ILLINOIS INFRASTRUCTURE STATE IMPLEMENTATION PLAN

for

2012 ANNUAL FINE PARTICLE MATTER (PM$_{2.5}$) NATIONAL AMBIENT AIR QUALITY STANDARD

AQPSTR 16-10

June 2017

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
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List of Acronyms and Abbreviations

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<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>Act</td>
<td>Illinois Environmental Protection Act</td>
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<tr>
<td>Agency</td>
<td>Illinois Environmental Protection Agency</td>
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<td>AQS</td>
<td>Air Quality System</td>
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<td>BART</td>
<td>Best Available Retrofit Technology</td>
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<td>Board</td>
<td>Illinois Pollution Control Board</td>
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<td>CAA</td>
<td>Clean Air Act</td>
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<td>CAIR</td>
<td>Clean Air Interstate Rule</td>
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<td>CFR</td>
<td>Code of Federal Regulation</td>
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<td>CPS</td>
<td>Combined Pollutant Standard</td>
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<tr>
<td>CSAPR</td>
<td>Cross-State Air Pollution Rule</td>
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<tr>
<td>EGU</td>
<td>electric generating unit</td>
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<td>FIP</td>
<td>Federal Implementation Plan</td>
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<td>FLMs</td>
<td>Federal Land Managers</td>
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<td>IAC</td>
<td>Illinois Administrative Code</td>
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<td>Illinois EPA</td>
<td>Illinois Environmental Protection Agency</td>
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<td>LADCO</td>
<td>Lake Michigan Air Directors Consortium</td>
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<td>MACT</td>
<td>Maximum Achievable Control Technology</td>
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<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
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<td>MPS</td>
<td>Multi-Pollutant Standard</td>
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<tr>
<td>NAAQS</td>
<td>National Ambient Air Quality Standard</td>
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<tr>
<td>NH₃</td>
<td>ammonia</td>
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<tr>
<td>NOx</td>
<td>nitrogen oxides</td>
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<tr>
<td>NSR</td>
<td>New Source Review</td>
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<tr>
<td>PM₂₅</td>
<td>particulate matter with diameter less than or equal to 2.5 micrometers</td>
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<tr>
<td>PM₁₀</td>
<td>particulate matter with diameter less than or equal to 10 micrometers</td>
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<td>ppm</td>
<td>parts per million</td>
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<tr>
<td>ppb</td>
<td>parts per billion</td>
</tr>
<tr>
<td>PSD</td>
<td>Prevention of Significant Deterioration</td>
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<tr>
<td>RACT</td>
<td>Reasonably Achievable Control Technology</td>
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<tr>
<td>SIP</td>
<td>State Implementation Plan</td>
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<tr>
<td>SO₂</td>
<td>sulfur dioxide</td>
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<tr>
<td>ug/m³</td>
<td>micrograms per cubic meter</td>
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<tr>
<td>USEPA</td>
<td>United State Environmental Protection Agency</td>
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<td>VOM</td>
<td>volatile organic material</td>
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INTRODUCTION

Under Clean Air Act ("CAA") sections 110(a)(1) and (a)(2), each state is required to submit a State Implementation Plan ("SIP") that provides for the implementation, maintenance, and enforcement of each primary or secondary National Ambient Air Quality Standard ("NAAQS"). Section 110(a)(1) requires each state to submit an “infrastructure SIP” within three years after promulgation of a new or revised NAAQS. Section 110(a)(2) includes a list of specific elements and sub-elements that the infrastructure SIP must meet. Many of the Section 110(a)(2) SIP elements relate to the general information and authorities that constitute the “infrastructure” of a state’s air quality program; hence these SIPs are referred to as infrastructure SIPs. Following each element below is a summary of the requirement from the United States Environmental Protection Agency ("USEPA") guidance document\(^1\) regarding infrastructure SIPs, dated September 13, 2013. The comment section following each element description is the Illinois Environmental Protection Agency’s ("Illinois EPA” or “Agency”) discussion regarding the Agency’s fulfillment of the requirements with respect to the NAAQS, and in this case, specifically for the annual 2012 fine particulate matter ("PM\(_{2.5}\)") standard of 12.0 ug/m\(^3\).

Element A

Section 110(a)(2)(A): Emission limits and other control measures

Each such plan shall-

(A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emission rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of this Act.

To satisfy Element A, the state should identify the existing SIP provisions or any new SIP provisions that the air agency has adopted that limit emissions of pollutants relevant to the subject NAAQS, in this case PM\(_{2.5}\), including precursors where applicable. USEPA notes that it would not expect infrastructure SIP submissions to identify nonattainment emission controls. Nonattainment area plans are subject to the timing requirements of CAA Section 172.

Comment: The Illinois EPA continues to monitor and implement needed revisions to its SIP. The Illinois Environmental Protection Act (“Act”) provides the Illinois EPA with the authority to develop rules and regulations necessary to meet ambient air quality standards, as well as programs and plans (415 ILCS 5/4). The Act also created the Illinois Pollution Control Board (“Board”) and grants the Board the authority to develop and adopt rules and regulations (415 ILCS 5/5).

