

WestJumpAQMS Study
Response to Comments by Air Quality Stakeholder Review
Document: [Draft WestJumpAQMS Modeling Plan dated September 30, 2011](#)
Response-to-Comments Dated January 23, 2012

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Comments from Bureau of Land Management (BLM): Craig Nicholls – BLM, NOC; Susan Bassett, BLM MT, Melissa Hovey, BLM WY dated 12/5/11					
1	Nicholls – BLM NOC	1.0	1	“Further the concept developed by New Mexico Environment Department Air Quality Bureau, EPA Region 6, the Bureau of Land Management (BLM) New Mexico office, British Petroleum (BP), and the Western Regional Air Partnership (WRAP).” <u>It seems like this is an incomplete thought – what is the concept here? I assume it would be WestJump project, but please clarify.</u>	Revised sentence as follows: “Further the concept developed by New Mexico Environment Department Air Quality Bureau, EPA Region 6, the Bureau of Land Management (BLM) New Mexico office, British Petroleum (BP), and the Western Regional Air Partnership (WRAP) to begin the next round of regional modeling to support western U.S. air quality planning.”
2	<u>Bassett – BLM MT</u>	1.0	1	Last Paragraph - The WestJumpAQMS is designed to be an open regional photochemical modeling study whose databases will be available to all for use free of charge.	Sentence modified as suggested.
3	Nicholls – BLM NOC	1.0	1	“WRAP has been working with its partners to develop a plan for 2011-2012 that initiates...” <u>this now extends into 2013</u>	Currently funded work is planned to be completed in 2012.
4	Nicholls – BLM NOC	2.1	4	“As with most ‘emissions models’, SMOKE is principally an <i>emission processing system</i> and not a true emissions modeling system in which emissions estimates are simulated from ‘first principles’.” (emphasis added) <u>The previous sentence calls SMOKE a “emissions modeling system” Please consider revising</u>	Although SMOKE is primarily an emissions processing system, it can perform some emissions modeling (e.g., biogenics and SMOKE-MOVES). The convention is to describe SMOKE as an emissions modeling system.
5	<u>Bassett – BLM MT</u>	2.1	5	3rd paragraph - This following sentence doesn't make grammatical or logical sense. Doesn't CMAQ also have source apportionment? If particular important for the WestJumpAQMS study is the available of Ozone and Particulate Source Apportionment Technology (OSAT/PSAT) that will be used to perform source apportionment modeling across the western states.	Typo, changed “If particular...” to “Of particular...”.
6	<u>Bassett – BLM MT</u>	2.1	5	4 th paragraph - Please mention that CMAQ includes source apportionment capability.	The publicly available versions of CMAQ do not include any source apportionment capability (www.cmascenter.org).
7	Nicholls – BLM NOC	4.0	8	“Impact Assessment Domains (IAD) are larger 4-km domains and will be defined as stand-alone 4-km photochemical modeling databases ...” <u>I am not sure I understand how a modeling domain = modeling database. Please clarify.</u>	Changed sentence to: “Impact Assessment Domains (IAD) are larger 4-km domains for which stand-alone 4-km photochemical modeling databases will be developed using boundary conditions (BCs) from the 36/12 km modeling.”
8	Nicholls – BLM NOC	4.0	8	Last Paragraph – the 4-km Inter-Mountain West Domain is abbreviated IMWD, while above it is abbreviated IWD. Please check document for consistency.	Changed “IWD” to “IMWD”.
9	Nicholls –	4.2	20	Figure 4-12 – Why was the Wyoming DSAD set such that much of the	DSAD domains are designed to be run using two-way grid

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	BLM NOC			SWWY development is not included? Does BLM-WY agree with the boundaries of this DSAD?	nesting with the 36/12 km domains so cannot overlap. Oil and gas development in the southern portion of SWWY are included in the Uinta-Piceance DSAD domain. Comments from BLM-WY did not mention anything about the DSAD domains.
10	Nicholls – BLM NOC	5.0	22	“The basic methodology was to apply the WRF model for the 2008 annual period and the model results (e.g., wind speeds, wind directions, temperatures) were compared with available surface meteorological observations.” <u>This sentence is past tense (as if the WRF modeling were already done, reviewed and finalized. The previous sentence correctly uses “will be”.</u> Please correct. See also 5.2 – 5.11.	WRF modeling is now completed so changed to past tense and referenced WRF Application/Evaluation report.
