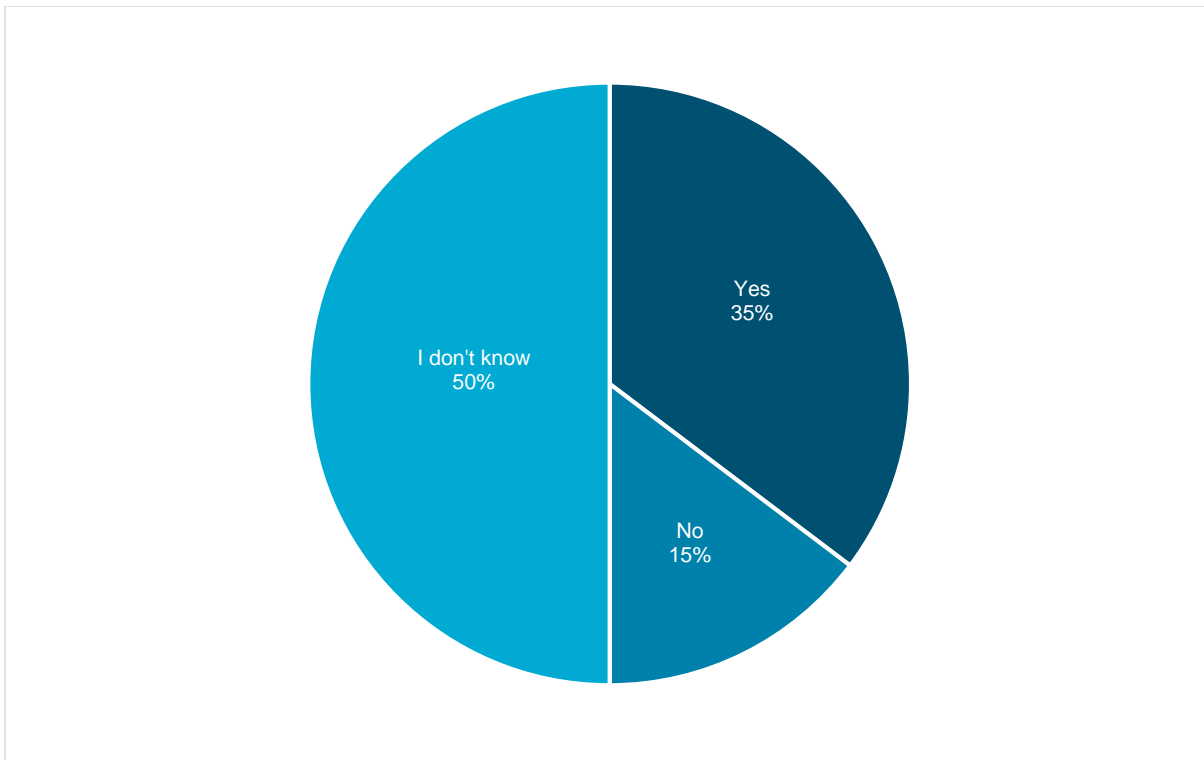


Figure 11. Additional actions required in a management response.

**Question 18:** What “other” management actions (regulatory, collaborative, or stewardship) do you feel should be considered? Below is a summary of the 12 survey responses to this question.

“Other” management actions respondents felt should be considered included:

- Public dissemination of data results, releasing the names of companies and organizations responsible for pollution events;
- More stringent and consistent enforcement measures;
- Involving local people;
- Monitoring the impacts of global warming and climate change; and
- Monitoring the use of off-road vehicles.

## Monitoring and Reporting

**Question 19:** What would be your preferred method of accessing information about the status of surface water quality and management response? (Select all that apply). Below is a summary of the 34 survey responses to this question.

The preferred method of accessing information about the status of surface water quality management is the Alberta.ca website, followed by summary reports, and formal reports.

