

[ORAL ARGUMENT NOT YET SCHEDULED]

15-1385

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

MURRAY ENERGY CORPORATION,

Petitioner,

v.

ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

No. 15-1385

(consolidated with Nos.

15-1392, 15-1490,

15-1491, 15-1494)

On Petition for Review of Final Agency Action of the
United States Environmental Protection Agency

AMICUS CURIAE BRIEF OF THE NATIONAL ASSOCIATION OF
HOME BUILDERS IN SUPPORT OF INDUSTRY AND STATE
PETITIONERS IN REVERSAL

Thomas J. Ward, D.C. Bar No.
453907*

Amy C. Chai, D.C. Bar No. 986085

NATIONAL ASSOCIATION

OF HOME BUILDERS

1201 15th Street, N.W.

Washington, D.C. 20005

P (202) 266-8200

tward@nahb.org

**Counsel for National Association of
Home Builders*

**STATEMENT REGARDING CONSENT TO FILE,
SEPARATE BRIEFING, AUTHORSHIP AND
MONETARY CONTRIBUTIONS**

Petitioners in case nos. 15-1385, 15-1392, 15-1491 and 15-1494, and Respondent E.P.A. all consent to the filing of this brief. Petitioners in case no. 15-1490 take no position at this time. Pursuant to Rule 29(c)(5) of the Federal Rules of Appellate Procedure, *Amicus* states that no counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *Amicus* made a monetary contribution to its preparation or submission.

Pursuant to Fed. R. App. P. 29(c)(4) and D.C. Circuit Rule 29(d), *Amicus* certifies that no other brief of which *Amicus* is aware provides the perspective on the 2015 Ozone NAAQS that *Amicus* provides here concerning the unique economic, health, and welfare impacts on the residential construction industry.

CORPORATE DISCLOSURE STATEMENT

Amicus National Association of Home Builders (NAHB) is a non-profit corporation organized under the laws of Nevada. NAHB has no parent companies or subsidiaries and has issued no shares of stock to the public. It is composed of approximately 800 state and local home builders associations with whom it is affiliated, but all of those associations are, to the best of NAHB's knowledge, nonprofit corporations that have not issued stock to the public.

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GLOSSARY OF ABBREVIATIONS

CAA = Clean Air Act

CDC = Center for Disease Control

MSA = Metropolitan Statistical Areas

NAAQS = National Ambient Air Quality Standards

NIOSH = National Institute for Occupational Safety and Health

ppb = Parts per billion

SIP = State Implementation Plan

TNRCC = Texas Natural Resources Conservation Commission

INTEREST OF *AMICUS*

NAHB is a trade association whose mission is to enhance the climate for housing and the building industry. NAHB's central goals are providing and expanding opportunities for safe, decent, and affordable housing. Founded in 1942, NAHB is a federation of more than 800 state and local associations. About one-third of NAHB's more than 140,000 members are home builders or remodelers. The remaining members are associates working in closely related fields within the housing industry such as manufacturers and suppliers of building materials and construction equipment.

NAHB members do not have Clean Air Act permits, nor do they operate large stationary sources. Nonetheless, they are significantly impacted by EPA's revision of the National Ambient Air Quality Standards for Ozone ("2015 Ozone NAAQS"). NAHB submitted regulatory comments on the 2015 Ozone NAAQS, as well as the 2008 NAAQS and prior iterations. NAHB petitioned this court for review of the 2008 NAAQS. NAHB participates in this current proceeding to advise the court on the wide-ranging impacts that the 2015 Ozone NAAQS will have on residential construction. These impacts are both economic and non-economic in nature, and constitute contextual factors EPA must consider when developing or revising a NAAQS. *See Whitman v. Am. Trucking Ass'n*, 531 U.S. 457, 494 (2001) (Breyer, J., concurring in part) and *Mississippi v. E.P.A.*, 744 F.3d 1334, 1343 (D.C. Cir. 2013).

INTRODUCTION AND BACKGROUND

Amicus concurs with the Industry Petitioners' Statement of Issues and Statement of the Case and Facts, which provide this court with a comprehensive description of the evolution of EPA's NAAQS for ozone and the 2015 Ozone NAAQS. The significance of EPA's revised NAAQS to the national economy has also been well-addressed in the Petitioners' Brief. *See* Joint Opening Brief of Industry Petitioners at 34-36, *Murray Energy Corp. v. U.S. E.P.A.*, No. 15-1385 (D.C. Cir. April 22, 2016) (describing numerous studies and data sources in the record concerning adverse, economy-wide impacts). NAHB estimates, based on EPA's 2012-2014 air quality monitoring data, that the 2015 Ozone NAAQS will impact 241 counties in 35 states, as well as the District of Columbia. Of these states, nine will be impacted for the first time, and nearly half of all affected counties will experience nonattainment for the first time.¹ Of the top 20 housing markets, 70% will fall into nonattainment.² NAHB has provided the court with this analysis³.

¹ NAHB based its analysis on the following data: County Level Design Values for the 2015 Ozone Standards, <https://www.epa.gov/sites/production/files/2016-03/documents/20151001datatable20122014.pdf>; Nonattainment Designations for the 2008 Ozone Standards – counties by State, April 30, 2012 and May 31, 2012, <https://archive.epa.gov/ozonedesignations/web/html/finaldes.html> (last visited April 27, 2016).

² New Privately-Owned Housing Units Authorized – Top 20 Metropolitan CBSA's: 2014, <https://www.census.gov/construction/bps/pdf/2014cbsachart.pdf> (last visited April 27, 2016).

³ NAHB's data analysis has been included in the Addendum at the end of the brief.

States will face significant challenges in meeting the 2015 Ozone NAAQS. States demonstrate compliance with a NAAQS by developing a State Implementation Plan (“SIP”). The SIP must include all federally mandated regulatory programs identified in Title I of the Clean Air Act, many of which are restrictive and highly expensive to implement. The result is a direct impact to the economic vitality of countless state and local jurisdictions, resulting in job loss and economic stagnation. Fewer jobs and economic opportunities reduce demand for new residential land development and construction activities. Thus, as a general matter, NAHB members are impacted by the broad economic injuries the 2015 Ozone NAAQS imposes on the full economy.

Additionally, the Clean Air Act provisions targeting the reduction of emissions from mobile sources raise a separate array of concerns for the construction industry. Direct restriction on the usage of fuel or equipment types or the requirement to make costly modifications to equipment are all part of the federal and state compliance toolkit.

Nonattainment areas must also align transportation planning with the emissions reduction requirements developed under a SIP. Restrictions and limitations on how federal transportation funding can be spent typically result in limited future investments in new or expanded highway infrastructure – precisely the infrastructure needed to support development. Efforts to comply with other

transportation requirements, specifically transportation conformity, can also result in the adoption of impact fees used to offset the future emissions assumed to be generated by the occupants of new residential development. NAHB members are therefore regulated by ozone NAAQS in a multitude of ways, despite their freedom from Clean Air Act permitting obligations. The 2015 Ozone NAAQS further exacerbates these impacts, and expands them to hundreds of new jurisdictions throughout the U.S.

SUMMARY OF ARGUMENT

While EPA may not consider costs in developing or revising NAAQS, the agency is obligated to consider “contextual factors” when making the policy decision of whether and how to set or revise a NAAQS. In the 2015 Ozone NAAQS, EPA failed to consider important factors including economic and health impacts. In particular, EPA failed to adequately address the concerns raised by NAHB that a more stringent NAAQS could lead to adverse health impacts to its members and their employees. NAHB urges this court to vacate the 2015 Ozone NAAQS for failure to properly consider all relevant factors when it revised the NAAQS.

ARGUMENT

A. Contextual Factors are Appropriately Included in Establishing or Revising a NAAQS

The U.S. Supreme Court in *Whitman* held that EPA is not permitted to consider costs in setting a NAAQS. 531 U.S. at 465, 471. However, this holding does not end the analysis EPA must conduct when revising a NAAQS. Justice Breyer, in his concurrence, emphasized that “[t]he statute, by its express terms, does not compel the elimination of *all* risk; and it grants the Administrator sufficient flexibility to avoid setting ambient air quality standards ruinous to industry.” *Id.* at 494 (emphasis in original). This court in *Mississippi v. EPA* recognized as well the need for context to be part of the ozone NAAQS calculus. *See* 744 F.3d at 1343 (“Determining what is ‘requisite’ to protect the ‘public health’ with an ‘adequate’

margin of safety may indeed require a contextual assessment of acceptable risk.”) (internal citations omitted).

In *Whitman*, Justice Breyer went on to note that the “statute also permits the Administrator to take account of comparative health risks.” *Id.* at 495. He provided an example of the health risks that could result from decreases in levels of tropospheric ozone, namely protection from cataracts and skin cancer. *Id.* As the years have passed and EPA has more stringently and rapidly ratcheted down the ozone NAAQS, Justice Breyer’s position is increasingly relevant. Congress and Justice Scalia may have been hard-pressed to envision a NAAQS that regulates background levels and impacts industries such as home builders. But, with an ozone NAAQS at 70 parts per billion (ppb), this is the state of affairs today.

Setting ozone at 70 ppb results in nine states and 118 counties falling into nonattainment for the first time. *See supra* n.1-2 and Addendum. Many of these communities are not home to the emission sources traditionally regulated under the Clean Air Act; hence, a significant number of these communities will be forced to wrestle with NAAQS compliance for the first time, without the benefit of having traditional sources to regulate.

Moreover, a number of areas that have been in nonattainment for some time are running out of emission sources to regulate. EPA recognized exactly this conundrum in its proposal: “The EPA recognizes that a number of areas of the

country have been working to reduce [ozone] precursors for many years and now may need to turn to newer, more innovative approaches...” 79 Fed. Reg. 75234 at 75372 (Dec. 17, 2014)⁴. These communities will turn to new sources, including the construction industry.

Therefore, designated non-attainment areas will increasingly look toward sectors not traditionally targeted, such as home building, to meet the revised standards.

B. Construction Industry Impacts Illustrate Why Contextual Factors Must Be Part of the NAAQS Equation

NAHB members are the quintessential example of Justice Breyer’s admonition that the Administrator consider comparative health risks when setting or revising the ozone NAAQS. NAHB submitted comments on March 17, 2015, to EPA on the proposed 2015 Ozone NAAQS. *See* National Association of Home Builders, Comment, 2015 Proposed Ozone NAAQS, EPA-HQ-OAR-2008-0699-2461 (March 17, 2015)⁵ (“NAHB Ozone Comments”). In these comments, NAHB described the impacts the proposal would have on the residential construction industry. NAHB’s comments in large part responded to EPA’s call for comments

⁴ Available at <https://www.gpo.gov/fdsys/pkg/FR-2014-12-17/pdf/2014-28674.pdf> (last visited 04.28.16)

⁵ NAHB’s Ozone Comments have been included in the Addendum at the end of the brief.

on the use of “innovative approaches” to comply with the NAAQS. 79 Fed. Reg. at 75372. In its proposal, EPA specifically singled out smart growth⁶ and energy efficiency – both of which are inexorably tied to home building – as strategies states should consider when developing their State Implementation Plans. 79 Fed. Reg. at 75372.