11	Nicholls – BLM NOC	5.1	22	“The WRF preprocessor programs including GEOGRID, UNGRIB, and METGRID were used to develop model inputs.” These will need to be explained in more detail in the protocol.	Protocol will contain more information. Details on the WRF modeling system can be found at: http://www.wrf-model.org/index.php
12	Nicholls – BLM NOC	5.4	22	What are the “standard WRF terrain databases”?	Added the following to the end of the sentence “... from the National Center for Atmospheric Research (NCAR)” with a footnote to NCAR website where terrain and other data are available.
13	Nicholls – BLM NOC	5.5	24	Other recent modeling analyses have (I think) used 34 WRF and no collapsing in CAMx. Is the issue here computing resources due to the large domains? How will collapsing 4 of the lowest 8 layers potentially affect CAMx performance?	The current WRF configuration was set up to have an extremely shallow first layer (12 m) compared to layers that are typically 20-30 m thick in the past. Our concern for regional modeling is that combustion produced NO _x emissions that always have buoyancy are released into a too shallow layer resulting in poor ozone performance. This issue will be investigated using sensitivity tests.
14	Nicholls – BLM NOC	6.1	27	“The temporal variability of other pollutant emissions (e.g., PM) from the CEM sources will be simulated using the hourly CEM heat input data; magnitudes of the emissions for these other pollutants will be estimated from the annual inventory.” <u>I would like to see this explained further in the protocol.</u>	Protocol will have more details. CEMS data provides hourly SO ₂ , NO _x and heat input for EGUs. Hourly SO ₂ and NO _x are input directly in the model. The hourly heat input data is used to temporally allocate the annual EGU PM emissions to hourly inputs.
15	Nicholls – BLM NOC	6.1	27	Please explain the phrase “Phase III-light”	This is explained in Section 6.4.2.
16	Nicholls – BLM NOC	6.1	27	7 th bullet – “Fire emission results from the DEASCO312 study for the Joint Fire Sciences Program (JFSP) will like likely be the most comprehensive	Sentence changed as suggested.
17	Nicholls – BLM NOC	General Comment		The most recent versions of CAMX is 5.4 and SMOKE is 3.0	Noted
Comments from Bureau of Land Management (BLM), Kerry E. Rodgers BLM Division of Environmental Quality and Protection, Washington DC e-mail received 1/3/12					
1	BLM-WADC	1.0, second bullet	1	In the second bullet, please briefly describe the concept developed by NMED, EPA Region 6, BLM, and others for those who are not familiar with it (e.g., “Further the concept of [describe] developed by...”).	This sentence has been expanded to describe the concept.
2	BLM-WADC	1.0, fourth	1	In the third bullet, open sub-bullet, there is a word missing in the last sentence (“...and will feedback to the WestJump AQMS...” – provide	Revised sentence as follows: “The regional collaboration initiated by the WRAP RMC was effective and efficient for

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		bullet		or yield feedback?	state and regional planning and will enhance the WestJumpAQMS study through the application of WRAP-IPAMS work to compile Oil and Gas VOC and NO _x emission inventories.”
3	BLM-WADC	1.0, fifth bullet	1	In the fifth bullet, I suggest referring specifically to the “Ozone NAAQS” rather than the “Ozone standard” for clarity.	Sentence modified as suggested.
4	BLM-WADC	1.0, second goal	1	In goal number 2., it might be helpful to reference specific land use plans as well (e.g., “...independent of any specific land use plan, proposed project, or regulatory activity”).	Add reference to SIPs and NEPA actions as examples.
5	BLM-WADC	2.1	5	In the CAMx paragraph on p. 5, the last sentence is unclear. It seems to mean: “Of particular importance for the WestJump AQMS study is the availability of...”	Typo, “If” changed to “Of” as suggested.
6	BLM-WADC	3.0, first bullet	7	In the first bullet, second open sub-bullet, I suggest “recession” instead of “depression” for consistency.	Text modified as suggested.
7	BLM-WADC	3.0, fifth bullet	7	In the third bullet, or the first time the Denver ozone SIP modeling is mentioned, please indicate the agency (or who else) is conducting the modeling for reference.	Sentence expanded to identify the agencies conducting the Denver ozone SIP modeling.