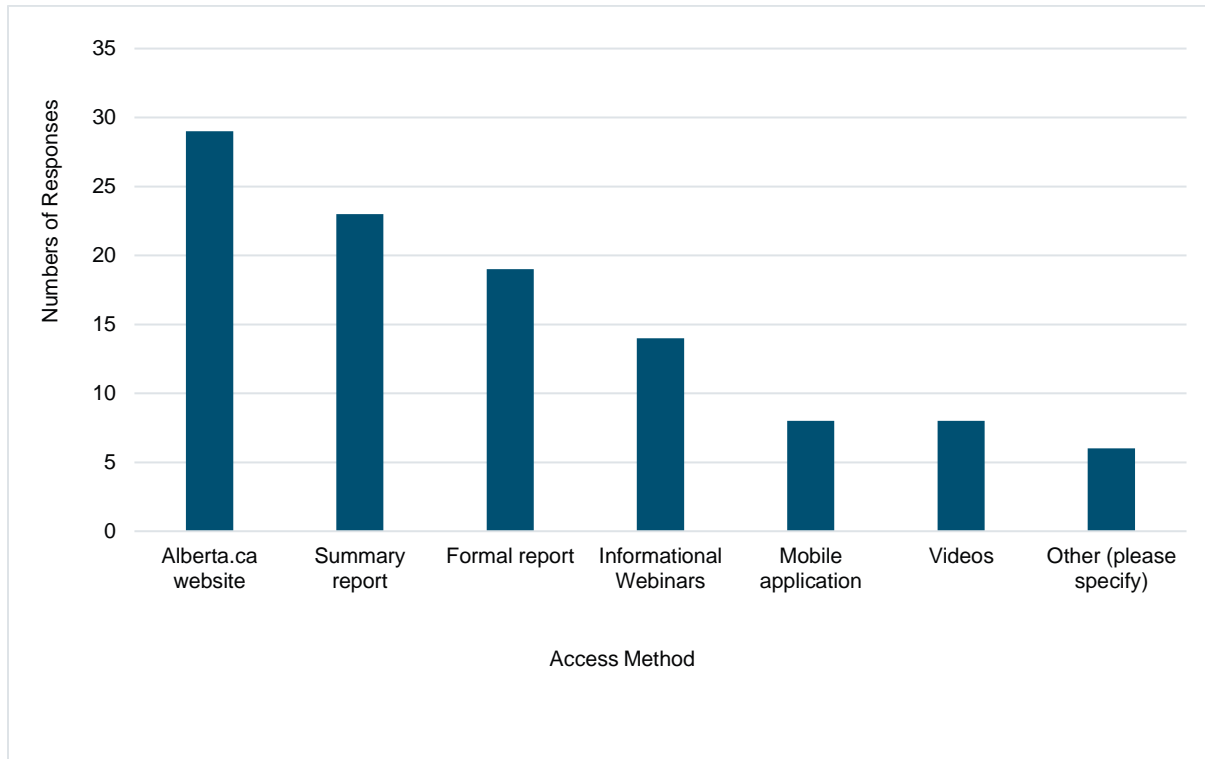


Figure 12. Preferred method of accessing water quality management.

Below are five survey responses from those who indicated “Other” in response to this question.

“Other” preferred methods of accessing information about the status of surface water quality and management responses included:

- Mainstream media - regular, public broadcasts through media outlets - water quality should be updated frequently, and test results should be openly communicated to the public;
- Visual materials - visually represented data such as infographics should be made a component of public reporting and information materials; and
- Federal involvement - some respondents would like to see the results of federally funded, independent water quality studies.

**Question 20:** What monitoring and response data would you be most interested in accessing? (Select all that apply). Below is a summary of the 34 survey responses to this question.

The top three kinds of monitoring and response data that respondents would be interested in accessing were: investigations of cause, trends, and maps.



