

CHAPTER 12

Environmental Health (EH)

Lead Agencies

Centers for Disease Control and Prevention
National Institutes of Health

Contents

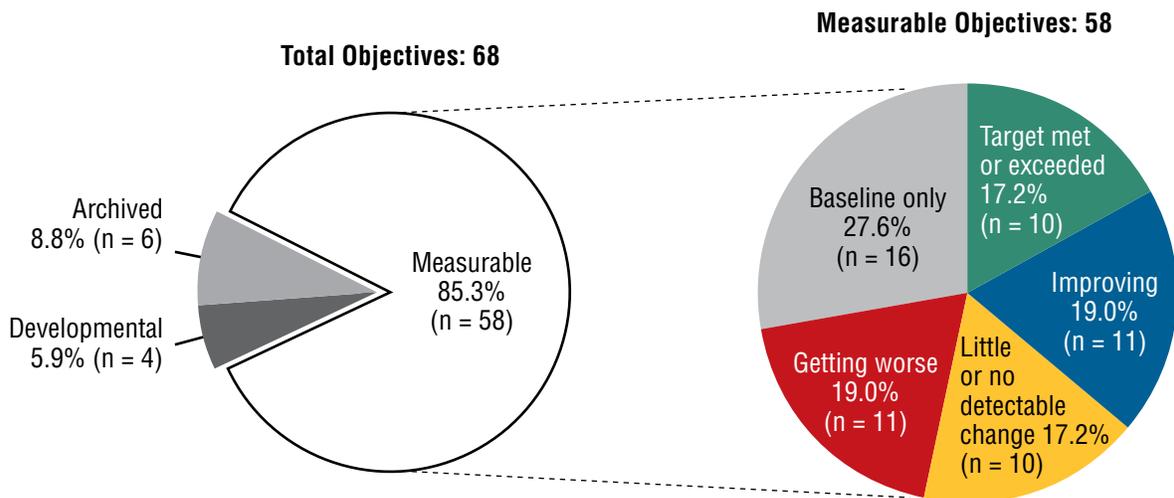
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Goal: Promote health for all through a healthy environment.

This chapter includes objectives that monitor outdoor air quality, water quality, toxics and waste, healthy homes and healthy communities, infrastructure and surveillance, and global environmental health. The *Reader's Guide* provides a step-by-step explanation of the content of this chapter, including criteria for highlighting objectives in the Selected Findings.¹

Status of Objectives

Figure 12-1. Midcourse Status of the Environmental Health Objectives



Of the 68 objectives in the Environmental Health Topic Area, 6 were archived,² 4 were developmental,³ and 58 were measurable⁴ (Figure 12-1, Table 12-1). The midcourse status of the measurable objectives was as follows (Table 12-2):

- 10 objectives had met or exceeded their 2020 targets,⁵
- 11 objectives were improving,⁶
- 10 objectives demonstrated little or no detectable change,⁷
- 11 objectives were getting worse,⁸ and
- 16 objectives had baseline data only.⁹

Selected Findings

Outdoor Air Quality

Two of the eight measurable objectives monitoring outdoor air quality had met or exceeded their 2020 targets, one had improved, and two demonstrated no change. Three objectives had baseline data only, so progress toward their 2020 targets could not be assessed (Table 12-2).

- The number of **days the Air Quality Index (AQI) exceeded 100** (weighted by population and AQI) (EH-1) decreased from 2,200,000,000 in 2006–2008 to 982,186,972 in 2012–2014, exceeding the 2020 target (Table 12-2).
- The proportion of **trips to work made by bicycling** (EH-2.1) increased from 0.5% in 2008 to 0.6% in 2012, meeting the 2020 target (Table 12-2).
- The proportion of **persons who telecommuted** (EH-2.4) increased from 4.1% in 2008 to 4.4% in 2012, moving toward the 2020 target (Table 12-2).

Water Quality

Three of the four measurable objectives monitoring water quality had exceeded their 2020 targets and one had worsened (Table 12-2).

- The proportion of **persons served by community water systems who had received a supply of drinking water that met the regulations of the Safe Drinking Water Act (EH-4)** increased from 92.0% in 2008 to 93.2% in 2011, continuing to exceed the 2020 target (Table 12-2).

- The number of **waterborne disease outbreaks among persons served by community water systems that arose from water intended for drinking** (EH-5) increased from 7 in 1999–2008 to 12 in 2009–2010, moving away from the baseline and 2020 target (Table 12–2).
- The number of **per capita daily gallons of domestic water used (water conservation)** (EH-6) decreased from 99.0 gallons per day in 2005 to 89.0 gallons per day in 2010, exceeding the 2020 target (Table 12–2).
- The proportion of **days during beach season that beaches were open and safe for swimming** (EH-7) increased from 95.0% in 2008 to 96.3% in 2013, exceeding the 2020 target (Table 12–2).

Toxics and Waste

Two of the six measurable objectives monitoring toxics and waste had exceeded their 2020 targets, three had improved, and one demonstrated little or no detectable change (Table 12–2).

