

**FY07 Air Quality Workshop
18-19 September 2007**

Name(s)	Organization	Comments on 2007 Evaluation	Comments on Future Activities
Mike Geigert	CT DEP – Air Pollution Control Engineer	<ul style="list-style-type: none"> • 62.5% of NCEP Operational verified...up from 53.8% in 2006. Developmental model has significantly improved – 75% for CT. Only 4 false exceedences. Developmental was depicting oranges better. • Experimental typically performed better than operational. • There were more issues before the model change on July 18 • NCEP model verifies from 04z to 04z • Models did pretty well on trends. • August 16, 07 – worst underprediction 	<ul style="list-style-type: none"> • Would be useful to have an ensemble of 5-6 models...more to look at! • A probability assessment of % of code orange day for the next day would be useful
Bill Ryan	Penn State/ PA forecaster	<ul style="list-style-type: none"> • Very challenging summer for AQ • Discussed verification in PHL area • Model performed quite well from 6/12-7/16. More overpredictions later in the summer. • Typical high ozone values just inland from the seabreeze fronts • Suggestions for improved color in weather.gov products to highlight USG threshold 	
Bill Appleby Mike Howe Jeremy March	Environment Canada	<ul style="list-style-type: none"> • Marine inversions make a huge difference in Ground Level Ozone (GLO) values coastal vs. inland. AQ predictions performed better inland. • 2007 was a quiet AQ season for Atlantic Canada. Insufficient number of events for conclusions. 	

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Bill Murphey	GA EPD	<ul style="list-style-type: none"> • Looked at 6/26 to 8/19 for Atlanta area. NOAA model did well during this time period. Picked up 2-3 code red days during this stretch. Slightly underforecast 1-hour and 8-hour ozone. • During heat wave period (8/6-19), big underforecast (isolated convection). 	
Joe Cassmassi	California	<ul style="list-style-type: none"> • AQF guidance underpredicts ozone for Metro LA and Valleys, overpredicts elsewhere • Influences include topography, grid scale, land use. • NOx transition apparent in South Coast Basin 	<ul style="list-style-type: none"> • Use the model simulations from 2007 to develop preliminary site specific ozone prediction algorithms • Evaluate aerosol forecasts for potential similar application
Greg Quina	SC Dept of Health and Environmental Control	<ul style="list-style-type: none"> • Used Upstate and downstate locations for analysis. • Charlotte and Atlanta plumes major influences. • AQF guidance generally under-predicted ozone concentrations during Spring and early Summer 2007 • AQF guidance generally over-predicted observed ozone concentrations (especially in the Piedmont) during August 2007 • The Charlotte urban plume was depicted fairly realistically in magnitude and spatial coverage on August 14th. • AQF guidance presumably depleted the Charlotte urban plume too quickly overnight August 14-15. The Atlanta urban plume was depleted too quickly August 16th. • Operational AQF guidance is excellent • Savannah River valley traps and recirculates Charlotte plume. 	

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Joe Sims	Alabama Department of Environmental Management	<ul style="list-style-type: none"> • Used three cities for analysis: Birmingham - old industrial Huntsville – clean industry Mobile – on Gulf of Mexico. • 2007 was difficult forecasting year. High false alarm rate from guidance. • Analysis on monthly, rather than yearly (as conducted), basis might prove more valuable • Three episodes analyzed. • Have to watch frontal boundaries in state. Can trap ozone. • Guidance graphics used for verification were a day early because of confusion over date in the graphic header. • Observed large variation in ozone with similar temperature over 10-day period. Not sure why this occurred; further investigation needed to find cause. 	
Mike Gilroy	Puget Sound	<ul style="list-style-type: none"> • Ozone only an issue occasionally, ~ 2-3 days a year. • Ozone trend has been downward since 1992. • Have good knowledge of where plume goes. • Typical wind flows are westerly and southwesterly. • Winds aloft temperature important for ozone increases; must be greater than 15C. • Issue calls for 48 hrs. Influenced by prediction for second day. • Summer – largely concerned with smoke; influence from plumes from AK wildland fires. • Useful guidance for issuing AQ forecast 	<ul style="list-style-type: none"> • Would like models to include AK smoke. • Contact Western Region to get/market AQ products due to growing interest • To better support action programs, AQF guidance through 48/72 hours needed (users understand skill issues) • Add regional (sub-regional) emissions for wood smoke from

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		<ul style="list-style-type: none"> • Predicted ozone difficult to read on current graphical products 	<p>heating sources in winter.</p> <ul style="list-style-type: none"> • Prioritize “consequence to user decision-making” (get the trend right first); with appropriate success metrics • Make PM2.5 runs acknowledge routine seasonal emissions (wood smoke from stoves and fireplaces) • Improve visual product. Current colors/gradations are too subtle • Emissions inventory data currently used: updates based on 2002 National Emissions Inventory. Would like to use (= provide) improved estimates for Washington State
Dan Salkovitz	Virginia State DEQ	<ul style="list-style-type: none"> • September AQF guidance worse than earlier in summer. NE flow; cause unknown 	
Jeff Stonesifer	Meteorologist City of Albuquerque, Air Quality Division	<ul style="list-style-type: none"> • In previous years, there were several days when the experimental guidance predicted USG ozone levels and the actual level was in the moderate category. No such days were logged in 2007. • Although I couldn’t collect data for every day, it seems to me that the experimental guidance for ozone levels in Albuquerque has improved significantly. It has become fairly good at distinguishing good versus moderate (AQI) days. • There are not enough days of Unhealthy for Sensitive 	

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		<p>Groups (USG) levels for guidance to make sense of it. When the ozone gets into the USG category, its event driven; wildfire smoke is the usual culprit.</p> <ul style="list-style-type: none"> • August 15-17, 2007 had ozone levels in the mid to high range of the moderate category. That was a transport event. Pollution had built up under a high pressure system over Dixie/Texas and deep easterlies had transported some of it to Albuquerque. The guidance predicted 8 hour maximums of 59-63 $\mu\text{g}/\text{m}^3$ (good AQI); the actual maximums were 71-77 $\mu\text{g}/\text{m}^3$. Maybe these events are where the forecaster needs to add some value. 	
Donovan Rafferty	WA State Dept of Ecology	<ul style="list-style-type: none"> • I used this product several times a day in order to chase ozone around Washington State. • During the course of the summer, I consulted this product in order to determine where the highest ozone concentrations were projected to occur. Once I had a target, I drove to the location and attempted to confirm the model in order to decide if our ozone monitoring network was adequate. • The NWS forecast [July 27] for the central and eastern half of the State was for concentrations between 50 and 60 ppb. As you can see by the profile it was pretty right on. I was using the 12z model run created July 26 2:34PM EDT. As you will note from the graph in the attachment, the NWS AQF guidance was right on. 	