



October 13, 2025

Andrea Anderson, Ph.D.
Senior Air Quality Engineer
Bay Area Air District
375 Beale Street, Suite 600
San Francisco, CA 94105

Submitted via email to: ruledevelopment@baaqmd.gov

Subject: Comments on Draft Amendments to Rule 11-18

Dear Dr. Anderson:

The Bay Area Clean Water Agencies Air Issues and Regulations (BACWA AIR) Committee appreciates the opportunity to comment on the Bay Area Air District's August 2025 [Draft Amendments to Rule 11-18](#), as presented in the Air District's documents released August 28, 2025. BACWA is a joint powers agency whose members own and operate publicly owned wastewater treatment works (POTWs) that collectively provide sanitary services to over seven million people in the nine-county San Francisco Bay Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health. The BACWA AIR Committee is a coalition of San Francisco Bay Area POTWs working cooperatively to address air quality and climate change issues, under the guidance of BACWA.

Our comments on the draft Rule 11-18 amendments are as follows:

Preparation of HRAs to be conducted by consultants who are familiar with POTW processes.
BACWA believes that this revised approach proposed by the Air District to have facilities or their consultants prepare the HRAs will result in more consistent and accurate HRAs. However, there is concern that there may be a limited number of consultants with appropriate sector experience, which could necessitate longer response times.

Proposed response times are too brief to allow public agencies to comply
Public agencies have requirements regarding the process of hiring consultants and contractors that often include a competitive bidding phase with extended timelines. The time allotted in the proposed language is insufficient for public agencies to respond. Additional time beyond the proposed 45 days in section 402.2 is necessary to hire a consultant and prepare the draft protocol. To streamline the review of the site-specific modeling protocol, sufficient advance notice must be given to public agencies subject to Rule 11-18, and flexibility allowed to accommodate the public contracting process. Depending on the agency and the amount of the contract, it may take 120 days or more to retain a consultant (develop the request for proposals, allow 30 days for responses, evaluate all submittals, wait for appeals, and obtain Board/Council approval), and then conduct the work. BACWA suggests a minimum of 180 days and up to one year, in consultation with Air District staff, to prepare the draft protocol. Additionally, the proposed response times require quick turn around by the regulated facilities but does not establish

timelines for Air District responses. This presents the potential for the limited number of qualified consultants to be unavailable to respond to Air District comments in a timely manner. For example, 402.3.2 requires a revised HRA to be resubmitted within 14 days. Depending on the complexity of any revisions as well as resource availability, this would not be possible and will necessitate response times longer than proposed. BACWA requests at least 30 business day response times, and that extended response times, in consultation with Air District staff, be allowed depending on the complexity of the work and availability of consulting staff. Air District response times should also be specified to facilitate workload planning.

Requiring facilities above a specified risk threshold to reduce risk to the extent feasible prior to the 5-year deadline established in the Risk Reduction Plan is insufficient for public agencies like POTWs.

As summarized in a [2017 letter](#) with the Air District and again in [2024](#), implementing a capital improvement project at a POTW requires a minimum of six years for its planning, design, and construction since it must go through its own public process and Board/Council approval at each stage. Project planning, scheduling, financial planning, environmental review, funding, pre-design, design, permitting, bid and award, and ultimately construction, is a lengthy and involved process, which cannot be completed within an accelerated time frame. BACWA requests that a definition of “extent feasible” be included in the Rule. BACWA also requests that the Air District acknowledge, in addition to specifying “safety regulations,” that other considerations including operational constraints, applicable technology options, and unforeseen delays outside of the facility’s control, such as supply chain issues, will impact the Risk Reduction planning and implementation process. Project sequencing must be carefully planned during construction projects to allow for continuous operation of POTWs to protect public health and the environment. BACWA requests that the Risk Reduction time frame for public agencies be extended to not less than six years after issuance of Authority to Construct permits to comply with existing public project implementation requirements.

Allowing early application of Risk Reduction Levels to facilities located in overburdened communities fails to make use of new emissions data resulting from the Pooled Emissions study required by CARB.

