TO: Utah Division of Air Quality (DAQ): Ryan Bares (ryan.bares@utah.gov)
FROM: Western Resource Advocates (WRA): Joro Walker, Deborah Kapiloff, Sophie Hayes (joro.walker@westernresources.org; deborah.kapiloff@westernresources.org; sophie.hayes@westernresources.org)
RE: **Comments on DAQ's State implementation Plan: 2015 Ozone NAAQS NWF Moderate Nonattainment Area (2023).**
DATE: July 17, 2023

I. Introduction

WRA appreciates the opportunity to provide comments on DAQ's Draft Moderate State Implementation Plan. WRA is a regional nonprofit advocacy organization fighting climate change and its impacts to sustain the environment, economy, and people of the West. These comments cover the following issues.

- The Weight of the Evidence Does Not Support Finding that the Attainment Demonstration Is Adequate.
- The Draft Ozone SIP Does Not Meet the Clean Air Act's Reasonable Further Progress (RFP) Requirement.
- The Draft Ozone SIP Does Not Meet the Clean Air Act's Contingency Measures Requirements.
- The Draft Ozone SIP's 179B(a) Submission Necessarily Fails Because the Plan Has Not and Can Not Meet the Relevant RFP/ROP and Contingency Measures Provisions.
- Because the Draft SIP's 179B(a) Submission Does Not Show that the NWF Would Attain the Ozone NAAQS "But For" International Emissions, the Submission Necessarily Fails.
- In the Draft Ozone SIP and in the Immediate Future, Utah Must Impose Measures that Achieve Significant Reductions in VOC and NO_X Emissions.
- DAQ Would be Well-Served to Adopt the Following Measures to Meet its Current and Future CAA Obligation:
    - Flare Minimization Rule;
    - Small Non-Road Engine Regulations; and
    - Advanced Clean Trucking Rules.
- Under Section 209(e), Utah is Authorized to Adopt California Regulations on Emissions from Small Non-Road Engines.

II. The Weight of the Evidence Does <u>Not</u> Support Finding that the Attainment Demonstration Is Adequate.

The Draft SIP does not include a demonstration of attainment. Rather, the air quality modeling summarized in the draft plan predicts that the NWF will continue to exceed the 2015 ozone NAAQS in 2023. Draft Ozone SIP at 126. Despite finding that the NWF will not attain the

standard, the draft plan contends that, based on the weight of the evidence, EPA should find that the draft plan has successfully modeled attainment. There are at least three reasons that we believe suggest the opposite – that the weight of the evidence supports the conclusion that the draft plan has not modeled attainment.

First, the weight of the evidence does not support finding that modeling has demonstrated attainment because it is almost certain that the NWF will **not** attain the standard. Attainment of the 2015 ozone NAAQS by the 2024 moderate attainment date will be based on monitoring data from 2021, 2022 and 2023. Data from, for example, the Bountiful monitor show that the 4th highest 8-hour average concentrations from 2021 and 2022 are .082 and .075 ppm, respectively. This means that a 4th highest 8-hour average concentration of around .056 ppm or greater in 2023 will mean that the NWF will not attain the standard by the attainment date.[1] Similarly, at the Copperview monitor, a value of about .054 ppm or greater in 2023 will mean that the NWF will fail to attain the standard. It is almost certain that these concentrations will be exceeded over the summer of 2023. Thus, because it is very likely that the NWF will fail to attain the ozone NAAQS by the moderate attainment date, there is no reason to conclude that the draft plan has modeled attainment.

Second, trends in ambient air quality in the NWF do **not** show a decrease in concentrations of ozone. Rather, a chart depicting the three-year average of the 4th highest daily maximum 8-hour average shows that concentrations of ozone recorded at monitoring stations in the NWF have been generally increasing or remaining static over time from 2008 to 2020.[2] Therefore, air quality trends in the NWF do not support a demonstration of attainment.

Third, the draft plan admits that the inventory of VOC emissions in the NWF has decreased only slightly since **2017**. As the plan acknowledges:

> [T]he net total reductions of anthropogenic VOC emission in the NWF NAA are 3.7 tpd, accounting for a decrease of 3.9% of the baseline 2017 emissions. This means that the State of Utah still has 11.15% of its RFP requirements to fulfill or 10.3 tpd of additional emission reductions required to fulfill the CAA 172(c)(2) and 182(b)(1)(A) requirements.

Draft Ozone SIP at 112. The fact that VOCs in the NWF have not decreased substantially since 2017 underscores that there is little reason to believe that attainment has been demonstrated.

Based on the above analysis, we believe that weight of the evidence does not support a determination that the modeling accompanying the draft SIP has demonstrated attainment. As a result, we hope that DAQ will do more in the context of the moderate SIP and in the immediate future to adopt additional measures that will reduce emissions of VOCs and NO_X in order to demonstrate attainment and assure that the NWF complies with the ozone NAAQS as expeditiously as practicable.

[1] Utah Ozone 3 Year Average Summary for 2022.
[2] Utah Air Quality, 2022 Annual Report at 19, Figure 5.

