


From: Huth, Alexander@ARB Alexander.Huth@arb.ca.gov 
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th
Date: July 20, 2018 at 4:11 PM
To: Tom Moore tmoore@westar.org, Ames,Rodger rodger.ames@colostate.edu, Cao, Jim@ARB Jim.cao@arb.ca.gov
Cc: Huber, Stephanie@ARB Stephanie.Huber@arb.ca.gov

AH

Hi Tom, Roger –

Here is the "greatest hits" version to give you an idea of where we stand on nonpoint and nonroad.

Nonpoint:

- Our livestock dust estimates that should have been reported to SCC 2805001000 were instead reported under a livestock waste SCC; as a consequence, EPA added estimates to 2805001000 that are higher than our estimates by roughly 45,000 tons PM10 or 9,000 tons PM2.5. I plan to send revised emissions early next week.
- There are some discrepancies in comm/inst combustion categories amounting to maybe 500 tons each of CO and NOX that I have made a note to investigate further. Not sure yet if they will require revision.
- Industrial NG combustion appears overestimated by about 2,250 tons of NOx in SCC 2102006000, possibly due to EPA adding estimates for counties where our inventory shows the emissions as fully captured in point sources. I anticipate revising emissions in this category for up to 17 counties, though 88% of the discrepancy occurs in 4 counties. There is an even larger CO discrepancy here but I'm assuming that's not relevant for regional haze modeling (please correct me if I'm wrong).
- Industrial "other" combustion is in the same boat as NG to the tune of about 500 tons of NOx in SCC 2102007000. I anticipate sending revised emissions for up to 47 counties.
- SO2 emissions in O&G production sector are a little higher than they should be, somewhere between 30 and 300 tons. This affects PM and NOX but looks like to a lesser degree. I anticipate sending revised emissions for at least one storage tank category, SCC 2310010200.

Nonroad:

- I don't anticipate any changes to locomotives, it looks pretty close.
- Aircraft is very odd and I'm still looking into it. Less familiar with the sector so I'm not going to prioritize it until I get the stuff done that I know how to do.
- Diesel and gas equipment TBD.

Best,
Alex

From: Tom Moore [mailto:tmoore@westar.org]

Sent: Tuesday, July 17, 2018 4:36 PM

To: Ames,Rodger <rodger.ames@colostate.edu>; Cao, Jim@ARB <Jim.cao@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>

Cc: Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>

Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Okay, thank you.

Tom Moore

office: 970.491.8837

mobile: 970.988.4055

WRAP Air Quality Program Manager / WESTAR

From: Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>

Sent: Tuesday, July 17, 2018 6:17:13 PM

To: Tom Moore; Ames,Rodger; Cao, Jim@ARB

Cc: Huber, Stephanie@ARB

Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Hi Tom –

Yes, I am still reviewing offroad and nonpoint categories.

Thanks,
Alex

Alex Huth
Air Resources Engineer
Emission Inventory Development
California Air Resources Board
alexander.huth@arb.ca.gov
(916) 324-6917

From: Tom Moore [<mailto:tmoore@westar.org>]

Sent: Tuesday, July 17, 2018 4:15 PM

To: Ames,Rodger <rodger.ames@colostate.edu>; Cao, Jim@ARB <Jim.cao@arb.ca.gov>

Cc: Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>

Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi, Jim - thanks and look forward to the corrected data. Are there other categories or sources that ARB is still reviewing?

Tom Moore
office: 970.491.8837

WRAP Air Quality Program Manager / WESTAR

From: Cao, Jim@ARB <Jim.cao@arb.ca.gov>

Sent: Tuesday, July 17, 2018 5:16:06 PM

To: Tom Moore; Ames,Rodger

Cc: Huber, Stephanie@ARB; Huth, Alexander@ARB

Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Hi Tom and Rodger,

I work on the portion of reviewing point sources. One of the items in round 1 comment process is to review point sources emissions of the top 20 EGU and NonEGU sources. I compared the NEI point sources emissions of NOX, SOX and VOC with those in the California Emission Inventory Development and Reporting System (CEIDARS). The emissions in 2014NEIv2 were from <https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data>. The majority of facilities I reviewed show identical emissions in CEIDARS and NEI. Discrepancies in emission values are identified in four EGU facilities and nine NonEGU facilities. Therefore, correct emission data for these 13 facilities has been obtained from CEIDARS for the year of 2014 and compiled into a correction data file. The data components in the file are based on the information in the samples provided by Rodger Ames. I will send the correction data file to Rodger tomorrow, before the deadline of July 20, 2018. If you have any questions, please feel free to let me know. Thanks.