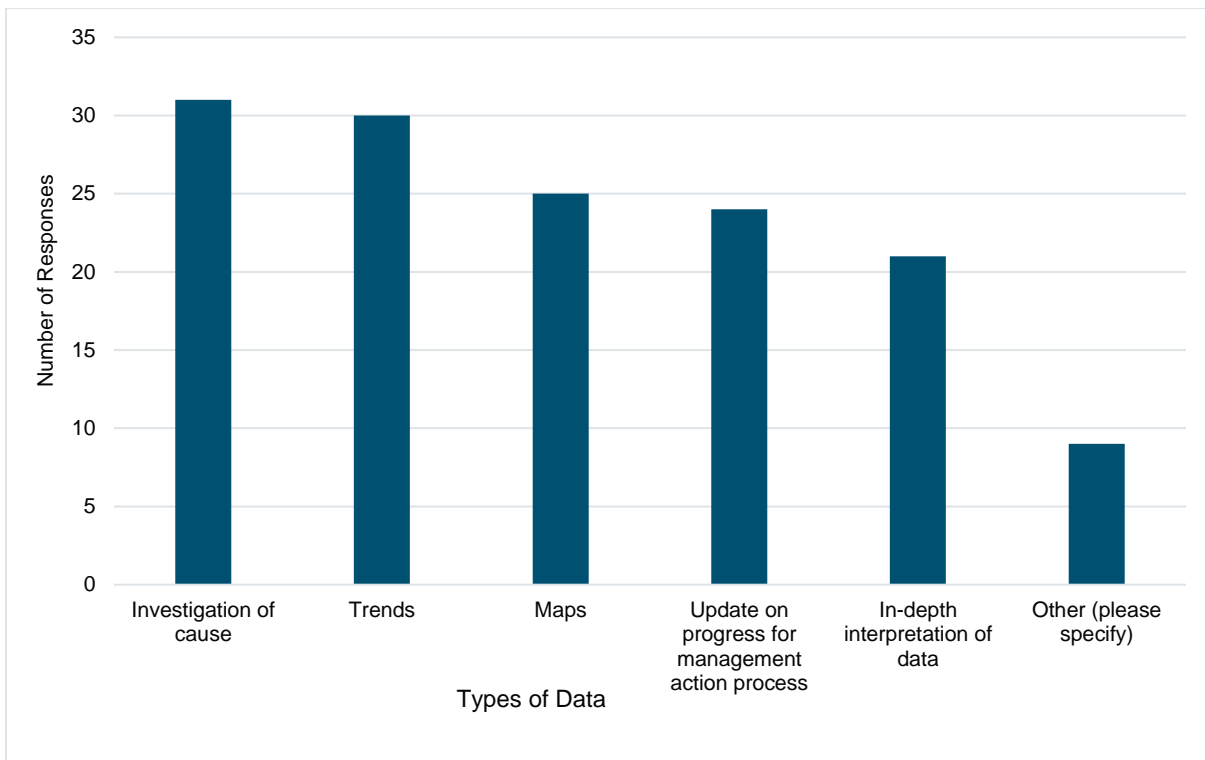


Figure 13. Interest in monitoring and response data.

Below are eight survey responses from those who indicated “Other” in response to this question.

“Other” monitoring and response data that respondents would be most interested in accessing included:

- Information on enforcement - proper enforcement and action is required, need to protect headwaters
  - Prevention/protection;
- Federal input;
- Historical data/databases;
- Mining/extraction; and
- Socio economic.

## Demographics

**Question 21:** Do you perform any of these activities in the Upper Athabasca Region? (Select all that apply). Below is a summary of the 34 survey responses to this question.

When asked to identify which activities they performed in the Upper Athabasca Region, the most frequent responses from respondents were recreating in the region (29 selections), living in the region (15 selections), and working in the region (15 responses).