POTWs have been identified as Phase II facilities, which establishes them as facilities which will be subject to Rule 11-18 after the Phase I facilities, regardless of the community in which they are located. This categorization provides POTWs the ability to access new data from the statewide Pooled Emissions Study (driven by the California Air Resources Board’s (CARB) updated reporting requirements). This is the first time a study of this magnitude has been conducted in more than 30 years. The objective of this study is to determine which air toxics are present at POTWs, what quantities of these air toxics are present, and what emission factor is appropriate for relevant air toxics. This rigorous effort is being performed in close coordination with POTWs, Air District staff (including the California Air Pollution Control Officers’ Association), CARB staff, and source test specialists to complete it in time for expanded monitoring and reporting planned to begin in 2028. Using the best available data developed in the Pooled Emission Study will result in more meaningful risk estimates. BACWA continues to engage Air District staff in this process and requests that Rule 11-18 HRAs at POTWs be deferred until after the updated emission factors are available.

Thank you again for the opportunity to provide feedback on the draft amendments to Rule 11-18. BACWA is the Air District’s partner in protecting the Bay Area’s public health and environment, and we ask that Air District staff work collaboratively with BACWA to address the above-listed concerns. BACWA also looks forward to continuing to participate in the ongoing

stakeholder engagement process as outlined in Rule 11-18's draft Implementation Procedures.

We would be happy to discuss any questions regarding these comments. Please contact me at LFono@bacwa.org.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Lorien Fono", with a stylized flourish at the end.

Lorien Fono, Ph.D., P.E.
Executive Director
Bay Area Clean Water Agencies

Attachments:

1. BACWA Letter Report to BAQQMD Summarizing the POTW Planning Process and Considerations with regard to Proposed Rule 11-18 (April 4, 2017)
2. BACWA Comments on Concepts for Amendments to Regulation 11-18 (February 29, 2024)

cc: BACWA Executive Board
Nohemy Revilla, BACWA AIR Committee Co-Chair
Jason Nettleton, BACWA AIR Committee Co-Chair
Courtney Mizutani, BACWA AIR Committee Supporting Consultant
Ray David, BACWA AIR Committee Supporting Consultant



April 4, 2017

Mr. Jack Broadbent
Executive Officer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
Submitted via email to: jbroadbent@baaqmd.gov

SUBJECT: LETTER REPORT SUMMARIZING THE POTW PLANNING AND PROJECT IMPLEMENTATION PROCESS WITH REGARD TO PROPOSED RULE 11-18

Dear Mr. Broadbent:

The Bay Area Clean Water Agencies Air Issues and Regulations Committee (BACWA AIR) appreciates the opportunity to provide the Bay Area Air Quality Management District (BAAQMD) a summary of the planning and implementation process wastewater agencies must undertake when investing in projects, particularly with regard to the schedule and special factors public agencies must consider to satisfy stakeholders, ratepayers, and their elected (or appointed) Board or Council members. BACWA is a joint powers agency whose 46 members own and operate publicly-owned wastewater treatment works (POTWs) that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected or appointed officials and managed by professionals who protect the environment and public health. The AIR Committee is a coalition of SF Bay Area POTWs working cooperatively to address air quality and climate change issues, under the direction of BACWA.

POTW Planning and Implementation Process

POTWs need at least six years to plan, design, and construct capital improvement projects. Figure 1 provides a summary of the POTW planning and project implementation process, and also highlights environmental review and financial considerations. The steps provided in Figure 1 are briefly described in this section.

The planning process begins with a Facility/Master Plan (Plan). This plan develops a long-term (i.e., 20-, 30-, sometimes 50-year) financing forecast to ensure reliable public service that protects public health and the environment. The result of a Facility/Master Plan (which typically takes one year or more to complete) is a Capital Improvement Program (CIP). The CIP provides a schedule of needed repairs and rehabilitation projects, as well as new capital investments that

are to be funded over the next 10 to 20 years to achieve the objectives set out in the Plan. These CIP projects are developed with several key factors in mind: projected growth in service area, existing and potential future regulations, aging infrastructure, and new local, state, or federal policies in development (e.g., climate related goals). The CIP is typically reviewed and updated annually, as capital and operations budgets are developed each fiscal year for approval by each agency's publicly elected or appointed Board/Council.

