

Minutes



Non-Point Source Technical Task Group, Meeting #3

Date: Tuesday April 26, 2016

Time: 10:00 am – 3:30 pm

Place: CASA Office, Edmonton, AB

In attendance:

Name	Stakeholder group
Patrick Andersen (phone)	West Central Airshed Society/Alberta Airsheds Council (AAC)
Randy Angle	Alberta Environmental Network (AEN)
Rhonda Lee Curran	Alberta Environment and Parks (AEP)
Ike Edeogu	Alberta Agriculture and Forestry (AAF)
Richard Melick	Alberta Environment and Parks (AEP)
Bob Myrick	AEMERA
Victoria Pianarosa	Parkland Fuel Corporation
David Spink	Prairie Acid Rain Coalition/Alberta Environmental Network (AEN)
Martin Van Olst	Environment and Climate Change Canada
Amanda Stuparyk	CASA
Keith Denman	CASA
Warren Greeves	CASA

Regrets:

Mandeep Dhaliwal	Calgary Region Airshed Zone/AAC
Frauke Spurrell	AEP
Koray Onder	CAPP

Action Items:

Action Items	Who	Due
1.3: All Task Group Members will review the Resource Library listing of information/documents that will assist with the task group work. Task Group members will send any additional resources that should be reviewed by the task group as part of their work objectives (include a link to the information (or pdf) and short description for posting).	All NPS Task Group Members	Ongoing
3.1: Amanda will send the Health Canada diesel exhaust report to the group once it is received and will post it to the library. David Spink will work with Martin van Olst to obtain higher resolution maps for Alberta/Regions as presented in the report.	Amanda David / Martin	ASAP Meeting #4
3.2: AEMERA will work on additional data requests from the task group for review at next meeting. This includes points 1-3 below.	Bob & AEMERA group	Meeting #4
3.3: AEP requested to provide the task group further information (census subdivision level inventory if possible) for the City of Red Deer including surrounding regions as available.	Richard	Meeting #4
3.4: Task group members will review the two summary EC Speciation study PowerPoint presentations posted within the NPS Resource Library for further information/learnings.	All task group members	Meeting #4
3.5: David will complete analysis and review of information for the region summary document for the task group members to review and discuss conclusions.	David	Meeting #4

3.6: Randy will work with the secretariat to update the resource listings on ongoing basis for inclusion in the Task Groups Final Report.	Randy	Meeting #4
3.7: Task Group members will draft summary information, data and resources for each of the CAAQS Regions for review by task group as follows: <ul style="list-style-type: none"> • Lower Athabasca = David (will further develop draft) • Upper Athabasca = Martin • Peace = Victoria • North Saskatchewan = Richard • Red Deer = Ike and AEP (TBC) • South Saskatchewan = Frauke & Mandeep and Patrick 	As indicated	Meeting #4 draft and any questions/gaps. Finals drafted for Meeting #5/6.
3.8: AEP will draft a sample matrix document to summarize NPS information and agreements by the task group.	Rhonda Lee	Meeting #4
3.9: Amanda will create and send out the Doodle poll for availability of all task group members to complete for their final meetings as discussed.	Amanda and Task Group members to complete the Poll	May 4th to complete poll.
3.10: Amanda will prepare the Task Group Update summary document with the co-chairs to provide the project team at their next meeting.	Amanda and Co-Chairs	By next project team meeting (May 18th).

1. Welcome and Administrative Items

The meeting began at 10:00 a.m. with Amanda chairing the meeting. All members that were in-person and on conference call introduced themselves and were welcomed to the meeting. Meeting quorum was achieved.

The agenda and meeting objectives for the day were approved with agenda items 3 and 4 interchanged so AEMERA could present their data first.

