Assessment of International Transport and Improved Ozone Air Quality

Prepared by the

Midwest Ozone Group

June 22, 2017

Introduction

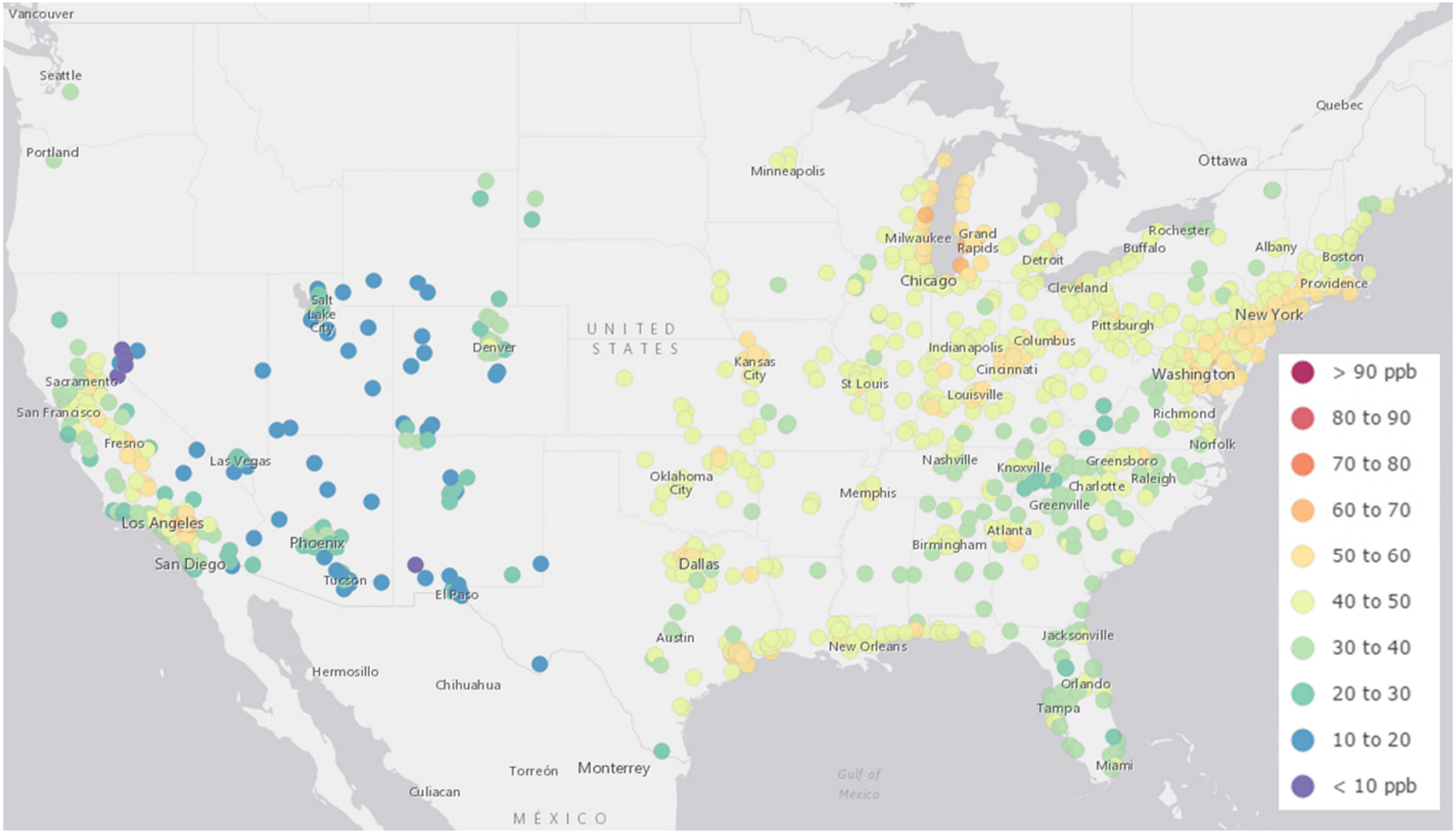
- Midwest Ozone Group (MOG) members own or operate more than 80,000 mw of fossil fuel-fired or coal refuse-fired electric generating capacity and have been active in the development of EPA's rules related to the establishment and implementation of the national ambient air quality standard (NAAQS) for ozone. In the following comments MOG stated its specific concern about the need for EPA to address international transport:
  - 2015 ozone NAAQS (http://midwestozonegroup.com/files/MOG_OZONE_NAAQS_COMMENTS.pdf),
  - CSAPR Update: (http://midwestozonegroup.com/files/MOGCommentsonProposedCSAPRUpdate-Final.PDF), and the
  - 2015 ozone implementation rule (http://www.midwestozonegroup.com/files/2015OzoneNAAQSImplementationRuleLetterandComments.PDF).
- On June 6, 2017, the EPA Administrator extended the deadline for promulgating designations related to the 2015 ozone NAAQS and in doing so noted that states have made "tremendous progress and significant investment cleaning up the air." The same letter identified that as part of the review process to be undertaken during the extension, EPA will be focusing on "appropriately accounting for international transport".
- This presentation is being offered to provide data to help inform the discussion of these issues.

International Transport

Impact of International Transport

- EPA's Cross State Air Pollution Rule (CSAPR) projections for 2017 contain CAMx/APCA modeling data for significant contribution calculations (EPA-HQ-OAR-2015-0500-0459).
- In addition to identifying upwind state contributions, EPA tagged boundary conditions, initial conditions, Canadian, and Mexican emissions from 2011 all of which can be fairly viewed as constituting international emissions.
- The following slide denotes the impact on air quality projections if international emissions are eliminated from the calculation.
- As can be seen of the slide, but for international emissions no monitor in the United States would exceed 66 ppb in 2017.
- Clean Air Act Section 179B provides the legal basis for relief from requirements to submit implementation plans in such a situation. Moreover, EPA v. EME Homer City Gen.. 134 S.Ct. 1584, 1606 (April 29, 2014) prevents EPA from imposing controls on upwind states that are more than necessary to eliminate that state's contribution to nonattainment. In either case, accounting for international emissions should result in eliminating the need for states to impose new controls to address interstate transport.

But for international emissions, no monitor in the US would exceed 66 ppb of ozone in 2017



No monitor with dv greater than 66 ppb

Only 11 monitors with dv greater than 60 ppb

Data source: http://www.epa.gov/sites/production/files/2015-11/2017_ozone_contributions_transport_noda.xlsx

