

Illinois
Ambient Air Monitoring
2015 Network Plan



Illinois Environmental Protection Agency
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Acronyms

AADT	Annual Average Daily Traffic
AQI	Air Quality Index
AQS	Air Quality System
BAM	Beta Attenuation Monitor
CAA	Clean Air Act
CBSA	Core Based Statistical Area
CCDEC	Cook County Department of Environmental Control
CFR	Code of Federal Regulations
CBSA	Core Based Statistical Area
CO	Carbon Monoxide
FEM	Federal Equivalent Method
FRM	Federal Reference Method
Illinois EPA	Illinois Environmental Protection Agency
MSA	Metropolitan Statistical Area
NAAQS	National Ambient Air Quality Standards
NCore	National Core multi-pollutant stations
NO	Nitric Oxide
NO ₂	Nitrogen Dioxide
NO _x	Nitrogen Oxides
NO _y	Total Reactive Nitrogen Oxides
O ₃	Ozone
PAMS	Photochemical Assessment Monitoring Station
Pb	Lead
PM _{2.5}	Particulate matter with a diameter less than or equal to 2.5 micrometers
PM ₁₀	Particulate matter with a diameter less than or equal to 10 micrometers
PM _{10-2.5}	Particulate matter with a diameter less than or equal to 10 micrometers and greater than or equal to 2.5 micrometers
ppb	Parts per billion
ppm	Parts per million
PWEI	Population Weighted Emissions Index
QA	Quality Assurance
SASS	Speciation Air Sampling System
SLAMS	State or Local Air Monitoring Systems
SO ₂	Sulfur Dioxide
SPM	Special Purpose Monitor
TSP	Total Suspended Particulate
U.S. EPA	United States Environmental Protection Agency
UV	Ultraviolet
VOC	Volatile Organic Compounds

Introduction

In 1970, Congress enacted the Clean Air Act (CAA), empowering the United States Environmental Protection Agency (U.S. EPA) to develop and implement National Ambient Air Quality Standards (NAAQS) for pollutants shown to threaten human health.

NAAQS exist for six criteria pollutants – carbon monoxide (CO), ozone (O₃), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter with a diameter less than or equal to 10 micrometers (PM₁₀), and fine particulate matter (PM_{2.5}). There are primary and secondary NAAQS. Primary standards protect public health, whereas secondary standards protect public welfare including the environment.

A predominant goal of the air monitors within Illinois' network is to collect data with which to assess compliance with the NAAQS. A listing of these NAAQS calculations and contributions can be found at <http://epa.gov/air/criteria.html> .

Illinois has designed its ambient air monitoring network to provide timely air pollution data to the public, support compliance with ambient air quality standards and emissions strategy development, and support air pollution research studies. Data gathered from the Illinois EPA's monitoring network is used to produce a daily Air Quality Index (AQI) report, compile daily air quality forecast reports, support short and long-term health risk assessments, identify localized health concerns, and track long-term trends in air quality that could potentially threaten Illinois citizen's quality of life.

The Illinois air monitoring network includes monitors for the six criteria pollutants: CO, O₃, Pb, NO₂, SO₂, PM₁₀, and PM_{2.5}. The Illinois air monitoring network meets or, in most cases, exceeds the applicable minimum network requirements.

Monitor siting takes into consideration: peak (the highest concentration of pollution in a given area), population (presence of pollutants in areas with high population densities), source (pollution resulting from significant sources or source categories), background (general pollutant levels), and transport (extent of regional pollutant transport between populated areas). Federal regulations prescribe requirements for monitor and probe siting to ensure that the ambient air quality data accurately is representative. The criteria for the placement and operation of each monitor and probe vary. Site surveys ensure that each requirement is satisfied.

Federal regulations require each State to submit to U.S. EPA an air monitoring network plan annually for the prospective year. The network plan provides a description of the monitoring network for each criteria pollutant including proposed changes. The air monitoring network plan is subject to public review and comment prior to its submission to the U.S. EPA.

Monitoring Designations

The following designations describe the various types of monitors at the sites within Illinois' air monitoring network:

- **NCore** - National Core multi-pollutant monitoring station. Illinois is required by federal regulations to operate one NCore site, which includes monitors for CO, nitrogen oxides (NO/NO₂/NO_x/NO_y), SO₂, O₃, PM₁₀, speciated PM_{2.5}, PM_{2.5}, PM_{10-2.5}, and Pb. Illinois operates an NCore site in Northbrook and provides support for the federal rural NCore site located in Bondville measuring PM_{2.5}.
- **Near-road** - Placed near busy roadways, near-road sites measure the peak hourly concentrations of NO₂ and sometimes CO or PM_{2.5} in urban areas.
- **PAMS** - Photochemical Assessment Monitoring Station. In addition to monitoring of criteria pollutants, Illinois also participates in a Regional Photochemical Assessment Monitoring Station (PAMS) network in the Chicago area that is part of the U.S. EPA approved "Alternate Plan for the Regional Lake Michigan PAMS Network." This Regional PAMS network focuses on both the Milwaukee and Chicago areas that are classified as ozone nonattainment areas, and these sites are dedicated to obtaining more information about ozone and its precursors. The Illinois sites participating in the 2015 Regional PAMS network will include Braidwood, Schiller Park, Northbrook, and Zion. Illinois' Regional PAMS sites will collect and monitor speciated volatile organic compounds (VOCs), carbonyls, NO_x, O₃ (Schiller Park, Northbrook, Braidwood, and Zion), CO (Northbrook), and meteorological data in order to monitor potential threats of nonattainment.
- **SLAMS** - State or Local Ambient Monitoring Station. SLAMS monitoring is for comparison to the NAAQS.
- **SPM** - Special Purpose Monitor. The monitors in this category are not included in the agency network and do not apply toward the determination of area NAAQS compliance.

Monitoring Objectives

Monitoring objectives describe the various purposes of the monitors within Illinois' air monitoring network:

- **General (Background) Concentration** - These sites are positioned to measure the general background concentration of pollutants in an area.
- **Highest Concentration (Highest Conc.)** - These sites are located to determine the expected peak concentrations of pollutants in an area.
- **Population** - Located in areas categorized by high population density, these sites are used to determine the typical pollutant concentrations in a specific area.
- **Regional Transport (Transport)** - These sites are located to monitor the level of regional pollution transport from one area to the next.
- **Source-Oriented (Source)** - As certain sources contribute to pollution more significantly than others, source-oriented monitors are placed in order to identify the impact of these sources.

Spatial Scale Designations

Sites are not only characterized by type and by the objective, but also according to spatial scale. These scales are used to categorize siting areas and link them with the specific monitoring objectives. Spatial scales as outlined by the U.S. EPA include:

- **Micro** - Concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.
- **Middle** - Concentrations typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.
- **Neighborhood** - Concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.
- **Urban** - Overall, citywide conditions with dimensions on the order of four to 50 kilometers.
- **Regional** - A rural area of reasonably homogenous geography without large sources, extending from tens to hundreds of kilometers.

Sampling Methodology

Every ambient air monitor can be classified by a specific method number which identifies sample collection and analysis methods. A comprehensive list of these numbers can be found at: <http://www.epa.gov/ttn/amtic/files/ambient/criteria/reference-equivalent-methods-list.pdf>.

Federal regulations specify that monitoring methods used for comparison to the NAAQS must be Federal Reference or Equivalent Methods (FRM or FEM). Almost all monitors listed in Illinois' network plan use either FRM or FEM with only a few exceptions. For example, the CO and SO₂ monitors at Northbrook are trace-level samplers that are not classified as either FRM or FEM. Further excepting, locations hosting continuous PM_{2.5} samplers are not currently operated as FRM or FEM. These continuous PM_{2.5} samplers provide data for AQI purposes.

Quality Assurance

Guidance, policies, and federal regulations establish quality system requirements for data submitted to U.S. EPA. Currently, there are two Primary Quality Assurance Organizations under this network plan – the Illinois EPA and the Cook County Department of Environmental Control (CCDEC).

Proposed Network for 2015

Ozone

Illinois is required to operate a minimum of 14 O₃ monitoring sites across the state to meet SLAMS O₃ requirements. NCore requires the operation of one O₃ monitor. Additionally, 19 other O₃ monitors are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2014, Illinois operated 34 O₃ monitors. This number will not change in 2015. Four of these monitors will be part of the alternate PAMS sites – Braidwood, Schiller Park, Northbrook, and Zion. The ozone site at University of Chicago was required to be removed by the property owners. Replacement locations are currently being investigated.

