



Re: Report evaluating air quality permit modeling and cumulative impacts in response to July 12, 2022 Letter from Governor Polis to CDPHE, DNR, COGCC

Dear Governor Polis and Honored Members of the General Assembly:

On July 12, 2022, Governor Polis directed the Colorado Department of Public Health and Environment (CDPHE), the Department of Natural Resources (DNR), and the Colorado Oil and Gas Conservation Commission (COGCC) to undertake further interagency coordination and collaboration in service of the State’s mission to improve air quality, reduce pollution, create a more efficient regulatory process, and protect the State’s most at-risk communities. The first step in implementing these directives is for CDPHE to provide the Administration and General Assembly with “an evaluation of cumulative impacts and air quality permit modeling.” The Governor’s 2022 letter states:

The Report should include how the Air Pollution Control Division ([Air Division]) considers, models or doesn’t model, and evaluates the air quality impacts of a proposed major or minor source or activity, and the cumulative air quality impacts of the proposed source and other sources. The Report should also articulate the scientifically-based and capacity-based criteria used to prioritize when to model sources for permitting purposes with limited resources.

This report provides an overview of air quality permit modeling and how cumulative air quality impacts are defined and assessed during that process. This report also addresses steps that the Air Division has taken to better protect people and air quality in Colorado through the air quality permit modeling process while reducing red tape and providing for a more scientifically-sound and efficient regulatory process. This report is intended as an overview, and provides links and [attachments](#) to the suite of documents reflecting the Air Division’s progress. Some of the key takeaways are:

- Air quality permit modeling is a complicated and technical process that can be used to evaluate the impact of a proposed source of air pollution against ambient air pollution standards established by the U.S. Environmental Protection Agency (EPA). This technical process evolves with new technology, science, modeling techniques, and guidance from the EPA and other expert bodies.
- The Air Division has developed Modeling Guidelines that discuss when certain air pollution sources should use air quality permit modeling to evaluate the impacts of potential emissions (i.e. the pollution emitted by the source) on ambient air quality (i.e. the amount of pollution existing in the air at a given place at a given time).
- The Air Division’s Modeling Guidelines have evolved as EPA’s standards have evolved and more effective and efficient approaches are identified as best practice.

- The [most current version of the Modeling Guidelines](#) were published on May 17, 2023. Significant updates were made based upon the Minor Source Permit Modeling Subject Matter Expert (SME) Panel and feedback from members of the General Assembly, community members, environmental organizations, and other stakeholders. The Air Division worked to be more efficient in the processing of permit applications, including the use of air quality permit modeling, to direct its resources to the actions that have the most direct impact upon air quality.
- In May 2023, the Air Quality Control Commission (Air Commission) adopted revisions to Colorado's Regulation Number 3 to establish enhanced modeling, monitoring, and permitting requirements for stationary sources in disproportionately impacted (DI) communities in response to the Environmental Justice Act, House Bill 21-1266.

The Air Division recognizes and expects that permitting processes and procedures will continue to change and improve as our understanding of air quality and cumulative impacts evolves. The Air Division remains committed to using a data driven approach and incorporating feedback from stakeholders to continue to protect the welfare and health of all Coloradans.

While cumulative impacts are a matter of concern for many communities across Colorado, some of the most significant impacts of air pollution in Colorado are regional, such as ozone. Therefore, while the Air Division's permitting approach must be conscientious of the contributions of new and modified sources of pollution, modeling alone does not necessarily improve air quality. That is why the Air Division is taking additional outcome-based strategies to reduce pollution such as implementation of rulemaking to achieve NOx emissions reductions from upstream oil and gas in a technology-agnostic way, statewide programs to accelerate the transition to electric vehicles, and support of rulemaking and investments in industrial facilities to reduce pollution. All of these efforts exist outside of the permitting and modeling work and are critical to achieving the National Ambient Air Quality Standards ("NAAQS").

Air pollution from the oil and gas and transportation sectors are the largest sources of ozone precursor emissions in the Denver Metro/North Front Range ozone nonattainment area. To address impacts from transportation, over the past three legislative sessions the Polis Administration and the General Assembly have invested an unprecedented amount into cleaner transportation. A brief summary of some of the more significant transportation investments and pollution reduction measures is warranted, given that the impacts of these programs are not accounted for in air quality permit modeling.