Progress in Improving Ozone Ambient Air Concentrations

Progress in Improving Ozone Ambient Air Concentrations

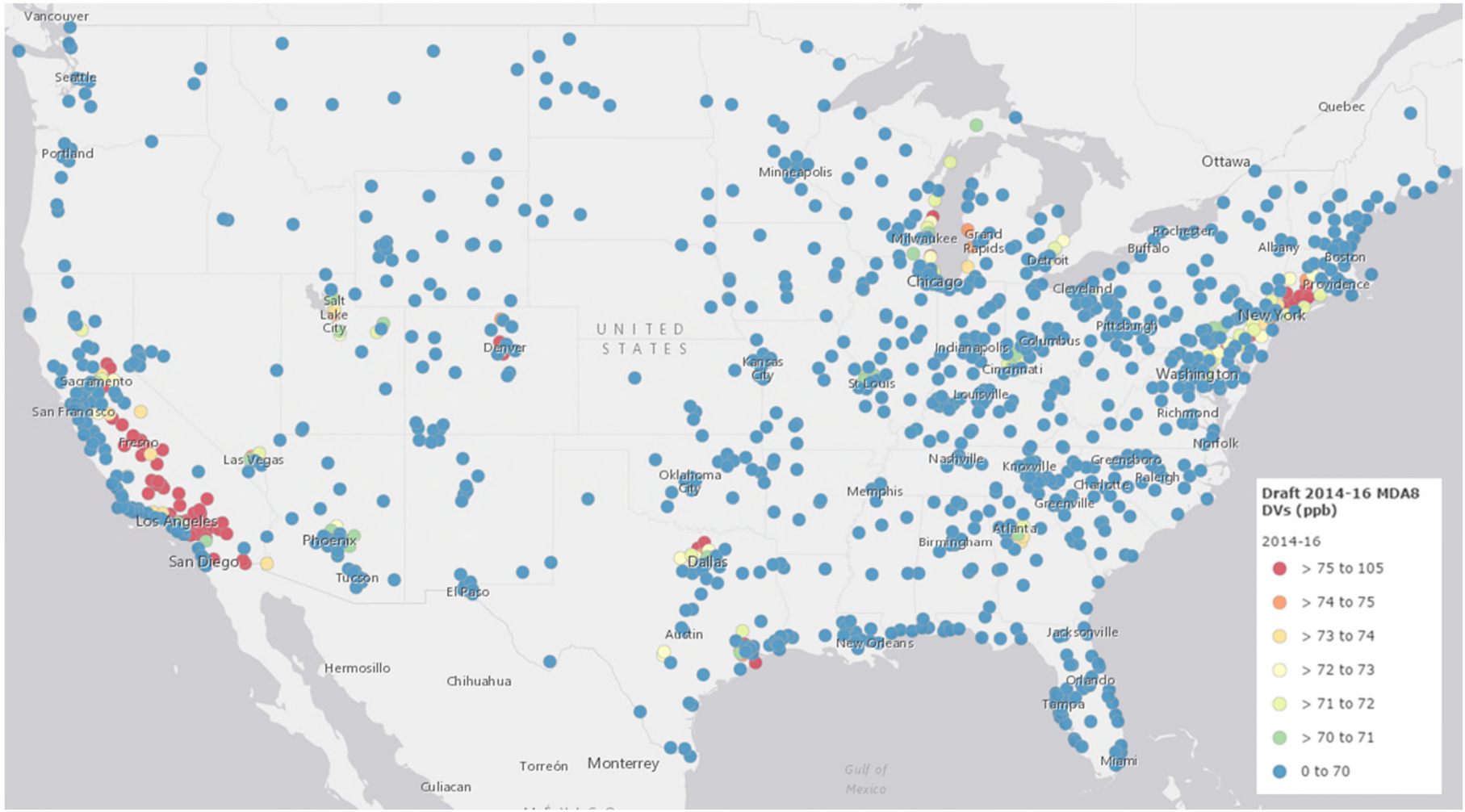
- The following maps use two methods to illustrate the progress that is being made by states in achieving lower ozone concentrations by identifying which monitors exceed ozone concentrations from 70 to 75 ppb.

- Monitored Data Method: These slides apply the current 2014-16 MDA8 DVs monitored data (calculated from AFS Data Mart draft 2016 4th high values, January 2017 download). This is the data used to support nonattainment designations.

- Final CSAPR Method: These slides apply the same 2014-16 MDA8 DVs monitored data in combination with the 2017 modeling data from the final CSAPR Update rule (maximum daily 8-hour average design values (ppb) and source apportionment results obtained from file EPA-HQ-OAR-2015-0500-0459). This is the type of data used by EPA in the development of transport rules or Good Neighbor SIPs.

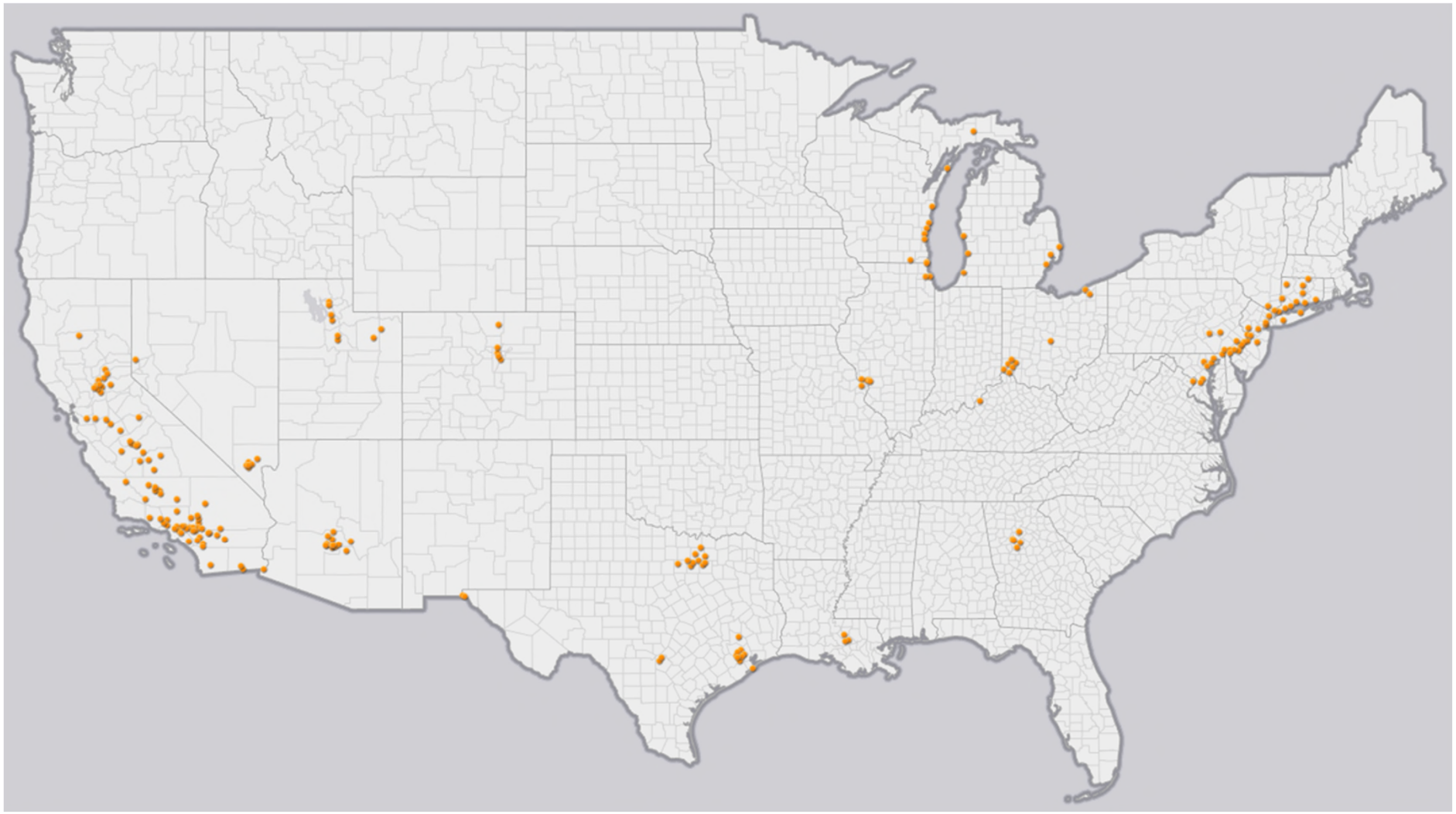
Monitored Data Method

Monitored Data 2016 Ozone Design Value (ppb)