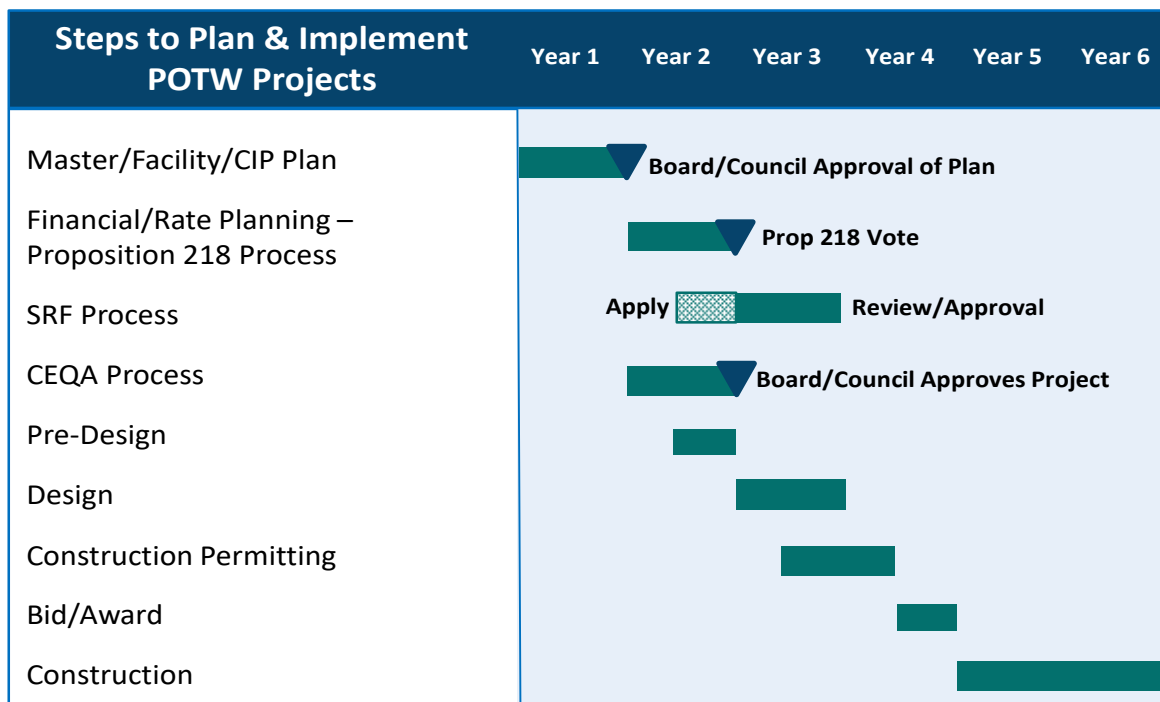


Figure 1. Timeline and Steps Necessary for Planning and Implementing POTW Projects.

Following approval of the Plan, POTWs begin financial planning to determine if and when to increase customer rates to support the CIP schedule. The financial planning process can take a year to complete and includes rate projections for funding the identified CIP projects. If there are any new charges and/or increases to existing charges/rates, then tax (rate) payers must be given the opportunity to vote to approve the rate increases as required by Proposition 218.

The environmental review process required by the California Environmental Quality Act (CEQA) can be performed concurrently with the financial planning process and typically requires up to a year to complete (may require additional time depending on the project elements). The environmental review process requires some pre-design work to provide specific information required for CEQA-Plus analysis. The pre-design work requires approximately six months and is typically undertaken toward the end of the CEQA-Plus process.

Following Board/Council approval of the Plan (within the last half of the CEQA-Plus environmental review process and concurrent with pre-design work), agencies begin the State Revolving Fund (SRF) application process. The SRF application process takes approximately six months to complete and requires CEQA-Plus documentation to be complete for submission. Once the application is submitted, the review and approval process begins and requires up to 12

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months. Many POTWs apply for SRF to fund CIP projects. However, there is limited funding available through the SRF program at this time, resulting in more pressure on ratepayers to directly fund projects.

Following Board/Council approval of a project, POTWs begin the design process (approximately one year). About half way into the design, the construction permitting procedures begin (requiring up to one year depending on the project). Once the construction permitting activities are complete, the project can be opened for bid and awarded to a contractor - this process can take up to six months. Finally, project construction can begin and typically lasts approximately two years (including start-up procedures).