III. The Draft Ozone SIP Does Not Meet the Clean Air Act's Reasonable Further Progress (RFP) Requirement.

Clean Air Act section 182(b)(1) requires a state implementation plan (SIP) for nonattainment areas designated as moderate or higher to meet the reasonable further progress (RFP) requirements by including a rate of progress (ROP) plan that achieves a 15 percent reduction in VOC emissions within 6 years of the baseline year.[3] The draft Ozone SIP does not comply with this core RFP/ROP obligation. As a result, the draft plan does not include one of the key elements demanded of an ozone SIP.[4]

Section 182(b)(1) of the CAA sets out the RFP obligations that apply to the Northern Wasatch Front (NWF), which was designated as a moderate nonattainment area in 2022. 87 Fed. Reg. 60897, 60898 (October 7, 2022). In that decision, the U.S. Environmental Protection Agency (EPA) determined that Utah monitoring data from the years 2018 to 2020 showed that the NWF had failed to meet the 2015 8-hour Ozone National Ambient Air Quality Standards (NAAQS) by the August 3, 2021 attainment date. 87 Fed. Reg. at 60899. Indeed, the NWF's design value – the value used to determine compliance with the Ozone NAAQS and calculated as the three-year average of the annual fourth highest daily maximum 8-hour average monitored ozone concentration – was 77 parts per billion (ppb), well above the 2015 Ozone NAAQS of 70 ppb. *Id.*[5]

Moderate nonattainment areas must meet the RFP requirement by containing an ROP plan that achieves a 15 percent reduction in VOC emissions from the baseline anthropogenic emissions within 6 years of the baseline year. 80 Fed. Reg. at 12275; 83 Fed. Reg. at 63004. For the purposes of the NWF, this means that the draft Ozone SIP must achieve a 15% reduction in VOC emissions by 2023, counting from the baseline year of 2017. Utah acknowledges this requirement, explaining:

> The RFP requirement for this SIP is to reduce VOC emissions by 15% within six years of the established 2017 baseline year. The state must identify and implement emission reduction strategies equal to or greater than 15% of the 2017 baseline inventory…by January 1, 2023.

Draft Ozone SIP at 110.

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[3] 40 C.F.R. § 51.1300(m) defines ROP as "the 15 percent progress reductions in VOC emissions over the first 6 years after the baseline year required under CAA section 182(b)(1)."

[4] Importantly, Utah concludes that failing to achieve adequate VOC emission reductions hinders the effort to attain the ozone standard in the NWF. As Utah explains, while reductions of NO_X emissions are important to attaining the ozone NAAQS as expeditiously as practicable, measures to reduce VOC emissions are also critical to this goal. Draft Ozone SIP at 114 ("Results showed that the area is in a transitional regime, with controls on both VOCs and NO_X emissions as potentially effective strategies to reduce ozone formation.").

[5] 70 ppb is equal to 0.070 parts per million (ppm), the unit of measure in which the 2015 standard is expressed. 87 Fed. Reg. at 60899.

As Utah acknowledges, RFP mandates a 15 percent reduction in **VOC** emissions. Reductions in NO_X emissions, although necessary to achieve other Act obligations, do not count toward the state's current RFP/ROP duties. 80 Fed. Reg. 12264, 12275 (March 6, 2015). This is because the NWF is a newly designated moderate nonattainment area that has **not** previously met the section 182(b)(1) RFP/ROP 15 percent VOC emission reduction requirement. 80 Fed. Reg. at 12275; *see also* 87 Fed. Reg. at 60898 (designating the NWF as a moderate nonattainment area in 2022). In a conclusion that equally applies to a 2015 nonattainment area, 83 Fed. Reg. at 63006, EPA stated that for a nonattainment area "that has not previously adopted and implemented a SIP providing for a 15 percent reduction in VOC emissions consistent with CAA section 182(b)(1)" an air quality agency "must provide for a 15 percent reduction in VOC emissions in the 6 years following the baseline emissions inventory year." 80 Fed. Reg. at 12275; *see also* Draft Ozone SIP at 110 (Because "the NWF does not have a previously approved ROP plan related to ozone, the state must meet the 182(b)(1)(A) requirements for this moderate SIP"). EPA specifically rejected the notion that, in this context, an ozone SIP could provide for NO_X emission reductions as a means of fulfilling the section 182(b)(1) RFP/ROP requirement:

> EPA does not believe that it has the authority under the CAA to allow NO_X substitution for VOC emissions reductions for the 15 percent ROP requirement in any area that has not previously met the 15 percent reduction requirement[.]

80 Fed. Reg. at 12275.

VOC emission reductions that may count toward RFP/ROP must "be enforceable, quantifiable, permanent and surplus." 80 Fed. Reg at 12274. These reductions must have "actually occur[ed] during the relevant ROP/RFP period and after the baseline year," *id.*, and must be from sources located inside the nonattainment area. 80 Fed. Reg at 12273. Finally, the RFP/ROP mandate exists whether or not an area attains the relevant NAAQS. 83 Fed. Reg at 60034 ("The 15 percent ROP requirement must be met by the end of the 6-year period regardless of when the nonattainment area attains the NAAQS.").