Fine Particulate Matter (PM_{2.5})

Illinois is required to operate a minimum of 13 FRM or FEM PM_{2.5} monitors. NCore requires one continuous and one filter based PM_{2.5} monitor. One near-road monitoring site with one FRM or FEM PM_{2.5} monitor shall also exist. Illinois is required to operate at least one FRM or FEM PM_{2.5} site monitoring regional background and at least one FRM or FEM PM_{2.5} site to monitor regional transport. Additionally, 15 other PM_{2.5} monitoring sites are operated for purposes of supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2014, 33 PM_{2.5} sites were operating in Illinois. In 2015 the number of PM_{2.5} sites will remain the same.

Historically, the PM_{2.5} monitor located at the Schiller Park site was supposed to have been designated as a source-oriented SPM site with a “Middle” spatial scale. For reasons that are unclear at this time, at some point this monitor was improperly given a SLAMS designation and was listed as “Highest Concentration” in previous plans, although it retained a spatial scale of “Middle.” This spatial scale monitor was then further erroneously changed to “Neighborhood” in the 2014 network plan. This 2015 network plan is correcting all of these errors such that the Schiller Park PM_{2.5} monitor will be properly listed as a source-oriented SPM with a “Middle” scale.

Sulfur Dioxide

Illinois is required to operate six SO₂ monitors. One additional SO₂ monitor is required at each of the Northbrook and Bondville NCore sites to fulfill NCore requirements. Illinois Water Survey operates the Bondville SO₂ monitor. Additionally, six SO₂ monitoring sites are operated in Illinois’ network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2014, a total of 14 SO₂ monitors operated in Illinois. In 2015, Illinois intends to discontinue the SO₂ monitor operated at Cicero, leaving a balance of 13 SO₂ monitors operated in Illinois.

Specifically, the Cicero SO₂ monitor meets the criteria of 40 CFR Part 58.14(c):

- The monitor has shown attainment for the previous five years, with one-hour maximum concentrations below the NAAQS of 75 parts per billion (ppb).
- Calculations of the monitoring data provide that there is less than a 10% probability of the monitor exceeding 80% of the NAAQS (60 ppb) over the next three years. Additionally, this monitor is not specifically required by an attainment or maintenance plan.

SO ₂ 1-Hour Standard 75 (ppb)			99% tile 1-Hour SO ₂ (ppb)					Design Value (ppb)
Site	AQS Code	Operator	2009	2010	2011	2012	2013	2011-2013
Cicero	17-031-4002	CCDEC	29	31	29	16	12	19

Nitrogen Dioxide

Illinois is required to operate two NO₂ monitors. Illinois is also required to operate two near-road NO₂ monitors. In addition, federal regulations require the Regional Administrator to collaborate with each State in determining the need for additional NO₂ monitoring requirements beyond the minimum, with a primary focus on siting monitors in locations to protect susceptible and vulnerable populations. In Illinois, two NO₂ monitoring sites are designated, East St. Louis and ComEd. The Northbrook NCore site is required to operate at least one NO₂ monitor. In 2014, the Illinois EPA monitoring network consisted of five NO₂ monitoring sites. With the addition of the proposed near-road sites, seven sites will be operated in 2015.

Carbon Monoxide

Illinois must operate one CO monitor in conjunction with one near-road NO₂ monitor. In addition, it must operate one CO monitor at an NCore site. An additional CO monitoring site is operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2014, the Illinois EPA operated three CO monitors. In 2015, Illinois EPA will continue to operate three CO monitors.

Particulate Matter (PM₁₀)

Illinois must operate three PM₁₀ monitors to satisfy MSA requirements. It must also operate one PM₁₀ monitor for NCore purposes. In 2014, the Illinois EPA operated a total of four PM₁₀ monitoring sites. In 2015, the Illinois EPA will continue to operate four PM₁₀ monitors.

Lead

Illinois must operate one population-based lead monitor. This monitor also satisfies NCore obligations. In addition to the population-based monitors, Illinois is required to operate source-oriented monitors near facilities emitting 0.5 tons/year of lead that also have maximum lead concentrations in ambient air in excess of 50 percent of the NAAQS. Illinois operates five source oriented monitors one of which is a special purpose monitor located in Geneva. One additional lead monitoring site is operated in Illinois' network supporting the basic monitoring objectives of public data reporting, air quality mapping, compliance, and supporting air pollution research studies. In 2014, Illinois operated seven lead monitoring sites. There are no changes proposed for the 2015 network plan.

Table 1: Illinois Monitoring Network by Pollutant

AQS ID	County	City	Address	Site Description	Operator	CO	NO ₂	SO ₂	O ₃	PM ₁₀	PM _{2.5}	Lead
17-001-0007	Adams	Quincy	1301 S. 48th St	John Wood Community College	IEPA				X			
17-019-0006	Champaign	Champaign	904 N. Walnut	Ameren Substation Platform	IEPA						X	
17-019-0007	Champaign	Thomasboro	North Thomas St.	Resident's Building	IEPA				X			
17-019-1001	Champaign	Bondville	Twp. Rd. 500 E.	SWS Climate Station	IEPA						X	
17-031-0001	Cook	Alsip	4500 W. 123rd St.	Village Garage	CCDEC				X		X	
17-031-0022	Cook	Chicago	3535 E. 114th St	Washington High School	CCDEC					X	X	X
17-031-0032	Cook	Chicago	3300 E. Cheltenham Pl.	South Water Filtration Plant	CCDEC				X			
17-031-0052	Cook	Chicago	4850 Wilson Ave.	Mayfair Pump Station	CCDEC						X	
17-031-0057	Cook	Chicago	1745 N. Springfield Ave.	Springfield Pump Station	CCDEC						X	
17-031-0063	Cook	Chicago	321 S. Franklin	CTA Building	IEPA		X					
17-031-0064	Cook	Chicago	5720 S. Ellis Ave.	University of Chicago	CCDEC				X			
17-031-0076	Cook	Chicago	7801 Lawndale	Com Ed Maintenance Bldg. Trailer	CCDEC		X	X	X		X	
17-031-0110	Cook	Chicago	1241 19th St.	Perez Elementary School	CCDEC							X
17-031-1003	Cook	Chicago	6545 W. Hurlbut St.	Taft High School	CCDEC				X			
17-031-1016	Cook	Lyons Township	50th St. & Glencoe	Village Hall	IEPA					X	X	
17-031-1601	Cook	Lemont	729 Houston	Lemont Trailer	CCDEC			X	X			
17-031-3103	Cook	Schiller Park	4743 Mannheim Rd.	Schiller Park Trailer	IEPA		X		X		X	
17-031-3301	Cook	Summit	60th St. & 74th Ave.	Graves Elementary School	CCDEC						X	
17-031-4002	Cook	Cicero	1820 S. 51st Ave.	Cicero Trailer	CCDEC		X	X	X			
17-031-4007	Cook	Des Plaines	9511 W. Harrison St.	Regional Office Bldg.	IEPA				X		X	
17-031-4201	Cook	Northbrook	750 Dundee Rd.	Northbrook Water Plant	IEPA	X	X	X	X	X	X	X
17-031-6005	Cook	Cicero	13th St. & 50th Ave.	Liberty School	CCDEC						X	
17-031-7002	Cook	Evanston	531 E. Lincoln	Evanston Water Plant	IEPA				X			
17-031-0113	Cook	Riverdale	To Be Determined	Riverdale Platform	IEPA							X
17-043-4002	DuPage	Naperville	400 S. Eagle St.	City Hall	IEPA						X	
17-043-6001	DuPage	Lisle	Route 53	Morton Arboretum	IEPA				X			
17-049-1001	Effingham	Effingham	Route 45 South	Central Junior High School	IEPA				X			
17-065-0002	Hamilton	Knight Prairie Twp	Route 14	Knight Prairie Trailer	IEPA				X		X	
17-083-1001	Jersey	Jerseyville	Liberty St. & County Rd.	Jerseyville Trailer	IEPA				X		X	
17-089-0003	Kane	Elgin	258 Lovell St.	McKinley School	IEPA						X	
17-089-0005	Kane	Elgin	665 Dundee Rd.	Larsen Junior High School	IEPA				X			
17-089-0007	Kane	Aurora	1240 N. Highland	Health Department	IEPA						X	
17-089-0113	Kane	Geneva	300 S. Glengarry Dr.	Geneva Platform	IEPA							X
17-097-1007	Lake	Zion	Illinois Beach State Park	Zion Trailer	IEPA				X			
17-099-0007	La Salle	Oglesby	308 Portland Ave.	Oglesby Trailer	IEPA			X				
17-111-0001	McHenry	Cary	First St. & Three Oaks Rd.	Cary Grove High School	IEPA				X		X	
17-113-2003	McLean	Normal	Main & Gregory	Normal-ISU Physical Plant Trailer	IEPA				X		X	