Jim

Jim Cao, Ph.D., P.E.
Air Resources Engineer
California Air Resources Board
Air Quality Planning & Science Division
Emission Inventory Development Section
(916) 322-7078
jcao@arb.ca.gov



From: Huber, Stephanie@ARB
Sent: Tuesday, July 10, 2018 9:18 AM
To: Tom Moore <tmoore@westar.org>; Cao, Jim@ARB <Jim.cao@arb.ca.gov>; Ames, Rodger <Rodger.Ames@colostate.edu>
Cc: Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>; pher461@ECY.WA.GOV
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Hi Tom,

We should be able to get you updated data and documentation by July 20.

Stephanie Huber, Ph.D., Manager
Emission Inventory Development Section
Air Quality Planning and Science Division
Air Resources Board
916-323-2664
stephanie.huber@arb.ca.gov



From: Tom Moore <tmoore@westar.org>
Sent: Tuesday, July 10, 2018 8:41 AM
To: Cao, Jim@ARB <Jim.cao@arb.ca.gov>; Ames, Rodger <Rodger.Ames@colostate.edu>
Cc: Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>; pher461@ECY.WA.GOV
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi, Jim and all – thanks for the clarification. I appreciate CARB’s willingness to evaluate the

emissions modeling and air quality modeling as that moves along.

In regard to my highlighted question below, please advise. Thank you.

*Tom Moore, WRAP Air Quality Program Manager
Western States Air Resources Council (WESTAR) | e: tmoore@westar.org | o: 970.491.8837
Western Regional Air Partnership | www.wrapair2.org*

From: Cao, Jim@ARB [<mailto:Jim.cao@arb.ca.gov>]
Sent: Tuesday, July 10, 2018 9:33 AM
To: Tom Moore <tmoore@westar.org>; Ames,Rodger <Rodger.Ames@colostate.edu>
Cc: Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>; pher461@ECY.WA.GOV
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Regarding the statement of “Once we have our modeling contract in place we could give you more specifics if necessary”, what I meant was that the correction files for point sources will follow the samples Rodger provided, and in case there would be a need for more changes from us, we will follow up with them. Thanks.

Jim

From: Tom Moore <tmoore@westar.org>
Sent: Monday, July 09, 2018 12:56 PM
To: Cao, Jim@ARB <Jim.cao@arb.ca.gov>; Ames,Rodger <Rodger.Ames@colostate.edu>
Cc: Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>; pher461@ECY.WA.GOV
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi, Jim and all – just closing the loop on CA input on the 2014 NEIv2 review. I wasn’t sure what the highlighted statement meant, below. Attached are the notes from the June 28th call.

Do you folks at ARB have an idea when you could let us know the scope of your comments? It would be helpful to have the comments and the revised data, so the scope of needed changes by the modeling contractor are clearer, by July 20th.

Thanks.

*Tom Moore, WRAP Air Quality Program Manager
Western States Air Resources Council (WESTAR) | e: tmoore@westar.org | o: 970.491.8837*

From: Cao, Jim@ARB [<mailto:Jim.cao@arb.ca.gov>]
Sent: Friday, July 06, 2018 9:18 AM
To: Ames,Rodger <Rodger.Ames@colostate.edu>
Cc: Tom Moore <tmoore@westar.org>
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Thanks Rodger. The information you provided is very helpful. I will follow up with the needs as the modeling project moves forward.

Jim

From: Ames,Rodger <Rodger.Ames@colostate.edu>
Sent: Thursday, July 05, 2018 9:19 PM
To: Cao, Jim@ARB <Jim.cao@arb.ca.gov>
Cc: Tom Moore <tmoore@westar.org>
Subject: Re: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi Jim,

We will use EPA's 2014v2 NEI modeling platform as a base for the WAQS modeling, so the inventory files from the EPA platform could be used as an example. The inventories by sector are available at

ftp://newftp.epa.gov/Air/emismod/2014/v2/2014fd/emissions/by_sector/

These are generally csv files that have annual total emissions by pollutant and SCC, among other fields. Once we have our modeling contract in place we could give you more specifics if necessary. At this point I'm trying to catalog updates that states provide, so we're not quite at the point where we need model ready inputs.

Thanks,
Rodger

On Jul 5, 2018, at 9:48 AM, Cao, Jim@ARB <Jim.cao@arb.ca.gov> wrote:

Hi Rodger, I am working on the data and will let you know the size of files when I complete them. I do submissions of point sources from the California Emission Inventory Development and Reporting System (CEIDARS) to NEI. In this modeling project, what is the format of files I should organize the data

in this modeling project, what is the format of files I should organize the data into? It would be helpful if you could provide me with or point me to sample files. Thanks.

Jim

From: Ames, Rodger <Rodger.Ames@colostate.edu>
Sent: Wednesday, July 04, 2018 4:34 PM
To: Cao, Jim@ARB <Jim.cao@arb.ca.gov>
Cc: Tom Moore <tmoore@westar.org>
Subject: Re: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi Jim,

Can you give me an idea of the size of the files you are planning to add to the review? If they are too large to conveniently email I can provide you with ftp upload instructions to one of our servers. If you want to discuss via phone, it is probably easier for me to call you. If so, let me know when you are available and I will give you a call.