Utah's ROP plan, submitted as part of the draft Ozone SIP, does **not** achieve a 15 percent reduction in 2017 VOC emissions by 2023 as RFP requires. Rather, the plan finds only a 3.9 percent decrease in VOC emissions that may be counted toward its RFP/ROP obligations:

> [T]he net total reductions of anthropogenic VOC emission in the NWF NAA are 3.7 tpd, accounting for a decrease of 3.9% of the baseline 2017 emissions. This means that the State of Utah still has 11.15% of its RFP requirements to fulfill or 10.3 tpd of additional emission reductions required to fulfill the CAA 172(c)(2) and 182(b)(1)(A) requirements.

Draft Ozone SIP at 112.

Because the draft Ozone SIP does not meet the requirement to achieve a 15% reduction in 2017 VOC emissions by 2023, the plan does not comply with the applicable CAA requirements. As the deadline for the 15% reduction has passed, it appears that adherence to this requirement for the purposes of the plan is precluded. As a result, the draft Ozone SIP is not legally adequate.

IV. The Draft Ozone SIP Does Not Meet the Clean Air Act's Contingency Measures Requirements.

The CAA also mandates that an ozone SIP include contingency measures. CAA § 172(c)(9). Contingency measures are intended to ensure that if a moderate or higher nonattainment area fails to achieve the 15 percent ROP VOC emission reductions by the RFP milestone year or fails to attain the ozone standard by the attainment date, additional VOC reductions will occur without further state or federal action. *Id.* This provision applies to the NWF because it is a moderate nonattainment area.

As EPA explains,

> [C]ontingency measures must be submitted for approval into the SIP as required by the CAA and must provide for the implementation of specific measures without any further rulemaking action if the area fails to attain or meet any applicable milestone.

80 Fed. Reg. at 12285; *see also* 83 Fed. Reg. 63026 (Contingency measures "must be fully adopted rules or measures that can take effect without further action by the state or EPA upon failure to meet milestones or attain by the attainment deadline."). Contingency measures should result in emission reductions equal to approximately three percent of baseline emissions. 83 Fed. Reg. at 63026.

Importantly, where a state has not completed the initial 15 percent RFP/ROP VOC reductions as required by CAA 182(b)(1)(A)(i), the contingency measures must achieve **VOC** emission reductions. 83 Fed. Reg. at 63026 ("EPA is continuing to allow contingency measures emissions reductions to be based entirely or in part on NO_X controls if the area has completed the initial 15 percent ROP VOC reduction required by CAA section 182(b)(1)(A)(i)."). Therefore, only once a state has achieved the 15 percent ROP VOC reductions as established in an approved 182(b)(1) ROP SIP, may the state substitute NO_X emission reductions for VOC emission reductions. *Id.*; 80 Fed. Reg. at 12276.

As the draft Ozone SIP admits, the NWF has not met the section 182(b)(1) ROP 15 percent VOC reductions. As a result, the draft plan must include contingency measures that will, without further state or federal action, secure additional VOC emission reductions of approximately 3 percent of 2017 emissions. The draft plan's contingency measures promise substantial NO_X reductions. We strongly support the immediate implementation of these measures as necessary to attain the ozone NAAQS as expeditiously as practical, as the CAA requires and appreciate the effort that has gone in to deriving and imposing these measures and technologies.

Yet, the draft ozone SIP sets forth contingency measures that would achieve only a 0.47 percent reduction in VOC emissions. Draft Ozone SIP at 155.[6] Given that the draft Ozone SIP does not include contingency measures adequate to secure a total of a 3 percent reduction in **VOC**

[6] The draft SIP claims that its contingency measures will result in 0.44 tons per day in VOC emissions, equaling a 0.47 percent reduction 2017 baseline VOC emissions. Draft Ozone SIP at 155. It is unclear which contingency measure or measures would result in these reductions.

emissions, the draft plan fails to meet section 172(c)(9), a central CAA requirement. Therefore, the draft Ozone SIP is not legally adequate.

V. The Draft Ozone SIP's 179B(a) Submission Necessarily Fails Because the Plan Has Not and Can Not Meet the Relevant RFP/ROP and Contingency Measures Provisions.

As part of the draft SIP, DAQ acknowledges that it cannot demonstrate attainment of the 2015 Ozone NAAQS. The agency contends nonetheless, that under CAA section 179B(a), Utah should be relieved of the obligation to demonstrate attainment or, that the weight of the evidence favors finding that attainment has been demonstrated. Draft SIP at 141 & 150. However, the draft SIP's 179B(a) submission is necessarily inadequate. This is because, to be valid, the 179B(a) submission must show that Utah's final moderate ozone SIP meets **all** applicable CAA requirements other than the attainment demonstration. As established above, Utah's draft Ozone SIP has not and cannot meet the sections 182(b)(1) and 172(c)(9) elements required of a SIP. As a result, the submission fails to fulfill a central requirement of 179B(a).