AQS ID	County	City	Address	Site Description	Operator	CO	NO ₂	SO ₂	O ₃	PM ₁₀	PM _{2.5}	Lead
17-115-0013	Macon	Decatur	2200 N. 22nd St.	Decatur Trailer	IEPA			X	X		X	
17-115-0110	Macon	Decatur	1226 E. Garfield	Mueller Platform	IEPA							X
17-117-0002	Macoupin	Nilwood	Heaton & Dubois	Nilwood Trailer	IEPA			X	X			
17-119-0008	Madison	Alton	409 Main St	Clara Barton School	IEPA				X			
17-119-0010	Madison	Granite City	15th & Madison	Air Products	IEPA							X
17-119-0024	Madison	Granite City	2100 Madison	Gateway Medical Center	IEPA						X	
17-119-1007	Madison	Granite City	23rd. & Madison	Fire Station # 1	IEPA					X	X	
17-119-1009	Madison	Maryville	200 W. Division	Maryville ComCast Bldg.	IEPA				X			
17-119-1010	Madison	South Roxana	Michigan St.	South Roxana Trailer	IEPA			X				
17-119-2009	Madison	Alton	1700 Annex. St.	SIU Dental Clinic	IEPA						X	
17-119-3007	Madison	Wood River	54 N. Walcott	Wood River Water Treatment Plant	IEPA			X	X		X	
17-143-0024	Peoria	Peoria	Hurlburt & MacArthur	Fire Station #8	IEPA			X	X			
17-143-0037	Peoria	Peoria	613 N.E. Jefferson	City Office Bldg.	IEPA						X	
17-143-1001	Peoria	Peoria Heights	508 E. Glen Ave.	Peoria Heights High School	IEPA				X			
17-157-0001	Randolph	Houston	Hickory Grove & Fallview	Houston Trailer	IEPA			X	X		X	
17-161-3002	Rock Island	Rock Island	32 Rodman Ave.	Rock Island Arsenal	IEPA				X		X	
17-163-0010	St. Clair	East St. Louis	13th & Tudor	ESTL Trailer	IEPA	X	X	X	X		X	
17-167-0006	Sangamon	Springfield	3300 Mechanicsburg Rd.	Sewage Treatment Plant	IEPA			X				
17-167-0012	Sangamon	Springfield	State Fair Grounds	Agriculture Bldg.	IEPA						X	
17-167-0014	Sangamon	Springfield	Illinois Building	State Fairgrounds Shelter	IEPA				X			
17-179-0004	Tazewell	Pekin	272 Derby	Pekin Fire Station #3	IEPA			X				
17-197-1002	Will	Joliet	Midland & Campbell Sts.	Pershing Elementary School	IEPA							X
17-197-1011	Will	Braidwood	36400 S. Essex Rd.	Com Ed Training Ctr. Trailer	IEPA				X		X	
17-201-0013	Winnebago	Rockford	201 Division St.	Winnebago Co.Health Department	IEPA						X	
17-201-2001	Winnebago	Loves Park	1405 Maple Ave.	Maple Elementary School	IEPA				X			
17-XXX-XXXX	Replacement site for 17-031-0064				TBD				X			
					IEPA	2	4	11	28	3	26	5
					CCDEC	0	2	2	6	1	7	2
					Total	2	6	13	34	4	33	7

Strike through indicates monitoring site ended
 Highlight indicates monitor proposed for removal
 Bold indicates site proposed

Table 2: Ozone Sites

AQ5 ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule
		Latitude	Longitude		Primary	Secondary					
17-001-0007	John Wood Community College	+39.91540937	-91.33586832	Quincy, IL-MO	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-019-0007	Resident's Building	+40.244913	-88.188519	Champaign-Urbana, IL	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-0001	Village Garage	+41.6709919	-87.7324569	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-0032	South Water Filtration Plant	+41.75583241	-87.54534967	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	No Change	SLAMS	T400	Hourly
17-031-0064	University of Chicago	+41.79078688	-87.60164649	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Site Lost	SLAMS	T400	Hourly
17-031-0076	Com Ed Maintenance Bldg. Trailer	+41.75139998	-87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-1003	Taft High School	+41.98433233	-87.7920017	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-1601	Lemont Trailer	+41.66812034	-87.99056969	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-3103	Schiller Park Trailer	+41.96519348	-87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Population	Source	Neighborhood	No Change	PAMS/SLAMS	T400	Hourly
17-031-4002	Cicero Trailer	+41.85524313	-87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	SLAMS	T400	Hourly
17-031-4007	Regional Office Bldg.	+42.06028469	-87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	NA	Urban	No Change	PAMS/NCORE	T400	Hourly
17-031-7002	Evanston Water Plant	+42.06185724	-87.67416716	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	SLAMS	T400	Hourly
17-043-6001	Morton Arboretum	+41.81304939	-88.0728269	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-049-1001	Central Junior High School	+39.06715932	-88.54893401	Effingham, IL	Population	N/A	Regional	No Change	SLAMS	T400	Hourly
17-065-0002	Knight Prairie Trailer	+38.08215516	-88.6249434	Mt Vernon, IL	Background	N/A	Regional	No Change	SLAMS	T400	Hourly
17-083-1001	Jerseyville Trailer	+39.11053947	-90.32407986	St Louis, IL-MO	Transport	Population	Regional	No Change	SLAMS	T400	Hourly
17-089-0005	Larsen Junior High School	+42.04914776	-88.27302929	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-097-1007	Zion Trailer	+42.4675733	-87.81004705	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Transport	Urban	No Change	PAMS/SLAMS	T400	Hourly
17-111-0001	Cary Grove High School	+42.22144166	-88.24220734	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	NAMS	T400	Hourly
17-113-2003	Normal-ISU Physical Plant Trailer	+40.51873537	-88.99689571	Bloomington-Normal, IL	Population	N/A	Urban	No Change	SLAMS	T400	Hourly

AQ5 ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule
		Latitude	Longitude		Primary	Secondary					
17-115-0013	Decatur Trailer	+39.866933	-88.925452	Decatur, IL	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-117-0002	Nilwood Trailer	+39.39607533	-89.80973892	St Louis, IL-MO	Transport	Population	Regional	No Change	SLAMS	49i	Hourly
17-119-0008	Clara Barton School	+38.89018605	-90.14803114	St Louis, IL-MO	Highest Conc.	Population	Urban	No Change	SLAMS	T400	Hourly
17-119-1009	Maryville - ComCast Trailer	+38.72657262	-89.95996251	St Louis, IL-MO	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-119-3007	Wood River Water Treatment Plant	+38.86066947	-90.10585111	St Louis, IL-MO	Population	N/A	Urban	No Change	SLAMS	T400	Hourly
17-143-0024	Fire Station #8	+40.68742038	-89.60694277	Peoria, IL	Population	N/A	Neighborhood	No Change	SLAMS	T400	Hourly
17-143-1001	Peoria Heights High School	+40.74550393	-89.58586902	Peoria, IL	Highest Conc.	Population	Urban	No Change	SLAMS	T400	Hourly
17-157-0001	Houston Trailer	+38.17627761	-89.78845862	N/A	Background	N/A	Regional	No Change	SLAMS	T400	Hourly
17-161-3002	Rock Island Arsenal	+41.51472697	-90.51735026	Davenport-Moline-Rock Island, IA-IL	Population	N/A	Neighborhood	No Change	SLAMS	T400	Hourly
17-163-0010	ESTL Trailer	+38.61203448	-90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	No Change	SLAMS	T400	Hourly
17-167-0014	State Fairgrounds	+39.831522	-89.640926	Springfield, IL	Population	N/A	Urban	No Change	SLAMS	49i	Hourly
17-197-1011	Com Ed Training Ctr. Trailer	+41.22153707	-88.19096718	Chicago-Naperville-Michigan City, IL-IN-WI	Background	N/A	Regional	No Change	PAMS/SLAMS	T400	Hourly
17-201-2001	Maple Elementary School	+42.33498222	-89.0377748	Rockford, IL	Highest Conc.	Population	Urban	No Change	SLAMS	T400	Hourly
17-031-XXXX								17-031-0064 Replacement	SLAMS		Hourly