8	BLM-WADC	7.0, last sentence		In the last paragraph of this section, the long sentence seems incomplete. Please re-read.	Long sentence was broken in two and re-written to be grammatically correct.
Comments from the National Park Service (NPS), comments from Mike Barna (NPS) dated 11/30/11 received in e-mail from Mike George (NPS) on 12/1/11.					
1	NPS	2.2	6	On Page 6, unless the source apportionment tools in CMAQ are updated (i.e., TSSA or OPTM/PPTM), the OSAT/APCA/PSAT source apportionment tools within CAMx are the preferred method for identifying sources. Running both models, as outlined in the plan, is worthwhile in terms of comparing “base case” results. If feasible, and if updates to CMAQ v. 5 include OPTM/PPTM, it would be interesting to compare source apportionment results between the two models.	CMAQ V5 is scheduled to be released in January 2012 and will not have any source apportionment capability. The OPTM/PPTM and TSSA source apportionment techniques are implemented in out-of-date and proprietary versions of CMAQ. Our understanding is that EPA is working on implementing source apportionment in CMAQ but that it will not be ready in time for the WestJumpAQMS study.
2	NPS	2.2	6	On Page 6, if the WRF simulations are revisited, consider running WRF v. 3.4, since this contains a data assimilation bug fix.	The latest publicly released version of WRF on the WRF website (http://www.wrf-model.org/index.php) is Version 3.3, which was used in the WestJumpAQMS study.
3	NPS	3.0	7	On Page 7, additional justifications for simulating an entire year include: 1) evaluation of seasonal behavior of pollutants; and 2) comparison of nitrogen and sulfur deposition results to annual values by NADP and CASTNet. 2009 appears to be an appropriate year to simulate given the relatively high ozone concentrations during this period, as well as the availability of the 2008 NEI.	These additional justifications have been added to the text. 2009 had some of the lowest ozone concentration in the west in recent record.
4	NPS	4.0	8	On Page 8, the one-way and two-way nesting approaches outlined in “Domain Selection” are reasonable given the large size (317 x 515) of the 4 km grid.	Even with the reduced size of the DSAD 4 km domains compared to the 4 km IMWD processing domain, the computation requirements of the source apportionment runs is still a concern.

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5	NPS	4.1	9	On Page 9, a description of how the receptors will be identified would be helpful.	For NAAQS analysis, receptors will be defined based on locations of FRM monitoring sites. For AQRVs receptors will be defined based on Class I area locations and locations of IMPROVE, CASTNet and NADP monitoring sites.
6	NPS	4.2	21	On Page 21, is there a reason to use 25 vertical layers for CAMx instead of the previously recommended 22?	The issue of number of vertical layers in CAMx/CMAQ, layer collapsing from the 37 WRF layers and computational requirements is an evolving issue. The collapsing of the 37 WRF to 25 CAMx/CMAQ layers reflects these trade-offs.
7	NPS	5.8	25	On Page 25, the data sets for obs nudging should be listed (e.g., NCAR DS461.0 or MADIS), since these could potentially have a significant influence on the winds.	Discussion has been expanded including the identification of using the MADIS wind observations for the observation nudging in the 4 km WRF domain.
8	NPS	6.1	27	On Page 27, will the WRAP ammonia model be updated to generate emissions estimates for 2008?	No. The WRAP ammonia model is now rather dated so we are leaning toward using the CMU ammonia model with updated activity data for the western U.S.
9	NPS	6.4.1	30	On Page 30, it is unclear what emissions estimates will be used for those basins not gotten to in WRAP Phase III. It would be helpful to clarify that question.	This issue will depend on the timing of when we are ready to perform the WestJumpAQMS PGM modeling. At this writing (January 2012) the only basin that Phase III O&G emissions may not be available is the Williston Basin.
10	NPS	6.4	33	On Page 33, one possible improvement to the Carnegie Mellon University ammonia estimate would be to include the location of confined animal feeding operations, which are typically the largest contributor to ammonia emissions. This was done for the RoMANS2 ammonia inventory for Colorado feedlots, and significantly reduced the uncertainty of ammonia emissions as compared to a spatial allocation based on land-use classification.	This is one of the activity updates we intend to implement when generating ammonia emissions using the CMU model.
11	NPS	7.1	35	On Page 35, will it be possible to perform a sensitivity test to determine the impact of using MOZART vs. GEOS-CHEM for the boundary conditions?	Such a sensitivity test could be possible if data are available. It has been added as a potential sensitivity test in Section 7.2.