Initially, section 179B(a) provides that a SIP "shall be approved by the Administrator if…such plan or plan revision meets all the requirements applicable to it…other than the requirement that such a plan or revision demonstrate attainment and maintenance of the relevant [NAAQS] by the attainment date[.]" EPA 179B Guidance at 3;[7] CAA section 179B(a)(1) (stating EPA shall approve a SIP if, *inter alia*, the SIP "meets all the requirements applicable to it under th[is] chapter other than a requirement that [the SIP]…demonstrate attainment and maintenance of the relevant national ambient air quality standards."); *see also* EPA 179B Guidance at 14 ("The air agency should…first evaluate whether the area can attain the standard by the attainment date based on required domestic emission reductions only."). "The regulatory relief gained if the state's section 179B(a) prospective demonstration is to the satisfaction of the [EPA]…is the ability for a state to submit an approvable attainment plan that does not demonstrate attainment and maintenance of the relevant NAAQS." EPA 179B Guidance at 3, fn. 8.

Of course, among the applicable requirements for any nonattainment area SIP is "a demonstration that the plan provides for Reasonable Further Progress (RFP) toward attainment[.]" EPA 179B Guidance at 13 (stating that the RFP provisions are necessary elements of a SIP specifically in the context of 179B(a)). Moreover, an adequate SIP must include valid contingency measures. *Id.* (stating contingency measures are a necessary element of a SIP specifically in the context of 179B(a)).

As established above, to meet the CAA's RFP/ROP, the NWF ozone plan must achieve a 15 percent reduction in VOC emissions from the baseline anthropogenic emissions within 6 years of the baseline year. 80 Fed. Reg. at 12275; 83 Fed. Reg. at 63004. For the purposes of the NWF, this means that the draft Ozone SIP must document a 15% reduction in VOC emissions by 2023, counting from the baseline year of 2017. *E.g.* Draft Ozone SIP at 110. Yet, the RFP/ROP plan, submitted as part of the draft Ozone SIP, does **not** achieve a 15 percent reduction in 2017 VOC emissions by 2023 as section 182(b)(1)(A)(i) requires. Rather, the plan finds only a 3.9 percent

[7] Guidance on the Preparation of Clean Air Act Section 179B Demonstrations for Nonattainment Areas Affected by International Transport of Emissions, EPA (December 2020).

decrease in VOC emissions that may be counted toward its RFP/ROP obligations, Draft Ozone SIP at 112, and so does not meet a key element of a lawful SIP.

Similarly, as established above, because the NWF has not achieved the initial 15 percent RFP/ROP VOC reductions as required by CAA 182(b)(1)(A)(i), the contingency measures imposed by section 172(c)(9) must achieve **VOC** emission reductions equal to approximately 3 percent of baseline emissions. 83 Fed. Reg. at 63026; 80 Fed. Reg. at 12276. The draft Ozone SIP admits that the NWF has not met the section 182(b)(1) ROP 15 percent VOC reductions. Draft Ozone SIP at 112. Further, the draft ozone SIP sets forth contingency measures that would achieve only 0.47 percent VOC emission reductions. Draft Ozone SIP at 155. Given that the draft plan does not include contingency measures adequate to secure an additional 3 percent reduction in **VOC** emissions, the draft plan fails to meet section 172(c)(9), a central CAA requirement.

In sum, the 179B(a) demonstration, submitted as part of the draft Ozone SIP cannot succeed. A valid 179B(a) submission must show, *inter alia*, that the draft SIP meets all the applicable CAA requirements for a moderate SIP other than the attainment demonstration. Because the draft SIP does not meet the RFP/ROP and contingency measure elements demanded of a moderate SIP, the accompanying 179B(a) submission necessarily fails. As a result, we hope that DAQ will do more in the context of the moderate SIP and in the immediate future to adopt additional measures that will reduce emissions of VOCs and NO_X in order to demonstrate attainment and assure that the NWF will comply with the ozone NAAQS as expeditiously as practicable.

VI. Because the Draft SIP's 179B(a) Submission Does Not Show that the NWF Would Attain the Ozone NAAQS "But For" International Emissions, the Submission Necessarily Fails.

As explained above, the draft SIP's 179B(a) submission must first show that the moderate ozone SIP for the NWF meets all the applicable SIP requirements. Because the draft SIP cannot and does not include adequate RFP/ROP and contingency measure provisions, the 179B(a) submission is not legally sufficient. Moreover, a 179B(a) submission must also show to the satisfaction of EPA that the SIP "would be adequate to attain and maintain the relevant [NAAQS] by the attainment date...**but for** the emissions emanating from outside of the United States[.]" EPA 179B Guidance at 3 (emphasis added).

The SIP's 179B(a) submission does not meet this "but for" test because it fails to show, *inter alia*, that on days the NWF exceeds the ozone NAAQS, the contribution of international anthropogenic emissions to ozone concentrations is greater than the contribution from Utah anthropogenic emissions. Rather, the 179B(a) submission shows the opposite – that on exceedance days, the contribution of Utah anthropogenic emissions is considerably greater than the contribution of international anthropogenic emissions. Moreover, the submission also shows that on exceedance days, the contribution of Utah anthropogenic emissions increases significantly more than does the contribution of international anthropogenic emissions.