- In June 2021, Governor Polis signed SB21-260 which, among other elements, established three new state enterprises focused on transportation electrification. The law's aim is to reduce emissions while improving local air quality, investing hundreds of millions of dollars in infrastructure, fleet electrification, and other projects.
- In late 2022, state agencies began the process of updating the state's EV Plan, finalizing the [2023 EV Plan](#) in spring 2023. The new EV Plan also features an increased focus on equity, electric trucks, electric micromobility (e.g., e-bikes, e-scooters), federal funding opportunities, and key implementation issues, such as charger reliability and charger

permitting. One important new action in the plan is a proposal to extend and expand Colorado’s clean car sales standards. A rulemaking at the Air Commission is scheduled to begin in July 2023.

- To ensure greater access to and affordability of electric vehicles for all Coloradans, [HB23-1272](#) expanded existing state tax credits for electric vehicle purchases and leases. HB23-1272 also increased and extended tax credits for the purchase of light-, medium-, and heavy-duty electric trucks. Also through HB23-1272, Colorado established a \$500 e-bike tax credit available to bike shops around the State in exchange for discounting an e-bike by \$450 at the time of purchase.
- Through [SB22-193](#), Colorado established funding for an e-bike rebate program that will provide point-of-sale rebates for electric bicycle purchases to low- and moderate-income Coloradans. The bill also created the largest electric school bus grant program of any state on a per capita basis.
- [SB22-180](#) created the Ozone Season Transit Grant Program, which provides \$28 million to transit agencies statewide to provide fare free transit service during the 2022 and 2023 summer ozone season (June through August). The program reduces vehicle pollution during ozone season, and helps rebuild transit ridership following the COVID-19 pandemic.
- In April 2023, the Air Commission adopted the Advanced Clean Trucks and Low NOx Omnibus rules, which will result in meaningful reductions of ozone precursors and greenhouse gases from the transportation sector. Medium- and heavy-duty trucks disproportionately emit harmful air pollutants. These programs will make it more affordable for Colorado fleet owners and operators to switch to electric vehicles, and are an essential step in implementing the state’s Clean Truck Strategy.

The examples above outline just a handful of the strategies underway to draw down unprecedented federal funds for the transition to zero-emission vehicles, buildings, manufacturing, and electricity– all of which will further decrease air pollution from these sectors.

Lastly, during the 2022 legislative session, the General Assembly appropriated a historic investment to the Air Division, much of which has been used to improve the Air Division’s permitting and modeling processes. Since July 2022, the Air Division has hired over one hundred new staff, including nearly 20 permitting team members and an additional 6 staff for the permit modeling unit. Additional hires are expected in the coming months. The Air Division is employing all tools and resources at its disposal, through engaging graduate-level interns from Colorado’s university system and targeted contracts with experts and consultants to conduct modeling and support permitting. The Air Division is committed to continual program improvement and is pleased to submit this report spotlighting recent progress.

I. Background on Air Quality Permit Modeling

A. Development of the Air Division’s Modeling Guideline

Air quality permit modeling is a complicated and technical process that can be used to evaluate the impact of a proposed air pollution source or activity against a federal air pollution standard known as the National Ambient Air Quality Standard (NAAQS). The EPA has established NAAQS for six pollutants, known as “criteria pollutants.” Criteria pollutants include ozone (O3), nitrogen dioxide (NO2) - also generally referred to as NOx, sulfur dioxide (SO2), lead (Pb), carbon monoxide (CO), and particulate matter (PM10 and PM2.5).

