

**Wyoming Department of Environmental Quality – Air Quality Division**  
**Upper Green River Basin Ozone Strategy**  
**APRIL 29, 2016**

The Upper Green River Basin (UGRB) area was designated by the EPA as “Marginal” nonattainment for the 2008 8-hour ozone NAAQS of 0.075 ppm on July 20, 2012. There has been much work done to address this ozone nonattainment status prior to this designation. Some of this work includes the creation of policy, increased monitoring, and detailed emission inventories by the Wyoming Department of Environmental Quality (WDEQ) Air Quality Division (AQD). It also includes stakeholder involvement since 2006 and the formation of the UGRB Air Quality Citizens Advisory Task Force (Task Force) in early 2012. The final ten Task Force recommendations were submitted to the WDEQ AQD in September 2012 for consideration.

The Task Force recommendations as well as many other elements were included in an *UGRB Ozone Strategy* dated March 11, 2013 that described WDEQ’s overall ozone reduction strategy, which evolved to *UGRB Ozone Strategy* documents dated September 24, 2013, April 22, 2014, October 21, 2014, and April 28, 2015. The strategy continued to evolve to an *UGRB Ozone Strategy* dated October 28, 2015; based upon the status of elements in the *Ozone Strategy* dated April 28, 2015 and information that became available since April 2015. The strategy continued through March 2016 and identified three groups of activities based on when they were targeted to be worked on as well as their ongoing nature, if applicable.

Of the three (3) activities that were to be worked on through the end of March 2016, all three (3) have been completed (#1, #2, #3) and are listed below.<sup>1</sup>

1. EPA 2015 Ozone National Ambient Air Quality Standard (NAAQS) Review
2. Forecasting for the winter ozone season for 2016
3. Ozone Action Days 2016

Of the four (4) activities that were to be worked on through the end of March 2016, and go into subsequent time periods, three (3) have been partially completed (#1, #2, #3) and are listed below.<sup>1</sup>

1. Oil & Gas Production Site Emissions Inventory Study
2. Commercial Oilfield Waste Disposal Ponds Study
3. Upper Green Winter Ozone Study (UGWOS) 2016

The completion of six (6) elements from the *Ozone Strategy* dated October 28, 2015 in addition to the 40 completed elements from all previous ozone strategies, have all been important in building the foundation to bring the UGRB back into ozone attainment.

Ozone monitoring within the UGRB Ozone Nonattainment area shows five consecutive winters (2012, 2013, 2014, 2015 and 2016) without an ozone exceedance. In addition, EPA signed a Final Rule on April 11, 2016 that included a Determination of Attainment for the UGRB by the attainment date of July 20, 2015. The determination of attainment does not constitute a redesignation of attainment.

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<sup>1</sup> The bullet numbering corresponds to the numbering within the *UGRB Ozone Strategy* dated October 28, 2015.

In consideration of how the strategy should evolve after March 2016, the AQD evaluated the status of elements in the *Ozone Strategy* dated October 28, 2015, information that has become available since October 2015. The strategy will continue through September 2016 with two groups of activities. This document will go into more detail for activities that are to be worked on through the end of September 2016. Also described are those elements that are ongoing. Please keep in mind that the strategy as described will evolve and thus, this document will evolve too.

The WDEQ-AQD has identified five (5) activities that are to be **worked on through the end of September 2016, and go into subsequent time periods**. Those WDEQ-AQD activities are summarized below.