Moreover, smart growth and energy efficiency initiatives work best when suited to the precise needs of a specific community, and not packaged to fit EPA’s nationally applicable requirements for a SIP.⁷ Inclusion of these land use measures in a SIP renders them federally enforceable, opening NAHB members up to federal civil action for violations that can result in penalties of tens of thousands of dollars. 42 U.S.C. § 7413. EPA’s suggestion to incorporate smart growth and energy efficiency initiatives demonstrates a profound lack of understanding at the federal level about the complexities and nuances inherent in local land use decisions. *See* NAHB Ozone Comments. Interestingly, the preamble to the final 2015 Ozone NAAQS does not contain any reference to smart growth, energy efficiency, or even

⁶ The term “smart growth” describes a philosophy on how to meet housing demand by planning for growth, building more compactly and creatively, preserving meaningful open space, and protecting environmentally sensitive areas.

⁷ *See, e.g.,* <https://www3.epa.gov/airquality/urbanair/sipstatus/process.html> (“Each nonattainment area SIP must outline the strategies and emissions control measures that show how the area will improve air quality and meet the NAAQS. In addition, the CAA mandates that areas adopt certain specified control requirements.”) (*last visited* April 27, 2016).

the need for communities to explore new, innovative ways to reduce emissions. Nor does the agency's response to comments address the concerns that NAHB raised about incorporating smart growth and energy efficiency into a SIP. Instead, the final rule reads as if EPA never raised the issue at all. Despite its curious disappearance, the agency's exhortation to states to use "innovative" measures to achieve emissions reductions remains relevant. Because EPA so significantly lowered the ozone NAAQS, states will still need to consider whether land use controls are necessary to achieve compliance with the ozone NAAQS.

One of the most draconian impacts NAHB members have experienced, and are likely to experience again as a result of the 2015 Ozone NAAQS, is a ban on the use of construction equipment during daytime hours. Such a ban was promulgated in Texas in response to an EPA NAAQS for ozone. The ban prohibited the operation of nonroad diesel equipment of 50 or more horsepower until later in the day. *See, e.g.,* Tex. Natural Res. Conservation Comm'n, *Control of Air Pollution from Motor Vehicles*, Ch. 114-Rule Log No. 2000-011B-114-AI⁸ (instituting a ban in the Houston-Galveston area). While the ban was ultimately repealed before it could be placed into effect, the ban remains a model for localities desperate to achieve ozone

⁸ Available at https://www.tceq.texas.gov/assets/public/legal/rules/hist_rules/Complete.00s/00011B114/00011B114_ado.pdf (last visited 04.27.16).

compliance. See Tex. Natural Res. Conservation Comm'n, *Control of Air Pollution from Motor Vehicles*, Ch. 114-Rule Log No. 2001-025a-114-AI⁹.

A daytime ban creates a logistical nightmare for NAHB's members, as a significant number of members build in communities that restrict or prohibit construction work at night. See *Noise Control*, Seattle, Wash. Mun. Code § 25.08.425 (2009) and Maricopa County., Ariz., *Hours of Construction Ordinance* § 102 (Dec. 2004)¹⁰(prohibiting construction activity in residential areas after 7:00 pm and in all areas after 10:00 pm). More compelling, for those members who can legally build at night, a daytime construction ban poses significant adverse health impacts to NAHB members and the workers they employ. There are significant and well-documented health impacts when construction activity is forced to take place at night. "Most studies tend to support the view that safety is more likely to be compromised during the night shift, particularly when night working is coupled with extended hours." Anne Spurgeon, J. Malcom Harrington, Cary L. Cooper, *Health and Safety Problems Associated with Long Working Hours: A Review of the Current Position*, *Occupational and Environmental Medicine* 1997; 54:367-375 at 373.

⁹ Available at https://www.tceq.texas.gov/assets/public/legal/rules/hist_rules/Complete.01s/01025a114/01025a114_ado.pdf (last visited 04.27.16).

¹⁰ Available at https://www.maricopa.gov/clk_board/Ordinances/P22_Hours_of_Construction.pdf (last visited 04.28.16).

Research conducted by the Centers for Disease Control (CDC) and National Institute for Occupational Safety and Health (NIOSH) similarly reveals troubling health consequences that occur from working at night. These include immediate impacts, such as sleep loss that can result in injuries from on-the-job accidents, to psychological stress from being unable to see family and friends and participate in social activities. See Roger R. Rosa, Michael J. Colligan, NIOSH, *Plain Language About Shiftwork*, Publication No. 97-145 (July 1997)¹¹, at 13; see also Claire Caruso, Edward Hitchcock, Robert Dick, John Russo and Jennifer Schmitt, CDC & NIOSH, *Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors* (April 2004)¹² at 17. The agencies also pointed to concerning evidence that nighttime work over the long term can cause digestive problems, heart disease, and propensity to use tobacco and alcohol. See *Plain Language about Shift Work* at 17-18.

EPA failed to incorporate consideration of these health risks into its analysis of the health risks and benefits associated with the NAAQS, and failed even to respond to NAHB's comments in the final rule. See U.S. E.P.A., Responses to Significant Comments on the 2014 Proposed Rule on the NAAQS for Ozone,

¹¹ Available at <http://www.cdc.gov/niosh/docs/97-145/pdfs/97-145.pdf> (last visited 04.27.16)

¹² Available at <http://www.cdc.gov/niosh/docs/2004-143/pdfs/2004-143.pdf> (last visited 04.27.16)

(Dec.17, 2014; 79 FR 75234), Docket No. OAR-2008-0699 (containing no reference to NAHB, nighttime construction, or other relevant terms).

The health risks posed by nighttime construction as a result of an ozone NAAQS are exactly the “comparative health risks” Justice Breyer called for EPA to consider in the development of a NAAQS. Under this analysis, EPA was obligated to consider the health factors NAHB raised and it failed to do so.

CONCLUSION

For the foregoing reasons, NAHB joins the Industry and State Petitioners in urging this Court to vacate the 2015 Ozone NAAQS.

Respectfully submitted on April 28, 2016.

/s/

Thomas J. Ward*

Amy C. Chai

NATIONAL ASSOCIATION

OF HOME BUILDERS

1201 15th Street, N.W.

Washington, D.C. 20005

P (202) 266-8200

tward@nahb.org

**Counsel for National Association of Home
Builders*

CERTIFICATE OF COMPLIANCE

Pursuant to Fed. R. of App. P. 32(a)(7)(c) and D.C. Circuit Rule 32(a)(7)(C)(i), the undersigned hereby certifies that this brief complies with the type-volume limitation of Fed. R. of App. P. 29(d); 32(a)(2).

1. Exclusive of the exempted portions of the brief, as provided in Fed. R. of App. P. 32(a)(7)(B)(iii), the brief contains 2,405 words.

2. The brief has been prepared in proportionally spaced typeface using Microsoft Word in 14 point Times New Roman font. As permitted by Fed. R. of App. P. 32(a)(5); 32(a)(6), the undersigned has relied upon the word count feature of this word processing system in preparing this certificate.

CERTIFICATE OF SERVICE

I hereby certify that on this 28th day of April, 2016, I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit using the appellate CM/ECF system. Counsel for all parties to the case are registered CM/ECF users and will be served by the appellate CM/ECF system.

ADDENDUM

Table 1. Potential Annual Economic Impact on Single Family Homebuilders (only) for Metropolitan Statistical Areas (MSA) EPA predicts as “New” Ozone Non-Attainment Areas (NAAQS set at 70 ppb to 65 ppb):

EPA’s Estimates for “new” Ozone non-attainment areas ^{1,2}	Total Single Family Permits 2013 ³	Median Single Family Home Sale Price 2013 ⁴	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Albany-Schenectady-Troy, NY	1,203	\$ 202,000	\$ 243
Albuquerque, NM	2,128	\$ 177,600	\$ 378
Allentown-Bethlehem-Easton, PA-NJ	1,051	\$ 179,100	\$ 188
Altoona, PA	88	No Data	N/A
Amarillo, TX	496	\$ 144,500	\$ 72
Anchorage, AK	671	No Data	N/A

¹ Areas listed are Metropolitan Statistical Areas (MSAs) which include counties likely to be designated as non-attainment based on most recent air quality data.

² U.S. Environmental Protection Agency *County-level Design Values for the 2015 Ozone Standards Based on Monitored Air Quality Data from 2012 - 2014 - Includes only Counties with Ozone Monitors* (<https://www.epa.gov/sites/production/files/2016-03/documents/20151001datatable20122014.pdf>)

³ U.S. Census Bureau *Permits by Metropolitan Area – Annual: Table 3au. New Privately Owned Housing Units Authorized, Unadjusted Units by Metropolitan Area, Annual 2014* (<http://www.census.gov/construction/bps/txt/tb3u2014.txt>)

⁴ National Association of REALTORS® *Median Sales Price of Existing Single-Family Homes for Metropolitan Areas* (<http://www.realtor.org/sites/default/files/reports/2016/embargoes/2016-q4-metro-home-prices/metro-home-prices-q4-2015-single-family-2016-02-10.pdf>)

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Ann Arbor, MI	385	\$ 224,800	\$ 87
Appleton, WI	508	\$ 143,900	\$ 73
Asheville, NC	1,408	No Data	N/A
Athens-Clarke County, GA	502	No Data	N/A
Auburn-Opelika, AL	751	No Data	N/A
Augusta-Richmond County, GA-SC	2,416	No Data	N/A
Austin-Round Rock, TX	11,515	\$ 240,700	\$ 2,772
Bakersfield, CA	1,885	No Data	N/A
Baltimore-Columbia-Towson, MD	4,662	\$ 244,100	\$ 1,138
Baton Rouge, LA	3,294	\$ 171,300	\$ 564
Beaumont-Port Arthur, TX	1,068	\$ 135,600	\$ 145
Bend-Redmond, OR	1,274	No Data	N/A
Birmingham-Hoover, AL	2,318	\$ 167,900	\$ 389
Bloomington, IL	257	\$ 156,000	\$ 40
Boise City, ID	3,481	\$ 172,900	\$ 602
Boston-Cambridge-Quincy, MA-NH	4,991	\$ 389,800	\$ 1,945
Bowling Green, KY	417	\$ 138,800	\$ 58
Bridgeport-Stamford-Norwalk, CT	987	\$ 397,600	\$ 392
Buffalo-Cheektowaga-Niagara Falls, NY	1,057	\$ 129,000	\$ 137
Canton-Massillon, OH	404	\$ 112,900	\$ 46
Cape Coral-Fort Myers, FL	3,112	\$ 188,700	\$ 587
Cedar Rapids, IA	644	\$ 151,600	\$ 98
Chambersburg-Waynesboro, PA	251	No Data	N/A
Champaign-Urbana, IL	366	\$ 136,100	\$ 50
Charleston, WV	88	\$ 132,600	\$ 12
Charleston-North Charleston, SC	4,144	\$ 228,200	\$ 950