Prior to issuing a permit for a minor (i.e. smaller) source of air pollution, Colorado regulations require the Air Division to determine whether the “proposed source or activity will cause an exceedance of any” NAAQS. Modeling is not the only mechanism for making this determination. The Air Division has been working for years to provide clarity around when the Air Division would require modeling in support of its determination that a proposed source or activity would not cause an exceedance of a NAAQS. In 2002, the Air Division’s permit modeling unit - then known as the Modeling and Emissions Inventory Unit - developed a guidance document to provide this clarity. Part of this guidance document included “modeling thresholds” - identified amounts of specified pollutants emitted by the proposed project above which modeling would presumptively be part of the permit review process. When Colorado’s 2002 version of the Modeling Guideline was prepared, EPA had not yet adopted the current 1-hour NO2 and SO2 NAAQS. Therefore, the Modeling Guideline focused on the annual NAAQS. Most of the modeling thresholds established in 2002, including those for minor sources, were set at the same emission rate as the significant emission rates in EPA’s New Source Review rule for major stationary sources (e.g., 40 tons per year for NOx).

In 2010, the Modeling Guideline was revised to include new modeling thresholds developed for short-term versions of the PM2.5, NO2, and SO2 NAAQS, on a pounds per hour basis instead of a tons per year basis. Documentation of the work performed by the Air Division in support of these modeling thresholds can be found in a document titled “[Air Dispersion Modeling Analysis to Support the Modeling Thresholds and Associated Language in Section 2 of the Colorado Modeling Guideline for Air Quality Permits](#)” (January 2002, April 2010).

The Air Division’s Modeling and Emissions Inventory Unit conducted hypothetical modeling to determine an emission rate at which exceedances of the NAAQS would be unlikely under most circumstances. Because the new short-term NAAQS were more stringent than the annual NAAQS, and in the absence of clear guidance from EPA, the hypothetical modeling exercise resulted in some scenarios identifying potential NAAQS impacts at lower emissions thresholds. As EPA has recognized, the Air Division’s hypothetical modeling was very conservative - i.e., the model predicted problems with the NAAQS that were less likely to occur in reality based on the assumptions made by the Air Division around the source’s operation or emissions. EPA stated (on page 28 of its [report](#)):

Our review also found that the APCD modeling unit has taken a conservative modeling approach that may result in higher predicted air quality impacts. While this is not an inappropriate approach, and it appears to follow EPA guidance, the use of other acceptable and representative options and assumptions could produce more refined and

representative analysis that could generate predicted concentrations that are significantly different or in compliance with the standards. In other words, more refined analyses might have demonstrated that the proposed projects would not cause NAAQS violations.

See *also* page 19 of EPA's report, noting that the Air Division modeling unit's analysis reflected "several conservative assumptions – that is, assumptions that would tend to ensure that the impacts would be over-predicted rather than under-predicted by the model."

As the Air Division has acknowledged in public correspondence with EPA, after EPA's promulgation of the 1-hour NAAQS for NO_x and SO₂, the Air Division's permitting program developed new guidance (in the form of permitting section or "PS" Memo 10-01). In this memo, the Division attempted to clarify for its permitting staff that they should use EPA guidance around modeling for the larger sources (major stationary sources) and apply that same guidance to smaller sources (minor sources). The memo relied on EPA guidance stating that an "ambient air quality impact analysis" is not necessary for major stationary sources with a potential to emit less than the significant emission rate of 40 tons per year of NO_x and SO₂. Based on the principle that minor sources should not be regulated more stringently than major stationary sources, the memo indicated modeling should only be required for minor sources that exceed the 40 tons per year emission rate. This led to the unfortunate situation of two different Air Division programs having conflicting guidance on the same topic - i.e., two different programs using different thresholds to determine when modeling would be required, and for which pollutants. The Air Division has taken and will continue to take steps to address this situation. The Air Division has worked very hard to ensure that the permitting team and the modeling team are taking consistent approaches, whenever possible, to determinations related to modeling.

B. Interim Modeling Guideline

In October 2021, the Air Division published an updated guidance for assisting the public and the regulated community in understanding when and how air quality permit modeling will be performed to evaluate the impact of a proposed source or activity upon the NAAQS. This guideline is entitled "[Interim Colorado Modeling Guideline for Air Quality Permits](#)" dated October 2021_May 2022 Update (Interim Guideline). The Interim Guideline was updated in May 2022 to provide more clarification around the APCD Form 114 process described in the next section of this Report. The Interim Guideline was in place between October 2021 and May 2023.