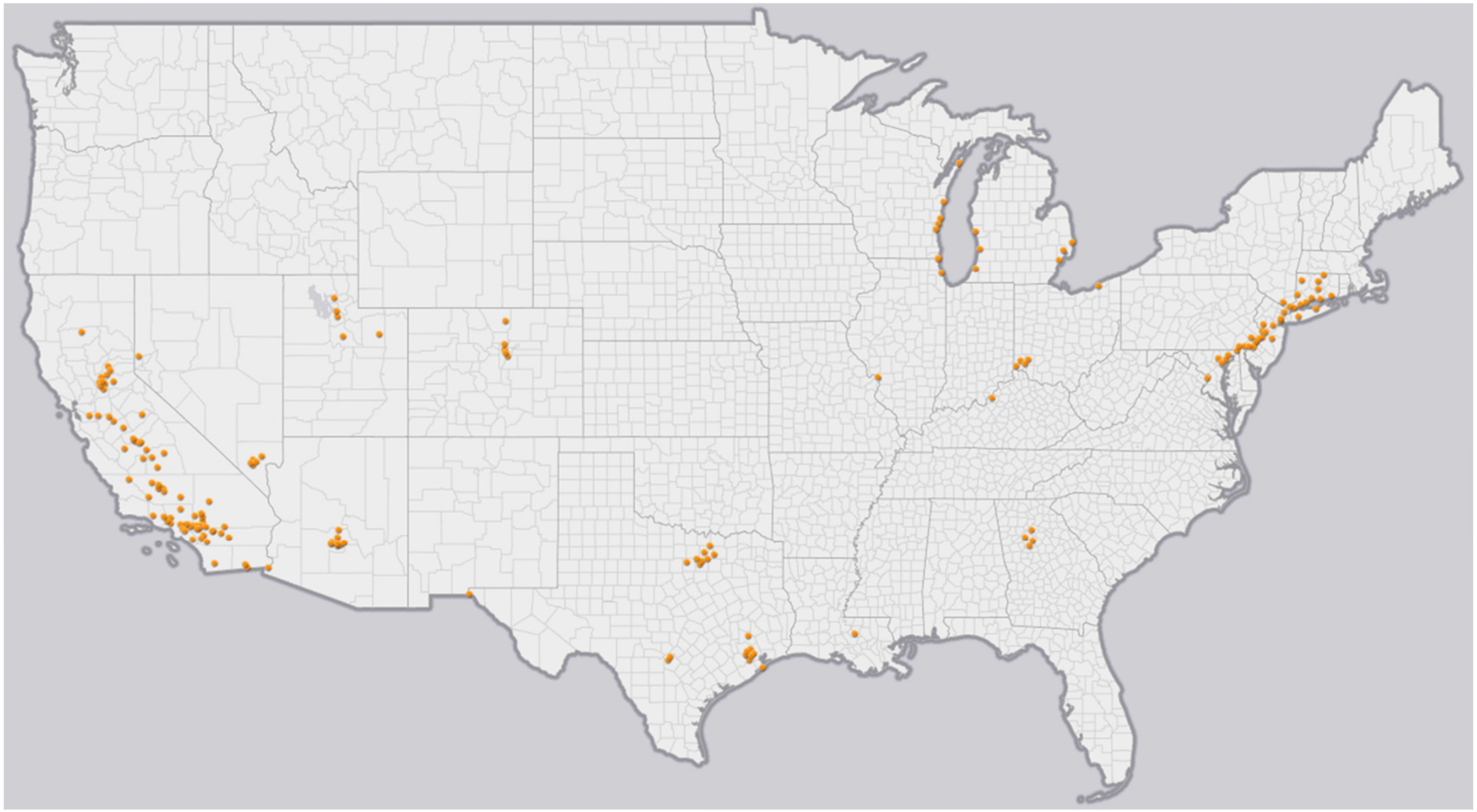


DVs still considered draft until final State approval

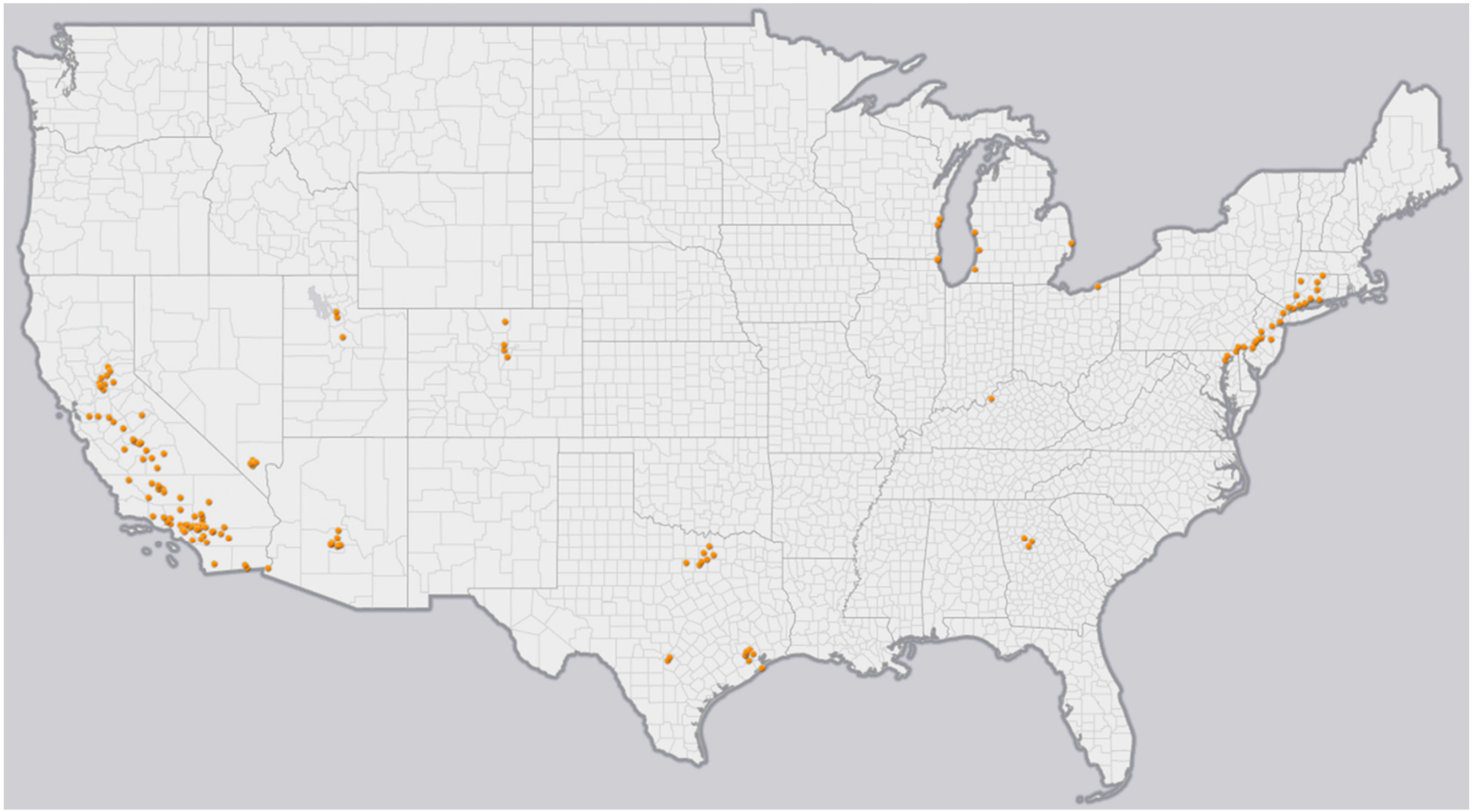
Monitored Data Method Indicating Ozone Nonattainment at 70 ppb