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\(^1\) “Guidance on Infrastructure State Implementation Plan (SIP) Elements under Clean Air Act Sections 110(a)(1) and 110(a)(2)” dated September 13, 2013, from Stephen D. Page, Director, Office of Air Quality Planning and Standards.
The Illinois EPA continues to implement particulate emission reduction measures to meet CAA requirements through delegation of authority for the New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants, and as directly regulated through SIP-approved regulations set forth in 35 Illinois Administrative Code (“IAC”) Part 212: Visible and Particulate Matter Emissions. Sulfur dioxide (“SO₂”), nitrogen oxides (“NOx”), volatile organic materials (“VOMs”), and ammonia (“NH₃”) are precursors for PM₂.₅ emissions. These precursors are directly regulated through SIP-approved 35 IAC Part 214: Sulfur Limitations, 35 IAC Part 217: Nitrogen Oxides Emissions, 35 IAC Part 215: Organic Material Emissions Standards and Limitations, 35 IAC Part 218: Organic Material Emission Standards and Limitations for the Chicago Area, and 35 IAC Part 219: Organic Material Emission Standards and Limitations for the Metro-East St. Louis Area. Ammonia is also identified as a precursor for PM₂.₅ emissions, but historically been considered insignificant, and are not directly regulated in Illinois. The Illinois EPA anticipates ammonia emissions will continue to be insignificant but is prepared to address ammonia emissions as part of the attainment planning process if it is determined to be necessary.

Element B

Section 110(a)(2)(B): Ambient air quality monitoring data system

Each such plan shall –

(B) provide for establishment and operation of appropriate devices, methods, systems, and procedures necessary to –

(i) monitor, compile, and analyze data on ambient air quality, and
(ii) upon request, make such data available to the Administrator.

To satisfy Element B, the infrastructure SIP submission should provide evidence of a commitment by, and legal authority for, an agency or official to perform the following actions:

- Monitor air quality for the relevant NAAQS pollutant(s) at appropriate locations in accordance with the USEPA’s ambient air quality monitoring network requirements.
- Submit data to the USEPA’s Air Quality System (“AQS”) in a timely manner in accordance with 40 CFR Part 58.
- Provide information to USEPA Regional Office regarding air quality monitoring activities, including a description of how the air agency has complied with the monitoring requirements and an explanation of any proposed changes to the network. Submission of annual monitoring network plans consistent with USEPA’s ambient air monitoring regulations is one way of providing this information.
- Obtain USEPA approval of any planned changes to monitoring sites or to the network plan.

Comment: In accordance with its SIP, the Illinois EPA continues to operate an extensive monitoring network collecting data, and tracking the measurements of a variety of pollutants and air toxic compounds throughout the State. There are currently 33 sites with 44 instruments that specifically collect PM₂.₅ data. Section 4 of the Act provides the Illinois EPA with the authority
to implement and administer the monitoring network (415 ILCS 5/4). The Illinois EPA publishes an annual report, which describes the monitoring network and summarizes the measurements for the year. This report is available on the Agency’s website. Illinois EPA also prepares and publishes for public comment its plan for the coming year. USEPA provides approval of the plan in advance of each calendar year. All reports and data are routinely shared through USEPA’s AQS, or are readily available to the USEPA upon request. The Illinois EPA ensures that any new monitoring requirements related to the revised NAAQS will be implemented and coordinated with USEPA consistent with 40 CFR Part 58.

Element C

Section 110(a)(2)(C): Program for enforcement of control measures and for construction or modification of stationary sources

Each such plan shall –

(C) include a program to provide for the enforcement of the measures described in subparagraph (A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that national ambient air quality standards are achieved, including a permit program as required in parts C and D.

This element consists of three sub-elements:

- Enforcement;
- Statewide regulation of new and modified minor sources and minor modifications of major sources (i.e., minor new source review (“NSR”) or minor NSR); and.
- Preconstruction permitting of major sources and major modifications in areas designated attainment or unclassifiable for the subject NAAQS, as required by CAA title I part C (i.e., the major source Prevention of Significant Deterioration (“PSD”) program).

Comment: The Illinois EPA staff implements an air enforcement program that includes the Bureau of Air (“BOA”) Compliance Section and the Agency’s Division of Legal of Counsel. Sections 4, 30, and 31 of the Act provide the Illinois EPA with the authority to implement and administer this program. (415 ILCS 5/4, 5/31, and 5/32). In Illinois, enforcement actions are brought by the Office of the Illinois Attorney General or local State’s Attorney offices, who consult with the Illinois EPA. The State of Illinois enforces all terms of minor NSR, PSD, and nonattainment NSR construction and operating permits through this coordinated effort. The Act also gives the authority for Illinois EPA staff to inspect these facilities and to enforce against any violations of the Act, permit conditions, or delegated federal regulations.