As Figure 1 shows, the entire process for planning and implementation of typical POTW projects takes a minimum of six years, assuming a project receives the necessary approvals at the various stages. More complex projects or controversial projects dealing with growth or environmental issues can take even longer. The implementation schedule for the Proposed Rule 11-18 is three years, with the potential to extend up to three more years. While this provides POTWs with a potential for six years for implementation, it leaves no flexibility for POTWs in the event there are issues with receiving Board/Council approval for the Plan, rate payer approval for rate increases, and Board/Council approval for the project, and assumes there are no delays with the environmental review or permitting processes.

Costs to Implement TBARCT

The draft cost estimates BAAQMD provided for the "Sewage Treatment Operations" Toxic Best Available Retrofit Control Technologies (TBARCT) are underestimating the true cost of TBARCT implementation costs (both capital and operating costs). Several BACWA member agencies have already estimated TBARCT costs for their POTW and those estimates are 2 to 10 times greater than BAAQMD estimates. BACWA members are willing to provide more detail on their cost estimates to ensure the accuracy of the costs considered by BAAQMD for satisfying TBARCT under Rule 11-18. It is important that these costs are accurate as they will be used to estimate the socio-economic impact of projects and determine the overall cost-benefit of projects. This information may reveal that projects to reduce TACs at POTWs are not as cost effective as initially estimated by BAAQMD staff.

Balancing Water Quality and Air Quality Objectives

The Regional Water Board is working to reduce nutrient loads in POTW effluent to receiving waters (specifically, the San Francisco Bay). One of the methods being considered at POTWs includes increasing aeration rates in secondary treatment to achieve additional nitrogen removal. While this process may effectively remove nitrogen to address a water quality objective, it may increase release of TACs and will increase energy demand. The BAAQMD staff should evaluate these types of competing regulatory objectives that may require additional flexibility to be built into Rule 11-18, and acknowledge existing regulatory requirements that POTWs have already taken into account in their CIP and regulatory compliance strategy.

Balancing TAC and GHG Reductions

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While the intent of the proposed Rule 11-18 is to reduce TAC emissions from existing sources to protect the public, there is an urgent need to harmonize this rule with regulations targeting GHG reductions. Rule 11-18 may discourage beneficial use of renewable natural gas (biogas) for renewable energy production and result in a wasted (flared) resource. Additionally, the Draft 2017 Clean Air Plan proposes 100 percent diversion of organic waste from landfills by 2035 and promotes the increase in renewable natural gas production and use. As part of this effort, POTWs have been encouraged to accept the organic waste (specifically, food waste) to co-digest it with wastewater solids to increase generation and use of renewable natural gas and biosolids (as a soil amendment). Many facilities combust the renewable natural gas onsite to generate electricity, offsetting purchased fossil fuel based electricity and the associated GHG emissions. However, formaldehyde is released during the combustion of the renewable natural gas which may trigger noncompliance with the proposed Rule 11-18. Implementing additional controls may cause these resource recovery projects to be cost prohibitive or result in changes to existing permits (e.g., with regard to biogas production) that make it difficult to support resource recovery projects.

This type of barrier to GHG reducing projects and practices already exists. For example, there is a pilot project being considered at one of BACWA's member facilities that is partially funded by a state agency grant to receive food waste for co-digestion in their existing anaerobic digesters. The project is in direct response to, and supports, recent legislative mandates established in AB 32, SB 32, AB 341, AB 876, AB 1826, and SB 1383. The mandates require the diversion of organics from landfills to reduce methane emissions and anaerobic digestion of organics to generate renewable natural gas, and support the Governor's push to produce at least 50 percent of our energy needs from renewable sources and reduce the carbon content of transportation fuel, to mitigate climate change.

The project is also consistent with the 2017 Draft Clean Air Plan, the ARB 2030 Target Scoping Plan January Draft, and the Revised Proposed Short-Lived Climate Pollutant (SLCP) Reduction Strategy. Each document explicitly supports using existing infrastructure such as digesters at POTWs as part of the overall solution to mitigate climate change. However, the project is at a standstill while BAAQMD re-evaluates the permit limits initially recommended.