Initially, the draft SIP admits that to succeed, the 179B(a) submission must establish that "international emissions represent a significant contribution to the [NWF] relative to ozone

attributable to anthropogenic emissions within the [NWF][.]"[8] Draft Ozone SIP at 149. EPA explains this requirement, stating that a compelling 179B demonstration will show that, on exceedance days, the contribution from international emissions is "meaningfully" larger than contributions from domestic sources:

> When a section 179B demonstration shows that international contributions are larger than domestic contributions, the weight of evidence will be more compelling than if the demonstration shows domestic contributions exceeding international contributions.

EPA 179B Guidance at 7; *see also id.* at 43 ("The range of results should demonstrate that international anthropogenic sources were large contributors relative to U.S. contributions on exceedance days."); *id.* at 44 ("When results show that international contributions are larger on exceedance days and **meaningfully** larger than domestic contributions, the weight of evidence will be more compelling."); *id.* at 36 ("When exceedance days show larger fractions of NPSC from international anthropogenic sources, this adds to the weight of evidence that international anthropogenic sources contribute to exceedances."); *id.* at 38 (same).

First, we note that as EPA instructs, the proper comparison for a 179B submission is between U.S. contributions and international anthropogenic sources. Instead, the draft SIP's 179B(a) submission largely compares Utah contributions to international anthropogenic sources. We will do the same but stress that the appropriate comparison establishes even more forcefully that the contribution of international anthropogenic emissions in the NWF is even more considerably overshadowed by the contributions of U.S. emissions.

In an attempt to meet the "but for" and "significant contribution" tests, the draft SIP shows only that the contribution of international anthropogenic emissions is small compared to Utah emissions and that this contribution increases by only a tiny amount – 0.5% – from non-exceedance days to exceedance days:

> The contribution of international anthropogenic emissions to MDA8 ozone also increased on exceedance days compared to non-exceedance days, but the increase was not as significant as that determined for local anthropogenic and biogenic source emissions. Their contribution estimate increased from 3.25 ppb (6.2%) on non-exceedance days to 4.47 ppb (6.7%) on exceedance days.

Draft Ozone SIP at 146.

Examining these figures in context further proves that the 179B(a) submission has not met the but for and significance tests. According to the submission, Utah anthropogenic emissions contribute 6.08 ppb to the non-exceedance day average, 11.89 ppb to the exceedance day average and 13.24 ppb to the top 10 exceedance day average. The same numbers for international

[8] EPA acknowledges that it will be harder for a state like Utah, located away from an international border, to submit a convincing 179B(b) submission: "[T]echnical demonstrations for non-border areas may involve additional technical rigor and resources compared to demonstrations for border areas." EPA 179B Guidance at 6.

anthropogenic emissions are 3.25 ppb, 4.47 ppb, and 4.50 ppb, respectively. Draft Ozone SIP at 147, figure 21. This comparison underscores that local anthropogenic emissions contribute considerably more to ozone concentrations in the NWF than do international anthropogenic emissions – from almost **twice** as much during non-exceedance days to **three** times as much during the top 10 exceedance days.

Second, the 179B(a) analysis confirms that Utah anthropogenic emissions increase substantially more during exceedance episodes than do international anthropogenic emissions. Given that the goal is to prevent exceedance days, this fact is highly germane to the present inquiry. Specifically, the contribution of Utah emissions to the exceedance day average over the non-exceedance day average increases by 6.3%, versus the international contribution, which increases by 0.5%. Even more pronounced, the increased contribution of Utah anthropogenic emissions from non-exceedance days to the top 10 exceedance days is 7.6%, while the increased contribution of international anthropogenic emissions is 0.3%. Thus, the influence of local anthropogenic emissions on exceedance day ozone concentrations in the NWF is significantly more than the influence of international anthropogenic.

Based on these numbers, the draft SIP cannot defend its assertion that the NWF would attain the ozone standard **but for** international emissions. Rather, reductions in local anthropogenic emissions contribute considerably more to ozone concentrations and have considerably more influence on ozone concentrations during exceedance days. By the same token, decreases in local emission can and will have the greatest impact on ozone concentrations and will allow the NWF to meet the ozone NAAQS. This is particularly true because modeling cited by the draft plan claims that the future design value for the Hawthorne monitor is 72.7 ppb, or if rounded as the plan suggests, 72 ppb. Draft Ozone SIP at 126. Based on this modeling and the claims of the draft plan, a reduction in 2 ppb in ozone concentrations is all that is needed to bring the NWF into attainment.[9]

In sum, given that local emissions constitute a more significant portion of overall emissions than international emissions and play a substantially greater role in exceedance days concentrations, it is plain that reductions in local anthropogenic emissions can secure the 2 ppb reduction in ozone concentrations and assure that the NWF will attain the ozone standard. Therefore, we hope that DAQ will do more in the context of the moderate SIP and in the immediate future to adopt additional measures that will reduce emissions of VOCs and NO_X in order to demonstrate attainment and assure that the NWF will comply with the ozone NAAQS as expeditiously as practicable.