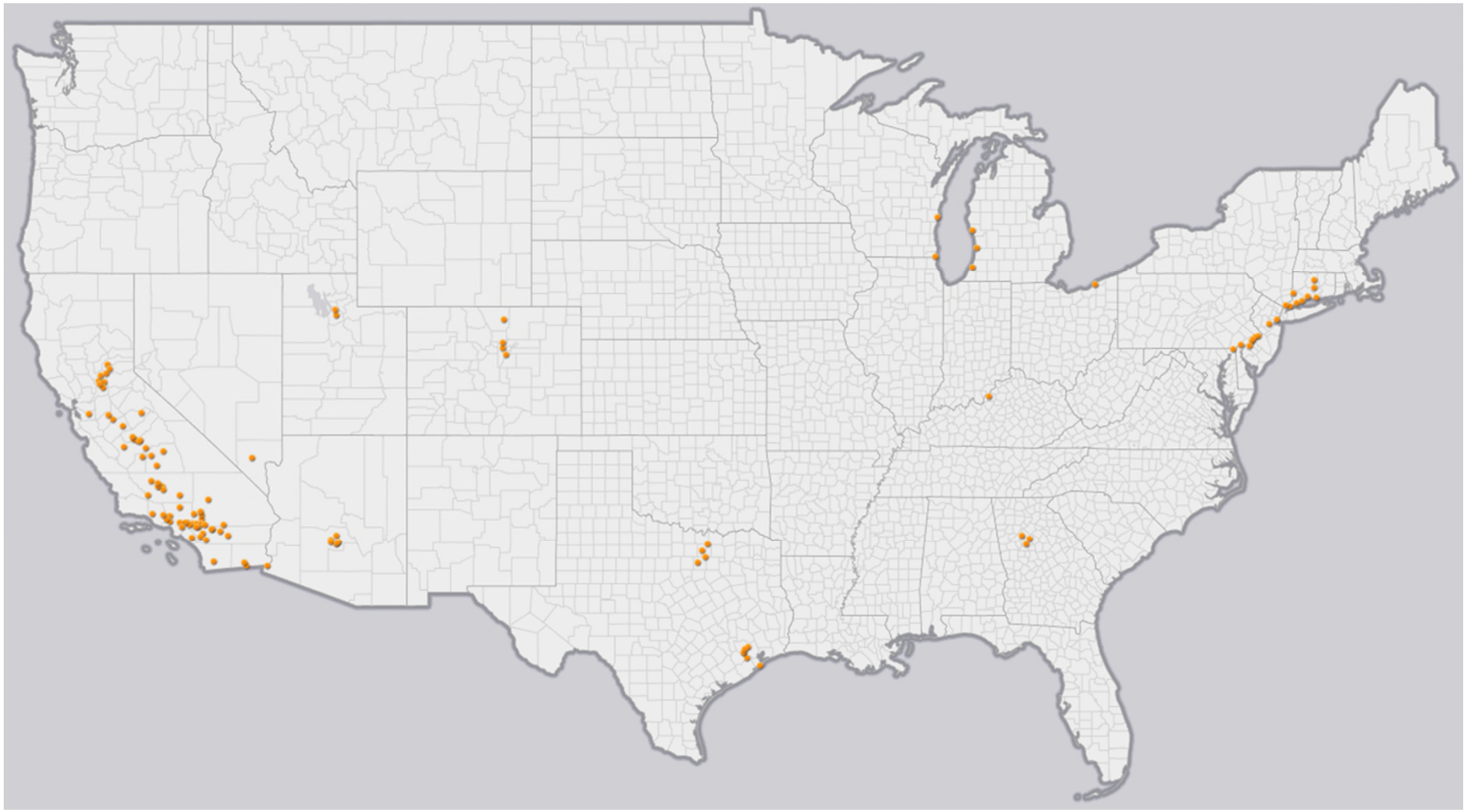
Monitored Data Method Indicating Ozone Nonattainment at 71 ppb



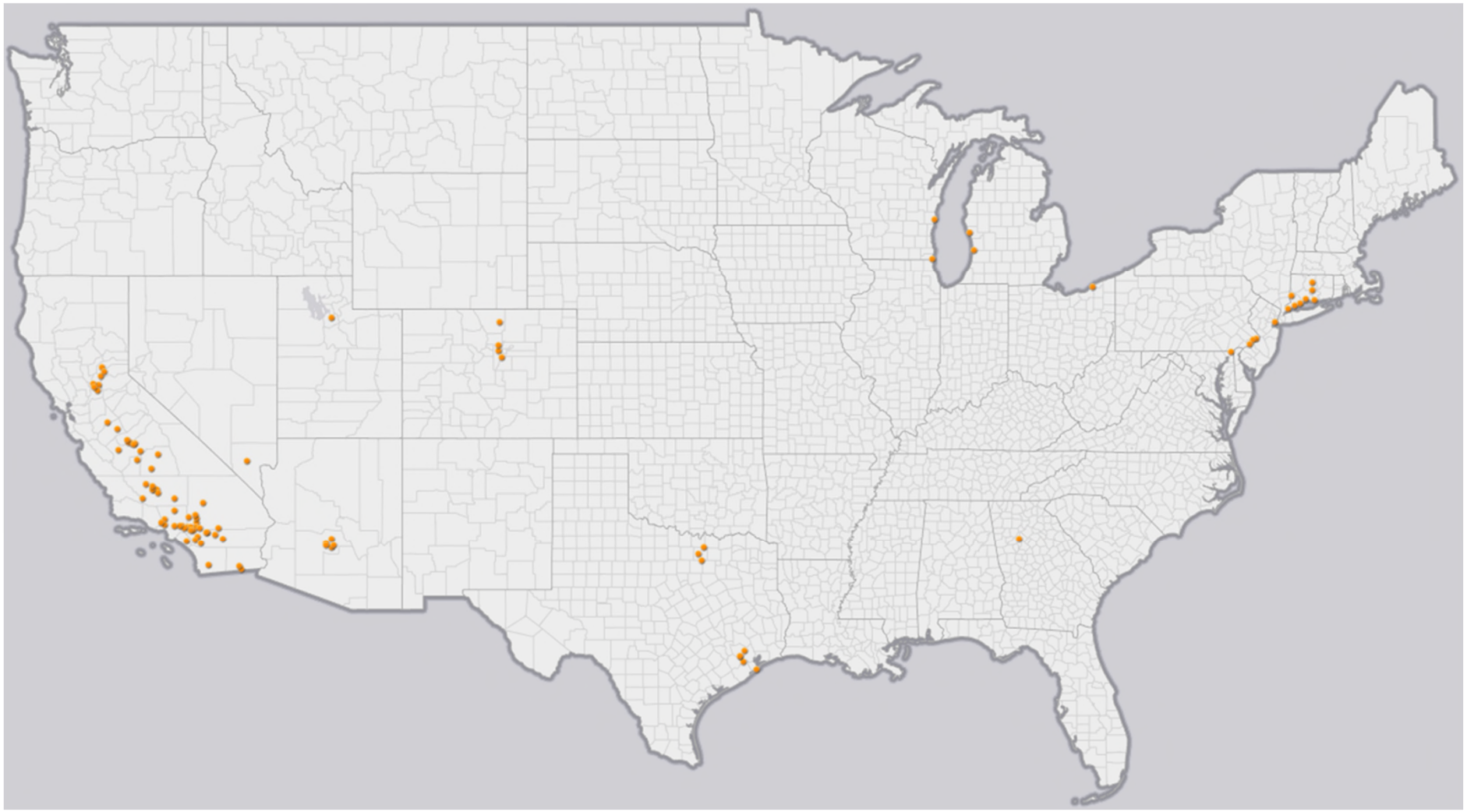
Monitored Data Method Indicating Ozone Nonattainment at 72 ppb



