

**COMMENTS OF THE GROUP AGAINST SMOG AND POLLUTION (“GASP”)  
REGARDING THE ALLEGHENY COUNTY HEALTH DEPARTMENT’S (“ACHD”)  
DRAFT AIR MONITORING NETWORK PLAN FOR CALENDAR YEAR 2022**

The Clean Air Act (“CAA”) requires each State Implementation Plan (“SIP”) to “provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to ... monitor, compile, and analyze data on ambient air quality.”<sup>1</sup> Regulations promulgated thereunder specify “requirements for measuring ambient air quality and for reporting ambient air quality data and related information.”<sup>2</sup> These regulations include design criteria for “[m]inimum ambient air quality monitoring network requirements used to provide support to the [SIPs], national air quality assessments, and policy decisions.”<sup>3</sup>

State and local air pollution control agencies must submit to the EPA “Regional Administrator an annual monitoring network plan which shall provide for the documentation of the establishment and maintenance of an air quality surveillance system.”<sup>4</sup> In accordance with 40 C.F.R. § 58.10, ACHD made its Air Monitoring Network Plan for Calendar Year 2022 (“Plan” or “Draft Plan”) available for public inspection on July 9, 2021.<sup>5</sup> Based on review of the Draft Plan, GASP offers the following comments.

**I. ACHD must expand and improve its public outreach and education efforts regarding air quality.**

One of the “three basic monitoring objectives” for ambient air monitoring networks is to “[p]rovide air pollution data to the general public in a timely manner.”<sup>6</sup> The applicable

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<sup>1</sup> 42 U.S.C. § 7410(a)(2)(B).

<sup>2</sup> 40 C.F.R. § 58.2(a).

<sup>3</sup> 40 C.F.R. § 58.2(a)(5).

<sup>4</sup> 40 C.F.R. § 58.10(a)(1).

<sup>5</sup> *Draft Plan*, at § 12.1.

<sup>6</sup> 40 C.F.R. Part 58, App. D § 1.1.

regulations do not list specific methods that air pollution control agencies must follow to fulfill this requirement,<sup>7</sup> but that agencies must develop such an outreach strategy is written into the Clean Air Act itself:

Each [SIP] shall contain measures which will be effective to notify the public during any calendar [year] on a regular basis of instances or areas in which any national primary ambient air quality standard is exceeded or was exceeded during any portion of the preceding calendar year to advise the public of the health hazards associated with such pollution, and to enhance public awareness of the measures which can be taken to prevent such standards from being exceeded and the ways in which the public can participate in regulatory and other efforts to improve air quality.<sup>8</sup>

“Historically, State and local agencies have used primarily the AQI, or other [air quality indices], to provide general information to the public about air quality and its relationship to public health.”<sup>9</sup> When conceived in 1999, the AQI was innovative insofar as it created a single, national, uniform means of providing “accurate, timely, and easily understandable information about daily levels of pollution.”<sup>10</sup> Unfortunately, 20 years of advancements in data communications, air quality monitoring technology, and the health sciences’ understanding of air pollution’s adverse impacts have left the AQI’s daily index value well behind the times.

As a community organization, GASP has observed the advent of EPA’s NowCast, Purple Air monitors and other internet sources publishing “real-time” air quality information, and ACHD’s own expansion of air quality monitoring are creating immense confusion among the public concerning air quality. To fulfill its Clean Air Act duties noted above, ACHD must

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<sup>7</sup> The only guidance in Part 58 appears to be simply: “Data can be presented to the public in a number of attractive ways including through air quality maps, newspapers, Internet sites, and as part of weather forecasts and public advisories.” 40 C.F.R. Part 58, App. D § 1.1(a).

<sup>8</sup> 42 U.S.C. § 7427.

<sup>9</sup> Air Quality Index Reporting, 64 Fed. Reg. 42,530, 42,531 (Aug. 4, 1999).

<sup>10</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,366 (Oct 26, 2015).

address the following circumstances impeding the public’s understanding of air quality and possibly increasing the public’s exposure to airborne pollutants.