The Illinois EPA continues to implement a minor NSR permit program under Sections 9 and 39 of the Act (415 ILCS 5/9 and 5/39). For major sources in attainment and unclassifiable areas, the State continues to administer the federal PSD regulations under Section 9.1(d) of the Act and 40 CFR 52.21. These regulations contain provisions specific to PM$_{2.5}$ and its precursors, as well
as appropriate requirements for permitting of pollutants related to other NAAQS, and for greenhouse gases. Illinois’ major NSR Program for sources in nonattainment areas is implemented through its SIP-approved regulation adopted at 35 IAC Part 203: Major Stationary Sources Construction and Modification, and is being updated to include any necessary revisions pertaining to PM$_2.5$ precursors, and filterable and condensable PM$_{2.5}$ and PM$_{10}$. Until the completion of these revisions to Part 203, the Bureau of Air’s Permit Section continues to rely on 40 CFR “Appendix S to Part 51 – Emission Offset Interpretative Ruling.” These program requirements ensure that the construction and modification of stationary sources do not cause or contribute to a violation of the PM$_{2.5}$ NAAQS from PM$_{2.5}$ emissions and relevant precursors. The Illinois EPA commits to working with USEPA on continual compliance with meeting these requirements.

**Element D(i)(I) and (II)**

Section 110(a)(2)(D)(i): Interstate pollution transport

Each such plan shall –

(D) contain adequate provisions –

(i) prohibiting, consistent with the provisions of this title, any source or other type of emissions activity within the State from emitting any air pollutant in amounts which will –

(I) contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard, or

(II) interfere with measures required to be included in the applicable implementation plan for any other State under part C to prevent significant deterioration of air quality or to protect visibility.

**Comment:** USEPA has already developed programs that address Section 110(a)(2)(D) for many of the NAAQS, such as the NOx SIP Call, Clean Air Interstate Rule (“CAIR”), Cross-State Air Pollution Rule (“CSAPR”), and the Regional Haze Rule.

Section 110(a)(2)(D)(i)(I), also known as the “good neighbor provisions,” are often referred to as prong 1 (significant contribution to nonattainment) and prong 2 (interference with maintenance). The Illinois EPA has adopted and implemented various SIP-approved major programs related to the interstate transport of pollution and is currently subject to a Federal Implementation Plan (“FIP”) for the CSAPR. The current SIP-approved state regulations under Part 217 cover large engines (Subpart Q), cement kilns (Subpart T), and large nonelectrical generating boilers pursuant to the NOx SIP Call (Subpart U). The current SIP-approved regulation for Best Available Retrofit Technology (“BART”) under the Regional Haze SIP is included in 35 IAC Part 225: Control of emissions from Large Combustion Sources, Subpart B, which includes the Multipollutant Standard (“MPS”) and the Combined Pollutant Standard (“CPS”).

On March 17, 2016, USEPA released a memorandum titled “Information on the Interstate Transport ‘Good Neighbor’ Provision for the 2012 Fine Particulate Matter National Ambient Air
Quality Standards under Clean Air Act Section 110(a)(2)(D)(i)(1).” This memo provides information to states to address interstate transport, including identification of the downwind receptors that are expected to have problems attaining or maintaining the standard, and identification of the upwind states that contribute to the impacted receptors. The Illinois EPA has performed a study of Illinois’ interstate transport of pollution relative to the 2012 PM$_{2.5}$ NAAQS by using this guidance, which is included as Appendix I below. The analysis demonstrates that, beyond the CSAPR program and other existing and planned controls, no additional emission reductions from Illinois are necessary to reduce its impact on the Allegheny County, Pennsylvania, nonattainment monitor or maintenance of any other monitor. Therefore, Illinois has fulfilled the requirements of both prong 1 and prong 2 for this NAAQS.

Section 110(a)(2)(D)(i)(II) provisions are often referred to as prong 3 (interference with PSD) and prong 4 (interference with visibility protection). To address prong 3 and prong 4, the Illinois EPA administers the Federal PSD regulations as discussed above in element C. For sources not subject to PSD because they are in a nonattainment area, Illinois has a SIP-approved nonattainment NSR program in 35 IAC Part 203: Major Stationary Sources Construction and Modification. Visibility protection is also included in the SIP approved Regional Haze program (77 FR 39943) that meets the requirements of 40 CFR 51.308.

Element D(ii)

Section 110(a)(2)(D)(ii): Interstate pollution abatement and international air pollution

Each such plan shall –

(D) contain adequate provisions –
(ii) insuring compliance with the applicable requirements of sections 126 and 115 (relating to interstate and international pollution abatement).

Section 126(a) requires state SIPs to include provisions requiring a new or modified source to notify neighboring states of potential impacts from the source. Section 126(b) and (c) are applicable only if USEPA has, in response to a petition, made a finding that emissions from a source within Illinois emits prohibited amounts of air pollution. Section 115 authorizes USEPA to revise the Illinois SIP under certain conditions to alleviate international transport into another country.

