# WRAP RHPWG Monitoring & Glide Slope Workgroup

Conference Call June 28, 2018

Agenda:

1. Roll Call

*Ryan Templeton, Kristen Martin, Brandon McGuire, Rebecca Harbage, Tom Moore, Bob Lebens, Pat Brewer, Tina Suarez-Murias, Phil Allen, Frank Forsgren*

1. Administrative
   1. Current Notes – Oregon (New Mexico will take notes on 7/12 call)
   2. Workgroup/Subcommittee updates

*Tom Moore noted that the EI and Modeling Subcommittee call occurred just before this Monitoring and Glideslope call, and that most states have submitted comments on the 2014 NEI, however revisions likely to occur over July. The next Oil and Gas Workgroup call is in July, and information from that workgroup may inform the EI. EI and Modeling Subcommittee wiki is up and running.*

* 1. Subcommittee Sharefile link: <https://azdeq.sharefile.com/d-sc6c4f002be1402ca>
     1. FED IMPROVE Data: <https://azdeq.sharefile.com/d-s9b3ddceda5348b5b>
     2. Workbook Processed Data: <https://azdeq.sharefile.com/d-sa8afc834d6242e7a>
     3. R processed Data: <https://azdeq.sharefile.com/d-sdc04633f03d44918>
     4. R Code: <https://azdeq.sharefile.com/d-sba6395214ab4f0e9>

1. Review Excel Workbook

Ryan used epa approach but allows to adjust e3

*Ryan described the Monitoring and Glideslope Subcommittee Sharefile website (see link at c) above) hosted by Arizona DEQ that consisted of 8 directories: Data Processing, Data Substitution, Documentation, Meeting Agendas, Meeting Attendance, Meeting Notes, Natural Conditions, and State Survey. The focus on this call was the Processing subdirectory, which contained the subdirectories Representative Sites, Results, Tools, and an example IMPROVE graphics\_061418.pptx. Within the Results directory were workbooks for each of 25 Class I area/Improve sites. Ryan used the Canyonlands (CANY1) workbook as an example and walked through the tabs beginning with the Data tab that displayed data as downloaded from EPA, including the Worst Day under the old metric. Other tabs are Episodic Treatment (where percentages of carbon or dust extinctions can be adjusted); Natural Conditions listing species contributions; Daily Constituents showing graphical daily contributions for 5 years; and a Trends Tab that provides tabular data and plots showing 5-year average, Annual, and URP trend lines and a list of MIDs that change automatically with changes in e3 thresholds made in the Episodic Treatment Tab.*

*The Results Workbook provides a very useful means to analyze factors that may contribute to MIDs in multiple Class I areas, however, what works well for one area may not be optimal for other areas.*

*The WinHaze program was mentioned as a potential tool for looking at visibility changes with changes in species contribution. WinHaze is available on the Improve website:* [*http://vista.cira.colostate.edu/Improve/winhaze/*](http://vista.cira.colostate.edu/Improve/winhaze/)

1. Review R datasets

*Kristin and Brandon reviewed their work using R Code to develop graphics for 25 sites. Each site provided multiple graphics showing annual data for each of 5 years; monthly and seasonal data for 2016; and for each year 2000-2016 graphs showing comparison of Haziest to MID days, sorted and unsorted 95% tile and 70% tile days, and plot of 20% days. The R Code is available for others to modify or adapt to their specific circumstances. These graphics are a very useful tool to see how data changes by removing haziest days and adjusting thresholds to develop reasonable MIDs. Seeing data by season and month allows an understanding of the different causes of impairment and the species that drive Worst (Haziest) Days and MIDs. Tina noted that trends in e3, for example windblown dust and wildfires, could be considered evidence of climate change.*

1. MID, E3, and Natural Conditions estimation alternatives

*Not discussed on this call*

1. Action Items

*Ryan’s direction to the subcommittee for the next call is to look at the workbooks and see how the data is performing for a range of sites: what sites are worst for different e3, such as windblown dust or wildfire smoke, and for different e3 thresholds, for example using 95%tile; and are there other methods or metrics needed to analyze the extinction data.*