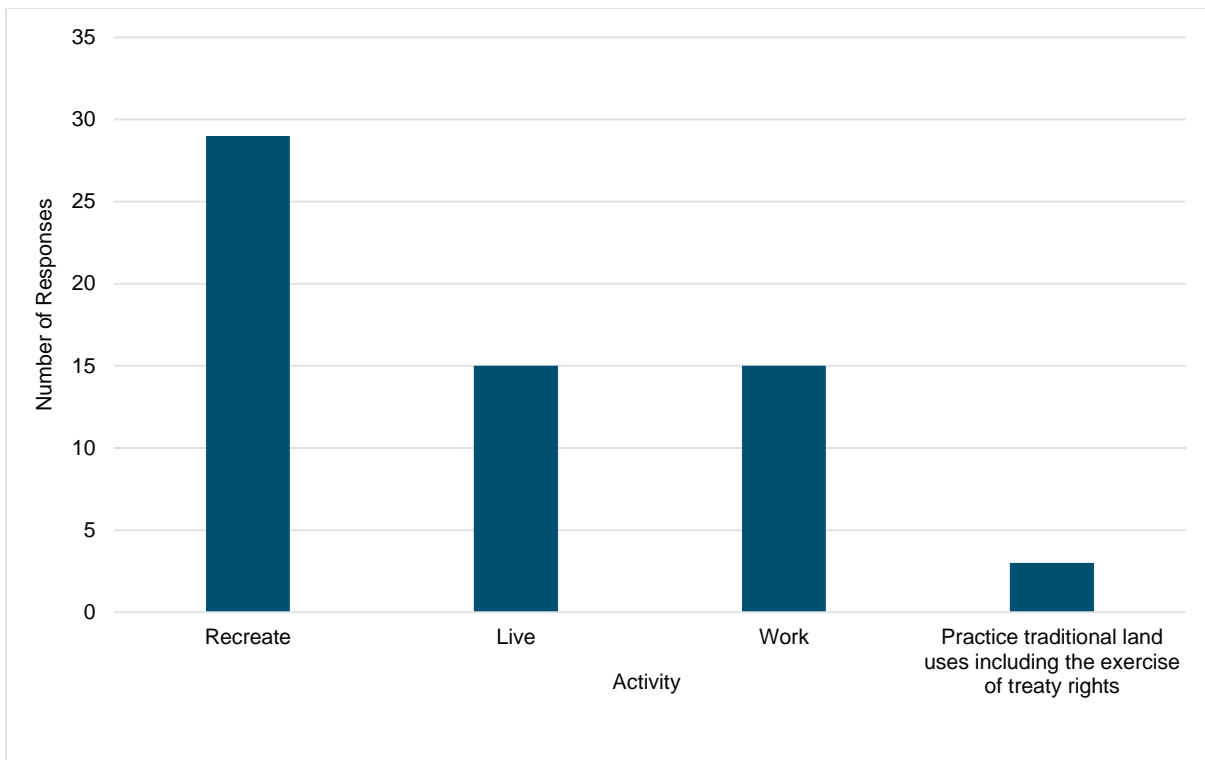


Figure 14. Activities in the Upper Athabasca Region.

**Question 22:** Are you associated with any of the following groups? (Select all that apply). Below is a summary of the 34 survey responses to this question.

When asked to identify groups which they were associated with, the most popular selections identified by respondents were environmental non-government organizations (18 selections), stewardship groups (12 selections), and municipalities (8 selections).

