2/4/2019

Representative Baseline and Future Fire Scenarios Working Group

Meeting Notes

Welcome and Roll Call – Sara

|  |  |
| --- | --- |
| Tom Moore | **x** |
| Matt Mavko | **x** |
| Ryan Templeton | **x** |
| Mark Fitch | **x** |
| Farren Herron-Thorpe | **x** |
| Rhonda Payne | **x** |
| Kristen Martin |  |
| Molly Birnbaum | **x** |
| Paul Goodfellow | **x** |
| Tina Suarez-Murias | **x** |
| Pat Brewer | **x** |
| Bob Kotchenruther | **x** |
| Paul Corrigan | **x** |
| Sara Strachan | **x** |
| Rene Nsanzineza |  |

**RBFFS effort to date - review of concepts, decisions made, outstanding questions, steps and timeline (Matt)**

* Review threshold questions

1. Step 1: Emissions calculations – Should we use readily-available data sources and approaches or build our own?
2. Step 2: Activity Data – Are Rx and Ag burning consistent enough on an annual basis that we can hold the activity data steady over the baseline period? YES
3. Can we assume that wildfire activity is highly variable on an annual and spatial basis, and can we assume that wildfire activity has increased significantly in the recent past? YES
4. Should we build our own activity data (e.g. build seasonality, size, and frequency distributions of fires by ecoregion and burnable area), or should we use readily-available data sources and approaches?

* Group has answered the first 3 questions
* We will discuss the 4th more today

**Discussion of the regional modeling schedule** **(Tom)**

* Tom reviewed the RH modeling schedule (March 27 update)
  + Currently finishing Shakeout v1
  + Found issues with GEOS-Chem boundary conditions, will rerun with fixes and a sensitivity run that zeros out the natural contributions
    - Mark: Assuming zeroing out the natural means zeroing out fire?
    - Tom: Yes.
    - Bob: Why don’t we zero out the anthropogenic instead of the natural?
    - Tom: Zeroing out natural vs. anthropogenic are two sides of the same coin. Bob thought zeroing out anthropogenic would be more beneficial because one gets an estimate of natural impacts for a natural conditions estimate. Bob suggested carrying on this discussion in the RTOWG forum.
  + No fire emissions changing from Shakeout v1 to v2
  + Stepped through rest of document

**Review of version 1 of the Baseline Period emissions calculation stream (Matt)**

* Talked about why we are doing sensitivity runs for future fire scenarios (follow-up to Bob’s question from last call)
  + Bob: These comments are helpful, still trying to figure out how the outcome will work with apportionment and how it will be useful (Bob will be reviewing these RH SIPs). Why modulate a portion that states don’t have to control?
  + Tom: The issue is not apportionment. Issue is that most impaired days in future may be different with different fire scenarios.
  + Bob: That’s helpful, can see how the sensitivity run could help assess the metric.
* Matt went through some slides (starting pg. 19 here: <https://drive.google.com/open?id=1aSLRaSCBofoeRbctsQ9Wp3Q3yV8atxBV>)
  + Baseline emissions calculations v1 results from Oregon
    - PM2.5 emissions 50% of 2014 NEI
    - Why? Because used Akagi emissions factors (different than NEI EFs) that create a different mosaic of fuel loading
      * Mark: Have you looked at the NEI EFs?
      * Matt: Haven’t been able to find them, not published, NEI modeling is a black box; could do a back calculation to find out
      * Lots of discussion about EPA NEI black box…
    - Tina: Question about smoldering/flaming allocation
      * Mark: Large megafires have flaming only on edges, lots of smoldering for days inside perimeter.
      * Matt: We could add a smoldering day to each fire…
      * Mark: I wouldn’t recommend adding to every fire, but maybe to some – maybe it would be better to do it in future fire scenarios
  + Emissions calculations, v2 option (pg. 21 slides)
    - Could vary fuel moisture seasonally.
    - This will affect consumption.
  + Baseline Period EI Wildfire Workflow (pg. 22 slides)
    - Good reference: WRAP Fire Ph3-4 EI Report (<https://drive.google.com/open?id=1bXqlSTqUTIYKbpXJZBWBryIo3o32vzcH>)
    - During RH Round 1, just grew the acres, otherwise used Base Year actuals
    - Propose to organically grow the dataset and place in space and time using representative recent history
      * Sara: Is proposed workflow achievable for our schedule? (refer to modeling timeline)
      * Matt: Ummm
      * Tom: June 14 deadline for Baseline; thinks it’s manageable
      * Matt: probability distributions better than percentage scalars
      * Sara: exciting approach, read Malamud paper (<https://drive.google.com/open?id=1ZQXi1kiE6d5_z7McwTMUDJ1Bh9q9KFNK>)
      * Mark: read it, thinks it’s an interesting approach
      * Tom: suggests Matt prepare more detail on proposed baseline approach for next meeting. **ACTION ITEM**
      * Mark: Are you confident in your 2013-2017 activity data to build the baseline inventory?
      * Matt: Yes and no. Hasn’t compared NIFC vs. NEI.
      * Matt and Mark will discuss NIFC activity data offline and include Paul in discussion. **ACTION ITEM**

**Outline of conceptual model for building future fire scenarios (Matt)**

* Ran out of time. Tabled until next call.

**Wrap up and Action Items**

* + April 17 (10:30-11:30 pm MT) – next call
  + **ACTION ITEM** for group: Look at Exploratory Graphics folder on Google Drive where Matt posted results plots from v1 of Baseline emissions calculations