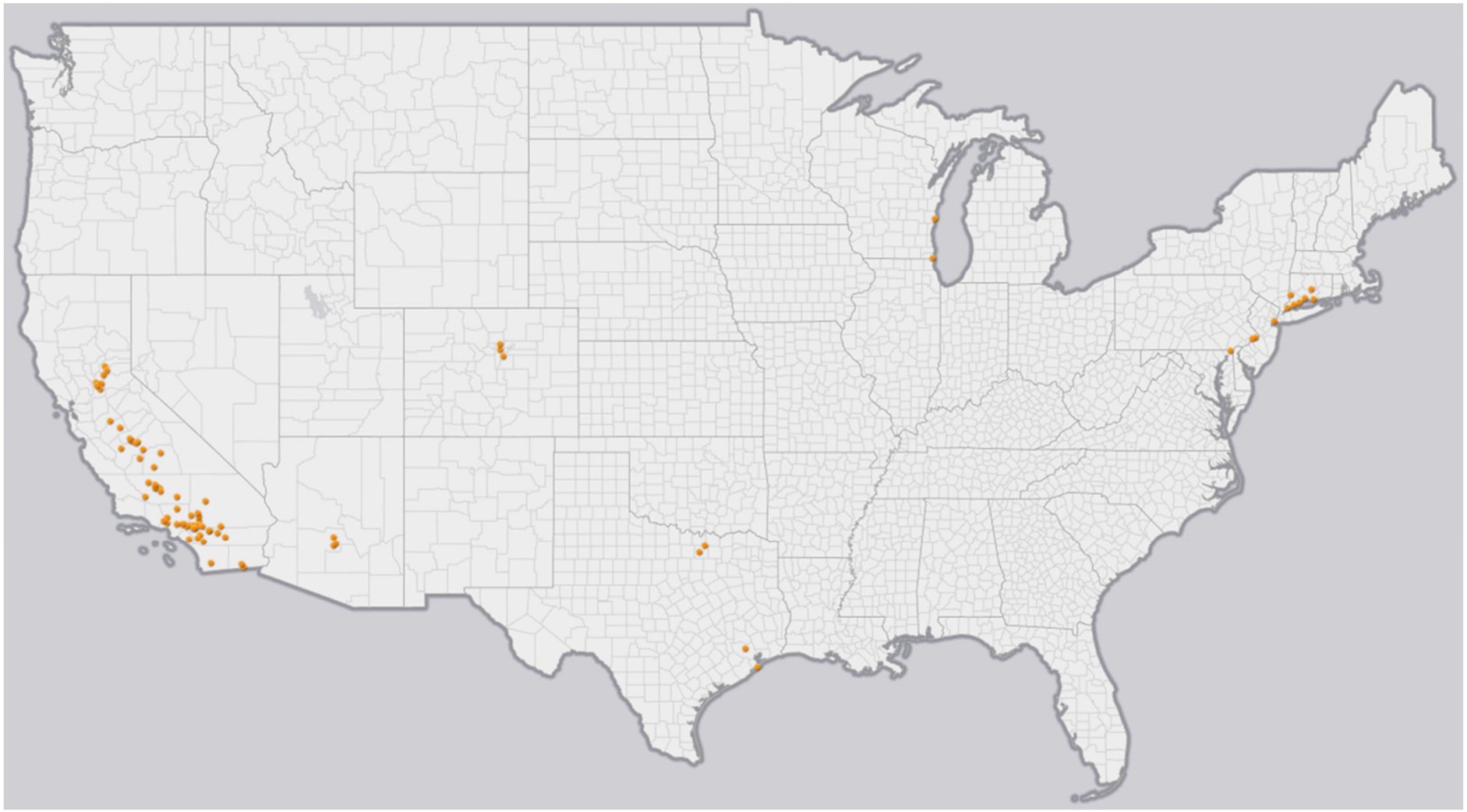
Monitored Data Method Indicating Ozone Nonattainment at 73 ppb