Figure 1a: Ozone Sites – Illinois

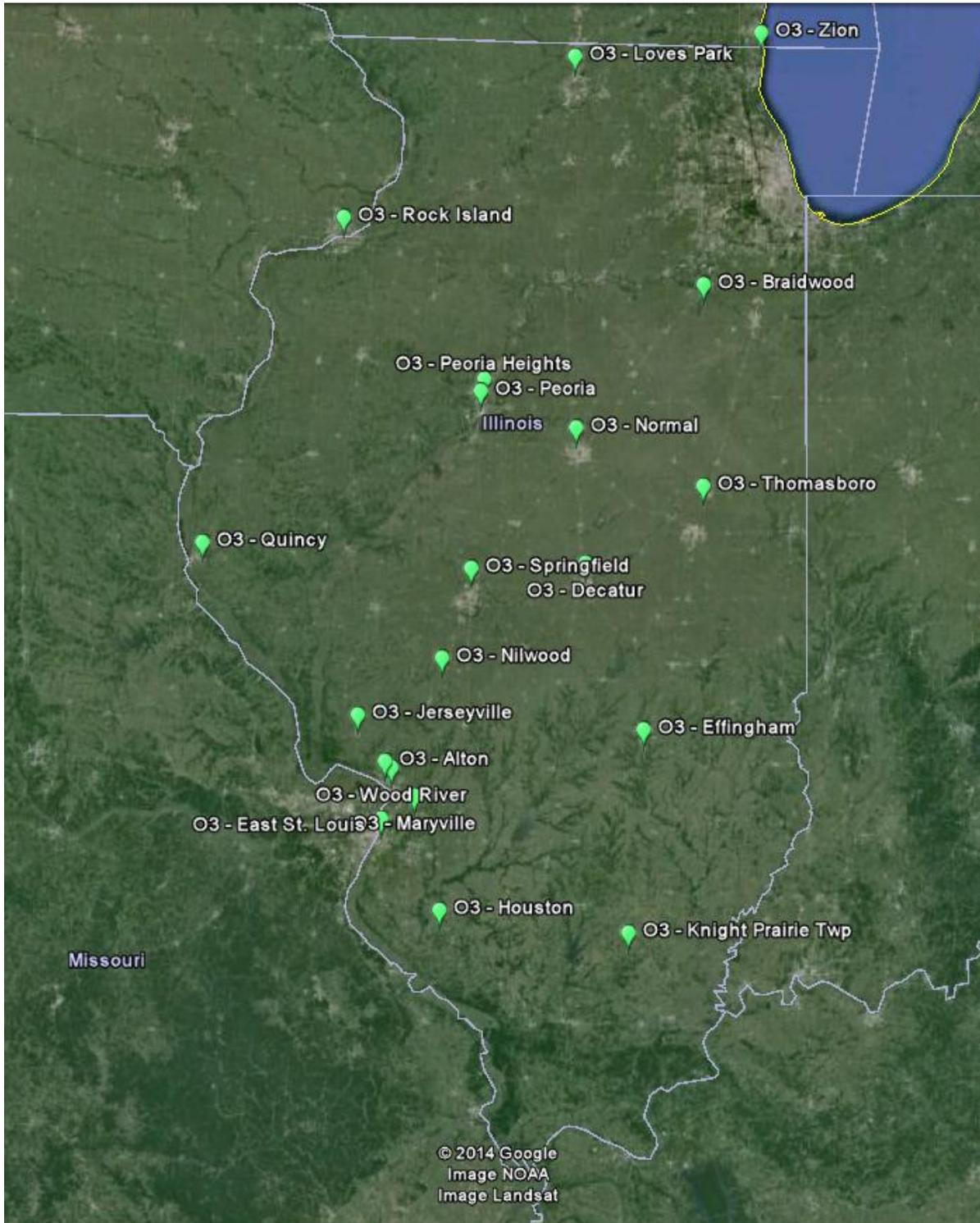


Figure 1b: Ozone Sites – Illinois Chicago Area

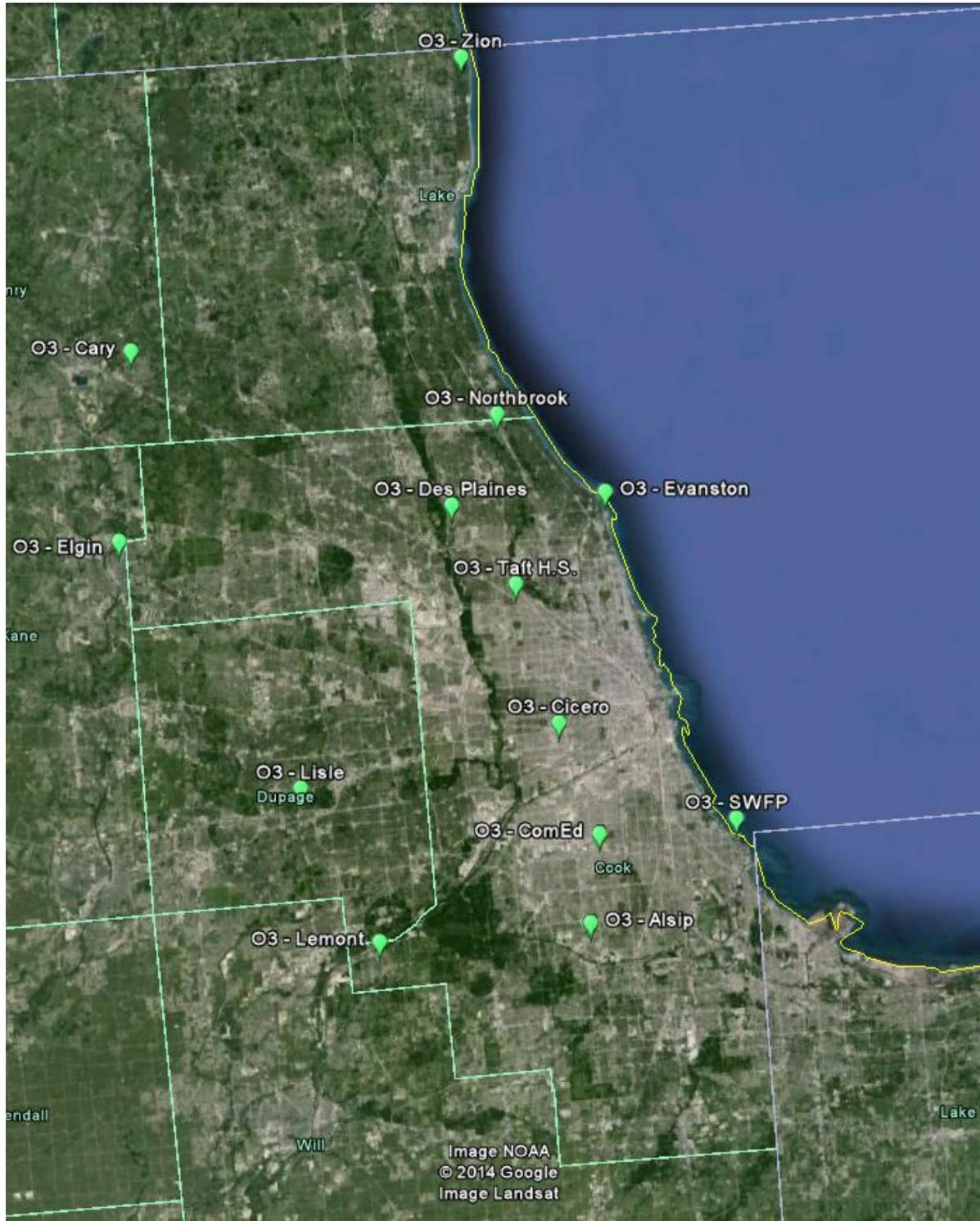


Table 3: PM_{2.5} Sites

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Standard	Location Status	Station Type	Monitor Type	Sampling Schedule	Collocated	Speciation	Frequency
		Latitude	Longitude		Primary	Secondary									
17-019-0006	Ameren Substation - platform	+40.123883	-88.240550	Champaign-Urbana, IL	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS	AS	1/3			
17-019-1001	SWS Climate Station	+40.05224171	-88.37254916	Champaign-Urbana, IL	Background	Population	Regional	Annual/24	No Change	RURAL NCORE	AS, BAM	1/3, Hourly			
17-031-0001	Village Garage	+41.6709919	-87.7324569	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS, SPM	AS, BAM	1/6, Hourly			
17-031-0022	Washington High School	+41.68716544	-87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Population	Source	Neighborhood	Annual/24	No Change	SLAMS	AS	1/3	YES		
17-031-0052	Mayfair Pump Station	+41.96548483	-87.74992806	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Population	Neighborhood	Annual/24	No Change	SLAMS	AS	1/3			
17-031-0057	Springfield Pump Station	+41.912526	-87.722667	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS, SPM	AS, BAM	1/6, Hourly		YES	1/6
17-031-0076	Com Ed Maintenance Bldg. Trailer	+41.75139998	-87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS, SPM	AS, BAM	1/6, Hourly		YES	1/3
17-031-1016	Village Hall	+41.80116701	-87.8319447	Chicago-Naperville-Michigan City, IL-IN-WI	Source	Population	Middle	24	No Change	SLAMS	AS	1/3	YES		
17-031-3103	Schiller Park Trailer	+41.96519348	-87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Source	Population	Middle	24	No Change	SLAMS	A1(2)	1/3	YES		

