# WRAP RHPWG Monitoring & Glide Slope Workgroup

Conference Call June 14, 2018

Agenda:

1. Roll Call
   1. AZ (Ryan, Elias), California (Tina), Montana (Kristen, Brandon), Nevada (Frank), New Mexico (Cindy), Oregon (Phil Allen), WRAP (Tom) , WESTAR (Bob), NPS (Pat), USFS (Scott Copeland)
2. Administrative
   1. Current Notes – Pat Brewer
   2. Workgroup/Subcommittee updates
      1. Shared Database Subcommittee held a call on June 14. Shawn McClure, CIRA, presented the CIRA websites that host western air quality planning data bases and more specifically, the architecture for the Technical Support System II that will be relevant to regional haze planning. Pat Brewer presented existing graphics illustrating aerosol contributions to the regional haze glidepaths for haziest days for example western Class I areas. Similar plots could be helpful to understand how the trends for most impaired days are different than for the haziest days.
3. Review/update June tasks
   1. **ADEQ's sharefile site** (<https://azdeq.sharefile.com/share/view/sc6c4f002be1402ca/fob7a14f-25cc-4a3c-8222-5c8a4f0db391>) is repository of documents under development, not ready to be posted to WRAP Monitoring and Glideslope Subcommittee webpage. Look there for Excel spreadsheets and R code to consider alternatives to EPA default assumptions for natural and anthropogenic contributions. Also Meeting agendas and notes; once reviewed and approved, Meeting records should migrate to Subcommittee webpage on WRAP RHPWG website.
   2. **IMPROVE data substitution:** Scott Copeland joined the Subcommittee to discuss these issues; his ppt is included with the meeting notes. Scott’s spreadsheets identify data that is patched or substituted. FED uses flags to identify patches or substitution. WRAP Round 1 Data substitution methods are save in the ADEQ sharefile.
      1. Subcommittee should review these methods to be able to recommend retention of same methods or alternatives.
      2. Like the first round of regional haze planning, for second round of regional haze planning, Tom suggested that states should be involved in selecting/approving which IMPROVE sites and which data are suitable to borrow for data substitution, no matter who does and documents the data substituted for regional haze planning.
      3. Data substitution has been completed for the RHR baseline years (2000-2004), and needs to be completed as needed for the retrospective modeling evaluation years (2008 and 2011), and every year 2013-2018. WRAP region states approved substitution methods for 2000-04 data in round 1 haze planning and implemented those data on the TSS, as well as Scott putting substituted data into the underlying CIRA database for VIEWS, FED, and TSS. No data substation in the CIRA database has been done since 2007. The 2008, 11, and 2013-18 data substitutions could be provided by a contractor with direction from affected states, and uploaded to the CIRA database by the TSS team as an in-kind service. Scott explained the underlying codes in FED – probably should have similar notations in TSS as well as protocol or explanation of patching algorithms.
   3. **Glideslope:** Scott illustrated glideslopes drawn using mean, haziest, most impaired, and an alternative to most impaired based on Schichtel’s carbon receptor model. Subcommittee members are continuing to look at potential alternative assumptions for most impaired days. One measure of alternative methods is how that affects the days selected as most impaired and the glideslope. The subcommittee may need to better understand Schichtel’s work and define fractional and absolute impairment.

*Additional clarifying comment for future Subcommittee discussion as needed: If a state has wildfires every year, the lowest 95th percentile for 15 years may not catch all the smoke impacted days in the lowest year (may be more than 6-10 days per year with wildfire smoke impacts.) Mathematically one year could skew a five-year average, but maybe not as much – and maybe only in high wildfire-prone areas, such as all California IMPROVE locations.*

* 1. **Natural conditions in 2064 for most impaired days:** Scott clarified EPA default assumptions for most impaired days. Tina pointed out that a day with elevated carbon from prescribed fire might exceed the episodic carbon threshold. Scott asked if states considered that a good thing (inferring that Rx fire is “natural”). Do states intend to track Rx fire as anthropogenic instead of natural? Additional discussion on this topic is likely. In the 2016 Technical Support Document, EPA defines 2064 natural conditions for the 20% most impaired days as the 15-year annual average for 2000 to 2014 of natural conditions on the most impaired days. EPA acknowledges that the natural contributions and episodic thresholds on the most impaired days may change over time and adjustments may be needed to represent natural conditions on most impaired days for future years.