An example practice that may be at risk under the proposed Rule 11-18 is landfill gas use at Central Contra Costa Sanitary District (Central San). Central San treats an average of 32 million gallons of wastewater per day for discharge into Suisun Bay, and serves nearly 482,000 residents and 3,000 businesses in central Contra Costa County. Currently, Central San uses landfill gas from the nearby Acme Landfill to supplement the combustion of sewage sludge and generate steam through heat recovery. The steam drives the aeration turbine that supplies air to support the secondary wastewater treatment process. This practice minimizes the treatment plant's dependence on fossil fuels, in turn reducing the resulting anthropogenic GHG emissions from combustion. The proposed Rule 11-18 may restrict landfill gas (renewable natural gas) combustion since it may contribute additional TAC emissions, potentially forcing Central San to condition the landfill gas to pipeline quality before use, or abandon landfill gas use completely (flaring a renewable resource), and resort to using natural gas in the sewage sludge combustion

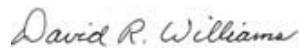
BACWA Letter Report in Response to BAAQMD

process. Unfortunately, the use of natural gas contributes to anthropogenic GHG emissions and is in direct contradiction with the Governor's climate goals for 2020, 2030, and beyond. Without the use of landfill gas to supplement sewage sludge combustion, Central San will be required to participate in the Cap-and-Trade Program and incur a minimum annual cost of \$250,000 in Cap-and-Trade allowances. Projects like these, which contribute toward achieving state and Bay Area climate goals, need flexibility built into Rule 11-18.

Additionally, because implementation of a rule like Rule 11-18 may discourage projects and practices that mitigate GHG emissions, staff must ensure the calculations of TAC emissions (used to estimate the prioritization scores) are based on realistic assumptions using current data. Gathering these data may take time, but is a critical step to ensure the balance between GHG and TAC reductions.

Thank you for the opportunity to provide information on POTWs that is crucial to the successful implementation of Rule 11-18. BACWA supports BAAQMD's goal to protect the Bay Area's air quality, and asks staff to work in conjunction with BACWA to address the stated concerns. We would be happy to discuss any questions regarding these comments. Nohemy Revilla and Randy Schmidt, BACWA AIR Committee Co-Chairs, can be reached at NRevilla@sfwater.org and RSchmidt@centralsan.org, respectively.

Sincerely,



David R. Williams
BACWA Executive Director

Cc: Victor Douglas, BAAQMD
Greg Nudd, BAAQMD
Jaime Williams, BAAQMD
Eric Stevenson, BAAQMD
BACWA Executive Board
Lorien Fono, BACWA Regulatory Program Manager
Nohemy Revilla, BACWA AIR Committee Co-Chair
Randy Schmidt, BACWA AIR Committee Co-Chair
Courtney Mizutani, BACWA AIR Committee Project Manager
Sarah Deslauriers, BACWA AIR Committee Project Manager



February 29, 2024

Alexander Sohn
Senior Air Quality Engineer
Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105

SUBJECT: COMMENTS ON CONCEPTS FOR AMENDMENTS TO REGULATION 11-18

Via email: Rule11-18@baaqmd.gov

Dear Alexander Sohn:

The Bay Area Clean Water Agencies Air Issues and Regulations Committee (BACWA AIR) appreciates the opportunity to comment on Potential Concepts to Rule 11-18 Amendments, as presented in the BAAQMD document released December 29, 2023. BACWA is a joint powers agency whose members own and operate publicly owned wastewater treatment works (POTWs) that collectively provide sanitary services to over 7.1 million people in the nine-county San Francisco Bay (SF Bay) Area. BACWA members are public agencies, governed by elected officials and managed by professionals who protect the environment and public health. The AIR Committee is a coalition of SF Bay Area POTWs working cooperatively to address air quality and climate change issues, under the guidance of BACWA.

Our comments on the proposed concepts to rule amendments are as follows:

Requiring facilities above a specified risk threshold to reduce risk to the extent feasible prior to the 5-year deadline established in the Risk Reduction Plan is not feasible

As outlined in a [letter](#) submitted in 2017 to BAAQMD, implementing a capital improvement project at a POTW requires at least six years for its planning, design, and construction since it must go through its own public process and Board approval at each stage. Project planning, scheduling, financial planning, environmental review, funding, pre-design, design, construction permitting, bid and award, and ultimately construction is a lengthy and involved process, which cannot be completed in an accelerated time frame.