Comment: Section 110(a)(2)(D)(ii) requires SIPs to contain provisions that address CAA Section 115 (International Air Pollution) and Section 126 (Interstate Air Pollution Abatement). Illinois has no pending obligations under Section 115 with respect to any previous NAAQS or the 2012 PM$_{2.5}$ NAAQS. With respect to the requirements of Section 126(a), which requires Illinois to notify states of new or modified sources, Illinois EPA administers the Federal PSD regulations per 40 CFR 52.21, which contain the necessary provisions to satisfy the applicable requirement of Section 126(a).
There are no sources in Illinois subject to an active finding under Section 126 with respect to any air pollutant, nor are there any final findings under Section 115 against Illinois with respect to any air pollutant.

**Element E**

Section 110(a)(2)(E): Adequate resources and authority, conflict of interest, and oversight of local governments and regional agencies

Each such plan shall –

(E) provide

(i) necessary assurances that the State (or, except where the Administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof),

(ii) requirements that the state comply with the requirements respecting State boards under section 128, and

(iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for ensuring adequate implementation of such plan provision.

Section 110(a)(2)(E)(i) requires assurance that the state has adequate personnel and funding to carry out its SIP functions.

Section 110(a)(2)(E)(ii) pertains to Section 128, applicable to certain boards, bodies, and personnel that approve permits or enforcement orders. Section 128 states:

Section 128(a)-Not later than the date one year after the date of the enactment of this section, each applicable implementation plan shall contain requirements that –

(1) any board or body which approves permits or enforcement orders under this Act shall have at least a majority of members who represent the public interest and do not derive any significant portion of their income from persons subject to permits or enforcement orders under this Act, and

(2) any potential conflicts of interest by members of such board or body or the head of an executive agency with similar powers be adequately disclosed.

A state may adopt any requirements respecting conflicts of interest for such boards or bodies or heads of executive agencies, or any other entities which are more stringent than the requirements of paragraphs (1) and (2), and the Administrator shall approve any such more stringent requirements submitted as part of an implementation plan.
Section 110(a)(2)(E)(iii) requires the state to have legal authority under state law to carry out its SIP and related issues.

**Comment:** With respect to sub-elements (i) and (iii), the Illinois EPA has sole authority to develop, implement, and enforce Illinois’ SIP.

As stated in previous Infrastructure SIP submittals, on July 12, 2011, Governor Quinn signed into law Public Act 097-0095/House Bill 1297 (the full text can be found at [http://www.ilga.gov/legislation/publicacts/97/097-0095.htm](http://www.ilga.gov/legislation/publicacts/97/097-0095.htm)). These revisions to the Act, found in 415 ILCS 5/9.6 and 39.5(18), increased operating permit fees in Illinois and provided additional funding for the Clean Air Act Permit fund. In combination with the funding provided by the Illinois EPA’s Performance Partnership Agreement (“PPA”) with USEPA, the Illinois EPA has the resources to carry out the required air programs.

The Act provides the Illinois EPA, in conjunction with the Board, with the legal authority to develop programs, plans, and rules necessary to meet ambient air quality standards and respond to any USEPA findings of inadequacy with the Illinois SIP (415 ILCS 5/4 and 10). The Board may also enact regulations that are required by law, that are otherwise part of the State’s attainment plan and are necessary to attain the NAAQS, or that are necessary to comply with the requirements of the federal CAA (415 ILCS 5/10). This provides assurance that the Illinois EPA retains responsibility for ensuring adequate implementation of the SIP.

With respect to sub-element (ii), Section 110(a)(2)(E) also requires states to comply with the requirements respecting state boards per Section 128. The Illinois EPA is working with USEPA and the Board on meeting the full requirements of Section 110(a)(2)(E). There is currently a rulemaking opened by the Board that addresses this issue. Once adopted, a revision to this and previous infrastructure SIPs will be submitted to USEPA.

**Element F**

Section 110(a)(2)(F): Stationary source monitoring and reporting

Each such plan shall –

(F) require, as may be prescribed by the Administrator –

(i) the installation, maintenance, and replacement of equipment, and the implementation of other necessary steps, by owners or operators of stationary sources to monitor emissions from such sources.

(ii) periodic reports on the nature and amounts of emissions and emissions-related data from such sources, and

(iii) correlation of such reports by the State agency with any emission limitations or standards established pursuant to this Act, which reports shall be available at reasonable times for public inspection.

Section 110(a)(2)(F) requires SIPs to include stationary source monitoring, emissions reporting, and reporting on the nature and amount of emissions and emissions-related data from such
sources. It requires including regulations for source monitoring, recordkeeping, and reporting requirements applicable to the subject NAAQS.

Comment: The Act gives the Illinois EPA (415 ILCS 5/4) and the Board (415 ILCS 5/5 and 10) the authority to require regulated sources to install and operate monitoring equipment, to perform emissions testing, and to submit emissions-related data and emissions reports to the Bureau of Air for review, depending on applicable requirements and the type of permit issued to the source. All reasonable efforts are made to maximize the effectiveness of available resources to review the required reports and make them available to the public. The Illinois EPA certifies that there are no Agency provisions or regulations preventing the use of any credible evidence in any of the above required reports.