- a. The AQI, NowCast, and ACHD’s Air Quality Dashboard all utilize different mathematical formulae to calculate an “AQI” value for PM<sub>2.5</sub>; this cannot be harmonized with Appendix D or the Clean Air Act.**

A 1976 study conducted by EPA “found that the 55 urban areas in the U.S. and Canada reporting [some type of] index of air quality used 14 different indices, in conjunction with different cautionary messages, such that in essence 55 different indices were being used to report air quality.”<sup>11</sup> EPA’s development of and reporting requirements for the modern AQI had the distinct advantage of sending “a clear and consistent message to the public by providing nationally uniform information on air quality.”<sup>12</sup> Sadly, the value of this approach appears to have been lost.

As explained in Appendix G to 40 C.F.R. Part 58, the “AQI” is required to be part of a “daily report,” but reporting is only required 5 days per week.<sup>13</sup> The calculations for the AQI are based on the averaging times of the National Ambient Air Quality Standards (“NAAQS”).<sup>14</sup> In this format, the AQI values serve the goals of standardization and simplicity but the reporting is of a wholly backward-looking value.

From a public health perspective, yesterday’s news is only one part of the picture. When the current AQI program was established in 1999, EPA noted “[c]ommenters from State and local agencies encouraged us to develop any approaches to revising the AQI in consultation with them, specifically in the areas of sharing real-time monitoring data, risk communication with the

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<sup>11</sup> Air Quality Index Reporting, 64 Fed. Reg. 42,530, 42,531 (Aug. 4, 1999)

<sup>12</sup> *Id.*

<sup>13</sup> 40 C.F.R. Part 58, App. G §§ 3, 7.

<sup>14</sup> 40 C.F.R. Part 58, App. G § 12.

public, and coordination of a national program.”<sup>15</sup> EPA also noted that Clean Air Scientific Advisory Council members recommended “that an expanded air pollution warning system be initiated so that sensitive individuals can take appropriate ‘exposure avoidance’ behavior.”<sup>16</sup> In spite of these unambiguous calls to use AQI values and messaging in a forward-looking application to protect public health, current regulations state air pollution control agencies, “should forecast the AQI to provide timely air quality information to the public, but this is not required.”<sup>17</sup> In fact, EPA has suggested “all other AQI-related activities—including real-time ozone and particle pollution reporting, next-day air quality forecasting and action days—are voluntary and are carried out at the discretion of state, local and tribal air agencies.”<sup>18</sup>

Under such tepid guidance, EPA should not be surprised to find – as it did in 1976 – that air pollution control agencies have developed different forecasting and real-time-reporting methods have developed. Even worse, the term “AQI” is used for many of them.

To highlight the confusion, consider PM<sub>2.5</sub> reporting in Allegheny County. A concerned resident might find a forecasted AQI for a given day. That forecast is based on the expected full-day value. During that day, EPA’s NowCast might show a higher or lower value based on the algorithm it uses.<sup>19</sup> Further complicating matters, ACHD’s Air Quality Dashboard reports the AQI for PM<sub>2.5</sub> on a strict rolling 24-hour basis.<sup>20</sup> In this scenario, a resident seeking to minimize exposure to PM<sub>2.5</sub> might not appreciate how hourly fluctuations are not reflected in an averaged,

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<sup>15</sup> Air Quality Index Reporting, 64 Fed. Reg. 42,530, 42,532 (Aug. 4, 1999).

<sup>16</sup> *Id.*

<sup>17</sup> 40 C.F.R. Part 58, App. G § 11.

<sup>18</sup> National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65,292, 65,366 (Oct 26, 2015).

<sup>19</sup> AirNow, *How is the NowCast algorithm used to report current air quality?*, [https://usepa.servicenowservices.com/airnow?id=kb\\_article\\_view&sys\\_id=fed0037b1b62545040a1a7dbe54bcdb4](https://usepa.servicenowservices.com/airnow?id=kb_article_view&sys_id=fed0037b1b62545040a1a7dbe54bcdb4).