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Chattanooga, TN-GA	1,226	\$ 139,700	\$ 171
Cheyenne, WY	305	No Data	N/A
Chicago-Naperville-Elgin, IL-IN-WI	7,723	\$ 205,900	\$ 1,590
Chico, CA	355	No Data	N/A
Clarksville, TN-KY	1,276	No Data	N/A
Colorado Springs, CO	2,662	\$ 222,300	\$ 592
Columbia, MO	663	\$ 161,200	\$ 107
Columbia, SC	3,300	\$ 150,400	\$ 496
Corpus Christi, TX	1,667	\$ 171,100	\$ 285
Dalton, GA	115	No Data	N/A
Daphne-Fairhope-Foley, AL	1,364	No Data	N/A
Davenport-Moline-Rock Island, IA-IL	458	\$ 116,000	\$ 53
Dayton, OH	743	\$ 114,900	\$ 85
Decatur, AL	136	\$ 118,700	\$ 16
Decatur, IL	41	\$ 89,700	\$ 4
Detroit-Warren-Dearborn, MI	4,830	No Data	N/A
Dover, DE	912	\$ 186,100	\$ 170
Durham-Chapel Hill, NC	2,167	\$ 199,100	\$ 431
El Paso, TX	2,260	\$ 140,800	\$ 318
Elizabethtown-Fort Knox, KY	292	No Data	N/A
Elkhart-Goshen, IN	270	No Data	N/A
Erie, PA	166	\$ 117,900	\$ 20
Eugene, OR	506	\$ 210,400	\$ 106
Evansville, IN-KY	568	No Data	N/A
Farmington, NM	173	\$ 173,800	\$ 30
Fayetteville, NC	1,012	\$ 146,500	\$ 148

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Fayetteville-Springdale-Rogers, AR-MO	2,388	No Data	N/A
Flagstaff, AZ	290	No Data	N/A
Flint, MI	271	No Data	N/A
Florence, SC	331	\$ 120,000	\$ 40
Florence-Muscle Shoals, AL	174	No Data	N/A
Fond du Lac, WI	106	\$ 120,600	\$ 13
Fort Collins, CO	1,627	No Data	N/A
Fort Smith, AR-OK	371	No Data	N/A
Fort Wayne, IN	883	\$ 108,200	\$ 96
Gettysburg, PA	222	No Data	N/A
Grand Junction,* CO	452	No Data	N/A
Grand Rapids-Wyoming, MI	2,273	\$ 138,300	\$ 314
Green Bay, WI	641	\$ 146,600	\$ 94
Greensboro-High Point, NC	1,470	\$ 136,600	\$ 201
Greenville, NC	335	No Data	N/A
Greenville-Anderson-Mauldin, SC	3,306	\$ 165,400	\$ 547
Gulfport-Biloxi-Pascagoula, MS	1,386	\$ 117,100	\$ 162
Hagerstown-Martinsburg, MD-WV	783	\$ 150,700	\$ 118
Houma-Thibodaux, LA	634	No Data	N/A
Huntington-Ashland, WV-KY-OH	230	No Data	N/A
Huntsville, AL	1,784	\$ 171,100	\$ 305
Indianapolis-Carmel-Anderson, IN	4,965	\$ 144,600	\$ 718
Ithaca, NY	140	No Data	N/A
Jackson, MS	1,954	\$ 155,300	\$ 304
Jacksonville,* FL	6,299	\$ 181,100	\$ 1,141
Jacksonville, NC	1,045	No Data	N/A
Janesville-Beloit, WI	123	No Data	N/A

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Jefferson City, MO	171	No Data	N/A
Johnstown, PA	59	No Data	N/A
Joplin, MO	332	No Data	N/A
Kalamazoo-Portage, MI	511	No Data	N/A
Kansas City,* MO-KS	4,170	\$ 158,800	\$ 662
Kennewick-Richland, WA	1,078	\$ 187,900	\$ 203
Killeen-Temple, TX	2,115	No Data	N/A
Kingsport-Bristol-Bristol, TN-VA	316	No Data	N/A
Knoxville, TN	2,095	\$ 149,700	\$ 314
Lafayette, LA	2,224	No Data	N/A
Lafayette-West Lafayette, IN	596	No Data	N/A
Lake Charles, LA	619	No Data	N/A
Lake Havasu City-Kingman, AZ	521	No Data	N/A
Lakeland-Winter Haven,* FL	2,547	\$ 132,900	\$ 338
Lansing-East Lansing, MI	455	\$ 120,100	\$ 55
Laredo,* TX	954	No Data	N/A
Las Cruces,* NM	606	No Data	N/A
Las Vegas-Henderson-Paradise,* NV	6,809	\$ 198,000	\$ 1,348
Lexington-Fayette, KY	1,319	\$ 144,000	\$ 190
Lincoln, NE	1,052	\$ 145,900	\$ 154
Little Rock-North Little Rock-Conway, AR	1,514	\$ 131,700	\$ 200
Louisville-Jefferson County, KY-IN	2,390	\$ 142,800	\$ 341
Lubbock, TX	975	No Data	N/A
Madison, WI	1,243	\$ 228,200	\$ 284
Manchester-Nashua, NH	464	\$ 234,800	\$ 109
Medford, OR	590	No Data	N/A

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Memphis, TN-MS-AR	2,539	\$ 138,600	\$ 352
Midland,* TX	920	No Data	N/A
Milwaukee-Waukesha-West Allis,* WI	1,257	\$ 207,800	\$ 261
Minneapolis-St. Paul-Bloomington, MN-WI	6,689	\$ 210,100	\$ 1,405
Mobile, AL	746	\$ 115,500	\$ 86
Nashville-Davidson--Murfreeseboro--Franklin, TN	9,075	\$ 183,000	\$ 1,661
New Orleans-Metairie,* LA	2,440	\$ 165,000	\$ 403
Oklahoma City,* OK	5,959	\$ 150,300	\$ 896
Olympia-Tumwater, WA	934	No Data	N/A
Omaha-Council Bluffs,* NE-IA	2,639	\$ 149,000	\$ 393
Orlando-Kissimmee-Sanford,* FL	9,806	\$ 180,000	\$ 1,765
Panama City, FL	687	\$ 169,900	\$ 117
Pensacola-Ferry Pass-Brent,* FL	1,637	\$ 150,800	\$ 247
Peoria, IL	835	\$ 118,900	\$ 99
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,379	\$ 220,700	\$ 1,408
Pittsfield, MA	137	\$ 186,200	\$ 26
Portland-South Portland, ME	1,419	\$ 227,700	\$ 323
Prescott, AZ	948	No Data	N/A
Providence-Warwick, RI-MA	1,441	\$ 238,800	\$ 344
Provo-Orem, UT	2,679	No Data	N/A
Raleigh, NC	7,680	\$ 208,600	\$ 1,602
Rapid City, SD	524	No Data	N/A
Reno, NV	1,507	\$ 247,500	\$ 373

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Richmond, VA	3,181	\$ 220,200	\$ 701
Rochester, MN	621	No Data	N/A
Rochester, NY	1,269	\$ 125,300	\$ 159
Rockford, IL	134	\$ 86,300	\$ 12
Salt Lake City, UT	3,159	\$ 239,100	\$ 755
San Antonio-New Braunfels, TX	6,220	\$ 182,100	\$ 1,133
Savannah, GA	1,857	No Data	N/A
Sheboygan, WI	87	No Data	N/A
Shreveport-Bossier City, LA	1,242	\$ 158,600	\$ 197
Sioux Falls, SD	1,134	\$162,300	\$ 184
South Bend-Mishawaka, IN-MI	342	\$ 106,700	\$ 37
Spartanburg, SC	1,084	\$ 129,900	\$ 141
Springfield, IL	300	\$ 122,700	\$ 37
Springfield, MA	420	\$ 193,300	\$ 81
Springfield, MO	1,116	\$ 121,200	\$ 135
St. George, UT	1,573	No Data	N/A
St. Joseph, MO-KS	98	No Data	N/A
Syracuse, NY	652	\$ 125,800	\$ 82
Tampa-St. Petersburg-Clearwater, FL	7,267	\$ 151,500	\$ 1,101
Texarkana, TX-AR	129	No Data	N/A
Toledo, OH	598	\$ 87,200	\$ 52
Topeka, KS	285	\$ 111,900	\$ 32
Trenton, NJ	239	\$ 267,100	\$ 64
Tucson, AZ	2,296	\$ 175,800	\$ 404
Tulsa, OK	3,022	\$ 145,500	\$ 440
Tuscaloosa, AL	440	No Data	N/A

EPA's Estimates for "new" Ozone non-attainment areas	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Tyler, TX	377	No Data	N/A
Virginia Beach-Norfolk-Newport News, VA-NC	3,766	\$ 196,000	\$ 738
Waco, TX	607	No Data	N/A
Watertown-Fort Drum, NY	107	No Data	N/A
Weirton-Steubenville, WV-OH	25	No Data	N/A
Wichita, KS	1,177	\$ 125,700	\$ 148
Wilmington, NC	1,367	\$ 211,400	\$ 289
Winston-Salem, NC	1,424	\$ 135,200	\$ 193
Worcester, MA-CT	1,274	\$ 236,100	\$ 301
York-Hanover, PA	720	\$ 155,100	\$ 112
Youngstown-Warren-Boardman, OH-PA	301	\$ 78,600	\$ 24
Yuma, AZ	594	No Data	N/A
<i>Totals in 2014:</i>	282,601		\$ 43.1 billion

Table 2. Potential Annual Economic Impact on Single Family Homebuilders
(only) for Top 20 Housing Markets under Final 2015 Ozone NAAQS
(NAAQS set at 70 ppb)