Monitored Data Method Indicating Ozone Nonattainment at 74 ppb

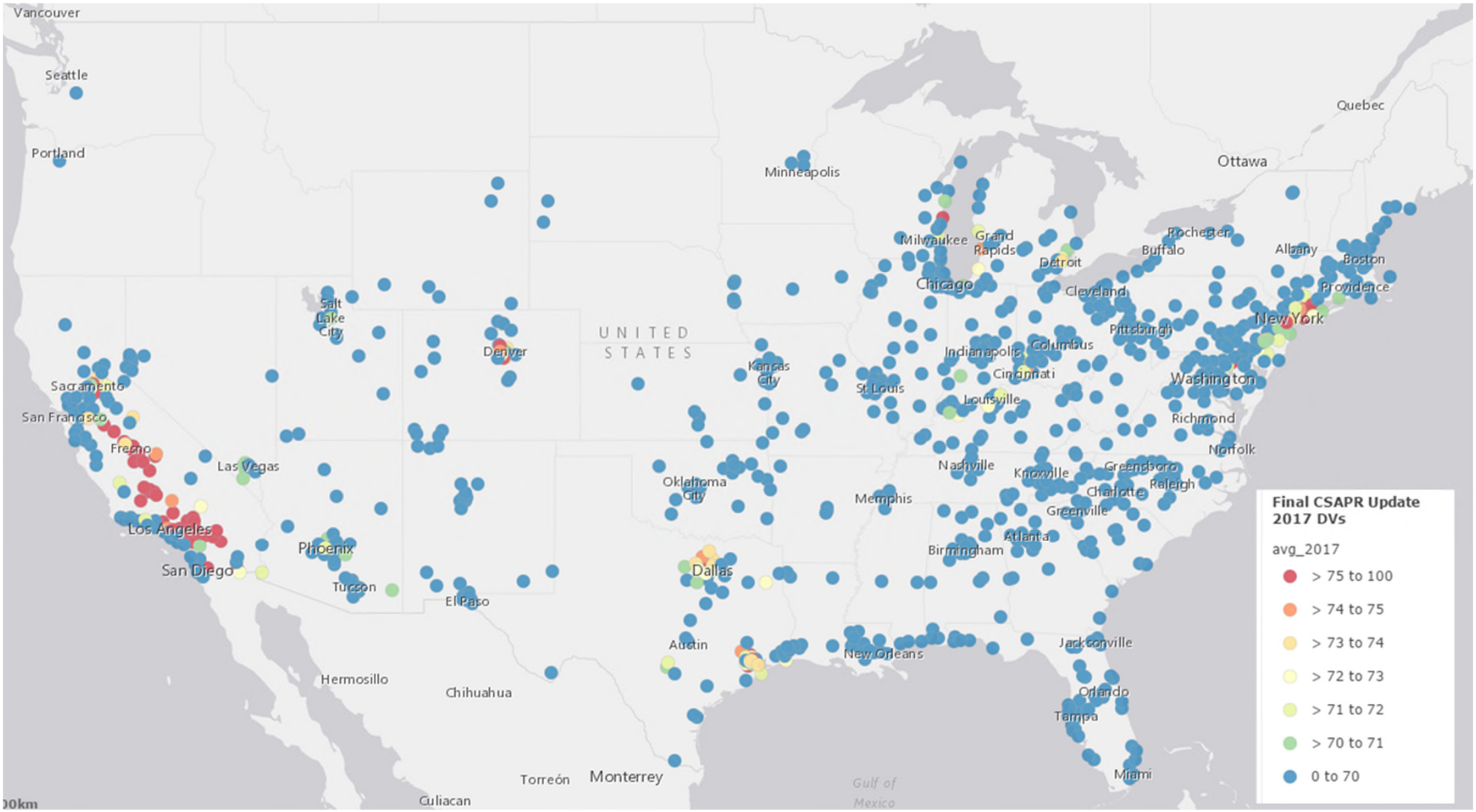


Monitored Data Method Indicating Ozone Nonattainment at 75 ppb

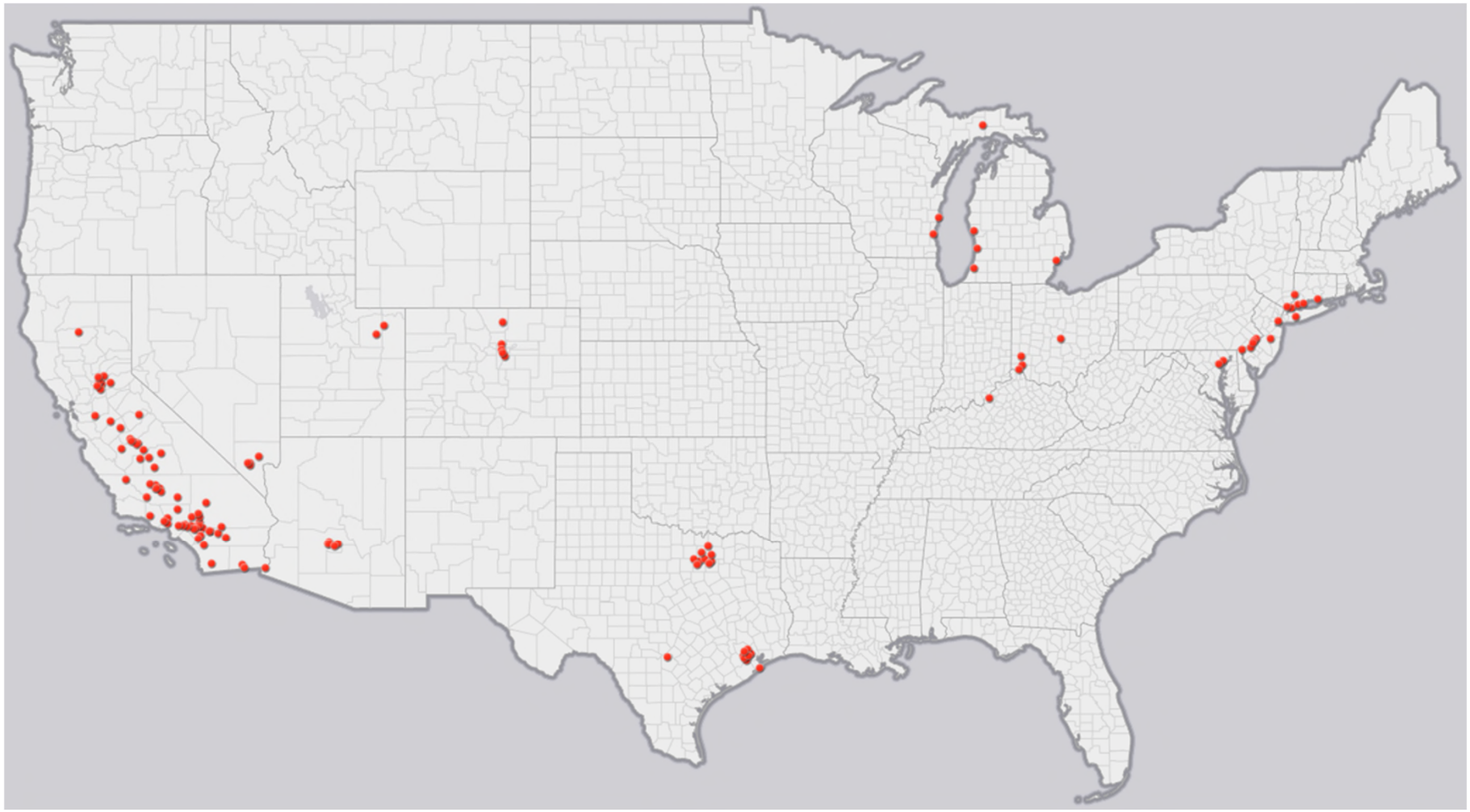


Final CSAPR Method

Final CSAPR 2017 Average Ozone DVs (ppb)



Final CSAPR Method Indicating Ozone Nonattainment at 70 ppb



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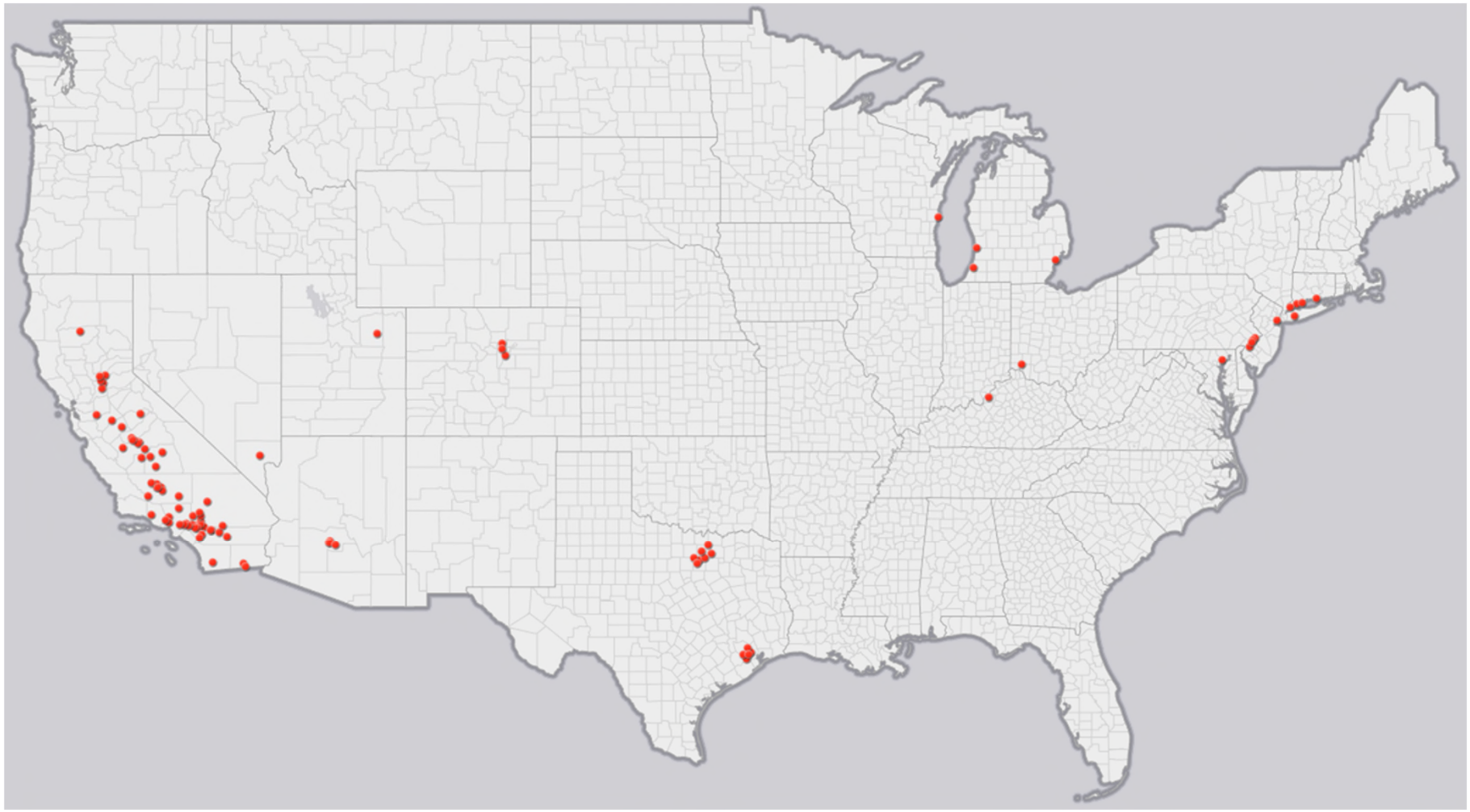