The Interim Guideline included a Table 1, which identifies modeling thresholds below which a source typically need not submit air quality dispersion modeling with its permit application to evaluate its impact on the NAAQS. Table 1 includes both long-term (in tons per year) and short-term (in pounds per hour or pounds per day) modeling thresholds. The Interim Guideline also noted that where a source's proposed emission rate is between the short-term and long-term modeling thresholds for a particular pollutant - such as NO_x - the source may consult with the Air Division's permit modeling unit and obtain a determination that no modeling is

necessary. These modeling thresholds in the Interim Guideline were the same as in the 2010 version of the Modeling Guideline discussed above.

C. How Modeling Evaluates Cumulative Impacts

As set forth in more detail beginning on page 23 of the Interim Guideline, once the Air Division determines that modeling will be used to evaluate a proposed source or activity, the modeling includes two phases: 1) the significant impact analysis; and 2) the cumulative impact analysis. In air quality permit modeling, the cumulative impact analysis is also referred to by EPA as the “full impact analysis”.

The Interim Guideline details the process for a significant impact analysis. Significant impact levels, or SILs, are concentrations of criteria pollutants in the ambient air that have historically been used to determine if an air quality impact causes or contributes to a violation of a NAAQS or PSD increment. Consistently with the Air Division’s understanding of longstanding EPA guidance, if the significant impact analysis modeling does not predict that the source’s emissions will exceed the established significance level, then no cumulative impact analysis is required. Conversely, if the significant impact analysis results in predicted concentrations above the significance level, then the Air Division then proceeds with a cumulative impact analysis.

Cumulative impacts is a term that can have different meanings in different contexts. Here, in the context of a cumulative impact analysis for modeling, it means that the modeling must evaluate the impact of the proposed source or activity taking into account:

- The emissions of a particular pollutant from a proposed project, as well as existing emission points (individual pieces of equipment or activities at a facility or source that emit pollution) at the same source; and
- Existing levels in the area around the source of the same pollutant(s) (i.e., the cumulative amount of a particular pollutant present in the area, including the impacts from other nearby sources not included explicitly in the model, natural sources, and transport contributions from more distant sources). These impacts are typically ascertained from representative ambient monitoring data.

A model analysis is conducted by incorporating all of the above sources of emissions to evaluate the potential cumulative air quality impacts of the modeled pollutant(s) from a proposed source or activity against the NAAQS.

Again, cumulative impacts is a term that can have different meanings in different contexts. In the context of air quality permit modeling, a cumulative impact analysis is conducted on a pollutant-by-pollutant basis. It does not account for the cumulative or synergistic impacts of all air pollutants that may affect the well being and health of the community (such as air toxics). Nor does it take into account potential impacts to the area from other media, such as water and soil pollution.

The long-standing concept of cumulative impact analysis, as used by EPA and states in air quality permit modeling, does not reflect the complementary ongoing actions and leadership Colorado has taken to protect at-risk communities by addressing cumulative impacts. The General Assembly has been working to assess and determine how to best protect communities from “cumulative impacts” in a broader sense (e.g., the multiple factors that affect communities such as air quality, water quality, land use, and more). At this time, neither federal nor state law defines “cumulative impact analysis” in the air quality modeling context in the same way that the environmental justice movement uses the term. The Air Division supports this movement and its work. In service of this aim, the Air Division and CDPHE as a whole have taken many steps to advance environmental justice in recent years. CDPHE and the Air Division are proud of our work to date, and we will continue incorporating substantive protections for DI communities and feedback from those communities into our work to protect public health.

Most recently, in May 2023, the Air Commission adopted new regulations that prioritize enhanced modeling, monitoring, and emissions reductions at stationary sources in DI communities that experience cumulative impacts. The rule is discussed in more detail in Part VI below. The rule requires that during the permitting process, sources of affected pollutants include an environmental justice summary with permit applications. The primary purpose of the environmental justice summary is to use Colorado EnviroScreen to present community-specific information regarding environmental and demographic indicators to be evaluated and considered during the permit review process when determining enhanced monitoring and/or modeling requirements. Colorado EnviroScreen combines data from 35 different environmental, climate, socioeconomic, health, and demographic indicators to calculate a cumulative impact score for each census block group statewide. Under the new rule, sources in communities that already experience a disproportionate share of cumulative impacts will receive greater scrutiny in modeling going forward.