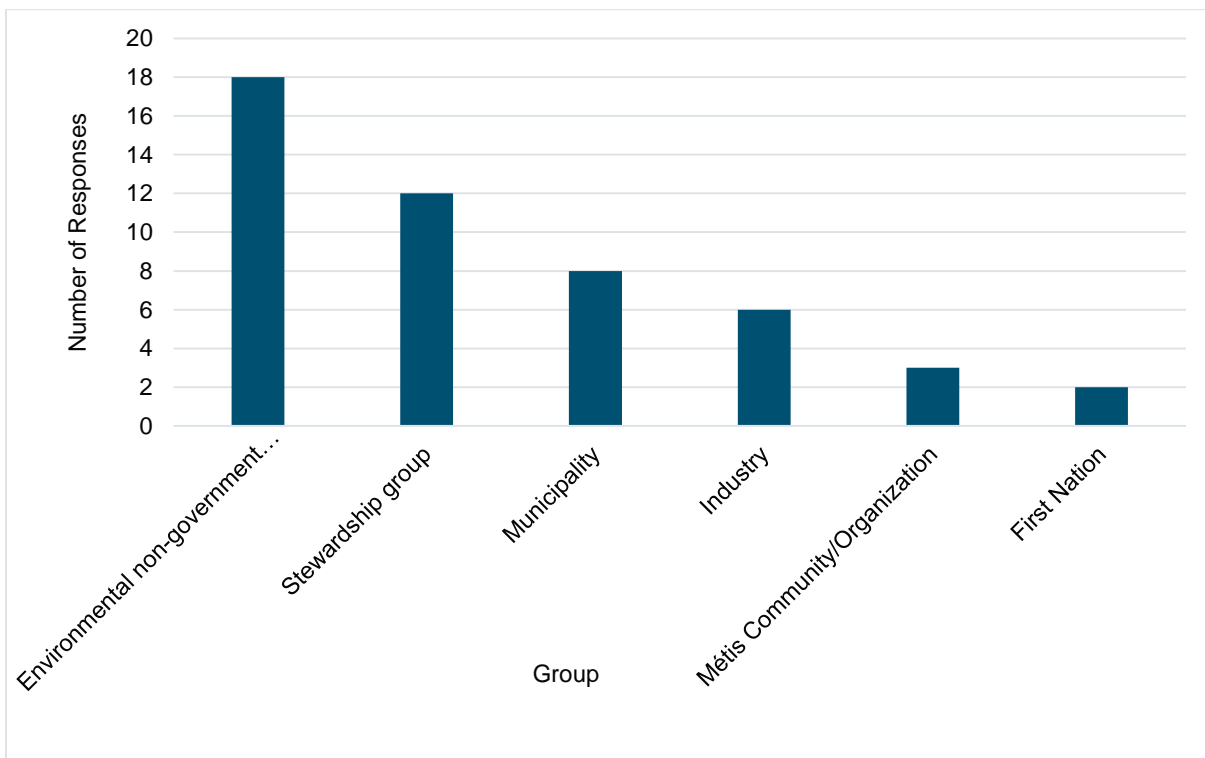


Figure 15. Association with a specific group.