Comments from EPA Region 8, e-mail from Gail Tonnesen (EPA R8) dated December 13, 2011.					
1	EPA R8	--	--	(1) There would be value in doing additional model sensitivity runs to evaluate transport of ozone from the boundaries and exchange of ozone between the free troposphere and the surface layer. This has large uncertainty and might not be accurately represented in current models. There is limited data to evaluate this, but it would be useful to comparison of how CMAQ and CAMx represent transport from the BC, e.g., using model runs with no emissions and no chemistry. It would also be useful to compare alternate global models for establishing BC. NCAR's MOZART, Arelene Fiore's AM3 and GEOS-Chem. I know you are doing some work on this already.	Boundary Conditions (BCs) are always one source category in a CAMx OSAT/PSAT application. Running CAMx and CMAQ with just ozone BCs and no chemistry is a good suggestion for cost-effectively evaluating their effects on ozone in the interior of the domain. MOZART vs. GEOS-Chem sensitivity tests will be considered.
2	EPA R8	--	--	(2) Benefits of accelerated meteorology modeling for 2010 and 2011. One of the challenges with previous air quality modeling studies is the	The current Phase of the WestJumpAQMS study is focusing on setting up the modeling platform for 2008.

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				lack of monitoring data to evaluate the model. We are getting more monitoring data especially beginning in 2010 and 2011, and one way that WRAP/WestJump might help us and the states is to accelerate the development of meteorology modeling for 2010 and 2011. The met data can be distributed through the data warehouse. We won't have 2011 NEI emissions data until 2014, but we can do model runs using the 2008 NEI with updates for key emissions sources so that we can take advantage of new ambient monitoring data.	Once that is setup, moving to 2010 and 2011 modeling years can be more easily accomplished in later (currently unfunded) phases of the study.
Comments from Wyoming Department of Environmental Quality (WDEQ) Air Quality Division (AQD) dated 11/30/11 received in e-mail dated 12/2/11.					
1	WDEQ-AQD	1.0 First Bullet under goals	1	Bullet #1 under goals: Considering that many of the recent western modeling analyses have been conducted using different prognostic meteorological models, physics options, emission models, domains, and versions of those models it would be good at some point in the future to nail down exactly which modeling analyses (and components of) will be compiled into the modeling database.	This Modeling Plan summarizes the models and options. More details will be provided in the Modeling Protocol.
2	WDEQ-AQD	1.0 Bottom Paragraph	1	Please verify that in fact the database will be available to "all" considering the sources of funding that will be used in developing the WestJump AQMS modeling effort.	As stated in Modeling Plan, the WestJumpAQMS databases will be available to all. Distribution hard drives of the input databases will be made as part of the study. How they are distributed remains to be seen. Potential options include: (1) serial distribution where the data is copied and sent to the next requester; (2) a State or Federal agency being the repository and making copies for requesters; or (3) the WestJumpAQMS study team making copies for nominal at cost for labor and disk drives.
3	WDEQ-AQD	1.1 Figure 1-1	2	The caption for Figure 1-1 indicates that urban counties which are currently in attainment of the 2008 Ozone NAAQS are being used to obtain Design Values, however; a number of the counties shown are color-coded red, which indicates Design Values that are greater than the Ozone NAAQS; please clarify or revise, as applicable.	Caption has been modified to indicate that color scheme relates to whether 2008-2010 ozone Design Values exceed the ozone NAAQS (75 ppb). Attainment/nonattainment classifications for the March 2008 ozone NAAQS have not been made yet and are expected in 2012.
4	WDEQ-AQD	2.1	4	There is an inconsistent use of the acronym WRF and WRF-ARW in the document.	There are two versions of WRF (WRF-ARW and WRF-ARW). All references to WRF in this document refer to WRF-ARW. A footnote has been added to clarify this.
5	WDEQ-AQD	2.1	5	The acronym for MEGAN should be spelled out.	Acronym is spelled out as suggested.
6	WDEQ-AQD	4.0 Figure 4-1	9	Considering that the meteorological component is based on using the larger set of modeling domains shown in Figure 5-1. Is the usage of the word "meteorological" correct for this graphic?	Caption for Figure 4-1 has been updated.