The Air Division recognizes that the definition of cumulative impacts continues to evolve, and that there are multiple, complementary efforts to define and address cumulative impacts occurring across various state agencies. The Environmental Justice Act ([HB21-1266](#)) instructed the Environmental Justice Action Task Force (Task Force) to develop recommendations about whether agencies should create environmental equity analyses that could include a process for identifying and describing cumulative impacts. The Task Force finalized its recommendations on November 14, 2022, including recommendations regarding a process for creating and applying such environmental equity and cumulative impact analyses.

On March 1, 2023, [Governor Polis sent CDPHE a letter](#) instructing the agency to begin implementing certain recommendations of the Task Force. The letter explained that “some important recommendations from the Task Force – most notably on cumulative impacts – require additional work beyond the initial scope of the EJ Action Task Force to develop a comprehensive statewide approach.” The letter discussed ongoing parallel efforts to address cumulative impacts by COGCC, and concluded that “[i]t is important that the COGCC process, and in parallel additional work by CDPHE, inform any additional approach to cumulative impacts for next year’s legislative session building off of these forthcoming findings.” Further, the

General Assembly adopted the Pollution Protection Act, ([HB23-1294](#)), which directs the COGCC to adopt additional rules to “evaluate and address the cumulative impacts of oil and gas operations;” new requirements for cumulative impact analysis for clean hydrogen ([HB23-1281](#)), hydrogen infrastructure and pipelines ([SB23-285](#)), and Class VI injection wells ([SB23-016](#)); and, created a uniform definition of DI communities across state agencies ([HB23-1233](#)). Accordingly, CDPHE, COGCC, and other state agencies will be focused on coordinating with stakeholders regarding cumulative impacts over the coming months.

II. The Air Division Implements New APCD Form 114

The Air Division received feedback from members of the General Assembly, community members, environmental organizations, an [independent investigation conducted by the Colorado Attorney General’s Office](#), and [the EPA](#) that the record of its permitting actions did not consistently include sufficient documentation to support the Air Division’s decisions around when modeling would be required in support of a permit application, or whether the proposed source or activity would interfere with the NAAQS. The Air Division took this feedback seriously, and acted swiftly to develop an entirely new process to ensure, as much as possible, that its permitting records were complete and transparent on the question of NAAQS evaluation. This new process involves a form used both by permit applicants and the Air Division, known as “[APCD Form 114](#).”

The use of APCD Form 114 was implemented in June 2022 for most construction permits. In September 2022, the Air Division also began to use APCD Form 114 to conduct individualized NAAQS determinations for most of its general construction permits. Permits issued prior to these dates do not have records that consistently reflect this new level of transparency and analysis. For the permits that were being processed as of these dates, the Air Division has endeavored to work with the permit applicants to ensure use of this form prior to permit issuance. Permit applications received after these dates are not considered complete unless and until an APCD Form 114 has been submitted, if required. The Air Division has been transparent with the industry that failure to provide sufficiently complete and detailed information on the APCD Form 114 will result in delays in the permitting process, if not rejection of the incomplete application.

Under this new process, compliance with the NAAQS is and will be clearly demonstrated in one of three ways:

- APCD Form 114 is submitted, and modeling is requested by the Air Division: The source conducts modeling to demonstrate compliance with the NAAQS and the modeling is reviewed and, if acceptable, approved by the Air Division. Permit records identify and describe the modeling and highlight permit terms and conditions necessary for inclusion in the permit to ensure no exceedance of the NAAQS.
- APCD Form 114 is submitted, but no modeling is requested by the Air Division: Where a modeling determination has resulted in an Air Division decision that no modeling is

required, the modeling determination contains a clear explanation of the basis for this conclusion, and becomes part of the permit record.