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Standard	Location Status	Station Type	Monitor Type	Sampling Schedule	Collocated	Speciation	Frequency
		Latitude	Longitude		Primary	Secondary									
17-031-3301	Graves Elementary School	+41.78276601	-87.80537679	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS	AS	1/3			
17-031-4007	Regional Office Bldg.	+42.06028469	-87.86322543	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	SLAMS	A1(2)	1/3			
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	NCORE, SPM	A1(2), BAM	1/3, Hourly		YES	1/3
17-031-6005	Liberty School	+41.86442642	-87.74890238	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS	AS, BAM	1/6, Hourly			
17-043-4002	City Hall	+41.77107094	-88.15253365	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	SLAMS, SPM	A1(2)	1/3		YES	1/6
17-065-0002	Knight Prairie Trailer	+38.08215516	-88.6249434	Mt Vernon, IL	Background	Population	Regional	Annual/24	No Change	SLAMS	AS	1/3			
17-083-1001	Jerseyville Trailer	+39.11053947	-90.32407986	St Louis, IL-MO	Population	Transport	Urban	Annual/24	No Change	SLAMS	THRM (2)	1/3			
17-089-0003	McKinley School	+42.050403	-88.28001471	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	SLAMS	AS	1/3			
17-089-0007	Health Department	+41.78471651	-88.32937361	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	SLAMS, SPM	A1, BAM	1/6, Hourly			
17-111-0001	Cary Grove High School	+42.22144166	-88.24220734	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	Annual/24	No Change	SLAMS, SPM	A1, BAM	1/6, Hourly			
17-113-2003	Normal-ISU Physical Plant Trailer	+40.51873537	-88.99689571	Bloomington -Normal, IL	Population	N/A	Urban	Annual/24	No Change	SLAMS	AS	1/3			

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Standard	Location Status	Station Type	Monitor Type	Sampling Schedule	Collocated	Speciation	Frequency
		Latitude	Longitude		Primary	Secondary									
17-115-0013	Decatur Trailer	+39.86683389	-88.92559445	Decatur, IL	Population	Source	Neighborhood	Annual/24	No Change	SLAMS, SPM	RP1, BAM	1/6, Hourly			
17-119-0024	Gateway Medical Center	+38.7006315	-90.14476267	St Louis, IL-MO	Source	Population	Middle	24	No Change	SLAMS, SPM	AS	1/3	YES	YES	1/6
17-119-1007	Fire Station # 1	+38.70453426	-90.13967484	St Louis, IL-MO	Highest Conc.	Population	Neighborhood	Annual/24	No Change	SLAMS, SPM	THRM ,BAM	1/6, Hourly	YES		
17-119-2009	SIU Dental Clinic	+38.90308534	-90.14316803	St Louis, IL-MO	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS	AS	1/3			
17-119-3007	Wood River Water Treatment Plant	+38.86066947	-90.10585111	St Louis, IL-MO	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS	THRM (2)	1/3			
17-143-0037	City Office Bldg.	+40.697007	-89.58473722	Peoria, IL	Population	N/A	Urban	Annual/24	No Change	SLAMS, SPM	THRM ,BAM	1/6, Hourly			
17-157-0001	Houston Trailer	+38.17627761	-89.78845862	N/A	Background	Population	Regional	Annual/24	No Change	SLAMS	AS	1/3			
17-161-3002	Rock Island Arsenal	+41.51472697	-90.51735026	Davenport-Moline-Rock Island, IA-IL	Population	N/A	Urban	Annual/24	No Change	SLAMS	AS	1/3			
17-163-0010	ESTL Trailer	+38.61203448	-90.16047663	St Louis, IL-MO	Population	Source	Neighborhood	Annual/24	No Change	SLAMS, SPM	THRM ,BAM	1/6, Hourly			
17-167-0012	Agriculture Bldg.	+39.83192087	-89.64416359	Springfield, IL	Population	N/A	Urban	Annual/24	No Change	SLAMS	THRM (2)	1/3			
17-197-1002	Pershing Elementary School	+41.52688509	-88.11647381	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Annual/24	No Change	SLAMS, SPM	AS	1/3			
17-197-1011	Com Ed Training Ctr. Trailer	+41.22153707	-88.19096718	Chicago-Naperville-Michigan City, IL-IN-WI	Background	Population	Regional	Annual/24	No Change	SLAMS	A1(2), BAM	1/6, Hourly			
17-201-0013	Winnebago Co. Health Department	+42.26308105	-89.09276716	Rockford, IL	Population	N/A	Urban	Annual/24	No Change	SLAMS, SPM	A1(2), BAM	1/6, Hourly			