1. WDEQ-AQD Ozone Advance Status
  - Ozone Advance is a voluntary and collaborative effort by EPA, states, and local governments to encourage ozone reduction.
    - i. WDEQ-AQD will provide an annual status update to EPA
2. Commercial Oilfield Waste Disposal Ponds Study
  - Implement field study to research and quantify emissions from disposal ponds in the UGRB
  - Summer field study completed August 2015
  - Winter field study completed February 2016
  - Final report anticipated to be complete in August 2016
  - Listed as Task Force Recommendation #7
3. Oil & Gas Production Site Emissions Inventory Study
  - Assess the control effectiveness of combustors and quantify emissions from fugitive sources in the UGRB
  - Initial field study completed in June 2015
  - Additional field study anticipated to be complete in June 2016
  - Final report anticipated to be complete in September 2016
  - May fulfill aspects of Task Force Recommendation #9
4. Upper Green Winter Ozone Study (UGWOS) 2016
  - WDEQ-AQD 2016 focus on monitoring of ozone, oxides of nitrogen and volatile organic compounds (VOCs) at long term stations as well as selected additional VOC locations to aid in the understanding of ozone formation
  - The January – March 2016 data will be finalized by the end of June 2016 with a final report anticipated in September 2016
  - Fulfills aspects of Task Force Recommendation #9
5. Gather and evaluate information for a Phase II approach to address emissions from existing sources and address new growth through integration of stakeholder involvement.

The WDEQ-AQD has identified 20 **activities, studies and projects that are ongoing**. Those activities, studies and projects are summarized below.

1. Continue to work to improve the processes for regulatory ambient monitoring, annual and winter emissions inventories, and regulatory modeling. (Listed as Task Force Recommendation #9.)
2. Continue to communicate how to access information such as ambient monitoring and emissions inventory data. (Fulfills aspects of Task Force Recommendation #9.)
3. Implement Nonattainment New Source Review permitting for applications, which are subject to these permitting requirements (i.e., new major sources and major source modifications).
4. Continue to utilize Wyoming Air Quality Standards and Regulations Chapter 6, Section 2(c) (demonstrations for permit requirements) for new and modified facilities in the UGRB.
5. Continue to collaborate with the BLM, USFS, EPA and industry representatives to implement the federally required General Conformity Rule for areas in nonattainment of the NAAQS.
6. Continue to collaborate with the WYDOT to successfully meet the requirements of the Transportation Conformity rule as it pertains to nonattainment of the NAAQS.
7. Continue to utilize compliance inspections at production sites, compressor stations, etc. to confirm ongoing compliance with applicable permit requirements, Wyoming rules and regulations, as well as Federal rules and regulations.
8. Continue to require measurement of source emissions via stack testing to confirm ongoing compliance with applicable permit requirements, rules and regulations.
9. Continue to utilize the notice of violation process for sources determined to be in noncompliance.
10. Continue to improve actual emission inventories to support nonattainment planning including but not limited to modeling and demonstration of emission reductions.
11. Continue to improve weather forecast capabilities for conditions conducive to elevated ozone for the timeframe of January through March. (Fulfills aspects of Task Force Recommendation #9.)
12. Continue to promote the development and implementation of ozone contingency plans, to utilize short-term emissions reduction measures on ozone action days, for all stakeholders throughout the nonattainment area. (Listed as Task Force Recommendation #3.)
13. Continue to plan for winter monitoring, as appropriate, to aid in the understanding of ozone formation to support nonattainment planning. (Fulfills aspects of Task Force Recommendation #9.)
14. Continue the WDEQ-AQD Statewide Engine Study contract, as appropriate, for source tests via stack testing to verify achievement of best available control technology control effectiveness and improvement of maintenance practices. (May fulfill aspects of Task Force Recommendation #9b.)
15. Continue WDEQ-AQD contract, as appropriate, to evaluate photochemical grid modeling performance to replicate elevated winter ozone formation, which will be utilized by the WDEQ-AQD if reasonable to evaluate control strategies in the UGRB.

16. Continue to collaborate on the regional efforts, which include a data warehouse, monitoring, and modeling that may be beneficial in a weight of evidence approach to nonattainment planning.
17. Continue to improve communication strategies including, but not limited to, updates to the Air Quality Advisory Board, press releases, public meetings, and stakeholder involvement.
18. The WDEQ Small Business and Pollution Prevention Program Manager will continue to explore community projects.
19. Continue to comply with the Governor's Sage Grouse Executive Order during the New Source Review permitting process and when siting new monitoring stations.
20. Continue to work cooperatively with State and Federal agencies to address wildlife concerns when siting new monitoring stations.