- APCD Form 114 is not required: If a modeling determination is not required in accordance with the current or future guideline, this rationale is referenced in the permit record to document how compliance with the NAAQS was demonstrated for that permit action. The Air Division's [website](#) has been updated to incorporate these new procedures and instructions and future guidance and updates will be reflected therein.

The Air Division continues to make improvements to the APCD Form 114 process.

III. Subject Matter Expert Panel Recommendations

As part of the process to update the 2021 Interim Guideline, CDPHE convened a group of scientific and other subject matter experts in air quality modeling and monitoring. From November 2021 to March 2022, this [Minor Source Permit Modeling Subject Matter Expert \(SME\) Panel](#) worked collaboratively to develop modeling process and guideline recommendations to ensure Colorado has a cohesive and justified approach to modeling and permitting of minor sources that meet NAAQS and Colorado air quality targets.

In April 2022, the SME Panel completed its work and provided its [recommendations](#) to the Air Division. The Air Division then solicited public and stakeholder feedback, asking for comments on the SME Panel's recommendations as well as the Air Division's Interim Guideline. Public comments were accepted until July 22, 2022. Additionally, the Air Division hosted two public listening sessions on June 13, 2022 and July 7, 2022, providing another opportunity for public participation.

The Air Division reviewed the SME Panel's recommendations and has worked to incorporate several recommendations into the revised [Colorado Minor Source NSR Modeling Guideline for Air Quality Permits](#). The Air Division [responded to the public comments](#) received on the SME Panel recommendations, further demonstrating its commitment to transparency in the permit modeling process. Many comments were related to improving the public's ability to identify and understand the Division's decision-making process. The Air Division has made and is continuing to make great strides to ensure improved transparency and communication within the Stationary Source Program and the Permit Modeling Unit. Additional comments were related to the air dispersion modeling thresholds and support or against the SME Panel recommendations. In its public response to comments received, the Division attempted to fully explain its rationale for any revisions made to its minor source modeling processes.

In December 2022, the Air Division published a [Technical Justification for Updated Modeling Thresholds](#) in Table 1 of the Interim Guideline. This document provides the technical details that could support a determination from the Air Division that modeling may not be required under certain circumstances, such as applications where emissions are below recommendations of the SME Panel and various other conditions exist that affect the impact of the proposed source or activity on the NAAQS. The modeling thresholds established by the Air Division and

recommended by the SME Panel are based on conservative (i.e., more protective) air dispersion modeling studies that illustrate conditions under which a source may operate and still result in pollutant concentrations that are below the NAAQS. If a source is proposing to operate under the conditions where compliance was shown, no additional modeling would be required. Conditions that inhibit compliance being shown include emissions above the modeling thresholds, poor dispersion characteristics, elevated pollutant concentrations in ambient air, and potential building impacts. In these cases, a modeling demonstration will likely be required to show compliance with the NAAQS.

V. Updated Minor Source Modeling Guideline

The [Colorado Minor NSR Source Modeling Guidelines for Air Quality Permits](#) document was developed to address minor source modeling requirements for the State. In service of addressing confusion between how minor sources are modeled in comparison to major stationary sources, the Air Division separated out minor source procedures into its own document. These new guidelines aim to protect health and the environment while providing greater clarity about how to model air pollution. Changes and updates to the process from the Interim Guideline include revising the air quality impact analysis requirements based upon the SME Panel's Recommendations. This section of the Report is not a comprehensive discussion of all the updates, but seeks to highlight some of the improvements.

The Air Division has proposed lower, more protective short-term thresholds for modeling of NO_x in communities disproportionately impacted by air pollution, and areas not in attainment with federal air quality standards. The Air Division ensures expert review of new and modified existing applications for minor sources that increase emissions, even if the projects are below short-term thresholds for modeling.

The Air Division also updated the sections regarding preferred air dispersion models and associated inputs. The models are the computer tools used to conduct the air quality impact analyses, and the models are very sensitive to the information used by sources and the Air Division to inform the modeling.