[9] These two modeling exercises – the effort to model attainment and the effort to support a 179B(a) submission – may not be analogous. However, the fact that the draft plan contends that the future design value at the Hawthorne monitor "is close to" the 2015 ozone NAAQS confirms that prompt reductions in local emissions, such as those required by the RFP/ROP and contingency measure provisions, can ensure that the NWF attains the standard.

VII. In the Draft Ozone SIP and in the Immediate Future, Utah Must Impose Measures that Achieve Significant Reductions in VOC and NO_X Emissions.

As explained above, Utah must achieve significant reductions in VOC emissions in the NWF in order to meet its current moderate SIP obligations. In addition, in the near future Utah must also secure further emission decreases, first in VOCs and eventually NO_X emissions. It is therefore incumbent on DAQ to immediately identify and implement control measures adequate to meet its moderate SIP obligations and to attain the 2015 ozone standard as expeditiously as practicable. This reality underscores that DAQ would be well-served by adopting the measures that we presented to the agency and Air Quality Board on November 2, 2022, as reasonably available controls, currently being applied in other states. We present those measures again below.

Initially, as explained above, the NWF must meet its obligations under the RFP/ROP and contingency measure provisions by implementing substantial reductions in **VOC** emissions in the present moderate plan and as soon as possible thereafter. Second, should the moderate plan's contingency measures be inadequate to bring the NWF into attainment with the 2015 ozone standard, DAQ must immediately develop and implement the additional control measures needed to bring the area into attainment. 83 Fed. Reg. at 63026 ("Once triggered, if the[] contingency measures are insufficient to attain the standard, an air agency must conduct additional control measure development and implementation for the area as necessary to correct the shortfall.").

Similarly, if and when the NFW fails to attain the ozone standard by the moderate attainment date and the area is designated as a serious nonattainment area, Utah's RFP obligations will continue. As a serious nonattainment area, the NWF must achieve an additional 3 percent reduction per year in VOCs unless and until the area meets its 182(b)(1) RFP/ROP and 172(c)(9) contingency measure requirements. This obligation is above and beyond Utah's duties vis-à-vis the moderate SIP, including the moderate RFP/ROP and contingency measures mandates. Once these obligations are met, the NWF should be able to meet its future RFP and contingency obligations in part or entirely with reductions in NO_X emissions until the area attains the ozone standard.[10]

Further, as a serious nonattainment area, the NWF would have to comply with the section 182(g) milestone demonstration and the 182(c)(9) contingency measure provisions. As EPA explains, under the "milestone compliance demonstration" or MCD provision, a state must achieve **and** demonstrate that the RFP milestones have been met. 83 Fed. Reg. at 63011. If a state fails to submit a MCD on time or EPA determines that a milestone was not met, an air agency must choose one of three options: 1) have the area reclassified as the next highest classification; 2) implement additional measures to meet the next milestone; or, 3) adopt a Section 182(g)(4) incentive program. *Id.*

[10] For example, in order to substitute NO_X for VOC emission reductions to meet its contingency measure obligation, an air agency must "demonstrate[] that NO_X substitutions (entirely or in part) would be effective in bringing an area into attainment." 83 Fed. Reg. at 63026.

These current requirements and the future mandates likely to apply to the NWF underscore that now and in the near future, Utah must secure considerable emission reductions of first VOCs and then, almost certainly, NO_X. To this end, we urge DAQ to adopt and implement the measures we outline below as reasonably available means to reduce VOCs and NO_X in the NWF and to bring the area closer to attainment of the 2015 ozone standard.

V. DAQ Would be Well-Served to Adopt the Following Measures to Meet its Current and Future CAA Obligations.

A. Flare Minimization Rule.

Refinery flares are a significant source of VOCs. Based on then-recent studies, EPA revised its AP-42 guidance for estimating VOC emission from flaring in December 2016, increasing the emission factor about 10-fold. The updated emission factor applies to "well-operated flares achieving at least 98% destruction efficiency" and is now 0.66 pounds VOC per MMBTU.[11]

To reduce VOC emissions, as well as other emissions from flares, the Bay Area Air Quality Management District (BAAQMD) adopted refinery flare regulations aimed at cutting emissions from flares by reducing the number and size of flaring events.[12] The rules also require refineries to monitor flares and file monthly reports.[13] Ultimately, flaring is not permitted unless it conforms to an approved Flare Minimization Plan, which describes each flare at a facility, the equipment and procedures employed to reduce flaring and any other measures needed to prevent flaring. Flare Minimization Plans are subject to public notice and comment. Chevron and Marathon (Tesoro) are among the companies that must submit Flare Minimization Plans to BAAQMD.

Importantly, BAAQMD's rules incorporate, are consistent with, and require additional measures and controls beyond EPA's Refinery Sector Rule, 40 C.F.R. Part 63 Subpart CC.[14]

We have attached, as **WRA attachment 1**, a graph that illustrates the reduction in non-methane hydrocarbon emissions at BAAQMD flares that have occurred as a result of the district's refinery flare rules.