Top 20 Metropolitan CBSA's: 2014⁵	Total Single Family Permits 2013⁶	Median Single Family Home Sale Price 2013⁷	Annual Size of the Single Family Home Residential Market (in billions of dollars)
Atlanta-Sandy Springs-Roswell, GA	16,984	\$ 159,500	\$ 2.7
Boston-Cambridge-Newton, MA-NH	4,991	\$ 389,800	\$ 2
Charlotte-Concord-Gastonia, NC-SC	11,306	\$ 193,800	\$ 2.2
Chicago-Naperville-Elgin, IL-IN-WI	7,723	\$ 205,900	\$ 1.6
Dallas-Fort Worth-Arlington, TX	22,550	\$ 188,300	\$ 4.2
Denver-Aurora-Lakewood, CO	8,064	\$ 310,200	\$ 3
Houston-The Woodlands-Sugar Land, TX	38,315	\$ 198,400	\$ 8
Los Angeles-Long Beach-Anaheim, CA	8,300	\$ 449,500	\$ 4
Minneapolis-St. Paul-Bloomington, MN-WI	6,689	\$ 210,100	\$ 1.4

⁵ Top 20 Markets based on U.S. Census *Annual Top 20 CBSA Chart* (<http://www.census.gov/construction/bps/pdf/2014cbsachart.pdf>) (2014)

⁶ U.S. Census Bureau *Permits by Metropolitan Area – Annual: Table 3au. New Privately Owned Housing Units Authorized, Unadjusted Units by Metropolitan Area, Annual 2014* (<http://www.census.gov/construction/bps/txt/tb3u2014.txt>)

⁷ National Association of REALTORS® *Median Sales Price of Existing Single-Family Homes for Metropolitan Areas* (<http://www.realtor.org/sites/default/files/reports/2016/embargoed/2016-q4-metro-home-prices/metro-home-prices-q4-2015-single-family-2016-02-10.pdf>)

Top 20 Metropolitan CBSA's: 2014	Total Single Family Permits 2013	Median Single Family Home Sale Price 2013	Annual Size of the Single Family Home Residential Market (in billions of dollars)
New York-Newark-Jersey City, NY-NJ-PA	11,799	\$ 395,900	\$ 5
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,379	\$ 220,700	\$ 1.4
Phoenix-Mesa-Scottsdale, AZ	11,557	\$ 198,500	\$ 2.3
Tampa-St. Petersburg-Clearwater, FL	7,267	\$ 151,500	\$ 1
Washington-Arlington-Alexandria, DC-VA-MD-WV	12,411	\$ 383,800	\$ 5
<i>Totals in 2014:</i>	174,335		\$ 42.2 billion



1201 15th Street NW
Washington, DC 20005

T 800 368 5242
F 202 266 8400

nahb.org

March 17, 2015

Gina McCarthy, Administrator
United States Environmental Protection Agency
OPPT Document Control Office
EPA East Bldg., Room 6428
1201 Constitution Avenue N.W.
Washington, D.C. 20460

(Submitted electronically via website www.regulations.gov)

**RE: Comments on EPA's National Ambient Air Quality Standards for Ozone;
Proposed Rule; Docket No. (EPA-HQ-OAR-2008-0699)**

Dear Administrator McCarthy,

On December 17, 2014, the U.S. Environmental Protection Agency (EPA) published a Federal Register notice seeking public comment on a proposed rule to revise the ozone National Ambient Air Quality Standard (NAAQS)¹ to a level within a range of 65-70 parts per billion (ppb). The National Association of Home Builders (NAHB) appreciates the opportunity to provide these comments and urges EPA to retain the current standard of 75 ppb.

NAHB is a federation of more than 850 state and local home builder associations nationwide. The organization's membership includes over 140,000 firms engaged in land development, single and multifamily residential construction, remodeling, multifamily ownership, building material trades, building products manufacturing and supply, and commercial and light industrial construction projects. Over 80 percent of NAHB's members are classified as "small businesses," as defined by the U.S. Small Business Administration, and NAHB members collectively employ over 3.4 million people nationwide. Four out of every five new homes are built by NAHB members.

NAHB is concerned that any change to the current ozone NAAQS will negatively impact home builders and developers as they seek to provide affordable housing for a growing population. EPA's proposal to revise the standard to a range of 65-70 ppb will greatly enlarge the number of impacted areas throughout the country, and the additional rules and regulations that State and local governments will be required to adopt to achieve the proposed ozone NAAQS will have a clear, direct and negative effect on NAHB members and the overall housing market. Because of the impacts

¹ 79 Fed. Reg. 75234 (December 17, 2014)

that will result from any change in the standard as outlined below NAHB encourages the retention of the current standard.

OVERVIEW

Section 109 of the Clean Air Act (CAA)² governs the promulgation of national primary and secondary air quality standards. The Act requires EPA to review and potentially revise both a “primary” and “secondary” NAAQS for pollutants for which air quality criteria are issued under CAA §108.^{3, 4} “Primary standards” are set to protect public health, including the health of “sensitive” populations such as asthmatics, young children, and the elderly.⁵ “Secondary standards” set limits to protect public welfare, including protection against visibility impairment and damage to animals, crops, and vegetation.⁶ Even though the primary and secondary standards are separate components of the NAAQS, the Administrator can determine that they should be set at the same level.

While the Administrator is required by the statute to revisit each NAAQS at least once every five years,⁷ there is no obligation that the Administrator revise the standard following the review. As part of the review, the CAA requires the Administrator to convene an independent scientific review panel—the Clean Air Scientific Advisory Committee (CASAC)—to review all known health data and provide the Administrator an independent recommendation as to the appropriate level for the NAAQS.

In determining whether to issue a revised standard, the Administrator is guided by the requirement under §109 (b)(1) of the CAA that a primary NAAQS standard is to be set at a level “requisite to protect the public health” with an “adequate margin of safety.” Both the courts and the Agency have reaffirmed that the ultimate decision in selecting any NAAQS standard is the Administrator’s alone, with a rational basis and limited by what is “requisite.”⁸

As outlined in the preamble, EPA has proposed finding that the current primary ozone standard set at a level of 75 ppb is not requisite to protect public health with an adequate margin of safety and that it should be revised to provide increased public health protection. As such, EPA is proposing to revise the level of that standard to within the range of 65 ppb to 70 ppb. The Agency is also proposing to retain the indicator (ozone), averaging time (8-hour) and form (annual fourth-highest daily maximum, averaged over 3 years) of the existing primary ozone standard.^{9,10}

² 42 U.S.C. §7409

³ 42 U.S.C. §7408

⁴ The six commonly found air pollutants (also known as “criteria pollutants”) are ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead.

⁵ 42 U.S.C. §7409(b)(1)

⁶ 42 U.S.C. §7409(b)(2)

⁷ 42 U.S.C. §7409(d)(1)

⁸ *Whitman v. American Trucking Assns., Inc.* 531 U.S. 457 (2001)

⁹ 79 Fed. Reg. 75236 (December 17, 2014)

¹⁰ EPA is also proposing to revise the secondary standard. The Agency has proposed a two-step approach to define a target level of protection and then revise the standard to achieve that level of protection. EPA is proposing a secondary standard within the range of 65 ppb to 70 ppb which would be equivalent to the primary standard.

In addition to its preferred option for revising the standard, EPA is accepting comments on retaining the current 75 ppb standard or revising the level of the standard to 60 ppb. The prospect of revising the level of the standard to 60 ppb can be traced back to reports from the CASAC which recommended that the standard be revised to within a range of 60-75 ppb. The EPA staff Policy Assessment (PA) also made similar recommendations. However, given the uncertainty of the scientific evidence supporting a 60 ppb standard, EPA made the policy judgment not to include 60 ppb in its recommended range.

Subsequent to the establishment or revision of a NAAQS the CAA requires EPA and states to take actions necessary to ensure the standard is met. The first triggered requirement in the CAA is the designation of areas as meeting the standards (attainment areas) or not meeting them (non-attainment areas) based on local air quality.¹¹ This process is considered part of the implementation of the standard and is undertaken through a federal, state, and tribal partnership.

Following the issuance of final area designations by EPA, States that contain areas deemed to be non-attainment must put together a State Implementation Plan (SIP) within three years. The SIP must contain a combination of prescribed federal and state air pollution control regulations necessary to reduce ambient air pollution levels to achieve the revised ozone NAAQS. Under the CAA states typically have between 6 to 8 years to achieve federal air quality standards. The timeline below (Fig. 1) reflects EPA's timeframe for affected states to implement regulatory plans and requirements sufficient to achieve the revised ozone NAAQS.¹²

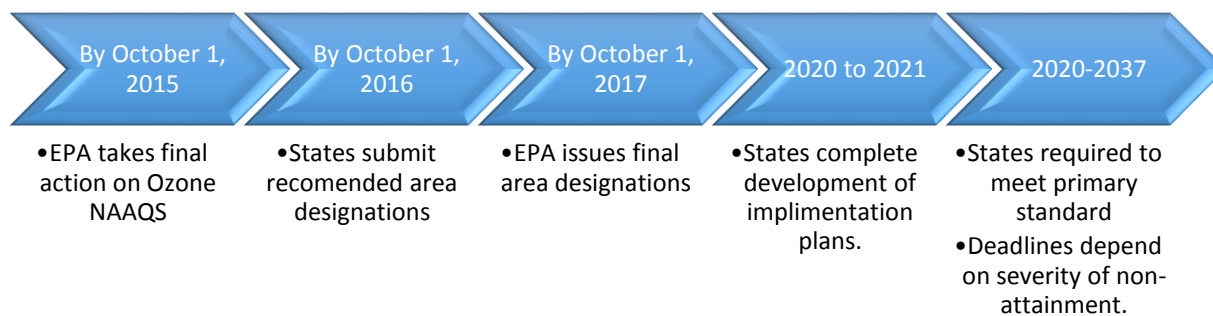


Figure 1. Projected timeline for action on proposed revision to the ozone National Ambient Air Quality Standard (NAAQS).

¹¹ 42 U.S.C. § 7407(d)

¹² U.S. Environmental Protection Agency, *The National Ambient Air Quality Standards: EPA'S PROPOSAL TO UPDATE THE AIR QUALITY STANDARDS FOR GROUND-LEVEL OZONE: DESIGNATIONS, MONITORING AND PERMITTING REQUIREMENTS* available at <http://www.epa.gov/airquality/ozonepollution/pdfs/20141125fs-requirements.pdf>

March 17, 2015

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PROPOSED REVISION TO OZONE NAAQS PREMATURE

Since 1980 ozone precursor emissions have been cut in half, and the national average ozone level has dropped by 33%.¹³ The continuing efforts to reduce emissions of NO_x and VOCs, the precursor emissions that contribute to the formation of ground level ozone, have been aided by a suite of regulations issued by EPA that to this date continue to come into effect.¹⁴ Further reductions in ground level ozone will be achieved through direct regulation of NO_x and VOC emissions as well as through co-benefits from reducing toxic emissions and carbon pollution. EPA indicates that these existing and proposed federal rules will play a role in the ability of most non-attainment areas to come into compliance with the proposed revisions to the ozone standard.