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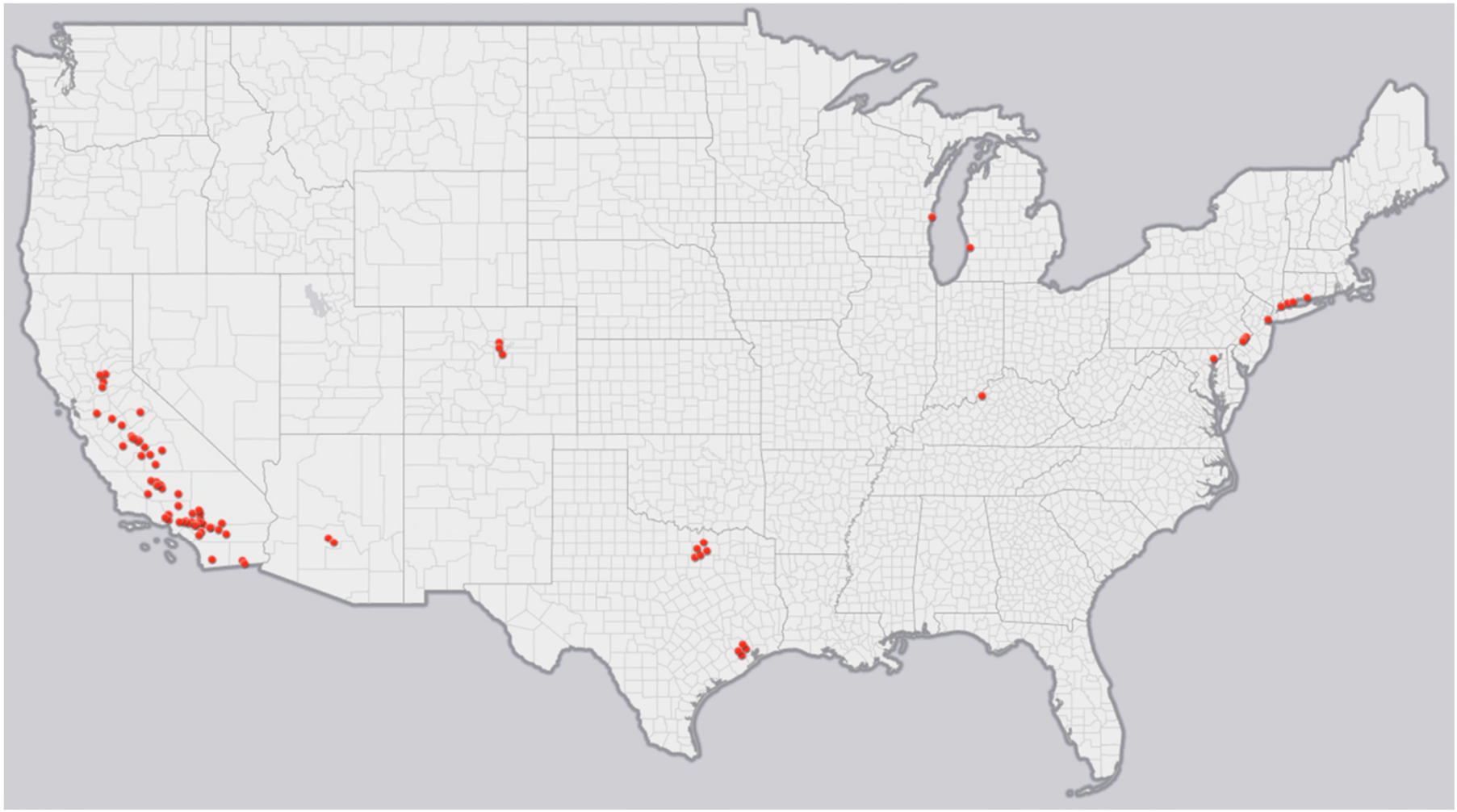

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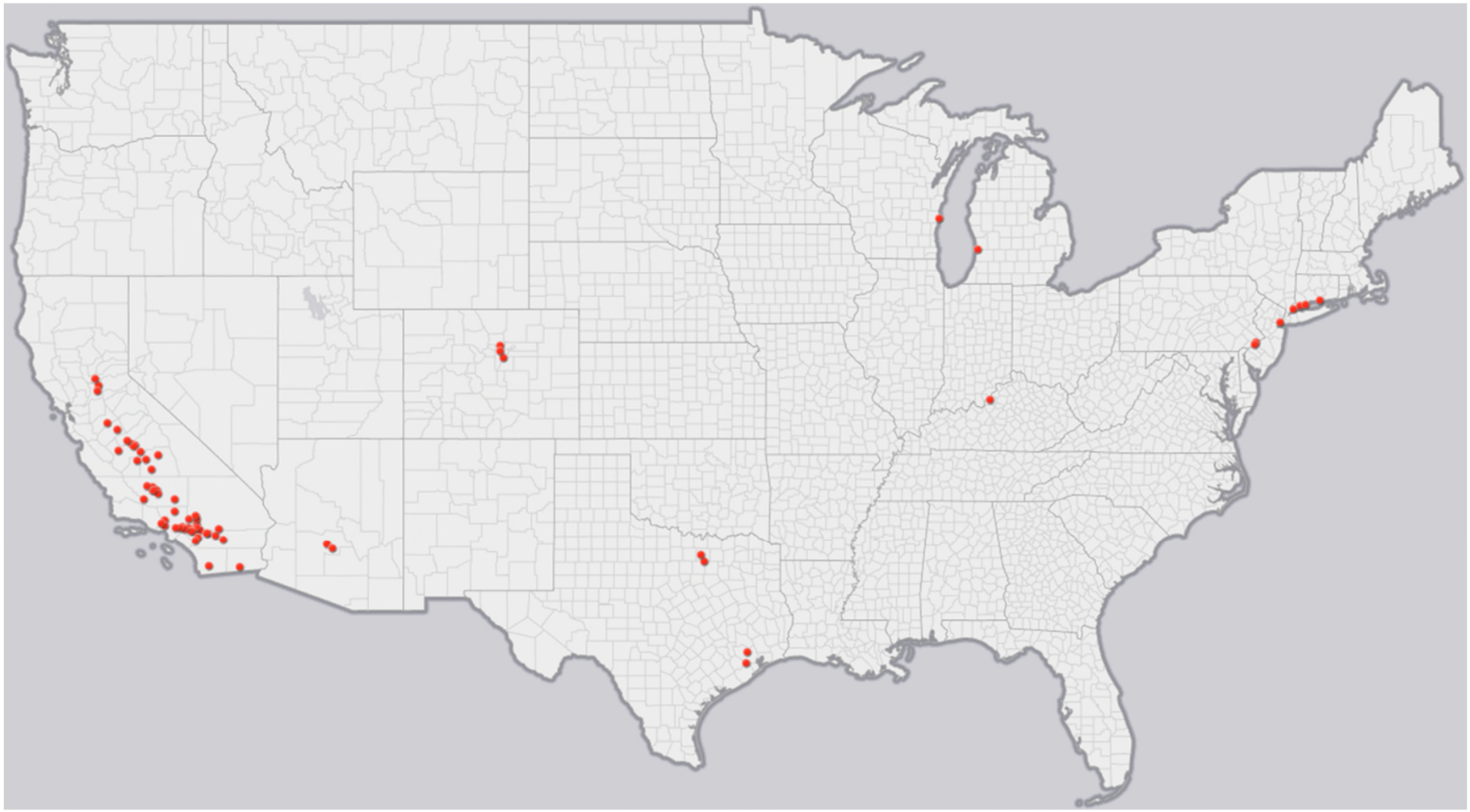