B. Small Non-Road Engine Regulations.

As DAQ acknowledges, small non-road engines, including 2- and 4-stroke engines, are a significant source of VOCs. The inventory of summertime VOC emissions shows that 4-stroke lawn and garden equipment account for approximately 3.97 tons of VOCs per day and 0.33 tons

[11] *See* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1118/PAR1118draftstaff.pdf. South Coast Air Quality Management District, Draft Staff Report (July 2017) at 10.
[12] *See* https://www.baaqmd.gov/plans-and-climate/emission-tracking-and-monitoring/flare-minimization-plans. The BAAQMD rules eliminate routine flaring, require use of sulfur and heating value analyzers on flare streams, require Flare Minimization Plans, require posting of flare incidents and establish decreases in emission targets.
[13] *Id.*
[14] *Id.*

of NO_X per day. As California noted when it decided to require that most new small non-road engines be zero emissions, "The volume of smog-forming emissions from this type of equipment has surpassed emissions from light-duty passenger cars and is projected to be nearly twice those of passenger cars by 2031."[15] Gasoline powered small non-road engines are also a significant source of benzene, butadiene, formaldehyde, CO, and $PM_{2.5}$. Nevertheless, it appears that DAQ is only considering "in use" strategies for small non-road engines and that the agency is not planning to include any particular measure to decrease VOC emissions from these sources in the draft Ozone SIP.

Because VOC emissions in the NWF must be decreased significantly as part of the Moderate SIP as well as in the immediate future, we hope that DAQ will immediately consider imposing in use restrictions for the NWF on all small off-road engines, including for the 2- and 4-stroke engines used for lawn and garden equipment. However, it is critical that these rules make plain there will be no restrictions on zero emission or electric small non-road engines. Such a clarification would encourage the purchase of zero emission equipment precisely because this equipment could be used even during episodes when the use of polluting equipment would be banned.

Further, given that the NWF will have to achieve significantly more reductions in VOCs now and in the future, we urge DAQ to consider rules that will, in a timely fashion, require most **new** small off-road engines to be zero emission engines. Recognizing the significant impact that VOC emissions from small off-road engines have on ozone concentrations, California recently adopted rules that require most newly manufactured small off-road engines, including those found in leaf blowers and lawn mowers, to be "zero emission" starting in 2024.[16] The regulations do not ban using older models, including those on store shelves. In explaining the rationale for its new rules, California states that zero emission small off-road engine equipment is readily available,[17] underscoring that the zero emission rules constitute reasonably available control measures.

Importantly, as discussed below, there are no federal pre-emption issues that might affect Utah's authority to regulate the emissions from small off-road engines, including by mandating that new lawn and garden equipment sold and used in the state have zero emissions.

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[15] https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024.

[16] https://ww2.arb.ca.gov/rulemaking/2021/sore2021.

[17] As the California Air Resources Board explains, in 2021 it finalized rules to eliminate emissions – which are largely VOCs – from all small non-road engines:

> The California Air Resources Board [] approved a measure that will require most newly manufactured small off-road engines such as those found in leaf blowers, lawn mowers and other equipment be zero emission starting in 2024. Portable generators, including those in recreational vehicles, would be required to meet more stringent standards in 2024 and meet zero-emission standards starting in 2028.

https://ww2.arb.ca.gov/news/carb-approves-updated-regulations-requiring-most-new-small-road-engines-be-zero-emission-2024.

C. Advanced Clean Trucking Rules.

WRA also urges DAQ to start considering longer term emissions reductions strategies as soon as possible. In particular, DAQ should consider how the state might adopt and implement the California Air Resources Board's Advanced Clean Trucks and Heavy-Duty Omnibus Rules, which are available to states to adopt under Section 177 of the CAA, in sufficient time to count any associated emissions reductions during the state's submission of a potential serious SIP for the Northern Wasatch Front Non-Attainment Area.

Medium- and heavy-duty vehicles' diesel emissions are a significant source of VOCs. In the immediate term, DAQ should consider rules to lower the emissions intensity of the medium-and heavy-duty vehicle stock in Utah, as numerous other states have done. Included as **WRA Attachment 2** is a list of states that have adopted or have begun the process of adopting advanced clean trucking rules, including information on whether the state pursued the rules through legislation, executive order, or administrative rulemaking.

The Advanced Clean Trucks Rule would require vehicle manufacturers to deliver and sell an increasing number of zero-emissions medium- and heavy-duty vehicle models in Utah, with specific requirements varying based on vehicle classification. There are flexible compliance pathways in the rule allowing for manufacturers to meet their compliance obligations in a variety of ways. The Heavy-Duty Omnibus Rule would require that all new internal combustion engine medium- and heavy-duty vehicles sold in Utah meet more stringent NO_X and PM standards. Adoption of the rules would allow an early crediting period to begin when Utah adopts the rule and continue for the next two model years before rule compliance begins. For example, if Utah adopted the rule in 2025, the first year of compliance would begin in calendar year 2028, corresponding to model year 2029. However, early action crediting mechanisms would encourage vehicle manufacturers to begin delivering and selling zero-emissions models to Utah prior to the first year of rule compliance, beginning as soon as the rule was adopted in 2025.