It was noted that meeting #2 minutes are not yet fully drafted and will be sent to the group with this meeting's minutes for review and finalization. The status of action items from the last meeting were updated as follows:

Action Item	Who	Status
1.3: Task group members will look for any non-point source information, resources or data and send to Amanda via email to post within the 'NPS Resource Library'. <i>Members will include the link to the resource (or pdf document) and short description for posting.</i> - Focus for resources as they pertain to the task group objectives and need to be reviewed.	All task group members	Ongoing.
1.8: Amanda will complete the request to re-title the NPS Resource Library on the CASA website 'regions' to the 'airzone' titles to reflect Alberta specific terminology.	Amanda	Complete. The library has been updated.
2.1: Gov will send the proposal from Health Canada (and UofC) work in the Calgary area for the task group reference.	Frauke	Complete. This was provided to the task group for their review.
2.2: Send Amanda the CEMA air modelling study for the task group reference and post to the NPS Resource Library.	David	Complete. This was sent to Amanda and posted.

2.3: AEMERA will work with AEP as needed to gather information and data for the task group reference and review for ambient air modelling task 1b) as discussed.	Bob	Complete. Data and information was sent to members and will be reviewed and discussed at this meeting.
2.4: Task group members will summarize the resources and data by creating a short summary document (1-2 page) based on the priority information for the task group to review and discuss as follows: - Koray will summarize the CMAQ Reports/info. - Patrick will summarize the EC Speciation work. - David will provide a summary on the LAR. ANY OTHER MEMBERS able provide a summary within their technical expertise is welcome.	As indicated	Complete. Information/summaries were provided by the members and will be reviewed and discussed at this meeting.
2.5: Review the NPS Resource Library for any specific resources that should be reviewed by the task group in order to meet their work objectives.	All task group members	Complete. This will be discussed on an ongoing basis based on the group's work.
2.6: Send an updated NPS Library resource listing to the task group members that includes all documents collected since Meeting #1.	Amanda	Complete. An updated listing of the complete NPS Resource Library to date was provided.
2.7: Draft a <i>Table</i> showing Task Group Resources relevant to each of workplan tasks 1-4 so the task group can follow the applicability of data collected and reviewed.	Randy & Amanda	Complete
2.8: Amanda will work with Task Group co-chairs on the Task Group Update from Meeting #2 for the Project Team including the initial priority list of NPSs.	Amanda & TG Co-Chairs	Complete. The update was provided to the task group members.

2. Updates

CASA Update: Amanda provided an update on the secretariat initiatives.

- CASA's next Board meeting is June 15 in Calgary. An update on the work of the NPS Project Team will be presented to the Board, and will include what the task team is doing.
- The CASA Performance Measures Committee has requested implementation of a new procedure for all project team/task groups. All members will be given the opportunity to complete a NPS Project feedback survey after each meeting. Options include a hard copy at each meeting or by a survey link within follow up emails. Everyone on the project team is encouraged to participate and we thank you for taking a moment to provide feedback. This will be replacing the bi-annual feedback surveys for project teams/committees, and it intended to allow more timely response where concerns are identified.
- There is an update to the Task Group membership. Due to fiscal considerations at CAPP, Koray will no longer be able to participate on the group. There has been some outside discussions for CAPP to reconsider and/or determine how they can actively be involved on this group as this work does have potential implications for the oil and gas sector. It was noted that they are on the CASA Board and have representation at the Project Team level.

Task Group Member Updates:

- It was reported that there is ongoing work on one of the stations in the West Central area and that there may be some local issues. This will be reported back on once more is known.

- The Red Deer Region CAAQS Response including the Action Plan and Science Report have been released by the GoA and is available on the Alberta Environment and Parks website and will be posted to the NPS Resource Library.
- A study by Health Canada has recently been released that conducted a health risk assessment on diesel exhaust emissions, based on 2015 emissions modelling. It may be useful to identify areas where there are significant health impacts, for example, it shows that risks for PM2.5 are in the larger urban areas. It also shows O3 issues in Lower Athabasca region from diesel including maps. They differentiate between on and off road diesel and non-diesel emissions. The group is interested in review the report and in possibly obtaining better (higher) quality maps for the Alberta region as presented in the report for review by the group.

Action Item 3.1: Amanda will send the Health Canada diesel exhaust report to the group once received and posted internal and work with EC to try to obtain higher resolution maps for Alberta/Regions as presented in the report.