Furthermore, revisions to the ozone standard at this time seem premature at best. Implementation of the most recent updates to the standard is ongoing, having been complicated by the unsuccessful 2010-2012 pursuit of reconsideration by EPA. In fact, EPA failed to publish a final rule on state implementation plan requirements for implementing the 2008 NAAQS until March 6, 2015.¹⁵ As states make progress in putting the current standard into effect further headway in reducing ozone-forming emissions will be realized without necessitating a revision in the ozone standard.

Given the unfolding picture with regards to ozone concentrations as a result of the current and proposed regulatory regime already underway, it is unclear how EPA can determine that a revised standard is necessary at this time. Without allowing sufficient time to determine the full benefit and effectiveness of these regulations EPA runs the risk of exceeding the statutory limit for setting a NAAQS of "requisite to protect the public health" with an "adequate margin of safety" as interpreted by the U.S. Supreme Court to mean "sufficient, but not more than necessary."¹⁶

BACKGROUND OZONE

NAHB continues to be concerned by EPA's treatment of issues related to background ozone levels as they relate to the review and establishment of the ozone standard. NAHB has previously raised similar concerns in comments submitted in 2010 in response to the proposed reconsideration of the NAAQS for Ozone (EPA-HQ-OAR-2005-0172).

In the August 2014 Final Policy Assessment, the Agency highlighted changes to several aspects of the methodology used for estimating the change in health risk and exposure that

¹³ U.S. Environmental Protection Agency *Air Quality Trends* (<http://www.epa.gov/airtrends/aqtrends.html> and <http://epa.gov/airtrends/ozone.html>)

¹⁴ Examples of these regulations include: Requirements to reduce the interstate transport of ozone; The Mercury and Air Toxics Standards; Mobile Source-Related Standards, especially the Tier 3 emission control requirements for motor fuels and vehicles; Regional Haze Best Available Retrofit Technology Emission Standards; Emissions Standards for Reciprocating Internal Combustion Engines; Emissions Standards for Industrial, Commercial and Industrial Boilers; and The Clean Power Plan.

¹⁵ 80 Fed. Reg. 12264 (March 6, 2015)

¹⁶ *American Trucking Associations v. EPA*, 531 U.S. at 473 (internal citation omitted)

would result from a revision to the ozone NAAQS.¹⁷ In particular, in the new methodology, risk estimates are based on total ozone concentrations while previous reviews, including 2008 and the reconsideration, only considered risk above background levels.

However, EPA lacks the authority to set NAAQS levels that regulate anything other than “air pollutants” within the meaning of CAA section 109(a).¹⁸ Emissions that are naturally present in the ambient air are already there and have not “entered” the ambient air on account of human activity. Instead, the purpose of the Act is to regulate only non-natural emissions.¹⁹ Simply put, EPA may not require states and localities to reduce ozone concentrations levels to or below national background concentrations.

Since the CAA only provides EPA the authority to regulate air pollutants, the emission reductions adopted under SIPs can only impact that fraction of total ozone concentration attributable to pollutants. Basing the evaluation of the change in health risk and exposure on total ozone concentration as opposed to the risk associated with concentrations above background levels could result in a standard where states and the regulated community could be held responsible for emission reductions at or below background levels. Clearly, this exceeds EPA’s statutory authority.

Regardless of the location-specific background ozone levels, the differential between background ozone and the ozone standard continues to shrink, in turn narrowing the ozone concentration above background for which states and regulated entities are able to control. For example, if the background concentration is 40 ppb and the standard is 70 ppb, the amount of ozone that can be allowed to be formed from man-made emissions is only 30 ppb. In this example, even with a 40 ppb background, a 70 ppb standard would allow little room for human activities. On a day when the background is 60 ppb, there would be even less margin for human activities. While this illustration over-simplifies the complex chemical and meteorological processes involved in ozone formation and transport, it demonstrates that the variability of background due to transport of ozone from upwind natural sources and foreign man-made sources can make some of the standards under consideration unattainable.

SETTING THE STANDARD INEXORABLY TIED TO SUBSEQUENT IMPLEMENTATION OF THE STANDARD

While NAHB acknowledges that the current action taken by EPA is to establish a national standard for allowable concentrations of ozone in ambient air as required under §109 of the CAA,²⁰ it is challenging to see the standard setting process as completely disconnected from the implementation issues that follow. Without revision to the standard, no subsequent activity would be undertaken by EPA and states to develop and finalize non-attainment designations for impacted local areas. Without updated non-attainment area designations the requirements for states to develop SIPs for EPA approval would not be triggered.

¹⁷ U.S. Environmental Protection Agency. *Policy Assessment for the Review of the Ozone National Ambient Air Quality Standards*. August 2014 2A-6
(<http://www.epa.gov/ttn/naaqs/standards/ozone/data/20140829pa.pdf>)

¹⁸ 42 U.S.C. §7602(g)

¹⁹ See CAA section 101(a)(1)-(3), (c).

²⁰ 42 U.S.C. §7409

NAHB understands that courts have found that the setting of a standard does not impose direct regulatory requirements on stakeholders.²¹ Nevertheless, the CAA is a compilation of interrelated requirements, many dependent on prior acts such as the setting of a standard, and NAHB believes that the establishment of a NAAQS will have real world implications for builders and developers. The establishment of the standard is the fundamental component of the equation that determines non-attainment status and therefore which areas will face increased regulatory restrictions that will impede future development. Furthermore, it is important to note that the clock starts ticking with regards to the implementation deadlines outlined in the statute upon promulgation of a revised NAAQS.

The NAAQS is a policy determination made by the Administrator, and NAHB urges the Administrator to make this policy decision fully within the context of the statutory activities triggered by establishing a revised standard and the associated regulatory requirements imposed by those actions. NAHB therefore provides the following information regarding impacts to the construction industry from regulatory requirements adopted for the sole purpose of coming into attainment with the ozone standard. Given the vast expansion in areas impacted by a revision to the ozone standard, the potential impacts to the residential construction industry will hamper the ongoing housing recovery.

UNPRECEDENTED EXPANSION IN POTENTIAL NON-ATTAINMENT AREAS PROBLEMATIC

Under the proposed rule an estimated 358 counties would violate an ozone NAAQS set at 70 ppb, and an additional 200 counties would violate an ozone NAAQS set at 65 ppb, collectively resulting in a total number of 558 newly impacted counties nationwide.²² (Fig. 2) This could more than double the number of counties determined to be in non-attainment²³ and expands the impact of the ozone NAAQS to include many suburban or rural areas. In addition, for many areas the difference between establishing a revised ozone NAAQS at 65 ppb or 70 ppb determines whether an entire state is subject to the mandatory federal regulatory programs under the CAA.

A closer examination of the air monitoring data that EPA released with the proposal illustrates the extent to which the playing field will change if the proposed revision to the ozone standard is finalized.

Many of the 26 states which currently include counties deemed in non-attainment will see an increase in the number of counties impacted in their state. In addition, under the proposed revision to the standard, 118 newly impacted counties can be found in 17 states that have no prior experience with ozone non-attainment area designations.²⁴

²¹ *American Trucking Associations v. EPA*, 175 F. 3d at 1044– 45 (D.C. Cir. 1999).

²² Based on 2011-2013 air quality data. This does not include counties without air quality monitors that may be considered for inclusion in area designations recommended by states or subsequently finalized by EPA. Source: U.S. Environmental Protection Agency *Counties Violating the Primary Ground-level Ozone Standard Based on Monitored Air Quality from 2011 - 2013 Includes only Counties with Monitors* <http://www.epa.gov/air/ozonepollution/pdfs/20141126-20112013datatable.pdf>

²³ Currently 224 counties in 26 states are considered in non-attainment for the 2008 ozone NAAQS.

²⁴ 65 of these newly impacted counties in newly impacted states would violate a 70 ppb standard, and an additional 53 counties would violate a 65 ppb standard.

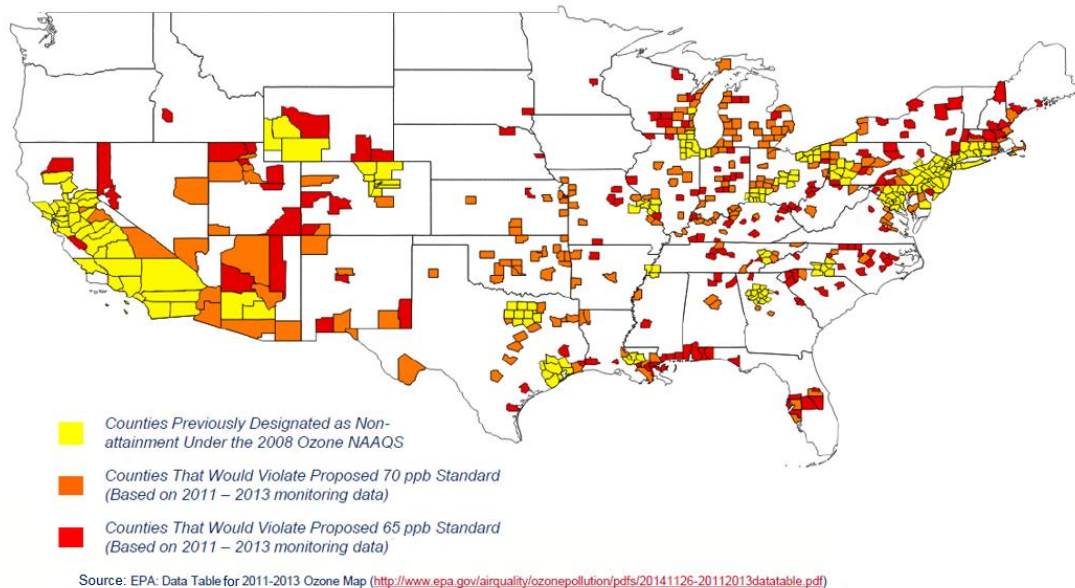


Figure 2. Map of counties across the U.S. that are currently designated as non-attainment under the 2008 ozone NAAQS of 75 ppb (yellow) and that will be designated as non-attainment under the proposed 70 ppb (orange) and 65 ppb (red) standards.