WRA Attachment 3 is a report by the International Council on Clean Transportation about how the advanced clean trucking rules work, including compliance requirements and timelines.

VI. Under Section 209(e), Utah is Authorized to Adopt California Regulations on Emissions from Small Non-Road Engines.

Emission reductions from lawn and garden equipment and other small non-road engines are particularly valuable to the NWF because these engines are a significant source of VOCs. For this reason, we urge Utah to use the full scope of its authority to reduce and eliminate VOC and other emissions from small non-road engines. DAQ should therefore consider and prepare to adopt regulations that would require all new small non-road engines to be zero emission engines. Importantly, once EPA authorizes California's zero emission regulations, DAQ may adopt these regulations without violating CAA section 209(e).

The draft Ozone SIP states that CAA "section 209(e) specifically preempt[s] states from regulating emissions from non-road sources." Draft Ozone SIP at 102. As a result, DAQ appears to limit its consideration of emission reduction strategies relating to small non-road engines to in-

use restrictions, or "restrictions on when or where these engines can be operated[.]" Draft Ozone SIP at 103.

However, 209(e)(2)(B) **does** allow states to adopt EPA-authorized California non-road or off-road **emission standards**, including emissions standards for lawn and garden equipment.[18] Specifically, 209(e)(2)(B) provides that non-California states may adopt and enforce "standards relating to control of emissions from nonroad vehicles or engines" that are "identical" to California's regulations. The states must also implement and enforce the non-road standards in the same way indicated in the California rule. CAA Section 209(e)(2)(B)(i).

EPA has made clear that section 209(e)(2)(B) permits states to adopt authorized California non-road vehicle or engine emission standards:

> The Clean Air Act also allows other states to adopt California's nonroad vehicle or engine emission standards under section 209(e)(2)(B). Section 209(e)(2)(B) requires, among other things, that such standards be identical to the California standards for which an authorization has been granted. States are not required to seek EPA approval under the terms of section 209(e)(2)(B).[19]

EPA has routinely authorized California regulations limiting emissions from small non-road engines.[20] These regulations have been successful in reducing VOCs in California airsheds. Beginning in 1990, California started restricting both exhaust and evaporative emissions from small off-road engines, defined as spark-ignition engines rated at or below 19 kilowatts.[21] Engines in this category are chiefly used in lawn, yard, and other outdoor power equipment. Due to these regulations, these small engines are 40 to 80 percent cleaner than they were before the program began.[22]

EPA explains that, for non-road engine and vehicle regulations, it will address a California authorization request after providing public notice and comment and applying a three-part test that presumes the validity of the relevant regulation.[23] CAA section 209(e)(2)(a). Under this

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[18] California, and therefore Utah, may **not** adopt standards for two kinds of non-road engines or vehicles: 1) "[n]ew engines which are used in construction equipment or vehicles or used in farm equipment or vehicles and which are smaller than 175 horsepower;" and, 2) "[n]ew locomotives or new engines used in locomotives." CAA Section 209(e)(1)(A)&(B). Plainly, these exceptions are not relevant to the present situation.

[19] https://www.epa.gov/state-and-local-transportation/vehicle-emissions-california-waivers-and-authorizations; *see also id.* ("The Clean Air Act allows California to seek authorization to enforce its own standards for new nonroad engines and vehicles, despite the preemption which prohibits states from enacting emission standards for new nonroad engines and vehicles.")

[20] *Id.*

[21] https://ww2.arb.ca.gov/our-work/programs/small-off-road-engines-sore.

[22] We also urge DAQ to consider and adopt any already authorized California rules limiting emissions from small non-road engines as a reasonably available measure to reduce VOCs.

[23] *Id.* ("When California files an authorization request, EPA publishes a notice for public hearing and written comment in the Federal Register. The written comment period remains open for a

standard, EPA has approved a host of California rules, including those regulating small non-road engines. Indeed, in May of this year, the federal agency initiated a public process to address California's 2022 request for authorization of its "Nonroad Engine Pollution Control Standards."[24] Given California's track record of success, EPA's repeated authorization of California's rules and the need to significantly reduce VOCs in the NWF, we urge DAQ to consider and adopt California small non-road engine regulations.

Emissions from small non-road engines are a significant source of VOCs and will contribute a larger percentage of VOCs to the NWF airshed as other sources are more tightly controlled. Thus, we urge DAQ to maximize emission reductions from "in use" regulations of these engines. Following this effort, we hope that the agency will consider and, as soon as it is authorized by EPA, adopt California's newest zero emission rule for small non-road engines as a reasonable measure to substantially decrease emissions of VOCs from lawn and garden equipment and other small non-road engines.

period of time after the public hearing. Once the comment period expires, EPA reviews the comments and the Administrator determines whether the requirements for obtaining an authorization have been met.").

[24] 88 Fed, Reg. 33143 (May 23, 2023).