Project Team Update:

The project team received the task group update and initial NPS priority list and had a few questions or considerations for the group including:

- The team would like discussion/consideration around which emissions are limiting in the formation of ozone – NOX or VOCs and where relevant data may be found.
- Some further work may be needed to differentiate between local and regional issues - where exceedances may be reflective of a larger body of polluted air or a local source and small scale issue. This would be helpful in understanding how large an area needs to be looked at in management planning.
- The Project team asked for a more discussion/documentation in their workplan around timelines and the need to keep the scope focused on the deliverables.

There was discussion about a role for the task group in conducting station by station analysis of the data that would identify potential likely sources within the orange and red zones. Some of this work may already be done but it would require a lot of time and effort by the task group members. This may help inform a couple of (red) areas but was noted to be outside the scope of the task group mandate as they are not doing QA/QC on the station data/monitoring.

The timeline is a function of the level of confidence wanted from the team. There was general agreement that the initial three month timeline was too short but this work cannot take much longer as the team is working on their other objectives based on the information from the task group. Ultimately there will likely need to be flags on the data or gaps, especially those that can't be filled. The group from this time forward will need to be very careful in the amount of time spent on data review if it isn't helpful to the overall deliverables.

3. Discuss Data Collection – Task 1b AEMERA data

AEMERA staff (with AEP) were able to compile information and data for most all requests. Three of four data requests were provided to the group by email and will work on the remaining (and any additional) for the next meeting. The group reviewed and discussed the information in the terms of satisfying data analysis for their workplan Task 1b) Ambient monitoring data and information and trends in ambient levels based on CAAQS monitoring sites.

Action Item 3.2: AEMERA will work on additional data requests from the task group for review at next meeting.

AEMERA data requests for the task group included:

1. Include which sites are NAP sites in the station information spreadsheet
2. Air station trending (2001-2013) with transboundary flows and exceptional events (TFEEs) removed (adjusted) and statistical significance.
3. Existing AEP analysis of the 2011 – 2014 adjusted station data (orange and red levels) and any explanations for the events triggering the orange and red levels. Should include ~10 stations (station information, MET data, wind direction etc.). Provide a summary of what is known about the context at/near this stations or areas (e.g. knowing the time of year as winter generally means more heating and less construction or agricultural activities).

They will also obtain any information on the inventory of the PM speciation data collected in the province from the original request for data.

Highlights of the ambient monitoring data discussion included:

- The detailed 24-hour CAAQS data (includes what was available for 2014/2015) shown with and without the TFEEs removed. It was noted that the Red Deer (red zone) Riverside station does not indicate exceedances with the most recent data. In some cases stations nearer to industrial activities might be triggering exceedances based on local air issues. The Red Deer Response from government is ongoing and working on detailed information from all stations in the region including speciation and source apportionment (but excludes full NAPS speciation approach). It was noted that the PAMZ has 2 units that is collecting this important data and that government should reconsider their decision not to do a full speciation work/measurement as gaseous ammonia data may be an important factor in Red Deer.
- The CAAQS data does not include industrial stations within any plant sites. The Canada Wide Standards for PM_{2.5} were for large urban centers and Alberta, through the CASA PM and Ozone Framework decided to use all non-industrial monitors. There are a few stations (within the WBEA area - CNRL station) that are close to some industrial activity.
- The data set that identifies dates and known issues at all of the stations that had CAAQS exceedances was noted to not filter out weather events such as inversions but do filter out transboundary, forest fires, etc. Wind data (which is generally measured at a height of 10 meters) can be helpful in determining upstream sources but may not be reflective of higher altitude airflows.
- Changes in the PM_{2.5} monitoring technology could be a reason why there may be upward trends in the data.
- Uncorrected data may be thrown off by events such as forest fires but is generally corrected. WBEA has been working on this so that there is an “apples to apples” data comparison. One of the challenges is that the adjustments are specific to the composition of the PM that is being measured – the correction needed varies from place to place.
- While QA/QC assessment of the technical aspects of CAAQS or for each station is not in the groups work objectives it might be helpful to have any information if it is currently known (i.e. site and station monitoring information based on requirements under the Air Monitoring Directive). The group could use this for context in finalizing their priority list to the team but may also list any considerations (monitoring updates) to the team.

The group requested points be included in a “parking lot” that will include areas that could be revisited towards the end of the process.