The Illinois EPA commits to meet any changes to the reporting, inventory, and emission statement requirements associated with any new or revised NAAQS under 40 CFR 51.116, 51.211, 51.212, 51.321-323 and Appendix A, and to work with USEPA’s regional and other offices as necessary.

Element G

Section 110(a)(2)(G): Emergency episodes

Each such plan shall –

(G) provide for authority comparable to that in section 303 and adequate contingency plans to implement such authority.

This section requires states to provide for authority to address activities causing imminent and substantial endangerment to public health, including contingency plans to implement the emergency episode provisions in their SIPs.

Comment: Section 34 of the Act allows the Illinois EPA to declare alerts upon a finding that episode or emergency conditions exist (415 ILCS 5/34). Further, Section 43(a) of the Act authorizes the Illinois EPA to request the Office of Illinois Attorney General or a State’s Attorney to seek immediate injunctive relief in circumstances of substantial danger to the environment or to the public health of persons (415 ILCS 5/43(a)). Thus, the Illinois EPA has the necessary authority to address activities causing imminent and substantial endangerment to public health, as required by Section 110(a)(2)(G).

SIP-approved 35 IAC Part 244 addresses the requirement to implement emergency action plans in the event of an Air Quality Alert. These regulations meet the requirements of 40 CFR 51.151 and 51.152.

The Illinois EPA also certifies that the above general emergency powers include any PM$_{2.5}$ related episodes, and that no specific emergency episode plan is necessary at this time. According to the September 25, 2009, guidance document, “Guidance on SIP Elements Required Under Sections 110(a)(1) and (2) for the 2006 24-Hour Fine Particle (PM$_{2.5}$) National Ambient
Air Quality Standards (NAAQS).” states are required to develop emergency episode plans for any area that has monitored and recorded 24-hour PM$_{2.5}$ levels greater than 140.4 ug/m$^3$ since 2006. If a state has never exceeded this level in any area of the state, the state is not required to develop a specific emergency episode plan. Illinois has never exceeded the 140.4 ug/m$^3$ level in any area of the state for 24-hour PM$_{2.5}$.

**Element H**

Section 110(a)(2)(H): SIP revisions

Each such plan shall –

(H) provide for revisions of such plan –

(i) from time to time as may be necessary to take account of revisions of such national primary or secondary ambient air quality standard or the availability of improved or more expeditious methods of attaining such standard, and

(ii) except as provided in paragraph (3)(C), whenever the Administrator finds on the basis of information available to the Administrator that the plan is substantially inadequate to attain the national ambient air quality standard which it implements or to otherwise comply with any additional requirements established under this Act.

Section 110(a)(2)(H) requires that states have the authority to revise their SIPs in response to changes in the NAAQS, availability of improved methods for attaining the NAAQS, or in response to a USEPA finding that a SIP is substantially inadequate.

**Comment:** The Act provides the Illinois EPA, in conjunction with the Board, with the authority to develop programs for the prevention, control, and abatement of air pollution, and to develop, adopt, and enforce rules and regulations for the purpose of achieving and maintaining compliance with the ambient air quality standards within the state as expeditiously as practicable, and respond to any USEPA findings of inadequacy with the Illinois SIP program (415 ILCS 5/4 and 10). The Illinois EPA continues to make every possible effort to meet SIP deadlines.

**Element I**

Section 110(a)(2)(I): Plan revisions for nonattainment areas

Each plan shall –

(I) in the case of a plan or plan revisions for an area designated as a nonattainment area, meet the applicable requirements of part D (relating to nonattainment areas).

**Comment:** Section 110(a)(2)(I) references nonattainment area planning. The planning requirements for nonattainment areas are on a different schedule than general infrastructure SIP
elements. USEPA’s guidance\(^2\) indicates that USEPA does not expect states to include these planning requirements, e.g., Attainment Demonstrations, as part of the infrastructure SIP.

**Element J**

Section 110(a)(2)(J): Consultation with government officials, public notification, and PSD and visibility protection

Each such plan shall –

(J) meet the applicable requirements of section 121 (relating to consultation), section 127 (relating to public notification), and part C (relating to prevention of significant deterioration of air quality and visibility protection).

Section 110(a)(2)(J) requires states to provide a process for consultation with local governments and Federal Land Managers (“FLMs”), if applicable, carrying out NAAQS implementation requirements pursuant to Section 121. It also requires states to notify the public if NAAQS are exceeded in an area and to enhance public awareness of measures that can be taken to prevent exceedances. Lastly, it requires states to meet the applicable requirements of Part C related to PSD and visibility protection.

**Comment:** The Illinois EPA provides notice to reasonably anticipated stakeholders and interested parties. The Agency is required to give notice to the Office of the Attorney General and the Illinois Department of Natural Resources during the rulemaking process under 35 IAC Part 102: Regulatory and Informational Hearings and Proceedings. The Illinois EPA also gives notice to FLMs if the rulemaking applies to Federal land over which the FLM has authority. Finally, the Illinois EPA consults with the USEPA and the States of Indiana, Wisconsin, Michigan, Minnesota, and Ohio through its membership in the Lake Michigan Air Directors Consortium (“LADCO”), and consults with the State of Missouri through participation with East-West Gateway pursuant to procedures in the applicable Memorandums of Agreement.