7	WDEQ-AQD	4.1 Figure 4-6	14	Remove the label for Southwest Wyoming Basin.	Figure has been modified as suggested.

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8	WDEQ-AQD	4.1 4.2	14-20	Provide the basis for the selection of the IADs and DSADs and some discussion as to the value of these areas for this project.	The discussion of the IAD and DSAD domain definitions has been expanded.
9	WDEQ-AQD	4.2 5.3 Table 5-1	21	There are several references throughout the document that mention vertical layer collapsing will be used in the PGM vertical layer structure. Specifically, in Table 5-1, as proposed, there would be approximately five (5) layers that would be collapsed that would likely be below the approximate height of the PBL, with 4 of those 5 layers being below 121 meters above ground. Considering the myriad of source release heights that will be modeled in this project, and that many of the oil and gas handling (and other) sources have low release heights/plume rise values, the use of vertical layer collapsing in the PGM simulations is not reasonable. Further, without sufficient analysis to support this approach of layer collapsing, this approach may not be entirely defensible.	Layer collapsing is used to reduce the computational time of the PGM, which will be quite substantial for the source apportionment runs. As noted above, the current WRF lowest layers are very thin (12 m) compared to past WRF applications (20-30 m) that could trap surface released NOx emissions in a too shallow layer potentially affecting ozone performance. Sensitivity simulations will be conducted with a 4 km domain to determine whether layer collapsing is affecting model performance.
10	WDEQ-AQD	5.9 6 th Bullet	25	Is the language in this bullet correct (i.e., the lack of cumulus parameterization in the final 36/12/4 km WRF simulation)?	The final WRF simulations used the Kain-Fritsch cumulus parameterization for the 36/12 km domains and no cumulus parameterization in the 4 km domain (because the 4 km resolution is sufficient fine to explicitly simulate cumulus effects). Text has been updated.
11	WDEQ-AQD	5.10	25	There is no mention of whether the 4 km domain WRF modeling will be handled in a similar manner as the 36 and 12 km domain WRF simulations.	A discussion of the observation nudging in the 4 km domain has been added.
12	WDEQ-AQD	5.11	26	The 2 nd and 4 th paragraphs in Section 5.11 seem to be indicating the same message, indicating that the 4 th paragraph is unnecessary.	Paragraph has been removed as suggested.
13	WDEQ-AQD	6.0	27	List out the major source categories for the reader.	List of expected major source categories has been added.
14	WDEQ-AQD	6.1 1 st Bullet	27	Please clarify what are "these other pollutants" that will have emissions calculated using the CEM heat input data.	The main one is particulate matter (PM) that is already given in the report. Hourly CO emissions are also allocated this way.
15	WDEQ-AQD	6.1 1 st Bullet	27	Please clarify which states comprise the "western U.S.". Does this include all states in the 12 km domain?	Added reference to WRAP states.
16	WDEQ-AQD	6.1 6 th Bullet	27	Provide a reference for the WRAP WBD model similar to the footnotes at the bottom of the page for the fire and biogenic models that are referenced in this section on emission data sources.	Footnote with link has been added.
17	WDEQ-AQD	6.1 Table 6-1	29	1) Provide the version of the MEGAN model that is being proposed (e.g., version 2.1). 2) Add the version of the GEOS-Chem and/or MOZART models that will be used in this project. 3) Add GEOS-Chem, MOZART, and AMET to this table, as applicable. 4) The CB6 chemical speciation module is referenced in this table, but there is no mention of the CB05 chemistry module in Table 6-1. Some discussion on the use of the CB05 module for the CMAQ model and the additional SMOKE emission processing needed to generate speciated emissions for the CMAQ model simulations should be included in this table and	1) MEGAN Version 2.1 enhanced by WRAP 2)-3) Added reference to BCs with link to MOZART-4/GEOS5 website. AMET is an evaluation tool so not appropriate to include in this input table. 4) Enhanced discussion on using CB05 for CMAQ.

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				throughout the document, as applicable.	
18	WDEQ-AQD	6.11 4 th Bullet	33	Add ... "and by state" to the end of this sentence.	Sentence modified as suggested.
19	WDEQ-AQD	7.1 1 st Paragra- ph	35	CMAQ 5.0 is not expected to have source apportionment tools or the capability of utilizing the CB6 chemistry module; please add further discussion regarding the overall value of running two PGMs, and how to reconcile model performance for ozone, visibility, deposition, primary and secondary pollutants, and the associated precursors if there are significant performance issues or model bias issues with one or both models.	It is difficult to describe a priori how differences in CAMx and CMAQ model performance will be reconciled without seeing what significant differences (if any) there are. Discussion on the benefits of running both models has been enhanced.