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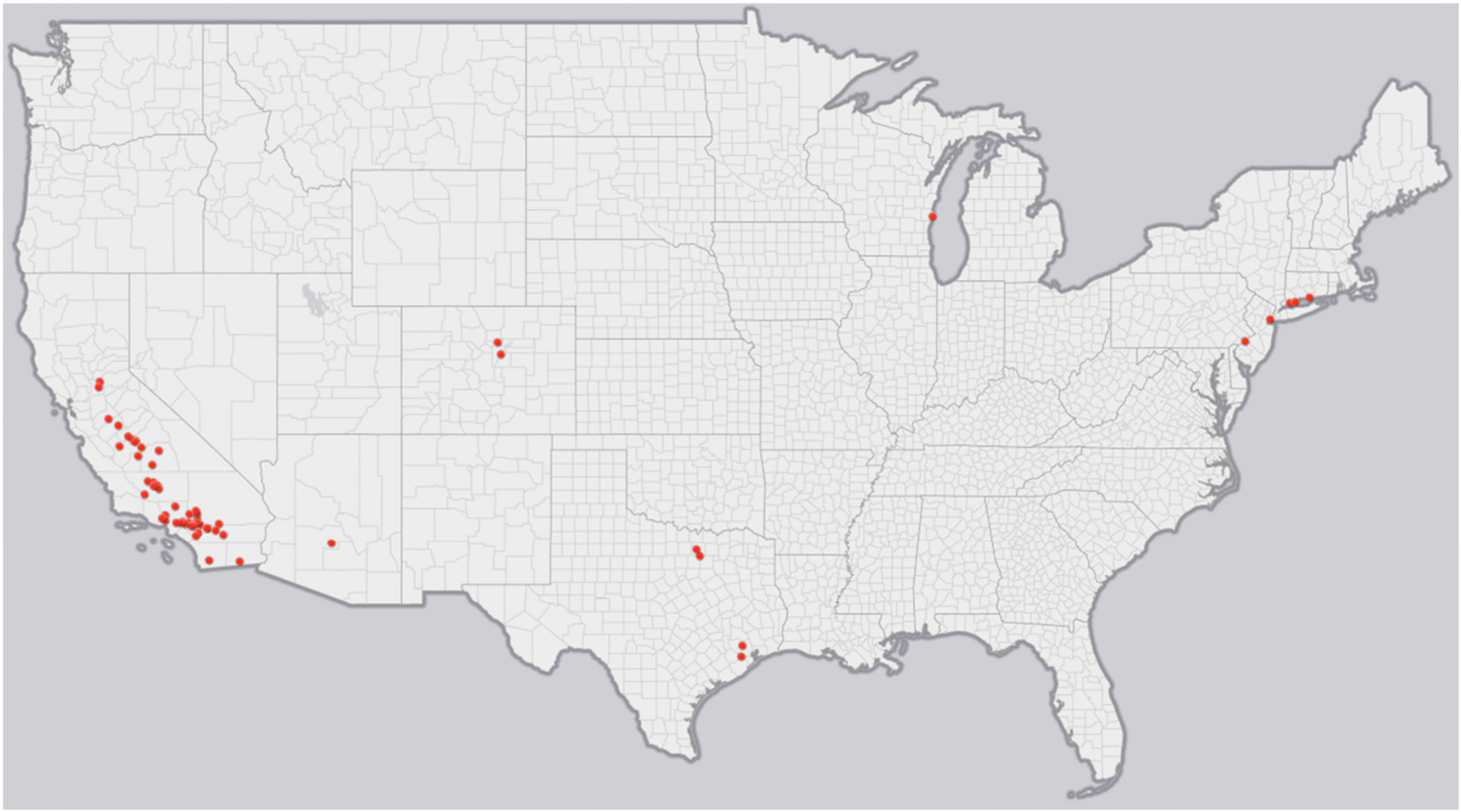

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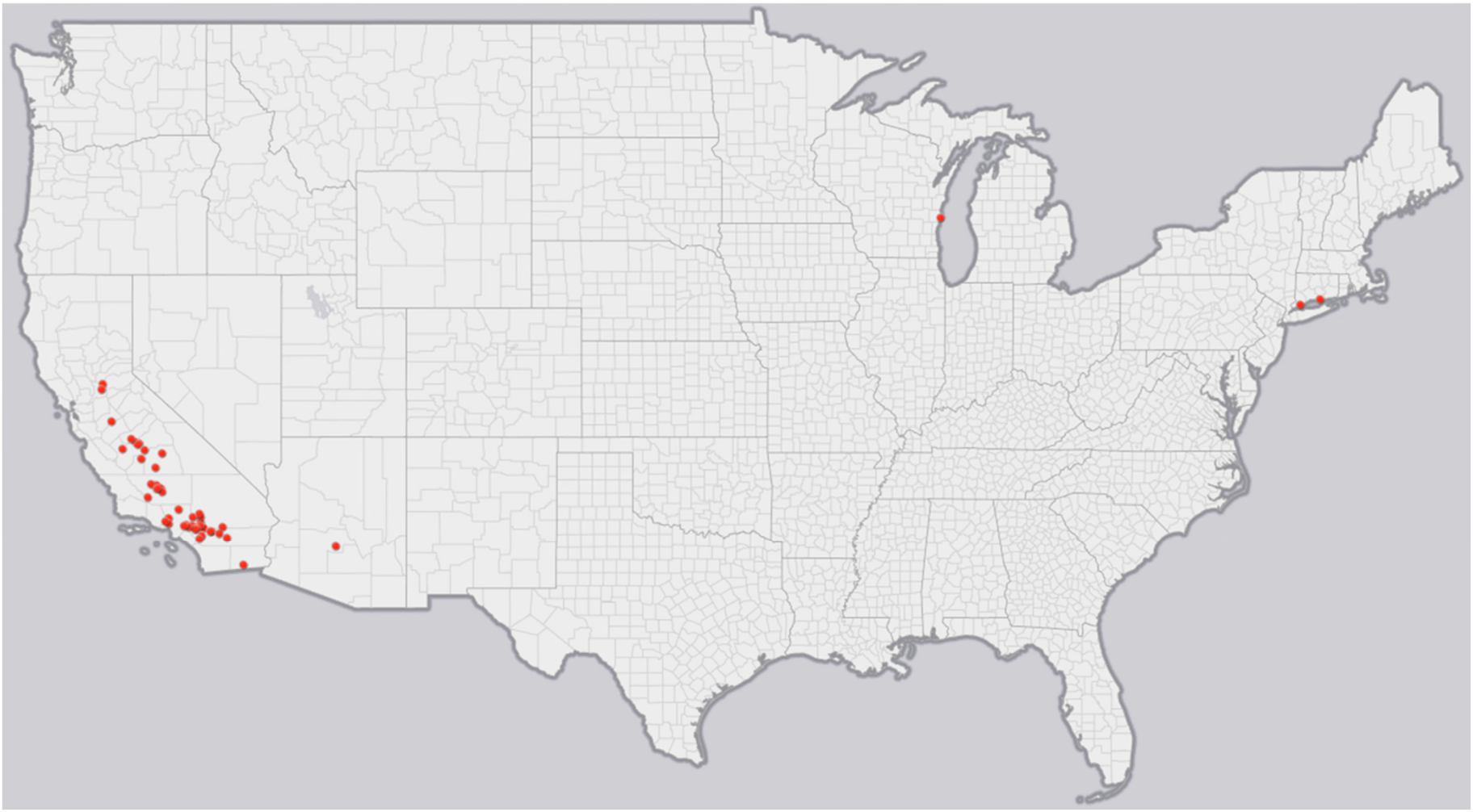

For further information

See the web site for the Midwest Ozone Group at http://midwestozonegroup.com/index.html;

or contact

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