The *Parking Lot* currently includes:

- Use of toxicity for prioritization or the NPS emissions sources,
- Boundary layer temperature and wind profiles,
- PM_{2.5} speciation measurement and monitoring,
- Future roles and opportunities for modelling,
- Following some ‘plumes’ such as what ECCO did in 2013 (aircraft monitoring in the oilsands region) enabled a more accurate picture of what has come from (i.e. total PM emissions at the power plants may be missing as much as 50% of the actuals due to condensables forming within a few minutes of being emitted – it is unclear how modeling handles this).

4. & 5. Discuss Data Collection – Task 1a AEP data

The task group reviewed the emission inventory data summaries (Background and Trend document) from AEP and discussed learnings, key messages and where the information leads them including any additional requests that AEP might conduct. It was discussed whether this should be done by air regions or by stations. The group discussed starting at the station level then rolling the results up to the level that is required to support its recommendations to the Project team.

While this may be possible for a few locations, it cannot be done for all regions/sub-regions.

This information provides the task group with an overall picture on the largest sources (point and non-point). The top ten list is based on Environment and Climate Change Canada’s categories. Some learnings from the information:

- The task group wants to be inclusive of all emission types but notes that the focus on specific non-point source emissions may shift. For example residential wood burning is under discussion right now in communities (and is included in the inventory).
- It was noted that primary PM emissions might be responsible for about 20% of the ambient levels of PM_{2.5}. 80% of the PM when there are exceedances is secondary, therefore the focus should be on precursors. Primary tends to be more local issues than regional and seasonal (in the winter when primary sources such as construction and road dust aren’t in at play). NOX emissions (transportation) and other precursors can be bigger issue in the winter (heating).
- This data report should form the basis of the information provided in the task groups technical report on provincial-level data for both point/non-point sources.

Action Item 3.3: AEP requested to provide the task group further information (census subdivision level inventory if possible) for the City of Red Deer including surrounding regions as available.

6. Discuss Data Collection – Tasks 1c-d & Regional data

The task group reviewed summary information on the US Modelling received from CAPP on the US EPA’s work. It was noted that the approach that the EPA takes in using and interpreting models is good and was used in the Edmonton Capital region. The modelling gives relative contributions not absolute numbers. It was noted that this is a good summary of models and how to use them but that the task team won’t be doing any modeling. Modelling was noted for the groups *Parking Lot*.

The task group reviewed summary information from Patrick on the EC speciation (NAPS PM_{2.5} filter sample) study. It was noted and requested for all task group members to review the PowerPoint

presentations that are included with the report – focusing on the Edmonton data and results. It was noted in Edmonton that days where PM is high are winter smog events and that home heating and transportation (passenger vehicles) are significant contributors. There may be some input from power plants. This is further support for the Task Group Initial NPS Priority List. There is no other completed speciation work for Alberta at this time. There is an Environment and Climate Change Canada (ECCC) project/work occurring in the north oil sands region. Any information on that will be shared with the group.

Action Item 3.4: Task group members will review the two summary EC Speciation study PowerPoint presentations posted within the NPS Resource Library for further information/learnings.

The task group reviewed the draft summary information on the Lower Athabasca Region Plan (LARP) and results. A great deal of air quality work has been done in this area as it will take a lot to review and summarize it. David Spink will continue to draft the summary for the group including any PM speciation info coming out of Fort McKay, but noted that ozone is not an issue in this area (though ECCC modeling said it is, the model has been over predicting ozone). Based on the PM2.5 annual numbers regional issues include fugitive dust emissions and prescribed burning.

It was noted that trending information will be helpful in where effort is focused – if the emissions are going down they may be less important to focus a lot of effort on. There is a lot of work underway at the moment (including tailings ponds and mine faces) as it is a known issue and people are trying to get at the numbers. This region, while specific and relevant to the local activity, is important overall for more broadly applicable NPS emissions sources like dust control.

Action Item 3.5: David will complete analysis and review of information for the region summary document for the task group members to review and discuss conclusions.