**Question 23:** What is your age range? Below is a summary of the 34 survey responses to this question.

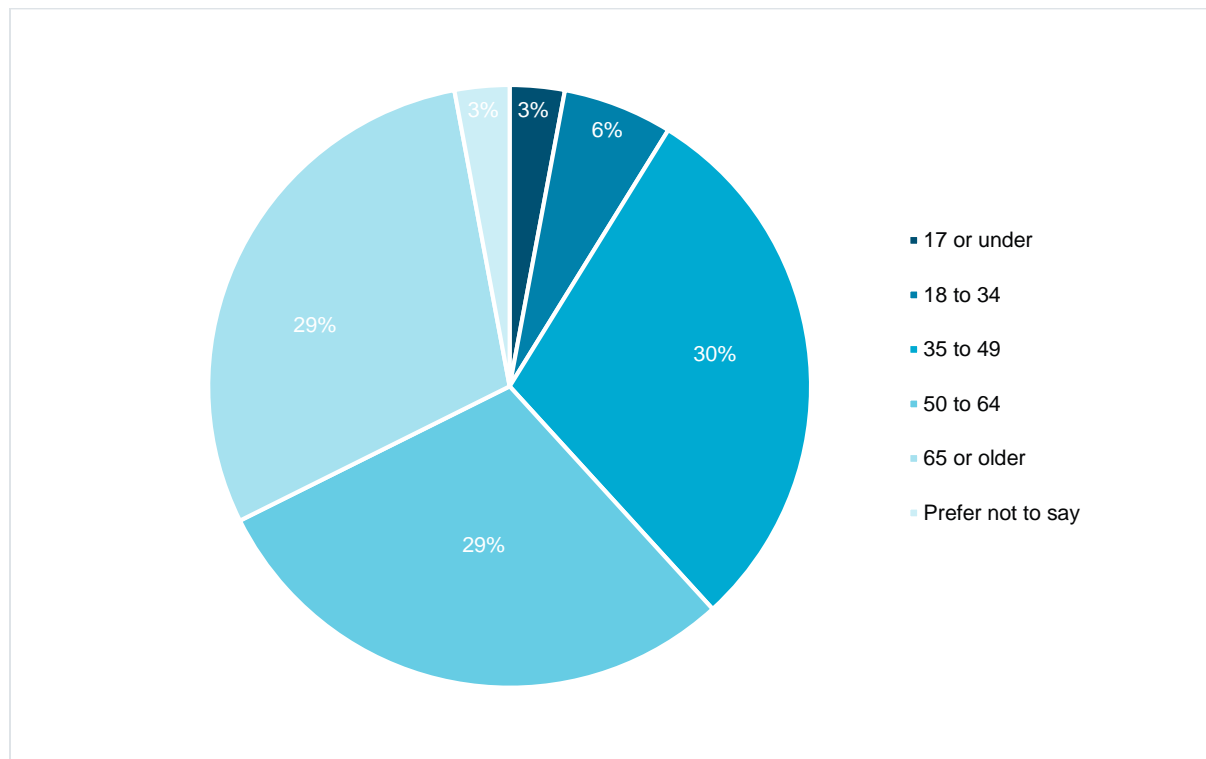


Figure 16. Age range.

**Question 24:** What is your profession? Below is a summary of the 15 survey responses to this question.

Professions identified by respondents, included, but were not limited to:

- Environmental/conservation professionals; and
- Municipal employees/public servants.

**Question 25:** What recreational activities do you participate in? Below is a summary of the 29 survey responses to this question.

There was a wide range of recreational activities identified by respondents, including, but not limited to:

- Hiking
- Fishing
- Camping
- Canoeing

# Stakeholder and Indigenous Engagement

Review of the Stakeholder and Indigenous submissions revealed significant themes and sentiments. Information outlined below was gathered through correspondence from one-on-one meetings with key stakeholders, Indigenous communities and organizations, and webinars. This section does not include information gathered through the public survey.

## Industry

Written submissions were received from two organizations from the energy sector, with a subsequent combined one-on-one meeting with Alberta Environment and Protected Areas. These organizations are supportive of Alberta Environment and Protected Areas' cumulative effects management approach including: monitoring and managing long-term potential impacts of human activities on water quality, setting clear objectives, science-based indicators and thresholds, and appropriate management responses if a threshold is reached.

One written submission was received and one, one-on-one meeting was held with members from the forestry sector. The forest sector showed strong support for the development of surface water management frameworks that are designed to ensure that Alberta's rivers remain healthy.

One one-on-one meeting was held with a member from the mining sector. They showed strong appreciation for the process and want to be a strong proponent.