The Illinois EPA and the Cook County Department of Environmental Control routinely monitor air quality throughout the state and notify the public when unhealthful air quality is measured or forecasted. The Illinois EPA provides air quality data to USEPA’s AIRNOW program, and also provides the daily air quality index (“AQI”) to the media and general public. The Illinois EPA also participates in the EnviroFlash program which sends real-time air quality notifications to the public.

The Illinois EPA is addressing both the long-term requirements to meet natural visibility levels by 2064, and the ongoing review of new major sources and major modifications under Illinois’ approved PSD new source review program. On July 6, 2012, USEPA approved Illinois’ regional haze SIP, including provisions to implement BART (77 FR 39943).

\(^2\) Id.
The Illinois EPA provides public notice for all SIP revisions with the opportunity for a public hearing when requested. Requirements for consultation with other government officials and PSD requirements have been addressed in other sections of this document. As previously addressed in the discussion of Section 110(a)(2)(C), the Illinois EPA administers the Federal PSD regulations per 40 CFR 52.21. Therefore, the applicable requirements for section 110(a)(2)(J) regarding PSD have been met.

**Element K**

Section 110(a)(2)(K): Air quality modeling and submission of modeling data

Each such plan shall –

(K) provide for –

(i) the performance of such air quality modeling as the Administrator may prescribe for the purpose of predicting the effect on ambient air quality of any emissions of any air pollutant for which the Administrator has established a national ambient air quality standard, and

(ii) the submission, upon request, of data related to such air quality modeling to the Administrator.

To satisfy this element, the Illinois EPA may demonstrate the ability to perform, or require, NSR modeling and the ability to perform area-wide modeling related to attainment demonstrations.

**Comment:** The Illinois EPA maintains the capability and authority to perform modeling, consistent with Appendix W of 40 CFR Parts 51, of the air quality impacts of emissions of all criteria pollutants, including the capability to use complex photochemical grid models. (415 ILCS 5/4). The Agency performs modeling in support of the SIP for all nonattainment areas in the State. The Agency also requires air quality modeling in support of permitting the construction of major and some minor new sources under the PSD program. These modeling studies are thoroughly documented and are available to USEPA and the public upon request.

Furthermore, the Illinois EPA participates in multi-state regional modeling efforts, including participation in and providing funding for LADCO. LADCO conducts regional modeling that is utilized for statewide planning purposes.

**Element L**

Section 110(a)(2)(L): Permitting fees

Each such plan shall –

(L) require the owner or operator of each major stationary source to pay to the permitting authority, as a condition of any permit required under this Act, a fee sufficient to cover –
(i) the reasonable costs of reviewing and acting upon any application for such a permit, and
(ii) if the owner or operator receives a permit for such source, the reasonable costs of implementing and enforcing the terms and conditions of any such permit (not including any court costs or other costs associated with any enforcement action), until such fee requirement is superseded with respect to such sources by the Administrator’s approval of a fee program under title V.

Comment: The Illinois EPA continues to implement the approved Title V operating permit program as set forth in Section 39.5 of the Act, which includes requiring major sources to pay permit fees (415 ILCS 5/39.5). The Illinois EPA also requires fees from applicants of potential new or modified sources in the form of construction permit application fees pursuant to Section 9.12 of the Act. These fees are used to cover reviewing, processing, and enforcing these permits.

Element M

Section 110(a)(2)(M): Consultation and participation by affected local entities

Each such plan shall –

(M) provide for consultation and participation by local political subdivisions affected by the plan.

Comment: The Illinois EPA follows approved procedures for allowing public participation, consistent with 35 IAC Part 164, Procedures for Informational and Quasi-Legislative Public Hearings, and 35 IAC Part 252, Public Participation in the Air Pollution Control Permit Program. Part 252 is an approved portion of Illinois’ SIP.

Based on the information provided in these discussions, the Illinois EPA meets all of the necessary CAA Section 110 infrastructure needs, enabling the Agency to continue to satisfy those requirements of the CAA.
APPENDIX I Good Neighbor Provision - Illinois Impact Analysis to Pennsylvania’s PM$_{2.5}$ Monitor

Introduction

The CAA Section 110(a)(2)(D)(i)(I), known as the “good neighbor provision” requires each state, in its SIP, to prohibit emissions that will significantly contribute to nonattainment and interference of maintenance of the 2012 PM$_{2.5}$ NAAQS in other states.

There are a total of nine nonattainment areas of the 2012 PM$_{2.5}$ standard: one area in Ohio, one area in Idaho, three areas in Pennsylvania, and four areas in California. Cuyahoga and Lorain Counties compromise the Cleveland nonattainment area in Ohio; and Allegheny, Lebanon, and Delaware Counties compromise the nonattainment areas in Pennsylvania. Illinois is not focusing this analysis on nonattainment areas in Idaho or California as historically, Illinois emissions have never contributed to nonattainment or interfered with maintenance of these western states. The majority of these nonattainment areas are moving towards better air quality year after year. The annual PM$_{2.5}$ design values for some of these areas improved by more than 35% over the last ten years.