The Air Division received feedback from members of the public that they would like to see the Air Division conduct source-specific modeling of proposed sources against the ozone NAAQS. Source-specific modeling for ozone is challenging, given the variety of factors that come into play. For example, ozone is not emitted by a source, but is formed through a chemical reaction of certain pollutants (precursors) in the atmosphere. It is challenging to predict, on a source-specific basis, how the source's precursor emissions might react in the atmosphere given the influence of meteorological conditions (e.g., sunshine, temperature, wind direction) and whether and where ozone might be formed. However, notwithstanding the challenges, the Air Division updated its processes for certain permit applicants to estimate the amount of ground-level ozone pollution and fine particulate matter pollution that can form from precursor pollutants released. This new process leverages a tool known as Modeled Emission Rates for Precursors, or MERPs, in alignment with [U.S. EPA guidance](#).

The Air Division is committed to providing clear documentation of procedures used and requirements associated with nearby source inclusion and determinations of background concentrations to be used in cumulative air quality impact analyses, thereby making this process more transparent and protective.

VI. Air Commission Rulemaking for Permitting in Disproportionately Impacted Communities

The Air Division adopted revisions to Colorado's Regulation Number 3 to provide for enhanced permitting requirements in DI communities in response to the Environmental Justice Act. The Environmental Justice Act directs the Air Commission to adopt rules to identify DI communities, provide for enhanced modeling and monitoring requirements for new and modified sources of affected pollutants in DI communities, and consider enhanced monitoring at existing sources of affected pollutants. The Air Division developed the proposed rules to meet both the letter and spirit of the Environmental Justice Act's statutory obligations by incorporating community feedback provided over the course of the Air Division's outreach efforts to develop valuable enhancements to the Air Division's protective existing permitting program.

The Air Commission reviewed and adopted the Air Division's proposed changes in May 2023. These newly adopted changes will begin to take effect in summer 2023 and include:

- Identifying DI Communities, consistent with HB23-1233,
- Revising permit application requirements for sources to include an environmental justice summary,
- Requiring new and modified sources in DI communities to conduct enhanced modeling,
- Expanding existing RACT requirements to sources located in communities experiencing the greatest cumulative environmental and public health impacts,
- Establishing enhanced monitoring requirements for new and modified sources in disproportionately impacted communities, and
- Allowing enhanced monitoring requirements to be applied to existing major sources located in disproportionately impacted communities.

Under these new changes, enhanced modeling includes:

- The establishing of more protective modeling thresholds in all DI communities; and,
- Requiring that larger sources of identified hazardous air pollutants – such as benzene, toluene, ethyl benzene, and xylene – located in communities experiencing the greatest cumulative environmental and public health impacts use air quality dispersion modeling during the permit application process to evaluate the impact of these toxics.

There are no NAAQS for hazardous air pollutants - so these pollutants are not evaluated against a specific regulatory health-based threshold, the way that criteria pollutants such as NO₂ are evaluated. Rather, the modeling results will be screened against existing health guideline values for informational purposes to determine if source specific, enhanced monitoring

is appropriate. Enhanced modeling results will be used to inform enhanced monitoring requirements - providing insights on where greatest impacts are expected to occur and what technology could be most effectively used. The modeling will be conducted in accordance with established modeling protocols and procedures. Pursuant to new legislation adopted by the General Assembly in 2022 (HB22-1244), the Air Division is also building the infrastructure to support a robust program to address emissions of air toxics in Colorado, including through the identification of priority toxic air contaminants and the development of health-based standards to propose to the General Assembly.

VII. Next Steps

The Air Division is committed to continue applying the best available science, policy, and technology to reduce unnecessary paperwork, streamline approval, and protect clean air for all Coloradans. The Air Division is pleased to share the progress made updating guidance and processes, in addition to expanding staffing capacity and expertise thanks to historic investments in the Air Division provided by the General Assembly and Governor Polis. The Air Division will continue advancing environmental justice in collaboration with local communities most at risk and overburdened by pollution. The Air Division also looks forward to ongoing and future efforts collaborating with other state agencies, legislators, local governments, community members, environmental organizations, and the industry to further protect public health and the environment.

The Air Division is available to meet with members of the General Assembly and welcomes further questions and conversations about this important work, as well as the other efforts underway by the Air Division and other agency partners to reduce air pollution statewide.