Thanks,
Rodger

On Jul 3, 2018, at 4:51 PM, Cao, Jim@ARB
<Jim.cao@arb.ca.gov> wrote:

Thanks Tom.

Jim

From: Tom Moore <tmoore@westar.org>
Sent: Tuesday, July 03, 2018 3:50 PM
To: Cao, Jim@ARB <Jim.cao@arb.ca.gov>
Cc: Rodger
Ames Rodger.Ames@colostate.edu <Rodger.Ames@ColoState.EDU>
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

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Hi, Jim – I copied Rodger on this reply, thanks for sending those files

for him to post. He is working remotely, so you and he can work telephone contact by E-Mail. Thanks and Happy July 4th.

*Tom Moore, WRAP Air Quality Program Manager
Western States Air Resources Council (WESTAR) | e: tmoore@westar.org | o:
970.491.8837
Western Regional Air Partnership | www.wrapair2.org*

From: Cao, Jim@ARB [<mailto:Jim.cao@arb.ca.gov>]
Sent: Tuesday, July 03, 2018 2:59 PM
To: Tom Moore <tmoore@westar.org>
Cc: Cao, Jim@ARB <Jim.cao@arb.ca.gov>
Subject: RE: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Hi Tom, this is Jim Cao with CARB. I am doing the review on the point sources of California on 2014NElv2. Based on the last call of June 28, correction data files will be sent to Rodger. I would like to get Rodger's contact email and phone for asking some questions related to sending data files. Thanks.

Jim

*Jim Cao, Ph.D., P.E.
Air Resources Engineer
California Air Resources Board
Air Quality Planning & Science Division
Emission Inventory Development Section
(916) 322-7078
jcao@arb.ca.gov*

<image001.png>

From: Tom Moore <tmoore@westar.org>
Sent: Thursday, June 28, 2018 11:47 AM
To: Herron-Thorpe, Farren (ECY) <fher461@ECY.WA.GOV>; Higgin, Roslyn, NMENV <Roslyn.Higgin@state.nm.us>; scoe@mt.gov; bharprin@ndep.nv.gov; [kvin.briggs@state.co.us](mailto:kevin.briggs@state.co.us); Mark.Jones@state.nm.us; Shawn McClure Shawn.McClure@colostate.edu <Shawn.McClure@colostate.edu>; repayne@mt.gov; Huber, Stephanie@ARB <Stephanie.Huber@arb.ca.gov>; Toon.Elias@azdeq.gov; curtis.taipale@state.co.us; jeremy.neustifter@state.co.us; jbaker@utah.gov; mike_barna@nps.gov; Templeton.Ryan@azdeq.gov; Dale Wells dale.wells@state.co.us <dale.wells@state.co.us>; Cindy.Hollenbe

rg@state.nm.us; Cao, Jim@ARB <Jim.cao@arb.ca.gov>; Huth, Alexander@ARB <Alexander.Huth@arb.ca.gov>; abrimmer@raqc.org; tyler.ward@wyo.gov; Martin, Kristen <KMartin@mt.gov>; fforsgre@ndep.nv.gov; patricia_f_brewer@nps.gov; jhuy461@ecy.wa.gov; Suarez-Murias, Christine@ARB <christine.suarez-murias@arb.ca.gov>; Berg, Earl <Earl.Berg@state.sd.us>; ashley.brakke@state.sd.us

Cc: Rodger

Ames Rodger.Ames@colostate.edu <Rodger.Ames@ColoState.EDU>

Subject: please review draft notes from RHPWG Emissions Inventory & Modeling Protocol Subcommittee call of June 28th

Importance: High

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Hi, all – thanks to Farren for moving us through the agenda this morning, to Roslyn for these notes, and to you all for participating.

Please review the attached notes by Tuesday July 3rd. Send any edits to Farren or Roslyn. We will then post today’s call materials and notes with any edits as well as those from future calls to the Subcommittee webpage at: http://www.wrapair2.org/RHP_InvMod.aspx. We will also post them while we doing the EI review steps we discussed today, to: [Western U.S. regional analysis - 2014 NEIv2 Emissions Inventory Review for Regional Haze Modeling](#)

Thanks to Farren for the link to the EPA SCC list that has “sector” for each SCC: <https://ofmpub.epa.gov/scowebservices/scsearch/>, which will be posted on the wiki.

Look forward to the next Subcommittee call on July 26th. Please complete your initial remaining review efforts by Thursday July 21st and E-Mail comment documents and data files to Farren, Rodger, and me.

Thank you.

*Tom Moore, WRAP Air Quality Program Manager
Western States Air Resources Council (WESTAR) | e: tmoore@westar.org | o:
970.491.8837
Western Regional Air Partnership | www.wrapair2.org*