The impact analysis used in this document was based on the analysis conducted by USEPA as part of the original CSAPR$^3$. This assessment is conservative since Illinois’ contribution to monitors under CSAPR is based upon older monitoring values, predicted concentrations, emissions levels, and control strategies.

Based on the Illinois EPA’s analysis conducted below, no additional emissions reductions beyond existing and planned controls are necessary to mitigate Illinois’ contribution to downwind 2012 annual PM$_{2.5}$ NAAQS air quality problems.

This Appendix is an evaluation of Illinois’ contribution to nonattainment of the 2012 PM$_{2.5}$ NAAQS at a single monitor in Pennsylvania. The analysis conducted by USEPA as a part of the original CSAPR identified a monitor in Allegheny County, Pennsylvania, that was not attaining the PM$_{2.5}$ NAAQS as a monitor to which Illinois significantly contributed. That monitor is still in nonattainment status after the 2013-15 design value (“DV”) period. No other monitors east of the Rocky Mountains are in nonattainment for the 2012 PM$_{2.5}$ standard.

The Illinois EPA examined monitoring trends, the original CSAPR modeling, geography, meteorology, and emissions, and has determined that no additional emission reductions besides on-the-books and on-the-way controls are necessary to mitigate Illinois’ contribution to nonattainment at the Allegheny County, Pennsylvania, monitor.

$^3$ [http://www3.epa.gov/airtransport/CSAPR/techinfo.html](http://www3.epa.gov/airtransport/CSAPR/techinfo.html)
Monitoring

Table 1 shows the design values from the 2003-05 period to the most recent validated three-year period (2013-15) at the Allegheny County monitor. The DV at the Allegheny County monitor has been decreasing steadily since the early 2000’s. The table shows that the DV has decreased by almost 40% over 10 years, or an average of 0.82 ug/m$^3$ per year.

Table 1. PM$_{2.5}$ Design Values for the nonattainment Allegheny County PA monitor

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (ug/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-05</td>
<td>20.8</td>
</tr>
<tr>
<td>2004-06</td>
<td>20.4</td>
</tr>
<tr>
<td>2005-07</td>
<td>19.8</td>
</tr>
<tr>
<td>2006-08</td>
<td>18.3</td>
</tr>
<tr>
<td>2007-09</td>
<td>17.0</td>
</tr>
<tr>
<td>2008-10</td>
<td>16.0</td>
</tr>
<tr>
<td>2009-11</td>
<td>15.0</td>
</tr>
<tr>
<td>2010-12</td>
<td>14.8</td>
</tr>
<tr>
<td>2011-13</td>
<td>13.4</td>
</tr>
<tr>
<td>2012-14</td>
<td>13.0</td>
</tr>
<tr>
<td>2013-15</td>
<td>12.6</td>
</tr>
</tbody>
</table>

A comparison of modeled DVs in the original CSAPR versus monitored DVs shows that the 2012 base modeled DV of 17.94 ug/m$^3$ is far above even the observed DV from 2010-12 of 14.8 ug/m$^3$. Likewise, the 2014 “remedy” modeling produced a DV of 14.62 ug/m$^3$ compared to a monitored DV for 2012-14 of 13.0 ug/m$^3$. It is reasonable to assume that large over prediction of modeled DV’s would lead to over prediction of modeled individual state contributions.

Modeling

The emissions and air quality photochemical modeling done in support of CSAPR has four emissions cases: 2005 base case, 2012 base case, 2014 base case, and the 2014 remedy (control) case. The 2012 base case modeling was used to quantify the contribution of emissions in upwind states to PM$_{2.5}$ at downwind receptors. Illinois is one of eight states (besides Pennsylvania) that contribute a “significant” amount of PM$_{2.5}$ to the Allegheny monitor. Illinois’ contribution of 0.26 ug/m$^3$ is the sixth highest contribution of the eight states, and is less than 20% of the contribution of Ohio, the highest state contribution other than Pennsylvania itself. Ohio used a similar approach in the document submitted to USEPA, “Ohio’s Interstate Pollution Transport Analysis 2012 Annual PM$_{2.5}$ Standard,” as part of its PM$_{2.5}$ Infrastructure SIP on December 4, 2015.

Geography

The nearest point in Illinois to the Allegheny monitor is about 400 miles away. At this large distance, PM$_{2.5}$ precursors from Illinois are well mixed (thoroughly dispersed) in the atmosphere long before reaching Pennsylvania, becoming just one part of the background concentration. Only a national control program, such as CSAPR, will have any effectiveness in reducing loading of precursors that may, on occasion, impact this monitor. Illinois is required to control Electric Generation Units (EGUs) year-round to meet annual budgets of NOx and SO$_2$ associated with CSAPR, so the Illinois contribution to long-range transport is already being minimized.