20	WDEQ-AQD	7.2 3 rd Paragra- ph	38	Please define who will make up the "modeling team"?	WestJumpAQMS modeling team was defined in Section 1 Introduction and consists of ENVIRON, Alpine and UNC.
21	WDEQ-AQD	7.3 3 rd Bullet	39	Please discuss the "issue" associated with the period of modeling, and also discuss what period(s) are envisioned to be handled for the source apportionment modeling.	The source apportionment runs will be very computationally extensive so there needs to be trade-offs between number of source categories, number of 4 km DSAD domains and simulation length.
Comments from Clark County, Nevada, Zheng Li e-mail received 12/21/11.					
1	Clark County, NV	--	--	I have one comment about the draft Modeling Plan. This is regarding on-road mobile source SMOKE modeling. On Page 6, It says the MOVES2010 will be applied to generate county-level emissions for each county. This should be fine for 36 km domain. But for 12/4 km domains, it better to use SMOKE-MOVES Integration Tool to generate emissions rates first, and then use SMOKE 3.0 to calculate the gridded emissions. The advantage of this approach is to be able to use gridded meteorological data from WRF. I believe EPA has used this approach for CONUS 12 km domain.	Running MOVES multiple times in the emissions factor mode to create the lookup table and then running SMOKE-MOVES with the hourly WRF inputs is very labor and computing intensive (it cost EPA \$15,000 in computing alone to do the 120,000 MOVES runs on the "cloud"). At the time we scoped out the WestJump modeling, SMOKE-MOVES was not even working correctly. Thus we elected to go for the MOVES county level inventory mode for monthly weekday and weekend day using local VMT data. The suggested approach is beyond the schedule and budget of the WestJump study.
Comments from New Mexico Environmental Department, e-mail from Mark Jones dated 11/30/11.					
1	NMENV	--	--	I read through the WestJumpAQMS modeling plan and I thought it was well organized and clear. It appears we are trying to use the most accurate meteorological and emissions models and make the process open and well documented on website. The overview of the models was also very informative.	Noted.
Comments from EPA/OAQPS, e-mail from Mark Houyoux dated 11/22/11.					
1	EPA OAQPS	6.0	--	You may be interested in the results of our first 2008 modeling effort ongoing now that uses 2008 NEI. In particular, since it appears you are starting with 2008 v1.5 data (though we would recommend v2 - see next bullet), we will have insights into known issues that we could share.	After discussing issues associated with the currently available NEI V1.5 with EPA/OAQPS, WestJumpAQMS has decided to wait for the NEI V2.0 that is scheduled to be available in February 2012.
2	EPA			We agree that using the hourly CEM data makes sense. UNC has an	UNC is on the WestJumpAQMS study team so we will

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	OAQPS			augmentation tool that perhaps you funded and will use? unclear from plan. You'll want to get a copy of the NEI that has the proper ORIS IDs so that matching works as best as possible. Current released modeling file (v1.5) does not have that. Will be better in v2 to be released next year. Suggest using v2, but you do not say in the plan. If you can wait until Feb or so (our current date) we may be able to provide a cross-walk before then that you could use to update the v1.5 file with better ORIS and Boiler IDs for CEM matching: contact Alison Eyth. Also, we have already prepared 2008-specific daily files that you could potentially leverage if you wish.	look into using their augmentation tool. Will wait for NEI V2.0 so that cross-walk file for NEI V1.5 is not needed.
3	EPA OAQPS	6.0	--	For all sectors, we generally suggest planning to use NEI v2. Some key updates on nonpoint will be of interest to you, I think.	Agree, will wait for NEI V2.0.
4	EPA OAQPS	6.0	--	We are interested in getting any updated data that you get from your states. In particular, South Dakota is non-compliant with their 2008 NEI reporting requirement and the 2008 NEI does not include South Dakota. We'll be filling in with 2005 NEI inventory in our modeling files. If you get something as part of this process, we'd be interested in getting modeling files in SMOKE-ready format as well as any encouraging you can do to get SD or someone out their to submit the information to the NEI.	Once we get the NEI V2.0 we will assess whether there is missing data we need to get from states. WestJumpAQMS is an open study and we will share data with EPA if desired.