Under the current ozone standard of 75 ppb, 11 of the top 20 housing markets are in non-attainment areas. If the ozone NAAQS is revised to a range of 65-70 ppb, 17 of the top 20 housing markets would be in non-attainment areas. If the EPA Administrator were to adopt the 60 ppb standard recommended by CASAC, all of the top 20 housing markets would be in non-attainment. Furthermore, a revised ozone standard of 65-70 ppb would also mean that 212 Core Based Statistical Areas (CBSAs)²⁵ would be newly impacted by the NAAQS.²⁶

More than one half of all housing starts would be affected by a revised ozone standard. Most importantly, these figures do not include smaller markets and non-urban areas throughout the nation that are likely to be newly impacted by a revised standard.²⁷

The impact of the proposed ozone NAAQS on a substantial portion of the country will subject large segments of the home building industry to new regulations as all states with non-attainment designations develop required SIPs. Across states that have never before had to contend with non-attainment designations, areas will have fewer traditional industrial sectors (i.e., electric power plants or factories) upon which to rely for emissions reductions. Similarly, in areas previously designated by EPA as non-attainment, the emissions reductions attributable to traditional industrial sectors may have already been counted toward compliance with earlier

²⁵ Includes both Metropolitan/Micropolitan Statistical Areas

²⁶ Based on U.S. Census Bureau, Population Division; Office of Management and Budget, February 2013 delineations. Internet Release Date: March 2013.

²⁷ U.S. Bureau of the Census, National Association of REALTORS®, NAHB calculations. See tables in Attachment 1.

versions of the ozone NAAQS standard. In both scenarios, states will increasingly look toward non-traditional sectors, including residential land development and construction activities, to achieve EPA's more stringent ozone air quality standards.

NON-ATTAINMENT AREA DESIGNATION HAS LONG-TERM IMPACTS ON COMMUNITIES

States and all non-attainment areas within an affected state will face a significant challenge regarding how to reduce emissions to a sufficient degree as to ensure that the standard is met. Development of the SIP begins with inclusions of all federally mandated regulatory programs identified under Title I of the Clean Air Act. These federally mandated components of a SIP include regulatory programs such as New Source Review (NSR) that require all major manufacturing facilities to be located in a non-attainment area to offset their presumed air emissions prior to construction. Restrictive and expensive regulatory programs such as NSR are powerful disincentives for future economic development in non-attainment areas.²⁸ When it becomes increasingly difficult to site new facilities in these areas, it also becomes harder to attract new jobs to these communities. The result is a direct impact to the economic vitality of countless towns, counties, cities, and states. In turn, an inability to attract new facilities and jobs to an areas subsequently undermines the need for new residential land development and construction activities.

Furthermore, the CAA provisions targeting the reduction of emissions from mobile sources raise a broader array of concerns for the construction industry.²⁹ Direct restriction on the usage of fuel or equipment types or the requirement to make costly modifications to equipment are all part of the federal and state toolkit to mitigate the emissions that lead to increased levels of ground level ozone. Designated non-attainment areas will increasingly look toward non-traditional sectors like home building to help achieve a revised standards as they have a more limited number of emission sources to target.

It is essential to note that these restrictions do not disappear when an area finally comes into attainment. Instead, former nonattainment areas face a legacy of EPA regulatory oversight. Before a non-attainment area can be redesignated to attainment, EPA must receive and approve an enforceable maintenance plan for the area that specifies measures providing continued maintenance of ozone standards and contingency measures to be implemented promptly if an ozone standard is violated.³⁰

Among the federal pollution control requirements that non-attainment areas must adopt is the need to align transportation planning with the emissions reduction requirements developed under a SIP.³¹ Restrictions and limitations on how federal transportation funding can be spent typically results in limited future investments in new or expanded highway infrastructure which is the precise type of infrastructure needed by suburban or fast growing rural areas to support ongoing development. Instead, federal air pollution transportation policies are designed with a clear bias supporting transportation control strategies or measures that are reliant on existing infrastructure including mass transit systems that typically service a limited number of urbanized

²⁸ 42 U.S.C. §7502(c)(5)

²⁹ 42 U.S.C. §7547

³⁰ 42 U.S.C. §7505a

³¹ 42 U.S.C. §7506(c)

areas.³² Efforts to comply with other transportation requirements, specifically transportation conformity,³³ can also result in the adoption of impact fees used to offset the future emissions assumed to be generated by the occupants of new residential development.

PROPOSED OZONE NAAQS WILL SIGNIFICANTLY IMPACT THE CONSTRUCTION INDUSTRY

In the preamble, EPA acknowledges the dilemma faced by areas that lack the traditional industry sectors most commonly impacted by the ozone standard. NAHB's position remains that EPA should cease the practice of allowing states to adopt mandatory energy efficiency requirements in exchange for air quality credits. However, the following excerpt clearly indicates that EPA recognizes the growing challenge of meeting an increasingly stringent standard.

The EPA recognizes that a number of areas of the country have been working to reduce O₃ precursors for many years and now may need to turn to newer, more innovative approaches for reducing emissions as they develop their implementation plans. These approaches, such as smart growth policies and renewable energy portfolios, hold great promise for improved air quality and health, and the EPA is working with air quality agencies and stakeholders to identify ways to include these types of programs in implementation plans. For example, the EPA developed a roadmap for giving SIP credit to energy efficiency/renewable energy projects. Recognition of innovative programs will allow states and tribes to pursue effective strategies that address some of the more challenging issues affecting air quality, such as land use planning, ever increasing motor vehicle use, and planning for long-term energy needs.³⁴

Moving forward, the integration of proposals impacting land development and home building will be increasingly likely in areas needing to reduce emissions and come into attainment with the ozone standard.

NAHB cautions EPA that land use decisions are complex and highly localized – thus the long held tradition in American governance that land use decisions are almost exclusively the domain of local authorities.³⁵ The following examples demonstrate situations where the CAA spurred actions that have adversely impacted the development industry and in turn the availability of affordable housing. Revisions to the NAAQS will result in an increase in the number of builders and developers facing the prospect of having to comply with an assortment of new and/or expanded regulations that limit or effectively dictate both where and how construction can occur.

Daytime Construction Restrictions

The Texas Natural Resources Conservation Commission (TNRCC) proposed the Construction Equipment Operating Limitations rule which would have banned the daytime use of all diesel construction equipment 50hp or greater during the ozone

³² 42 U.S.C. §7511a(d)(1)(A)

³³ 42 U.S.C. §7506(c)(2)

³⁴ 79 Fed. Reg. 75372 (See Section VII.A.1)

³⁵ See *Solid Waste Agency of Northern Cook County v. Army Corps of Engineers*, 531 U.S. 159, 174 (2001)(the government's action "would result in a significant impingement of the States' traditional and primary power over land and water use."); see also *Rapanos v. United States*, 547 U.S. 715, 738 (2006)("Regulation of land use...is a quintessential state and local power.").

season (defined as April to October).³⁶ Such a ban would have had an economic impact as high as \$50-\$70 million annually in Dallas/Fort Worth metropolitan area and another \$100-\$135 million annually in Houston/Galveston metropolitan areas.

The ultimate environmental benefit of TNRCC's proposal was extremely questionable because it would have only delayed the NO_x emissions rather than preventing them altogether.

While this proposal was ultimately withdrawn, it is important to note that proposed restrictions on construction activities, like this one, are likely to be tied to the ozone monitoring season. As a result, any extension of the monitoring season, as proposed by EPA under this rule,³⁷ will only magnify the fiscal impact of potential restrictions.

NAHB is deeply concerned that EPA's stringent proposal will incite other jurisdictions to enact limitations on construction during daytime hours for several reasons. Key among those is the health and safety of the industry's workforce.

There are significant and well-documented health impacts to forcing construction to take place at night. Research published in the Journal of Occupational and Environmental Medicine notes, "Most studies tend to support the view that safety is more likely to be compromised during the night shift, particularly when night working is coupled with extended hours."³⁸

Both the Centers for Disease Control (CDC) and National Institute for Occupational Safety and Health (NIOSH) have written extensively about the health impacts of working at night. NIOSH's "Plain Language about Shiftwork" includes a section on the "Health and Safety Effects of Shiftwork." This section provides an overview of various short- and long-term health impacts.³⁹ Immediate impacts include sleep loss that can result in injuries from on-the-job accidents and psychological stress from being unable to see family and friends and participate in social activities.⁴⁰ While long-term impacts are harder to estimate, studies have demonstrated links between shift work and digestive problems, heart disease, and propensity to use tobacco and alcohol.⁴¹

In its literature review of 22 studies related to overtime and shiftwork, the CDC highlighted results demonstrating an increase in physical fatigue, smoking, and alcohol use for night shift workers.⁴² Studies also demonstrated a higher risk of injury during

³⁶ TNRCC Chapter 14, *proposed*, Control of Air Pollution from Motor Vehicles Rule Log Number 2001-025a-114-AI

³⁷ 79 Fed. Reg. 75358-75360 (December 17, 2014)

³⁸ Health and safety problems associated with long working hours: a review of the current position; Anne Spurgeon, J Malcolm Harrington, Cary L Cooper, Occupational and Environmental Medicine 1997;54:367-375 at 373.

³⁹ NIOSH, Plain Language about Shift Work, at 13.

⁴⁰ *Id.* At 16

⁴¹ *Id.* At 17-18

⁴² CDC & NIOSH, Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors, 2004 at 17.

evening and night shifts when compared to day shifts.⁴³ And physical fatigue levels are highest during 12-hour night shifts.⁴⁴

Thus, the adverse health impacts associated with working at night are significant and wide-ranging. Any estimated health benefits EPA attributes to the proposed ozone NAAQS must be balanced with the adverse health impacts resulting from reasonably foreseeable state SIP provisions.

Second, nighttime construction, especially in residential areas, is prohibited in most areas by municipal ordinances. For example, in Seattle, Washington, most construction can only occur in residential areas between 7:00 am and 7:00 pm on weekdays and between 9:00 am and 7:00 pm on weekends. Construction in all other areas cannot occur after 10:00 pm.⁴⁵ Similarly, in Maricopa County, Arizona, construction in residential areas can take place between 5:00 am or 6:00 am (depending on the time of year) and 7:00 pm. In non-residential areas, construction must end at 10:00 pm.⁴⁶ Other municipalities establish decibel limits that effectively preclude nighttime construction.⁴⁷ If the revised ozone NAAQS is as stringent as proposed, jurisdictions with few options for compliance may consider daytime construction moratoria as an option which, coupled with the prevalence of noise ordinances, will make it increasingly difficult to build a home during the summer months when construction typically takes place.

Impact Fee

In California, the San Joaquin Valley local air quality district adopted an indirect source rule that imposes an impact fee on developers and builders of up to \$1,772 per home.⁴⁸ The air quality district based this figure on the projected air pollution generated by diesel construction equipment and the presumed transportation-related air pollution generated by future home owners while commuting between employment centers and these housing developments.⁴⁹

States desperate for emissions reductions and revenue generation may seize at programs such as these without taking into consideration the ancillary adverse impacts, such as a reduction in affordable housing.

AIR v. EPA

A recent decision in the Ninth Circuit also demonstrates a way in which the home building industry stands to be adversely impacted by a more stringent ozone NAAQS. In 2012, the Ninth Circuit ruled in *Association of Irrigated Residents v. EPA* that reductions in vehicle miles traveled (VMTs) cannot be calculated by using aggregate emissions

⁴³ *Id.*

⁴⁴ *Id.*

⁴⁵ Seattle, Wash, Mun. Code § 25.08.425 (2009).