Figure 2a: PM_{2.5} Sites – Illinois

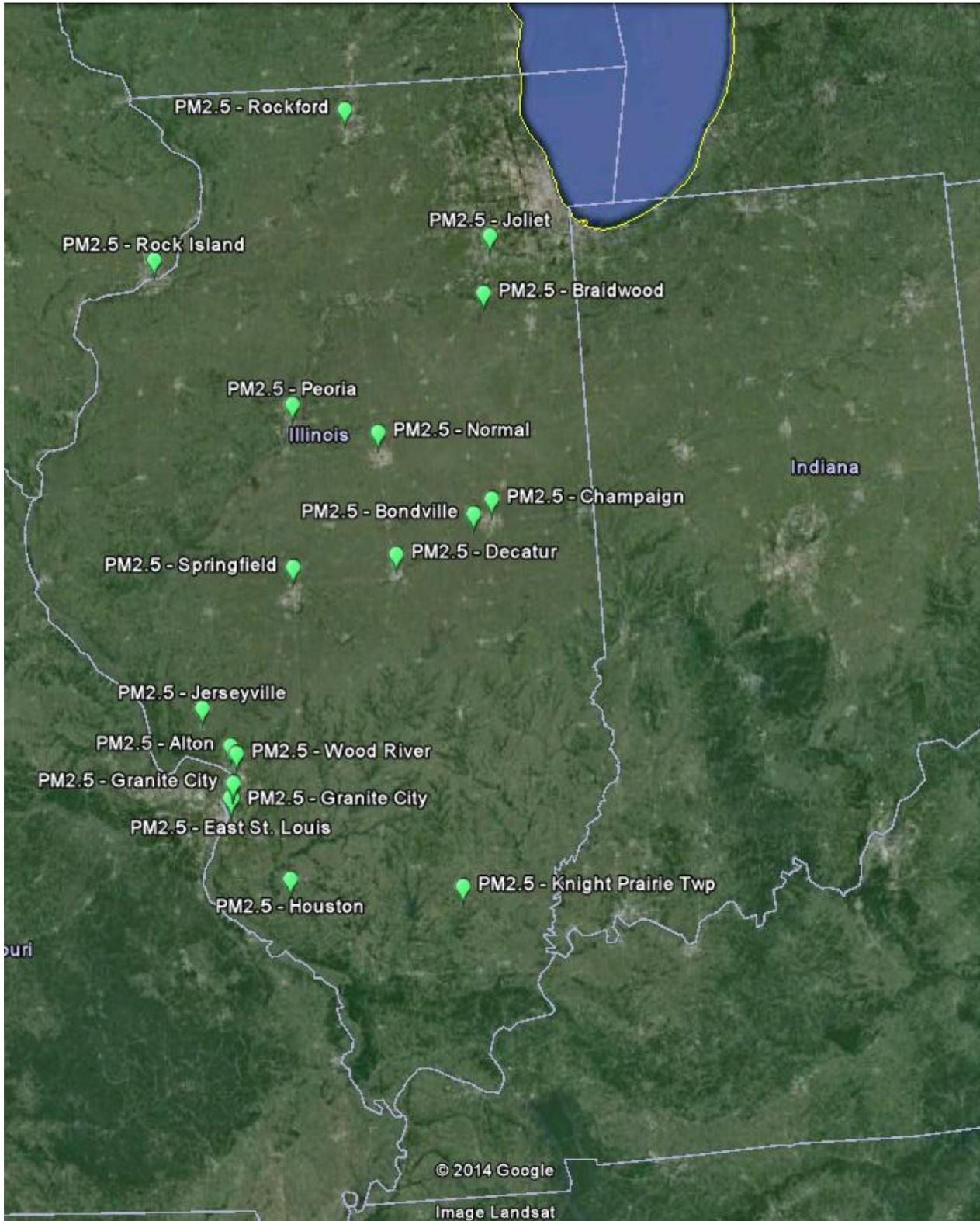


Figure 2b: PM_{2.5} Sites – Illinois Chicago Area

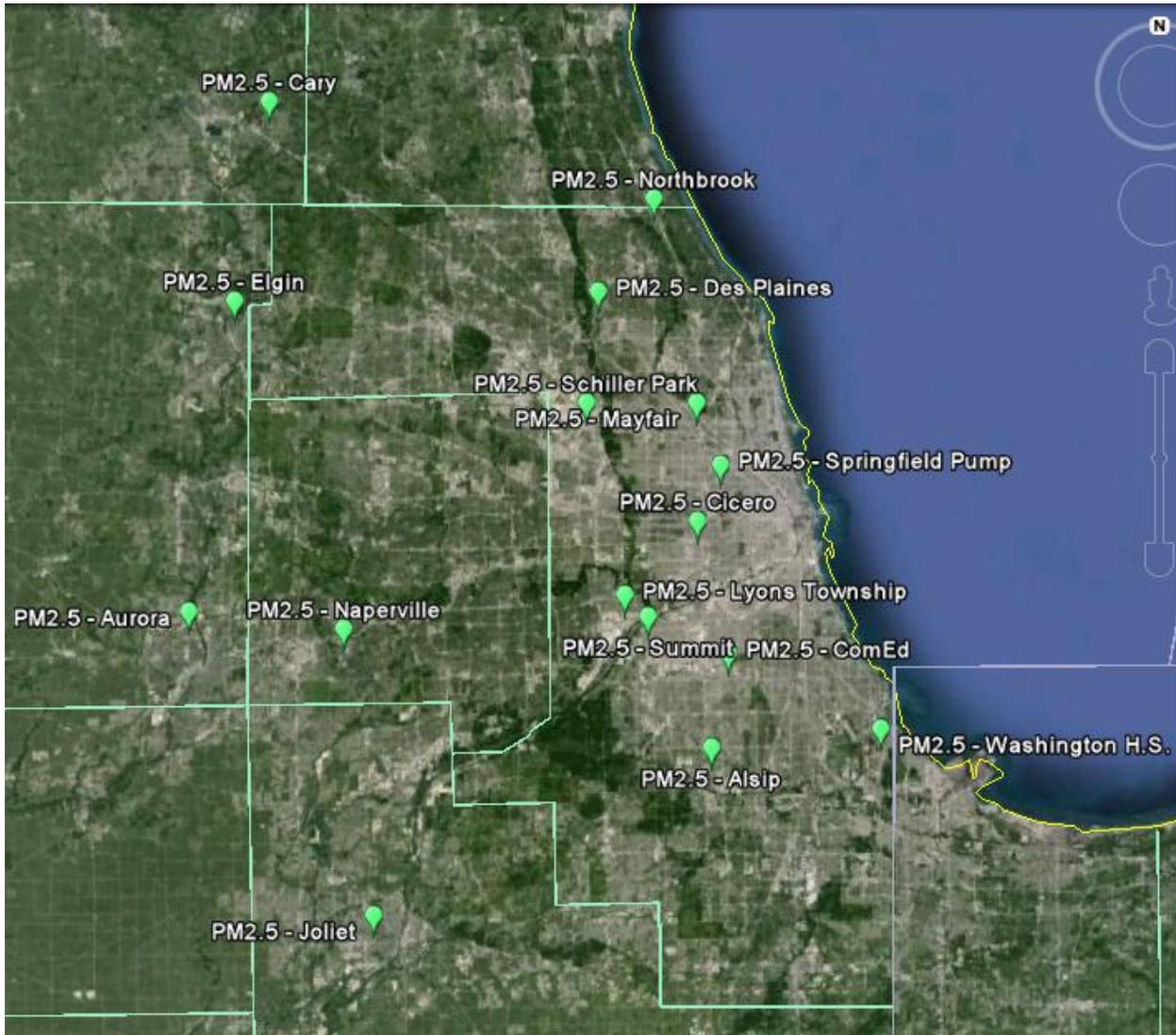


Table 4: SO₂ Sites

AQ5 ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule
		Latitude	Longitude		Primary	Secondary					
17-031-0076	Com Ed Maintenance Bldg. Trailer	+41.75139998	-87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	SLAMS	API	Hourly
17-031-1601	Lemont Trailer	+41.66812034	-87.99056969	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	SLAMS	API	Hourly
17-031-4002	Cicero Trailer	+41.85524313	-87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	Removal Proposed	SLAMS	API	Hourly
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	NCORE	T100U	Hourly
17-099-0007	Oglesby Trailer	+41.29301454	-89.04942498	Ottawa-Streator, IL	Highest Conc.	Source	Neighborhood	No Change	SLAMS	T100	Hourly
17-115-0013	Decatur Trailer	+39.86683389	-88.92559445	Decatur, IL	Population	N/A	Neighborhood	No Change	SLAMS	T100	Hourly
17-117-0002	Nilwood Trailer	+39.39607533	-89.80973892	St Louis, IL-MO	Background	Population	Regional	No Change	SLAMS	T100	Hourly
17-119-1010	South Roxana Trailer	+38.82830334	-90.05843262	St Louis, IL-MO	Highest Conc.	Source	Neighborhood	No Change	SLAMS	T100	Hourly
17-119-3007	Wood River Water Treatment Plant	+38.86066947	-90.10585111	St Louis, IL-MO	Population	N/A	Neighborhood	No Change	SLAMS	T100	Hourly
17-143-0024	Fire Station #8	+40.68742038	-89.60694277	Peoria, IL	Population	N/A	Neighborhood	No Change	SLAMS	T100	Hourly
17-157-0001	Houston Trailer	+38.17627761	-89.78845862	Randolph County	Background	N/A	Neighborhood	No Change	SLAMS	T100	Hourly
17-163-0010	ESTL Trailer	+38.61203448	-90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	No Change	SLAMS	T100	Hourly
17-167-0006	Sewage Treatment Plant	+39.80061377	-89.59122532	Springfield, IL	Highest Conc.	Source	Neighborhood	No Change	SLAMS	T100	Hourly
17-179-0004	Pekin Fire Station #3	+40.55646017	-89.65402807	Peoria, IL	Highest Conc.	Source	Neighborhood	No Change	SLAMS	T100	Hourly