<sup>20</sup> ACHD, *Allegheny County Air Quality*, <https://www.alleghenycounty.us/Health-Department/Programs/Air-Quality/Air-Quality.aspx>.

full-day value, rely somewhat more accurately on the weighted 12-hr math of the NowCast, and then be absolutely baffled by a rolling 24-hour value differing with the NowCast.

Neither ACHD nor EPA could sanely state this situation serves the public's best interest. For all of the advancements made in the past 20 years that allow more accurate data to be shared faster with wider audiences, ACHD and EPA simply must do better to ensure communications and outreach "advise the public of the health hazards associated with [air] pollution" effectively and accurately.

**b. ACHD must develop a consistent, clear method for sharing air quality data generated as part of special studies (non-AQI data) with the public.**

ACHD's commitment to expanding air quality monitoring over the past two years has been impressive. As far as those expansions include monitoring of criteria pollutants, the existing public outreach methods – as hopefully modified per the points noted above – will likely suffice. Unfortunately, the AQI as an outreach tool is limited to pollutants for which the EPA has set a NAAQS.

When ACHD has conducted prior Special Study Projects of non-AQI pollutants, the reports generated have often been thorough but without a consistent update schedule. Given the significant expansion of monitoring proposed in the Draft Plan for the Mon Valley Air Toxics and Odors Study – a project with significant public interest – and the expanded PAMS monitoring, a thorough but irregular schedule for updating the public will not suffice. Given the numerous studies and data collected on non-NAAQS pollutants, ACHD must develop an approach to ensure data and results are provided to the general public in a timely manner.

- c. **ACHD should consider messaging, outreach, and education to address low-cost monitoring and internet sources of air quality information and working with Pa DEP to standardize air quality data reporting.**

In keeping with the plea for better outreach set forth at the beginning of this section, GASP believes that the various sources of air quality data across the internet are contributing to public confusion over air quality. Understanding that the internet at large and Pa DEP are not within ACHD's sphere of control, GASP believes that ACHD still can play a role by exercising its duty to protect public health through education. In that respect, some sort of communications policy or outreach materials that explain the various sources of air quality data, why agencies might report values differently, and the roles the public plays in would be beneficial.

**II. The Draft Plan must be amended to greater detail regarding the Mon Valley Air Toxics and Odors Study.**

As noted above, GASP strongly supports ACHD's commitment to expanding air quality monitoring. In particular, GASP has no complaints as to stated aims and likely methods for conducting the Mon Valley Air Toxics and Odors Study. That said, the reported details of the study as they appear in the Draft Plan must be expanded.

Simply put, the public cannot provide meaningful comments when details of a proposal are incomplete. From notes of prior public meetings held by ACHD, GASP staff are reasonably sure the PM<sub>10</sub> metals will be sampled at the existing North Braddock site, but that detail is not listed in the Draft Plan.<sup>21</sup> In addition, locations, sampling schedules, and most of the criteria required under 40 C.F.R. § 58.10(b) are not in the Draft Plan. While that could be said for many of the special monitoring projects ACHD has, the Mon Valley Air Toxics and Odors Study is

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<sup>21</sup> *Draft Plan*, at § A6.

significantly larger in scale. Even if ACHD determines Section 58.10(b) is inapplicable, ACHD should provide the public with a greater level of detail than currently exists in the Draft Plan.

**III. Allegheny County officials and ACHD must clarify the future of ACHD's Lawrenceville monitoring site.**

EPA requires that annual monitoring network plans contain “[a]ny proposals to remove or move a monitoring station within a period of 18 months following plan submittal.”<sup>22</sup> In spite of local community groups engaging in activities aimed at “visioning” future uses for the current Lawrenceville monitoring site, neither the County nor ACHD have made any statement on the matter. By omitting any mention of moving the site in the Draft Plan, ACHD must confirm that for at least the next 18 months, the status quo will remain.

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<sup>22</sup> 40 C.F.R. § 58.10(b)(5).