7. Review NPS Resource Library Outline

The Task Group reviewed the drafted Resource Concordance Table and the outline of all documents posted within the NPS Resource Library. It was updated to include a Task Group Resources section that will list all documents reviewed to date and from the project team there will be two new sections for mobile sources and industrial resources. The summary documents will be posted as applicable. The task team discussed whether there were any gaps in it that should be addressed and did not identify any right now. They will continue to review the library and add new applicable resources.

The group noted that the draft concordance table from Randy was very helpful in showing the project team how their reviewed resources are applicable to their work objectives. This should be included in the task group's technical report and will need to be updated with all resources.

Action Item 3.6: Randy will work with the secretariat to update the resource listings on ongoing basis for inclusion in the Task Groups Final Report.

The group discussed their data and varying levels of confidence around the table with the current amount of information, and whether this should be done by air regions or by stations. They will be receiving and reviewing the AEMERA data at the station level. The team discussed starting at that level then rolling the data up until they have the right information to support their recommendations to the Project team. It was proposed that the task group begin working on the synthesis of the data

and information/conclusions for all regions with any sub-region considerations, and with those the group will be able to have a wholesome discussion and start to agree to conclusions and final deliverables to the project team. The draft region summary document provided by David is an excellent outline for the other regions and the group agreed to follow a consistent format. Amanda will provide an outline to the group to start their work. The group will work on draft information and bring any questions/concerns or assistance requests to the group at next meeting but will work towards final summary documents at the June/July meetings.

Action Item 3.7: Task Group members will draft summary information, data and resources for each of the CAAQS Regions for review by task group as follows:

- ***Lower Athabasca = David (will further develop draft)***
- ***Upper Athabasca = Martin***
- ***Upper and Lower Peace = Victoria***
- ***North Saskatchewan = Richard***
- ***Red Deer = Ike and AEP (TBC)***
- ***South Saskatchewan = Frauke & Mandeep and Patrick***

The team also discussed a proposal that a matrix be assembled that would provide a snapshot visual overview of the resources reviewed and key points/messages/learnings for each non-point source emission top categories. This will ensure the task group is all on the same page and reaching agreement on conclusions and be a useful reference for the task group final report for the project team. Rhonda Lee agreed to draft a sample at a high level but the task group will need to assist in further development.

Action Item 3.8: AEP will draft a sample matrix document to summarize NPS information and agreements by the task group.

The group discussed timelines and their next meetings that are scheduled on May 17th and June 8th and when the group realistically expects to be finished and how many more meetings might be required. It was agreed to work towards a September deadline based on all the work areas discussed so far. The group agreed to poll for availability for meeting dates in July/August and potentially two meetings in September. The September CASA Board Meeting is in Edmonton on September 22nd.

The task team discussed what their deliverable will be. The deliverable as per the terms of reference is a technical report including their agreed upon refined priority list of non-point sources. There will likely be two components of the final task group report: context for what the task group did with any considerations; and the technical piece that discusses background to the decisions made. This will need to be discussed further by the group including who will be drafting the report and if additional resources are required.

Action Item 3.9: Amanda will create and send out the Doodle poll for availability of all task group members to complete for their final meetings as discussed.

8. Project Team Status Update

The task group had a discussion of what the project team should know about this meeting and their work including any considerations (i.e. budget) that need to be addressed. The group wants their final product before they present to the project team. In the meantime Amanda will provide an update to

the team at their meeting as they need to be kept up-to-date on the work. The group requested Amanda draft a meeting summary document with the co-chairs to be shared with the team including:

- High-level update of this data discussion meeting and that the group is making progress on synthesizing data/resources/information.
- They have developed a “Parking Lot” of potential gaps and/or considerations that will be discussed and presented to the project team if agreed to.
- The group has committed to and will work towards September for their final deliverables and presentation of results to the project team.

Action Item 3.10: Amanda will prepare the Task Group Update summary document with the co-chairs to provide the project team at their next meeting.

9. Meeting Wrap-up and Next Steps

Action items and the work that will be done in between the meetings were confirmed. Objectives for the next meeting are to:

- Review and discuss AEMERA data
- Review and discuss each region data or questions/considerations from task group members
- Discuss the NPS Priority Listing
- Discuss a final report outline and deliverables including resources required
- Discuss outstanding information and how to get the work done.

The meeting adjourned at 3:30 p.m.