## Feedback:

- Stakeholders would like to be continually engaged throughout the development and implementation of the framework and be involved in identifying triggers, limits, and potential targets;
- Stakeholders were appreciative of the opportunity to be involved in engagement and have valued similar opportunities to do so in the past;
- Further engagement and dialogue were suggested to occur with key stakeholders regarding limits in relation to compliance requirements and approvals;
- There is interest in having targets set through a multi-stakeholder process to ensure desired future conditions are technically and economically attainable;
- There is concern that industry was not specifically listed as a key stakeholder to engage with when identifying targets;
- Stakeholders were supportive of consistent, high quality monitoring, evaluation, and reporting;
- Stakeholders were interested in collective management;
- Interested in sharing the responsibility of monitoring and management with the provincial government. Important that data is not missed;
- Interested in accessing historical monitoring data to better understand how triggers relate to the setting of limits, and to have an opportunity to consider all relevant data and natural ranges of variability. Would like to understand how the framework compares to the Lower Athabasca Region SWQualMF, specifically as related to guideline values relative to historical concentrations;
- Would like to understand where triggers and targets will be applied, now and if monitoring network changes will occur in the future;
- It is important that that limits align with the environmental quality guidelines for Alberta surface waters;
- Would like to understand when data collected will be assessed, and how factors such as seasonal variability and approved project activities will be considered when setting management thresholds;
- Interest in having a better understanding of timelines and how all the plans and frameworks work with one another;
- Supportive of Alberta Environment and Protected Areas' cumulative effects management approach but concerned that the SWQualMFs are being developed ahead of the regional plans, suggesting that the current SWQualMFs be designated as interim reports and re-visited/updated when the regional plans are completed;
- Important that the economic, social, and environmental implications are considered in the development of the SWQualMFs;
- It was recommended that relevant advisory councils and key stakeholders be actively involved and informed through the framework development process so that they can support the province in investigation and management activities;
- It is important to ensure that data collection methods are reliable, and data is properly collected so that management thresholds can be established. Alberta Environment and Protected Areas should notify and coordinate with stakeholders when exceedances occur;

- Stakeholders would like to be involved throughout the development and implementation of frameworks and have a better understanding of next steps;
- Better understand of how species at risk have been considered in the indicators and limits, and how triggers/limits were identified; and
- Unsure of what industry's role in monitoring will be and what management actions will be undertaken in the event that exceedances occur.

## Environmental Non-Governmental Organizations

Four environmental non-governmental organizations (ENGOs) provided a written submission and/or participated in one-on-one meetings with Alberta Environment and Protected Areas. The majority of ENGOs strongly supported the need for SWQualMFs but hold a variety of views on how they should be executed.

Feedback:

- Supportive of regional objective for the North Saskatchewan Region to maintain and improve surface water quality;
- Seeking clarity regarding objective for Upper Athabasca Region framework; want to ensure protected uses include ecological as well as human uses. Unclear whether current and future water use will allow for acceptable water quality or maintain adequate flows and health to support riparian ecosystems;
- Would like to understand if identified indicators account for human activity and development;
- Concerned that there are not enough monitoring stations or monitoring of tributaries, which will lead to the dilution of potential impacts, limit sample size, and miss source of pollution;
- Would like to understand monitoring frequency, the impacts of data coming from different monitoring stations and different regions, and how oil sands/extraction activities are monitored;
- Concern that different regions and municipalities are not treated equally with regards to monitoring. Suggest that policies address these discrepancies, and that there is policy alignment with other Alberta Environment and Protected Areas documents. Authorization and approval regulations will need to be updated to align with the load management direction;
- Would like a better understanding of how monitoring and remediation is funded. Concern about funding sustainable for monitoring and evaluation and whether fluctuating budgets will have a negative impact on the quality of monitoring. Consider raising money to fund monitoring and data collection and suggest that those responsible for pollution contribute to bearing some of the costs;
- Would like to better understand what happens when exceedances are captured;
- Important that trigger exceedances are properly investigated, stakeholders have an opportunity to provide input on indicators and thresholds, and corresponding limits are identified for all indicators;
- In favor of proactive vs. reactive management;
  - Recommend that Alberta Environment and Protected Areas focus on addressing pollutants before thresholds are exceeded; and
  - Management responses should be proactive vs. reactive, and protection and restoration should be key concerns;
- Reporting is of value, but there are concerns about lack of information;
- Concern about the timing of reports and how incidents that happen early in the year will be addressed;
- Wetlands should be protected and restored as they play an important role in mediating water quality concerns by acting as a buffer/filter;
- Stakeholders are interested in being involved in the process and understanding more about the timelines for framework development; and
- Interested in collaborating with Alberta Environment and Protected Areas; sharing information and being actively involved in water quality management; would like to have access to monitoring data.