Figure 3: SO₂ Sites – Illinois

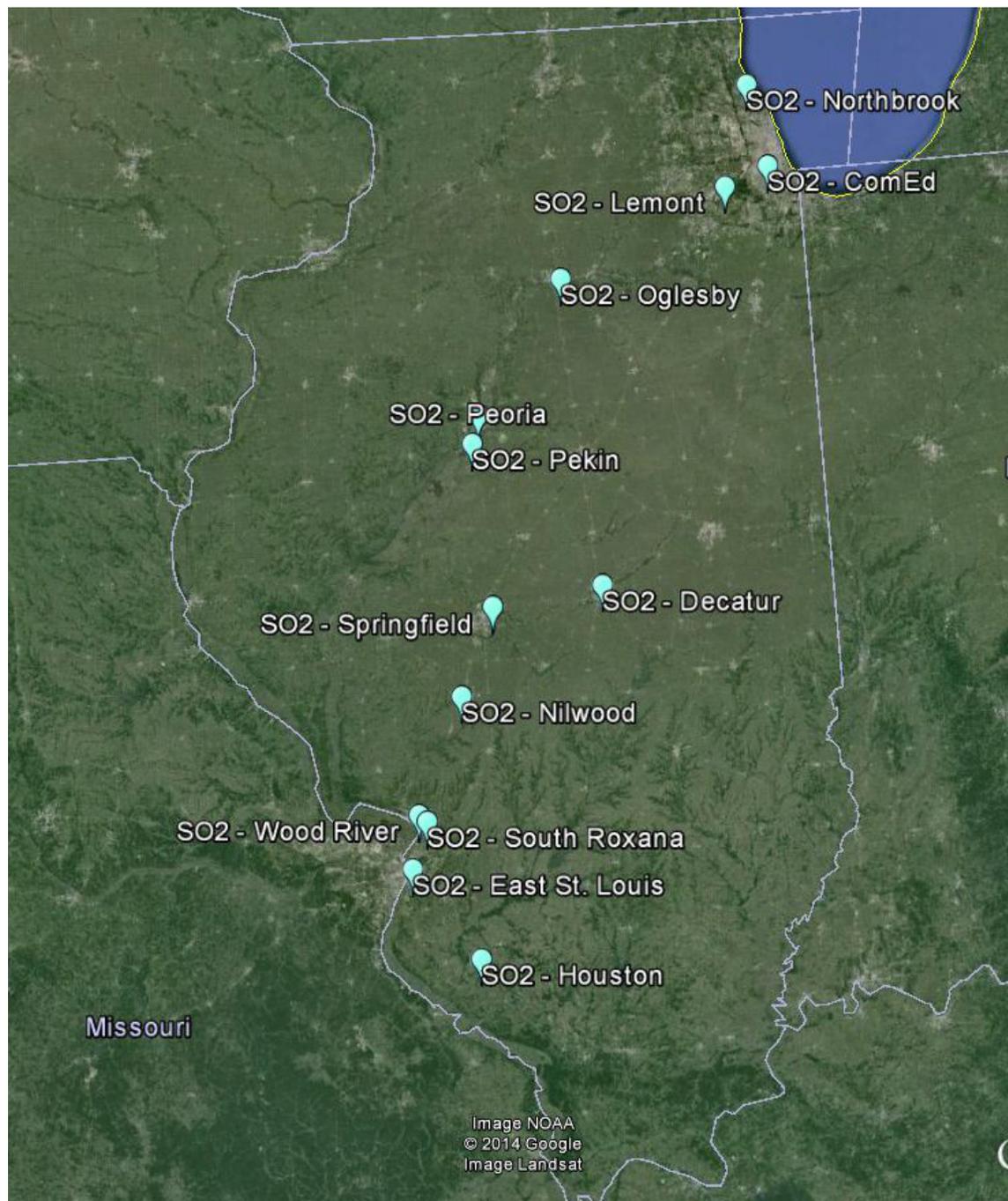


Table 5: NO₂ Sites

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule
		Latitude	Longitude		Primary	Secondary					
17-031-0063	CTA Building	+41.877628	-87.635027	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Middle	No Change	SLAMS	T200	Hourly
17-031-0076	Com Ed Maintenance Bldg. Trailer	+41.75139998	-87.71348815	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	SLAMS	TE	Hourly
17-031-3103	Schiller Park Trailer	+41.96519348	-87.87626473	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Middle	No Change	PAMS/SLAMS	T200	Hourly
17-031-4002	Cicero Trailer	+41.85524313	-87.7524697	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	SLAMS	TE	Hourly
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	PAMS/NCO RE	T200	Hourly
17-163-0010	ESTL Trailer	+38.61203448	-90.16047663	St Louis, IL-MO	Population	N/A	Neighborhood	No Change	SLAMS	T200	Hourly

Figure 4: NO₂ Sites – Illinois

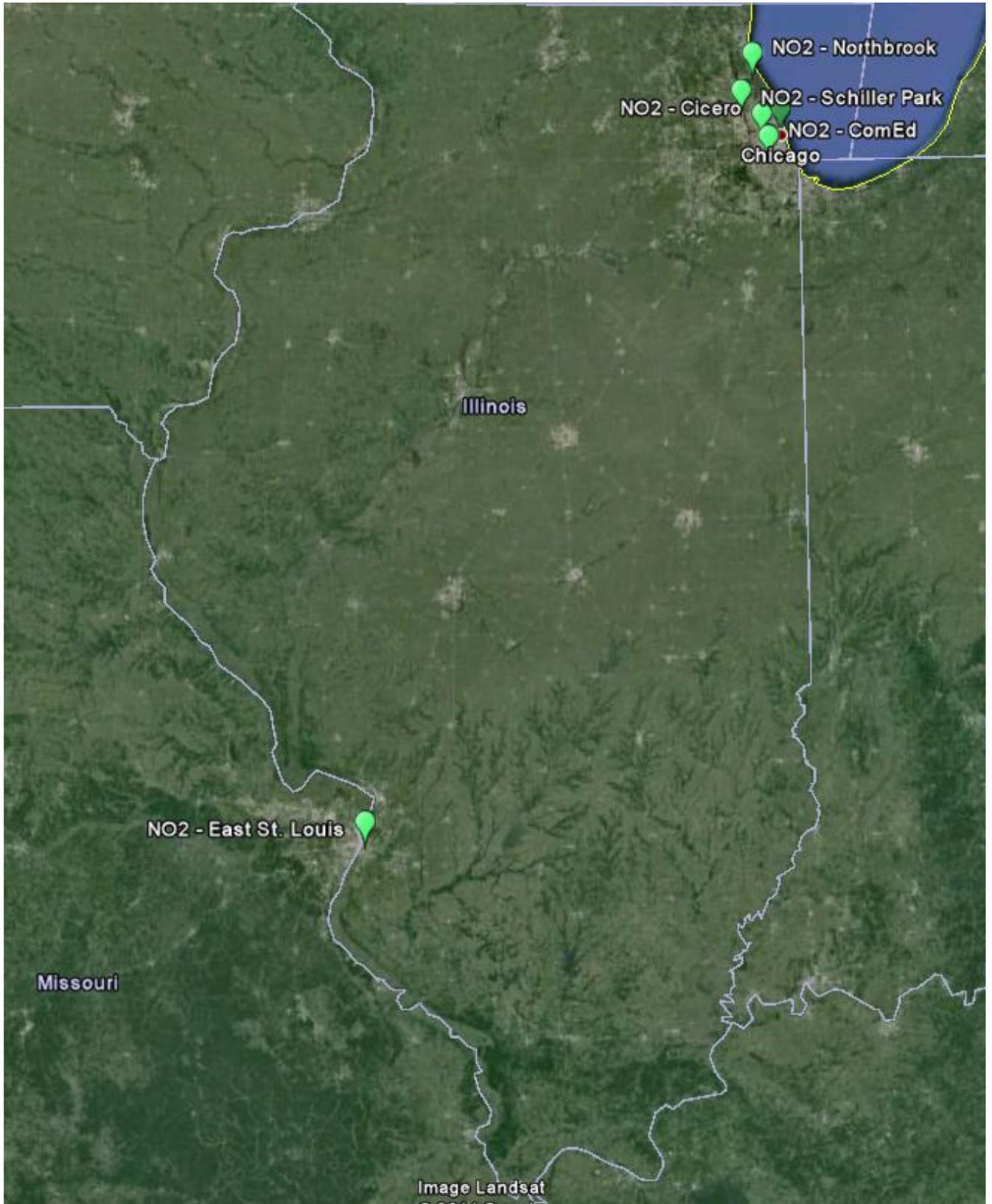


Table 6: CO Sites

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule
		Latitude	Longitude		Primary	Secondary					
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	PAMS/NCORE	48i TLE	Hourly
17-163-0010	ESTL Trailer	+38.61203448	-90.16047663	St Louis, IL-MO	Highest Conc.	N/A	Neighborhood	No Change	SLAMS	48i	Hourly