⁴⁶ Maricopa Cnty., Ariz., Hours of Construction Ordinance §102 (2004).

⁴⁷ See., e.g., D.C. Mun. Regs., tit. 20, §2802.2 (1977)(requiring construction activities occurring between 7:00 pm and 7:00 am to adhere to the maximum noise levels prescribed for all activities occurring during that time.

⁴⁸ The fee covers developments with 50 or more housing units.

⁴⁹ District Rule 9510, Indirect Source Rule, San Joaquin Valley Air Pollution Control District, Adopted December 15, 2005.

reductions resulting from more efficient vehicles.⁵⁰ For areas designated as severe non-attainment, the CAA requires states to adopt transportation control measures to offset an increase in VMTs and reduce motor vehicle emissions.⁵¹ Thus, jurisdictions designated as severe non-attainment areas that are located within the Ninth Circuit can no longer use aggregate emissions reductions to fully satisfy CAA section 176.⁵² It remains to be seen whether other circuits will apply this reasoning if states in those areas become subject to a more stringent NAAQS and VMT requirements become more widespread.

NAHB is concerned that a more stringent NAAQS, coupled with decisions like *Association of Irrigated Residents*, may force jurisdictions into land use decisions that are incompatible with local jurisdictions and are detrimental to the shelter industry.

REGULATORY FLEXIBILITY AND THE EFFECTS ON SMALL ENTITIES

EPA has certified that “this action will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (RFA).”⁵³ However, NAHB questions why the Agency chose not to request comment on the potential impacts of the proposed rule on small entities as it has in previous proposals.⁵⁴

The Regulatory Flexibility Act (RFA) requires federal agencies to assess the effect of proposed rules on small entities and to take measures to reduce such effects.⁵⁵ The Small Business Regulatory Fairness Enforcement Act (SBREFA)—an amendment to the RFA—requires EPA to impanel a committee of small entity representatives to evaluate the effect of a proposed rule on small entities in their business.⁵⁶ NAHB acknowledges that courts have ruled that NAAQS regulate States, not small entities. Yet certain aspects of RFA and SBREFA still apply.

Both the RFA and its later amendments under SBREFA require federal agencies whose proposed rules will have “a significant economic impact on a substantial number of small entities”⁵⁷ to prepare an Initial Regulatory Flexibility Analysis (IRFA), which analyzes the economic impact upon small businesses from the Agency’s proposed action. During the preparation of an IRFA, agencies must quantify the economic impact upon all small businesses and identify potential alternatives to the proposed rule that would minimize impacts while still achieving the objectives of the proposed rule.⁵⁸ Later amendments to the RFA resulted in the addition of SBREFA provisions that placed additional obligations to convene small business advocacy review panels to ensure small businesses had early and meaningful input during the earliest stages of regulatory development. The preparation of an IRFA can be avoided if the head of the agency proposing such rule certifies that the proposed rule will not significantly affect a substantial number of small entities.⁵⁹

⁵⁰ *Association of Irrigated Residents v. U.S.E.P.A.*, 686 F.3d 668, 678-681 (9th Cir. 2012).

⁵¹ 42 U.S.C. § 7511a(d).

⁵² 42 U.S.C. § 7506.

⁵³ 79 Fed. Reg. 75386 (December 17, 2014)

⁵⁴ 72 Fed. Reg. 37908 (July 11, 2007)

⁵⁵ 5 USC 601 *et seq.*

⁵⁶ 5 USC 609(b)

⁵⁷ 5 USC 601 *et seq.*

⁵⁸ 5 USC 605(b)

⁵⁹ 5 U.S.C. 605(b)

Given that more than 80% of NAHB's members meet the Small Business Administration's (SBA) definition of small entities, NAHB's members are exactly the kind of entities the RFA and SBREFA were enacted to protect. Both NAHB's members and the general public benefit greatly from the economic analysis and the evaluation of alternative regulatory options required under the RFA and SBREFA. Nevertheless, it is clear that small entities will be affected by implementation of the SIPs that states are required to develop to reduce ambient air pollution levels sufficient to achieve the new ozone NAAQS. The prescribed combination of federal mandated air pollution regulations upon both stationary and mobile sources and specific state air pollution control regulations included in a SIP have practical effects on the regulated communities. As discussed earlier, it is illogical to completely divorce these emission mitigation programs from the standard that triggered their mandate.

CONCLUSION

Residential construction is one of the most heavily regulated industries in America. The time and costs of compliance not only impact a businesses' ability to thrive and grow, they can also negatively affect housing affordability and stifle economic development. For example, residential construction is one of the few industries where a government issued permit is typically required for each unit of production. Unfortunately however, the rules do not stop there, as a constricting web of regulatory requirements affects virtually every aspect of residential land development and home building process, adding substantially to the cost of construction for a new home and preventing many families from becoming home owners. Imposed at the federal, state, and local levels, the breadth of these regulations is largely invisible to the home buyer, the public, and even the regulators themselves, yet nevertheless has a profound impact on housing affordability and homeownership. An analysis done by NAHB illustrates the number of households priced out of the market for a median priced new home due to a \$1,000 price increase. Nationally, this price difference means that when a median new home price increases from \$225,000 to \$226,000, 232,447 households can no longer afford that home.⁶⁰ New regulations to implement a revised ozone NAAQS will challenge the ongoing housing recovery.

Given these concerns outlined above NAHB opposes any revision to the ozone NAAQS and urges EPA to retain the current standard when issuing a final rule.

Thank you for your consideration of our comments. Please do not hesitate to contact me at (202) 266-8327 if you have any questions or if you would like to discuss NAHB's comments further.

Sincerely,



Tamra Spielvogel
Environmental Policy Program Manager
National Association of Home Builders

⁶⁰ Siniavskaia, N. S. (2014, August 1). State and Metro Area House Prices: the "Priced Out" Effect. *Special Studies*. NAHB HousingEconomics.com.

Attachment 1

Table 1: Potential Annual Economic Impact on Single Family Homebuilders (only) for Metropolitan Statistical Areas (MSA) EPA predicts as “New” Ozone Non-Attainment Areas (NAAQS set at 70 ppb to 65 ppb):

EPA’s Estimates for “new” Ozone non-attainment areas^{1,2}	Total Single Family Permits 2013³	Median Single Family Home Sale Price 2013⁴	Annual Size of the Single Family Home Residential Market (in millions of dollars)
Albany-Schenectady-Troy, NY	1,221	\$ 202,600	\$ 247
Albuquerque, NM	1,456	\$ 174,300	\$ 254
Altoona, PA	93	No Data	N/A
Amarillo, TX	624	\$ 138,400	\$ 86
Ann Arbor, MI	394	No Data	N/A
Appleton, WI	516	\$ 142,000	\$ 73
Asheville, NC	1,332	No Data	N/A
Athens-Clarke County, GA	698	No Data	N/A
Augusta-Richmond County, GA-SC	2,386	No Data	N/A
Austin-Round Rock, TX	8,941	\$ 222,900	\$ 1,993
Barnstable Town, MA	425	\$ 335,100	\$ 142
Beaumont-Port Arthur, TX	600	\$ 135,500	\$ 81
Birmingham-Hoover, AL	2,016	\$ 165,100	\$ 333
Bloomington, IL	393	\$ 154,000	\$ 61
Boise City, ID	3,522	\$ 163,700	\$ 577
Boston-Cambridge-Newton, MA-NH	4,953	\$ 375,900	\$ 1,862
Bowling Green, KY	378	\$ 134,100	\$ 51
Bridgeport-Stamford-Norwalk, CT	870	\$ 403,000	\$ 351
Buffalo-Cheektowaga-Niagara Falls, NY	1,016	\$ 131,000	\$ 133
Canton-Massillon, OH	495	\$ 104,000	\$ 51
Chambersburg-Waynesboro, PA	No Data	No Data	N/A
Champaign-Urbana, IL	300	\$ 143,100	\$ 43
Charleston, WV	22	\$ 134,000	\$ 3
Chattanooga, TN-GA	1,264	\$ 132,300	\$ 167
Cheyenne, WY	410	No Data	N/A
Chico, CA	307	No Data	N/A

¹ Areas listed are Metropolitan Statistical Areas (MSAs) which include counties likely to be designated as non-attainment based on most recent air quality data.

² U.S. Environmental Protection Agency *Counties Violating the Primary Ground-level Ozone Standard Based on Monitored Air Quality from 2011 - 2013 Includes only Counties with Monitors*
<http://www.epa.gov/air/ozonepollution/pdfs/20141126-20112013datatable.pdf>

³ U.S. Census Bureau *Permits by Metropolitan Area – Annual: Table 3au. New Privately Owned Housing Units Authorized, Unadjusted Units by Metropolitan Area, Annual 2013*
<http://www.census.gov/construction/bps/txt/tb3u2013.txt>

⁴ National Association of REALTORS® *Median Sales Price of Existing Single-Family Homes for Metropolitan Areas* (<http://www.realtor.org/sites/default/files/reports/2015/embargoes/2014-q4-metro-home-prices/metro-home-prices-q4-2014-single-family-2015-02-11.pdf>)