Allowing early application of Risk Reduction Levels to facilities located in overburdened communities fails to make use of new emissions data resulting from the Pooled Emissions study required by CARB

POTWs were originally identified as Phase II facilities, which has a specific timeline associated

with them regardless of the community within which they are located. This categorization is providing POTWs the ability to participate in a statewide Pooled Emissions Study (driven by CARB's updated reporting requirements) that has the objectives of determining which air toxics are present at POTWs and in what quantities, so that an emission factor for each air toxic can be determined by calendar year 2027. This effort will be performed in close coordination with POTWs, Air District staff (including the California Air Pollution Control Officers' Association), CARB staff, and source test specialists to complete it in time for expanded monitoring and reporting beginning in 2028. BACWA continues to engage BAAQMD staff in this process.

Combining the facility review period and public comment period does not allow facility review prior to public review

While not unique to POTWs, this approach is concerning. BACWA is concerned about this proposed change because POTWs are complex facilities. Based on permit applications, refinement in descriptions of processes and operations are often necessary to appropriately convey what is happening at the facility. However, by combining the facility review and public comment periods, the public will likely review and comment on a document that is either incomplete or requires further refinement to correctly represent the facility. Knowing this step will need to be done and proposing that it be done as part of a combined facility review and public comment period will result in increased (and possibly unwarranted) alarm from the public that is better managed if these two steps are kept separate and in sequence. Allowing the facility to review the document prior to public comment provides the opportunity to address misunderstandings of POTW operations (which is common by nature of the treatment stages) and correctly communicate facility operations and the associated risk. Keeping these steps in sequence not only avoids public confusion (by avoiding the distribution of incomplete information), but it also preserves public confidence in the process.

BAAQMD review of HRAs should be performed by staff or consultants who are familiar with POTW processes

Section 4.2 of the draft Implementation Procedures discusses the possibility of outside contractors or consultants being used to conduct Health Risk Assessments (HRAs). However, it is unclear how that will be implemented. If this approach is accepted, BACWA strongly encourages prioritizing consultants having experience in the respective sector. For example, POTWs across the Bay Area have similar treatment processes and objectives. Having a prescreened shortlist of consultants who are familiar with wastewater treatment processes is critical for performing consistent and accurate HRAs. It will also be key for the BAAQMD to present its requirements and parameters for HRAs to be acceptable to BAAQMD. To address BAAQMD's concerns regarding potential conflict of interest (COI), independent contractors can sign COI disclosures to disclose existing contracts with the agencies. This would help improve transparency. We also note that allowing the BACWA Title V agencies to perform their own HRAs will help streamline the HRAs and speed up implementation by reducing BAAQMD's workload.

Thank you again for the opportunity to provide feedback on the concept amendments to the implementation of Rule 11-18. BACWA is BAAQMD's partner in protecting the Bay Area's public health and environment, and we ask that BAAQMD staff work collaboratively with BACWA to address the above-listed concerns. BACWA also looks forward to participating in the stakeholder engagement process as outlined in Rule 11-18's draft Implementation Procedures.

BACWA Comment Letter on Regulatory Concepts for Amendments to Rule 11-18

We would be happy to discuss any questions regarding these comments. Please contact me at LFono@bacwa.org.

Sincerely,

A handwritten signature in black ink, appearing to read "Lorien Fono", with a stylized flourish at the end.

Lorien Fono
BACWA Executive Director

Attachment: LETTER REPORT TO BAAQMD SUMMARIZING THE POTW PLANNING PROCESS AND CONSIDERATIONS WITH REGARD TO PROPOSED RULE 11-18 (April 4, 2017)

Cc: BACWA Executive Board
Nohemy Revilla, BACWA AIR Committee Co-Chair
Jason Nettleton, BACWA AIR Committee Co-Chair
Courtney Mizutani, BACWA AIR Committee Supporting Consultant
Ray David, BACWA AIR Committee Supporting Consultant
Sarah Deslauriers, BACWA AIR Committee Supporting Consultant