Figure 5: CO Sites – Illinois

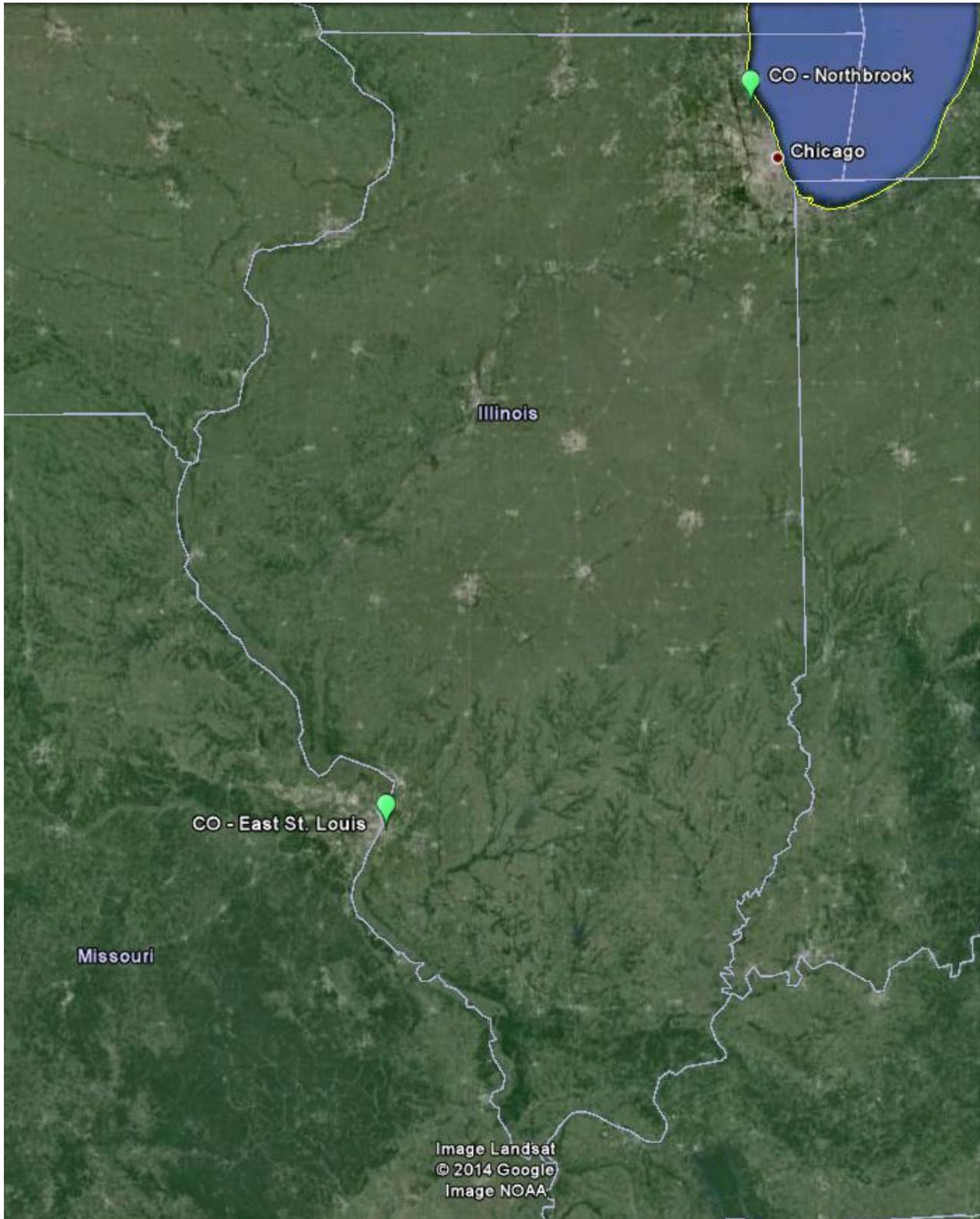


Table 7: PM₁₀ Sites

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Sampling Schedule	Collocated
		Latitude	Longitude		Primary	Secondary						
17-031-0022	Washington High School	+41.68716544	-87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Neighborhood	No Change	SLAMS	BETA	Hourly	
17-031-1016	Village Hall	+41.80116701	-87.8319447	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	Source	Middle	No Change	SLAMS	BETA	Hourly	
17-031-4201	Northbrook Water Plant	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Urban	No Change	NCORE	Hi-Vol	1/6	YES
17-119-1007	Fire Station # 1	+38.70453426	-90.13967484	St Louis, IL-MO	Highest Conc.	Source	Neighborhood	No Change	SLAMS	Hi-Vol	1/6	

Figure 6: PM₁₀ Sites – Illinois

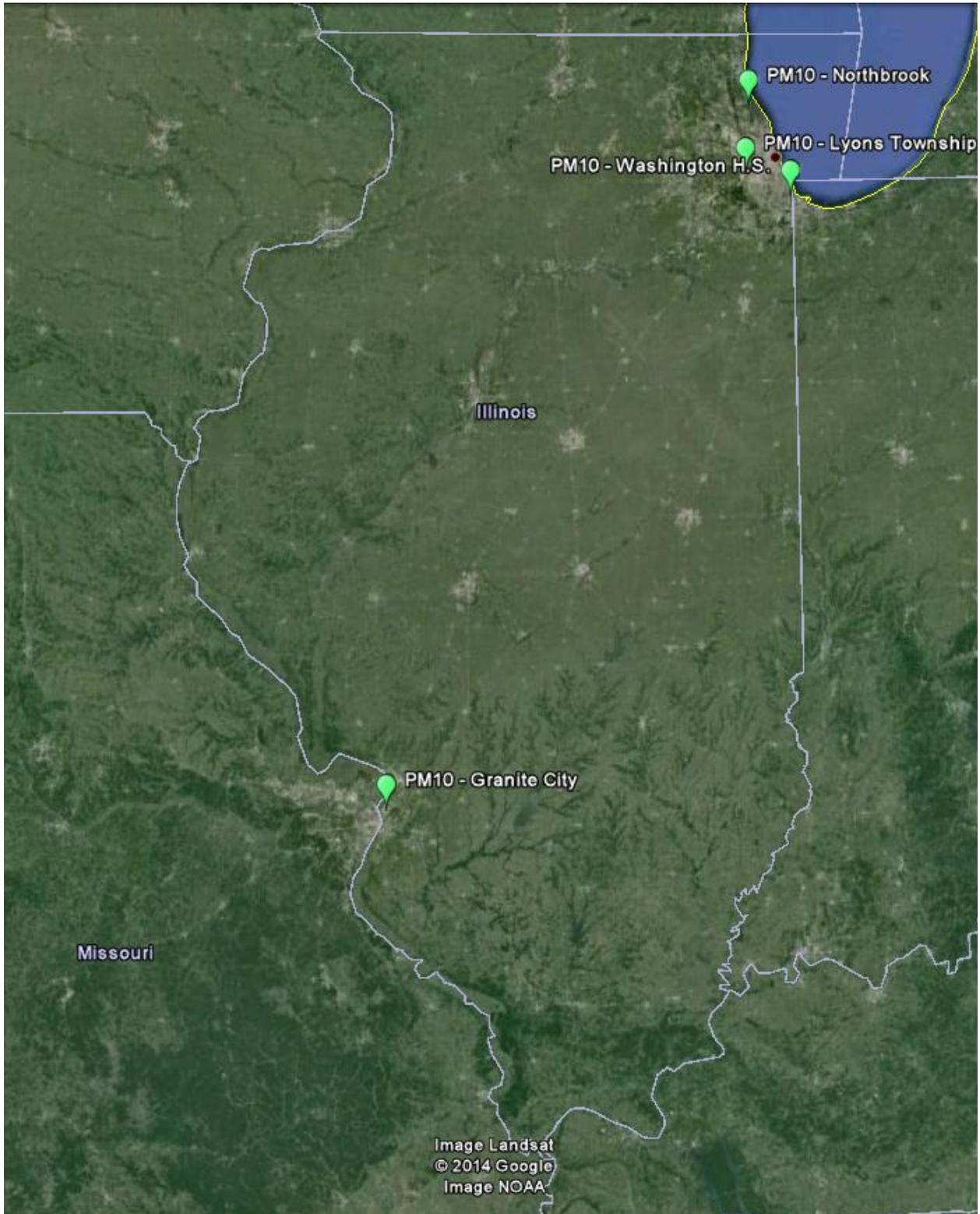


Table 8: Lead Sites

AQS ID	Site Description	Geographical Coordinates		Area Represented	Monitoring Objective		Spatial Scale	Location Status	Station Type	Monitor Type	Frequency	Collocated
		Latitude	Longitude		Primary	Secondary						
17-031-0022	Washington High School	+41.68716544	-87.53931548	Chicago-Naperville-Michigan City, IL-IN-WI	Highest Conc.	N/A	Neighborhood	No Change	SLAMS	Hi-Vol	1/6	
17-031-0110	Perez Elementary School	+41.855917	-87.658419	H Kramer	Source	N/A	Middle	No Change	SLAMS	Hi-Vol	1/6	YES
17-031-4201	Northbrook	+42.13999619	-87.79922692	Chicago-Naperville-Michigan City, IL-IN-WI	Population	N/A	Neighborhood	No Change	NCORE	Hi-Vol	1/6	
17-031-0113	Riverdale	+41.663611	-87.622483	Mittal Steel	Source	N/A	Middle	No Change	SLAMS	Hi-Vol	1/6	
17-089-0113	Geneva	+41.884417	-88.282692	Johnson Controls	Source	N/A	Middle	No Change	SPM	Hi-Vol	1/6	
17-115-0110	Decatur	+39.862576	-88.940748	Mueller	Source	N/A	Middle	No Change	SLAMS	Hi-Vol	1/6	
17-119-0010	Air Products	+38.69443831	-90.15395426	Mayco / US Steel	Source	N/A	Middle	No Change	SLAMS	Hi-Vol	1/6	YES

Figure 7: Lead Sites – Illinois