Clarksville, TN-KY	1,256	No Data	N/A
Colorado Springs, CO	2,885	\$ 216,800	\$ 625
Columbia, MO	836	\$ 155,200	\$ 130
Columbia, SC	3,183	\$ 146,800	\$ 467
Corpus Christi, TX	1,592	\$ 152,600	\$ 243
Dalton, GA	69	No Data	N/A
Daphne-Fairhope-Foley, AL	No Data	No Data	N/A
Davenport-Moline-Rock Island, IA-IL	510	\$ 114,600	\$ 58
Dayton, OH	815	\$ 106,500	\$ 87
Decatur, AL	140	\$ 115,100	\$ 16
Decatur, IL	67	\$ 84,800	\$ 6
Detroit-Warren-Dearborn, MI	5,442	No Data	N/A
Dover, DE	823	\$ 178,400	\$ 147
Durham-Chapel Hill, NC	1,969	\$ 192,700	\$ 379
El Paso, TX	2,613	\$ 141,200	\$ 369
Elizabethtown-Fort Knox, KY	311	No Data	N/A
Elkhart-Goshen, IN	283	No Data	N/A
Erie, PA	258	\$ 113,300	\$ 29
Evansville, IN-KY	648	No Data	N/A
Farmington, NM	155	\$ 173,800	\$ 27
Fayetteville, NC	1,269	\$ 146,500	\$ 186
Fayetteville-Springdale-Rogers, AR-MO	2,252	No Data	N/A
Flagstaff, AZ	294	No Data	N/A
Flint, MI	227	No Data	N/A
Florence, SC	362	\$ 123,800	\$ 45
Fond du Lac, WI	114	\$ 118,300	\$ 13
Fort Smith, AR-OK	384	No Data	N/A
Fort Wayne, IN	960	\$ 106,600	\$ 102
Gettysburg, PA	No Data	No Data	N/A
Grand Junction, CO	440	No Data	N/A
Grand Rapids-Wyoming, MI	1,319	\$ 128,400	\$ 169
Green Bay, WI	719	\$ 134,700	\$ 97
Greensboro-High Point, NC	1,416	\$ 131,000	\$ 185
Greenville, NC	412	\$ 159,200	\$ 66
Greenville-Anderson-Mauldin, SC	2,724	\$ 159,200	\$ 434
Gulfport-Biloxi-Pascagoula, MS	1,037	\$ 107,800	\$ 112
Hagerstown-Martinsburg, MD-WV	848	\$ 147,800	\$ 125
Harrisburg-Carlisle, PA	1,331	No Data	N/A
Houma-Thibodaux, LA	562	No Data	N/A
Huntington-Ashland, WV-KY-OH	164	No Data	N/A
Huntsville, AL	1,944	\$ 171,600	\$ 334
Indianapolis-Carmel-Anderson, IN	5,014	\$ 136,700	\$ 685
Ithaca, NY	115	No Data	N/A
Jackson, MS	1,590	\$ 148,200	\$ 236
Janesville-Beloit, WI	114	No Data	N/A
Jefferson City, MO	240	No Data	N/A
Johnstown, PA	70	No Data	N/A
Joplin, MO	363	No Data	N/A
Kalamazoo-Portage, MI	511	No Data	N/A
Kansas City, MO-KS	4,229	\$ 154,800	\$ 655

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Killeen-Temple, TX	2,114	No Data	N/A
Kingsport-Bristol-Bristol, TN-VA	415	No Data	N/A
Lafayette, LA	1,399	No Data	N/A
Lafayette-West Lafayette, IN	471	No Data	N/A
Lake Charles, LA	730	No Data	N/A
Lakeland-Winter Haven, FL	1,994	\$ 117,300	\$ 234
Lansing-East Lansing, MI	508	\$ 102,200	\$ 52
Las Cruces, NM	677	No Data	N/A
Las Vegas-Henderson-Paradise, NV	7,067	\$ 173,800	\$ 1,228
Lawton, OK	159	No Data	N/A
Lebanon, PA	359	No Data	N/A
Lexington-Fayette, KY	1,335	\$ 143,800	\$ 192
Lima, OH	59	No Data	N/A
Little Rock-North Little Rock-Conway, AR	1,681	\$ 137,000	\$ 230
Logan, UT-ID	379	No Data	N/A
Longview, TX	258	No Data	N/A
Louisville/Jefferson County, KY-IN	2,551	\$ 139,500	\$ 356
Macon, GA	173	No Data	N/A
Madison, WI	1,212	\$ 221,500	\$ 268
Manchester-Nashua, NH	468	\$ 229,200	\$ 107
Manhattan, KS	496	No Data	N/A
Michigan City-La Porte, IN	97	No Data	N/A
Milwaukee-Waukesha-West Allis, WI	1,275	\$ 200,700	\$ 256
Minneapolis-St. Paul-Bloomington, MN-WI	7,174	\$ 196,200	\$ 1,408
Mobile, AL	251	\$ 108,400	\$ 27
Morgantown, WV	27	No Data	N/A
Morristown, TN	164	No Data	N/A
Muncie, IN	58	No Data	N/A
Muskegon, MI	168	No Data	N/A
Nashville-Davidson--Murfreeseboro--Franklin, TN	7,020	\$ 176,400	\$ 1,238
New Orleans-Metairie, LA	2,441	\$ 164,700	\$ 402
Niles-Benton Harbor, MI	146	No Data	N/A
North Port-Sarasota-Bradenton, FL	3,779	No Data	N/A
Ogden-Clearfield, UT	2,150	No Data	N/A
Oklahoma City, OK	6,359	\$ 153,100	\$ 974
Omaha-Council Bluffs, NE-IA	3039	\$ 145,700	\$ 443
Orlando-Kissimmee-Sanford, FL	9,222	\$ 160,400	\$ 1,479
Owensboro, KY	243	No Data	N/A
Panama City, FL	488	\$ 153,300	\$ 75
Parkersburg-Vienna, WV	88	No Data	N/A
Pensacola-Ferry Pass-Brent, FL	1,865	\$ 152,400	\$ 284
Peoria, IL	538	\$ 114,400	\$ 62
Pittsfield, MA	99	\$ 183,400	\$ 18
Portland-South Portland, ME	1,485	\$ 228,900	\$ 340
Prescott, AZ	841	\$ 265,500	\$ 223
Providence-Warwick, RI-MA	1,465	\$ 230,800	\$ 338
Provo-Orem, UT	2,675	No Data	N/A
Racine, WI	182	No Data	N/A
Raleigh, NC	8,034	\$ 196,900	\$ 1,582

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Redding, CA	204	No Data	N/A
Reno, NV	1,243	\$ 218,400	\$ 271
Richmond, VA	3,555	\$ 207,500	\$ 738
Rochester, NY	1,043	\$ 126,300	\$ 132
Rockford, IL	96	\$ 86,600	\$ 8
Rocky Mount, NC	188	No Data	N/A
Salt Lake City, UT	3,447	\$ 230,600	\$ 795
San Antonio-New Braunfels, TX	5,827	\$ 171,000	\$ 996
Santa Fe, NM	159	No Data	N/A
Scranton--Wilkes-Barre--Hazleton, PA	429	No Data	N/A
Shreveport-Bossier City, LA	1,166	\$ 162,400	\$ 189
Sierra Vista-Douglas, AZ	No Data	No Data	N/A
Sioux Falls, SD	1,330	\$ 155,500	\$ 207
South Bend-Mishawaka, IN-MI	268	\$ 95,200	\$ 26
Spartanburg, SC	954	\$ 128,200	\$ 122
Springfield, IL	276	\$ 116,900	\$ 32
Springfield, MA	461	\$ 189,800	\$ 87
Springfield, MO	1,098	\$ 111,700	\$ 123
St. George, UT	1,835	No Data	N/A
St. Joseph, MO-KS	114	No Data	N/A
State College, PA	428	No Data	N/A
Syracuse, NY	710	\$ 125,500	\$ 89
Tampa-St. Petersburg-Clearwater, FL	7,314	\$ 142,800	\$ 1,044
Terre Haute, IN	105	No Data	N/A
Toledo, OH	732	\$ 81,700	\$ 60
Topeka, KS	272	\$ 109,000	\$ 30
Tucson, AZ	2,623	\$ 169,600	\$ 445
Tulsa, OK	3,008	\$ 143,100	\$ 430
Tyler, TX	373	No Data	N/A
Victoria, TX	222	No Data	N/A
Virginia Beach-Norfolk-Newport News, VA-NC	4,104	No Data	N/A
Waco, TX	611	No Data	N/A
Watertown-Fort Drum, NY	No Data	No Data	N/A
Weirton-Stuebenville, WV-OH	No Data	No Data	N/A
Wheeling, WV-OH	33	No Data	N/A
Wichita, KS	1,163	\$ 122,200	\$ 142
Williamsport, PA	123	No Data	N/A
Winston-Salem, NC	1,001	\$ 128,700	\$ 129
York-Hanover, PA	744	\$ 150,500	\$ 112
Youngstown-Warren-Boardman, OH-PA	344	\$ 75,400	\$ 26
Yuma, AZ	670	No Data	N/A
Totals in 2013:	223,662		\$30.6 billion

**Table 2: Potential Annual Economic Impact on Single Family Homebuilders (only)
 for Top 20 Housing Markets under Revised Ozone NAAQS
 (NAAQS set at 70 ppb, 65 ppb, or 60 ppb)**

Top 20 Metropolitan CBSA's: 2013⁵	Total Single Family Permits 2013⁶	Median Single Family Home Sale Price 2013⁷	Annual Size of the Single Family Home Residential Market (in billions of dollars)
Houston-The Woodlands-Sugar Land, TX	34,542	\$181,300	\$6.3
New York-Newark-Jersey City, NY-NJ-PA	10,139	\$391,800	\$4.0
Dallas-Fort Worth-Arlington, TX	21,224	\$175,600	\$3.7
Los Angeles-Long Beach-Anaheim, CA	7,509	\$405,600	\$3.0
Atlanta-Sandy Springs-Roswell, GA	14,824	\$139,500	\$2.1
Washington-Arlington-Alexandria, DC-VA-MD-WV	13,274	\$381,900	\$5.1
Austin-Round Rock, TX	8,941	\$222,900	\$2.0
Miami-Fort Lauderdale-West Palm Beach, FL	6,369	\$246,000	\$1.6
Seattle-Tacoma-Bellevue, WA	8,773	\$336,300	\$3.0
Phoenix-Mesa-Scottsdale, AZ	12,959	\$183,600	\$2.4
Orlando-Kissimmee-Sanford, FL	9,222	\$160,400	\$1.5
Denver-Aurora-Lakewood, CO	6,965	\$280,600	\$2.0
Charlotte-Concord-Gastonia, NC-SC	8,792	\$174,200	\$1.5
Tampa-St. Petersburg-Clearwater, FL	7,314	\$142,800	\$1.0
Minneapolis-St. Paul-Bloomington, MN-WI	7,174	\$196,200	\$1.4
Boston-Cambridge-Newton, MA-NH	4,953	\$375,900	\$1.9
Portland-Vancouver-Hillsboro, OR-WA	5,717	\$265,500	\$1.5
Chicago-Naperville-Elgin, IL-IN-WI	7,261	\$191,300	\$1.4
Raleigh, NC	8,034	\$196,900	\$1.6
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	6,252	\$220,300	\$1.4
Totals in 2013:	210,238		\$48.2 billion

⁵ Top 20 Markets based on U.S. Census *Annual Top 20 CBSA Chart* (<http://www.census.gov/construction/bps/pdf/2013cbsachart.pdf>) (2013)

⁶ U.S. Census Bureau *Permits by Metropolitan Area – Annual: Table 3au. New Privately Owned Housing Units Authorized, Unadjusted Units by Metropolitan Area, Annual 2013* (<http://www.census.gov/construction/bps/txt/tb3u2013.txt>)

⁷ National Association of REALTORS® *Median Sales Price of Existing Single-Family Homes for Metropolitan Areas* (<http://www.realtor.org/sites/default/files/reports/2015/embargoes/2014-q4-metro-home-prices/metro-home-prices-q4-2014-single-family-2015-02-11.pdf>)