5	EPA OAQPS	6.0	--	It appears from the write-up that you are not using SMOKE-MOVES for the onroad modeling. Why is that? Why are you running representative days when it's technically feasible to run all days?	SMOKE-MOVES was not a viable option when the WestJumpAQMS study was formulated, scoped out and funded. Its use would exceed the current schedule and budget constraints (see response to Clark County comment).
6	EPA OAQPS	6.0	--	You do not mention California mobile sources as needing special treatment and this seems odd. If you end up getting California-specific information that is sub-county level, you will have succeeded where we have failed (so far at least). However, we are very interested in getting better California onroad emissions and would love to leverage any progress you happen to make there.	Currently, monthly EMFAC2011 on-road mobile source emissions for California are available on the CARB website at a county level for summer and winter, which appears to be the current best source of this data. We are not aware of any sub-county data that are available. However, we are aware that the CARB is working with the SCAQMD on an AQMP that includes 2008 modeling period so additional data may be available.
7	EPA OAQPS	6.2	--	In section 6.2, you refer to "default SMOKE" files. There is no such thing. The files that come with SMOKE are documented as intended for example purposes only. This information needs to be much more specific about where you plan to get temporal and speciation information. Your table on page 29 however says that you plan to use "latest collected information", so which is it? Also, I recall past presentations at NEI conferences with updated temporal information available from various past projects (perhaps even some ENVIRON ones) for onroad sources. EPA has not yet had the time or resources to collect and put that information into our modeling platform. If you end up doing that, then we would be happy to incorporate that information into our modeling platform at some point in the future.	More details on the SMOKE modeling files will be obtained in a SMOKE Emissions Modeling Parameters Technical Memorandum Number 13 that is in preparation and expected to be finalized in February 2012. Data can be shared with EPA if desired.

#	Commen-ter	Sec-tion	Page	Draft Modeling Plan Comment	Response for Final Modeling Plan
8	EPA OAQPS	6.3	--	In section 6.3, you refer to new 2010 census spatial surrogates. We are also doing work in this area. I suggest that you coordinate with Rich Mason and Alison Eyth on this to allow us to do complimentary work rather than duplicative work. Also, the information provided on this is very limited. If you plan to use our data, then I think there is more information in hand about what we intend to do.	The new 2010 census 4 km spatial surrogates to be used for the WestJumpAQMS were generated by UNC under contract to EPA. So we are using the same data.
9	EPA OAQPS	6.6	33	Regarding your plans on ammonia source emissions and to evaluate different methods, I suggest including in this review the new temporal allocation methods released (to be released) in SMOKE for met-based adjustments. This is something that we are looking for a collaborator on. Contact: Rich Mason and Alison Eyth. Also, since the 2008 NEI is based on CMU model algorithms, I'm not sure the advantage to using the CMU model directly. There may also be some disadvantages. Contact: Roy Huntley.	We intend to update some of the western U.S. activity and locational data in the CMU ammonia emissions modeling (e.g., update locations of CAFOs as in ROMANS2). When we are ready to start this work we will contact the indicated people from EPA about other CMU model updates.
10	EPA OAQPS	6.0	28	If you get a newer SMOKE-ready Canadian inventory (or projection), we would love to leverage that success.	Current plan is to use the Environment Canada 2006 inventory that we would share if desired.
11	EPA OAQPS	6.4	30	Thank you for your continued collaboration on oil & gas inventories. This is very valuable for us and we'll appreciate keeping in the loop. Contact: Rich Mason and Lee Tooly. If there is any interest in getting this type of information into the official NEI, we are very willing to talk about that. Contact: Ron Ryan.	Will share WRAP Phase III oil and gas inventory when available.
12	EPA OAQPS	6.10	33	We are interested in getting any new speciation profiles developed from SPECIATE4.3 for this effort. Contact: Alexis Zubrow. Your documentation does not say what is being done for the cross-reference. Is someone going through the new profiles in SPECIATE4.3 and making choices about what profiles to use? We may be able to collaborate on that, but perhaps not in the same timeframe that you need.	Emissions Technical Memorandum No. 13 will have more information on the SMOKE emissions modeling parameters including speciation. We will contact Alexis Zubrow before we start the SMOKE emissions modeling to coordinate on this issue.