Meteorology

The wind rose (Figure 1) from the Pittsburgh/Allegheny airport demonstrates that the dominant wind directions in the monitor area are south through west, with the highest frequency from the
south. The following sources are located to the south of the monitor: Clairton Coke Works (1.3 miles), Guardian Industrial Group (5.3 miles), Genon Power Midwest/Elrama Power Plant (5.7 miles), and Allegheny Energy Supply Co./Mitchell Power Station (8.9 miles). US Steel Corp./Irvin Plant is located 2.0 miles to the west of the monitor. The 2011 emissions totals for these sources were 702 tons/year (“TPY”) of primary PM$_{2.5}$, 3,075 TPY of NOx, and 1,468 TPY of SO$_2$. There are clearly very large sources of PM$_{2.5}$ and precursors of PM$_{2.5}$ near the monitor that line up favorably with the prevailing wind directions in the area. All possible controls for these sources should be evaluated and implemented before areas far upwind are burdened with additional controls.

Figure 1. Wind rose for Pittsburgh/Allegheny airport

![Wind rose for Pittsburgh/Allegheny airport](image)

Emissions

Emissions of NOx and SO$_2$ have been steadily decreasing since the early 2000s due to state and federal control requirements. Table 2, below, lists the emissions from all source categories from each federal inventory year since 2002. The emissions of NOx and SO$_2$ from all source categories have decreased by 48.5 and 64 percent, respectively, since 2002.
Table 2. Tons emissions of NOx and SO\textsubscript{2} by inventory year

<table>
<thead>
<tr>
<th>Year</th>
<th>Pollutant</th>
<th>Point</th>
<th>Area*</th>
<th>On-Road*</th>
<th>Off-Road</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>NOx</td>
<td>267,814</td>
<td>47,436</td>
<td>309,869</td>
<td>209,362</td>
<td>873,253</td>
</tr>
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<td></td>
<td>SO\textsubscript{2}</td>
<td>507,097</td>
<td>5,264</td>
<td>8,934</td>
<td>9,305</td>
<td>530,601</td>
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<tr>
<td>2005</td>
<td>NOx</td>
<td>213,961</td>
<td>42,972</td>
<td>249,185</td>
<td>206,077</td>
<td>712,195</td>
</tr>
<tr>
<td></td>
<td>SO\textsubscript{2}</td>
<td>489,049</td>
<td>6,350</td>
<td>5,646</td>
<td>9,449</td>
<td>510,494</td>
</tr>
<tr>
<td>2008</td>
<td>NOx</td>
<td>193,613</td>
<td>47,481</td>
<td>195,251</td>
<td>154,832</td>
<td>591,177</td>
</tr>
<tr>
<td></td>
<td>SO\textsubscript{2}</td>
<td>376,510</td>
<td>6,508</td>
<td>1,048</td>
<td>2,773</td>
<td>386,839</td>
</tr>
<tr>
<td>2011</td>
<td>NOx</td>
<td>129,720</td>
<td>43,985</td>
<td>183,397</td>
<td>139,627</td>
<td>496,728</td>
</tr>
<tr>
<td></td>
<td>SO\textsubscript{2}</td>
<td>278,916</td>
<td>5,376</td>
<td>1,032</td>
<td>1,605</td>
<td>286,929</td>
</tr>
<tr>
<td>2014</td>
<td>NOx</td>
<td>99,753</td>
<td>58,012</td>
<td>174,774</td>
<td>116,965</td>
<td>449,504</td>
</tr>
<tr>
<td></td>
<td>SO\textsubscript{2}</td>
<td>182,200</td>
<td>5,688</td>
<td>1,040</td>
<td>2,576</td>
<td>191,504</td>
</tr>
</tbody>
</table>

*These are the original emissions determined for the inventory at that time.

Figure 2. Total Emissions of NOx and SO\textsubscript{2} from Table 2

NOx and SO\textsubscript{2} emissions specifically from point sources (according to source Annual Emissions Reports) have decreased even more than the overall emissions – by 74.6 and 80.5 percent, respectively, since 2002 as shown in Figure 3, below.
Conclusion

Illinois’ analysis of the factors contributing to continued nonattainment of the annual PM$_{2.5}$ standard at a monitor in Allegheny County, Pennsylvania, shows that the design value has decreased every year for the last ten years, and that the prevailing wind directions indicate a sizable local contribution from industrial sources near the monitor. The modeling used in the CSAPR rule shows that, although Illinois was considered a “significant” contributor, five other states had a larger contribution, and the “future year” modeling predicted much higher concentrations than actually occurred in 2012 and 2014. Illinois’ annual emissions of NOx and SO$_2$ have decreased significantly within the last 13 years. Finally, the large distance between Illinois and the Pennsylvania monitor makes individual Illinois sources indiscernible from the general background. Illinois already participates in the CSAPR control program, which is the only reasonable way to reduce long-distance transport. Therefore, no additional emission reductions from Illinois are necessary beyond the CSAPR program and other planned controls to reduce its impact on the Allegheny County, Pennsylvania, nonattainment monitor.