1. Ryan closed the call at 3:02, however, several members stayed on the call to discuss additional questions with Scott
   1. **Episodic threshold for sulfate:** Tom asked if IMPROVE had considered an episodic threshold for sulfate. Tom pointed out that if sulfate is transported differently or persists longer than organic carbon, sulfate from fire could be included in most impaired days. Pat observed that 2011 CAMx-PSAT tracked sulfate from wildfire, prescribed, and agricultural fire separately, and PSAT 2011 results suggested that fire contributions to sulfate were very small compared to other source categories. Are sulfates elevated with high organics during fires; how much sulfate is “natural”? EC is not the only species that increases incrementally with a strong wildfire? Is it enough to account for it as natural when splitting anthropogenic and routine natural?
      1. Subcommittee may want to test an episodic sulfate threshold.
   2. **IMPROVE data stability:**  Should IMPROVE data be “frozen” for regulatory purposes so that future revisions of science data base does not cause regulatory dataset to change? This is more work for IMPROVE data management, but Frank, Tina, and Tom emphasized that shifts in data during the regulatory period were difficult to explain or defend to the public and could influence state to state communications. Further discussion expected.

Will SIP reviewers appreciate practical needs to use static data over the two-three years it takes to complete SIP process? Can we include any changes to data in Appendix and comment on why it cannot be included in the just completed planning process? And also comment on what data changes and trends might be better evaluated in the next interim Progress Report before next SIP? Data will change and we’ll gain new knowledge as we observe and analyze more data. It may require maintaining two databases. (one “snapshot date” for planning and separate one modified as research improves.)

* 1. **Graphic Display:** Tom reported that Shawn McClure will be adding graphic displays specific to most impaired days on the TSS2. Pat sent ppt to Subcommittee re possible graphics (included on the ADEQ Sharefile). While these were not discussed on the call, Tina responded by email with observations about the data displayed. Can R be used to plot data in different ways to tease out relationships – how much is research and how much can be incorporated in SIP regulatory documents or become western protocols?

1. Action Items
   1. **Data Substitution for Round 2**: Subcommittee should review Round 1 methods and identify decisions points for Round 2.
   2. **Data Stability:** Tom volunteered that Pat and Tom would develop a white paper on the pros and cons of “freezing” or “locking down” the regulatory data set. Moore will send out a white paper off the TSS of how the data was handled in the first planning period.
   3. **Alternative assumptions:** Ryan, Brandon, others will continue to review alternatives. Subcommittee should continue to suggest alternatives to test.
   4. **Graphic Display:** Subcommittee should continue to develop list of desired graphics for monitoring and glideslope.
   5. **Coordination with IMPROVE:** Tom and Scott will meet June 18 to further coordination. Tom suggested that Ryan should reach out to Bob Lebens and Gordon Park as state reps to IMPROVE so they are aware of these discussions. (Bob was on the call, sending these minutes to Bob and Gordon would further coordination.)
   6. **Ryan to contact Shawn McClure:** Ryan will contact Shawn McClure to ensure work performed on the TSS and within the Monitoring & Glideslope subcommittee sync.
   7. **Future meeting discussions of E3 threshold, estimation alternatives and 2064 “Natural Conditions”**
   8. **Meeting Note migration:**  Subcommittee meeting notes from all earlier calls should migrate to Subcommittee webpage (http://www.wrapair2.org/RHP\_DataGlide.aspx) after review and Subcommittee approval.
2. Next Call
   1. 6/28/2018 at 12:00-1:00pm Pacific Time / 1:00-2:00 PM Mountain Time.