## Indigenous Communities and Organizations

One written technical submission was received and seven one-on-one meetings were conducted with representatives from Indigenous communities and organizations located in either the North Saskatchewan or Upper Athabasca regions. Feedback was also shared through the Indigenous and Métis webinars.

Feedback:

- Concern that current management objectives do not meet the needs of Indigenous people;

- Monitoring needs to take place consistently and on a long-term basis so that results are accurate and useful. Many communities and organizations felt that there were not enough monitoring stations relative to the area being monitored. The selection of new monitoring station locations should incorporate Indigenous input. Indicators should have reference points that connect them to different activities and have relevant protection goals;
- Indigenous communities and organizations should be actively involved alongside government and key stakeholders in monitoring activities, so they are not solely reliant on data provided by government. Communities and organizations who are currently conducting their own monitoring would like to coordinate their efforts with the provincial government;
- Implementation mechanisms and processes are a key component of the proposed frameworks, there is a desire for a better understanding of these processes;
- Some communities and organizations feel that they have already been engaged on similar projects, and that some of the work being done is redundant - previous work could be built upon instead of repeated;
- Traditional knowledge must be incorporated so the frameworks can adequately protect the ability to exercise Indigenous and treaty rights. Some concern that engagement with Indigenous communities and organizations has been insufficient, and that the proposed frameworks do not adequately incorporate traditional knowledge or protect the rights of Indigenous peoples;
- Concern about the impacts to Indigenous communities and organizations downstream from areas that are contaminated or polluted. Water quality has the potential to significantly impact the ability to exercise Indigenous and treaty rights in certain areas. The impacts of mining, specifically of coal, were of significant concern;
- There are concerns regarding how withdrawals and returns are managed, would like to better understand the quantity being withdrawn and the quality of returns;
- Consider additional support from Alberta Environment and Protected Areas to Indigenous communities and organizations to support water management (e.g., cumulative effects or other studies; engagement/information sharing; monitoring initiatives).
- Indigenous communities and organizations would like to understand how these frameworks integrate with other policies, such as the coal policy, and the timeline for the development of these frameworks relative to other policies;
- There is some concern regarding the framework development process, specifically that the frameworks are preceding regional plans. There were some concerns that the process for creating these frameworks was rushed;
- There was interest in understanding the process that would be used to update triggers and the process for including candidate indicators that were not initially included as more data becomes available;
- Maps currently being used as resources for this work do not outline where Indigenous communities and organizations are, and which areas are used for Indigenous uses;
- Specific requests were made regarding engagement follow-up including: written responses to questions asked during engagement, the production of an FAQ document, and a follow-up meeting with Alberta Environment and Protected Areas after frameworks have been approved; and
- Frameworks should aim to improve water quality, not just maintain existing levels which may be polluted.

## Conclusion

Alberta Environment and Protected Areas would like to thank all participants for their feedback and comments. All feedback was reviewed by Alberta Environment and Protected Areas and considered in the refinement and completion of the SWQualMF. Some of the key changes made to the SWQualMF include, but are not limited to the following:

- The refinement of the indicator list:
  - Removing methylmercury as secondary indicator; but retaining total mercury as a secondary indicator;
  - Adding total cobalt and total copper as secondary indicators;
  - Ensuring key parameters associated with coal mining (e.g., selenium) are included as indicators.
- Inclusion of tributary monitoring stations, which are for reporting purposes only and for which triggers and limits do not apply.

Alberta Environment and Protected Areas will also continue engagement with Indigenous communities and organizations, related to implementation of the surface water quality management framework.