

ACPAC What We Can Do – Air Quality Qualitative Analysis Description – DRAFT

Background for this Initiative

In discussions with the MWAQC Chair, ACPAC members addressed the value from an analysis showing what actions could be put in place to reduce air pollution to a level resulting in no unhealthy air days across metropolitan Washington. Following up on this interest, MWAQC asked ACPAC to develop a Scope of Work for an analysis to identify the suite of local and regional measures, aka *What We Can Do*, that could reduce air pollution in the region to the level that would result in no unhealthy air days.

ACPAC had discussed that a high-level qualitative assessment of measures could be used for planning new measures to be put in place to reduce ozone levels in the region. MWAQC, based on input from its Technical Advisory Committee, is interested in knowing what level of work is needed for a Scope of Work that describes two options, a qualitative assessment and a quantitative assessment. MWAQC TAC believes a quantitative assessment is needed to provide a more rigorous cost-effectiveness analysis of proposed actions.

After some discussion, ACPAC members decided that they needed more information about quantitative modeling before pursuing the Quantitative Assessment Scope of Work. Therefore, ACPAC is first focusing on finalizing the Qualitative Scope of Work.

This Qualitative Scope of Work describes:

- Basic project methods and inputs,
- Project timeline,
- Expertise needed, and
- Project estimated costs and time needed for completion.

DRAFT SCOPE OF WORK FOR AIR QUALITY ANALYSIS – QUALITATIVE

Discussion

The overall goal of this project is to identify, through a qualitative analysis, the suite of local and regional measures, (Menu of Options), that could reduce air pollution in the region to the level that would result in no unhealthy air days –defined as no Code Orange or higher air quality days (>100 AQI). For each measure or suite of measures, the work should include an estimated range of costs, level of effort to implement, and estimated range of pollutant reduction achieved (in tons).

Considerations for Expertise Needed: The types of expertise needed to undertake this analysis includes: environmental management, environmental policy, urban planning, environmental engineering, atmospheric chemistry, air quality analysis, and emissions control technologies. The work could be completed by a graduate student or a contractor. A graduate student would be less expensive, but the timing may be dependent on the academic calendar and more staff oversight/mentoring may be required. The timing may fit if the project begins in early 2018 at the start of the semester and completed by midterm or finals depending on whether there is potential for support from local university programs.

Estimated Cost for contractor:

210 hours at \$130/hour for an analyst plus

70 hours at \$200/hour for supervisor = \$41,300.

Graduate student work would be a lower direct cost but require more COG staff supervisory hours.

Project Inputs, Tasks, and Deliverables

Task 1 – Literature Review and Discussions with Experts. The purpose of this task is to understand what work has already been completed and can be used as inputs into this project, to help form a baseline scenario, to identify emissions reductions strategies, or develop methods for demonstrating qualitatively what it would take for the area to achieve no unhealthy air days. Strategies shall include actions that MWCOG, states (DC, VA, MD), and the 24 jurisdictions within MWCOG could implement over the next five years to see improvements in ozone air quality. MWCOG staff shall be consulted throughout this process to provide guidance and answer questions.

Inputs to the project shall include:

- The Regional Action Plan
- Multi-Sector Working Group Analysis
- Climate & Energy Action Plan
- Gold Book
- Past control measures evaluations, including the Reasonably Available Control Measures Analysis (RACM) Analysis and Priority Measures Lists for the Ozone and PM SIPs.
- Existing regional air quality analyses and ozone modeling results, including
 - The Ozone State Implementation Plan (SIP) and Ozone Redesignation Request and Maintenance Plan for the 2008 Ozone NAAQS
 - Ozone Transport Commission modeling
 - CLRP conformity analysis and CLRP performance reporting
 - Note that this would account for anticipated reductions from existing federal regulations (e.g., CAFE standards)

- Review of other key regional efforts and best practices to improve air quality (e.g. California Air Resources Board, etc.)
- Long Range Transportation plans
- Other potential federal, state or local legislation, regulation or policies that would affect ozone air quality
- Additional literature available on the effectiveness of measures to achieve NOx or VOC reductions

Deliverables from this task include:

- A summary of lessons learned from existing ozone modeling and implications for this qualitative analysis, including any assumptions necessary to move forward with the analysis of controls. For example, what does the modeling indicate about the impact of local controls on air quality levels and the ability to achieve required reductions in the identified timeframe?
- A list of potential emissions reduction strategies, indicating costs, level of effort to implement (high/medium/low, with a description of rating methods), and estimated range of pollutant reduction achieved (in range of tons – high/ medium/ low, indicating NOx and/or VOCs). This shall also indicate which, if any, jurisdictions have already implemented the identified measures. Anti-Idling programs/policies, for example, should be evaluated as one of the measures. Analysis shall indicate which levels of local government would be responsible for implementing the emissions controls, including:
 - Level 1: Virginia and Maryland, and DC
 - Level 2: All 24 local jurisdictions within MWCOG
- Detailed description of methods, assumptions, and sources
- Presentation of results to COG Staff and TAC
 - Incorporate feedback into the project

Estimated Timeline: 4 weeks, or 160 hours

Task 2 – Identify Promising High-Impact Emissions Reductions Measures. Based on the deliverables from task one, develop emissions reductions strategies to help the region achieve no unhealthy air days. Identify the two to four strategies that would be highest priority based on the level of emissions reduced and cost. These strategies shall include the most effective emissions reductions measures and discussion of why/how they were chosen. Identification of existing or potential funding mechanisms shall also be included. MWCOG staff shall be consulted throughout this process to provide guidance and answer questions.

Deliverables from this task include:

- Summary of each emissions reduction scenario, including which control strategies are implemented by which jurisdictions, estimated emissions reductions achieved, cost (total, range in tons, per jurisdiction), and existing or potential funding mechanisms.
- Presentations to the Air and Climate Public Advisory Committee (ACPAC), MWAQC Technical Advisory Committee (TAC), and COG staff. Feedback shall be incorporated into final report.

Estimated Timeline: 1 week, or 40 hours

Task 3 – Prepare a Final Report. The report shall summarize and provide documentation of the project, including why the project was done, project methods, results, conclusions, and any recommendations. Additionally, the report should include qualitative discussion of the benefits (economic, health and environmental) of achieving no unhealthy air quality days. The main body of the report shall be no more than 20 pages long and include an executive summary geared for policymakers. A draft shall be circulated for review and comment to ACPAC, MWAQC TAC, and COG staff. The final report shall be delivered to MWCOG.

Deliverable: Final Report and presentations

Estimated Timeframe: 2 weeks, or 80 hours