- The **concentration level of lead in blood samples at which 97.5% of children aged 1–5 years were below the measured level** (EH-8.1) decreased from 5.8 µg/dL in 2005–2008 to 4.3 µg/dL in 2009–2012, exceeding the 2020 target (Table 12–2).
 - » In 2009–2012, the disparities by sex, race and ethnicity, and family income in the concentration of blood lead level among children aged 1–5 years (EH-8.1) were not statistically significant (Table 12–3).
- The **geometric mean of blood lead levels in children aged 1–5 years** (EH-8.2) decreased from 1.8 in 2003–2004 to 1.0 in 2011–2012, exceeding the 2020 target (Table 12–2).
 - » In 2011–2012, there were statistically significant disparities by race and ethnicity and family income in the geometric mean of blood lead levels in children aged 1–5 years (Table 12–3, EH-8.2). The disparity by sex was not statistically significant.
- The number of **hazardous sites on the National Priorities List (Superfund sites)** (EH-9) decreased from 1,279 in 2010 to 1,240 in 2014, moving toward the 2020 target (Table 12–2).
- The number of **visits to a health care facility for pesticide exposure** (EH-10) decreased from 14,963 in 2008 to 13,869 in 2013, moving toward the 2020 target (Table 12–2).
- The proportion of **municipal solid waste that was recycled** (EH-12) increased from 33.2% in 2008 to 34.3% in 2013, moving toward the 2020 target (Table 12–2).

Healthy Homes and Healthy Communities

One of the 18 measurable objectives monitoring healthy homes and healthy communities had exceeded its 2020 target, 2 had improved, 5 demonstrated little or no detectable change, and 4 had worsened. Six objectives had baseline data only, so progress toward their 2020 targets could not be assessed (Table 12–2).

- Between 2007 and 2012, the proportion of **homes in areas at risk for radon exposure that had radon mitigation systems** (EH-14) increased from 10.2% to 16.0%; and the proportion of **new single family homes in high radon zones that were constructed with radon-reducing features** (EH-15) increased from 28.6% to 36.0%, moving toward their respective 2020 targets (Table 12–2).
- The proportion of **elementary, middle, and high schools that had a mold management plan** (EH-16.2) increased from 67.0% in 2006 to 78.2% in 2014, exceeding the 2020 target (Table 12–2).
- The proportion of **elementary, middle, and high schools that informed students and staff prior to the application of pesticides** (EH-16.6) decreased from 65.4% in 2006 to 35.6% in 2014, moving away from the baseline and 2020 target (Table 12–2).
- Between 2006 and 2014, the proportion of **elementary, middle, and high schools that inspected drinking water outlets** decreased from 55.7% to 45.8% **for lead** (EH-16.7), from 58.8% to 51.4% **for bacteria** (EH-16.8), and from 55.2% to 48.5% **for coliforms** (EH-16.9), moving away from their respective baselines and 2020 targets (Table 12–2).

Infrastructure and Surveillance

Of the 21 measurable objectives monitoring infrastructure and surveillance, 1 had exceeded its 2020 target, 5 had improved, 2 demonstrated little or no detectable change, and 6 had worsened. Seven objectives had baseline data only, so progress toward their 2020 targets could not be assessed (Table 12–2).

- The **creatinine-corrected urine concentration of total arsenic among persons aged 6 years and over** (EH-20.1) increased from 50.4 µg/g in 2003–2004 to 80.8 µg/g in 2009–2010, moving away from the baseline and 2020 target (Table 12–2).
 - » In 2009–2010, the disparities by sex and race and ethnicity in exposure to arsenic among persons aged 6 years and over (EH-20.1) were not tested for statistical significance (Table 12–3).

- From 2003–2004 to 2009–2010, exposure to selected chemicals, as measured by concentration levels in blood samples, improved: **cadmium levels in persons aged 1 year and over** (EH-20.2) decreased from 1.60 to 1.40 µg/L; **lead levels in persons aged 1 year and over** (EH-20.3) decreased from 4.20 to 3.34 µg/dL; and **mercury levels in children aged 1–5 years** (EH-20.4) declined from 1.80 to 1.30 µg/L, moving toward their respective 2020 targets (Table 12–2).
 - » In 2009–2010, the disparities by sex and race and ethnicity in exposure to cadmium (EH-20.2) and lead (EH-20.3) in persons aged 1 year and over were not tested for statistical significance (Table 12–3).
 - Data beyond the baseline were not available for **mercury exposure among females aged 16–49**, as measured by blood concentration levels (4.60 µg/L in 2001–2002) (EH-20.5), so progress toward the 2020 target could not be assessed (Table 12–2).
 - » In 2001–2002, the disparity by race and ethnicity in mercury exposure among females aged 16–49 (EH-20.5) was not tested for statistical significance (Table 12–3).
 - Data beyond the baseline were not available for exposure levels to selected chemicals, as measured by creatinine-corrected concentration levels in urine samples from persons aged 6 years and over, so progress toward the 2020 targets could not be assessed. In 2001–2002, the concentration level of **para-nitrophenol (methyl parathion and parathions)** (EH-20.9) was 2.89 µg/g; the concentration level of **3,4,6-trichloro-2-pyridinol (chlorpyrifos)** (EH-20.10) was 9.22 µg/g; and the concentration level of **3-phenoxybenzoic acid** (EH-20.11) was 3.10 µg/g (Table 12–2).
 - » In 2001–2002, the disparities by sex and race and ethnicity in exposure to para-nitrophenol (methyl parathion and parathions) (EH-20.9), 3,4,6-trichloro-2-pyridinol (chlorpyrifos) (EH-20.10), and 3-phenoxybenzoic acid (EH-20.11) among persons aged 6 years and over were not tested for statistical significance (Table 12–3).
 - The **creatinine-corrected urine concentration level of Bisphenol A among persons aged 6 years and over** (EH-20.15) decreased from 11.20 µg/g in 2003–2004 to 8.03 µg/g in 2009–2010, moving toward the 2020 target (Table 12–2).
 - » In 2009–2010, the disparities by sex and race and ethnicity in exposure to Bisphenol A among persons aged 6 years and over (EH-20.15) were not tested for statistical significance (Table 12–3).
 - The **creatinine-corrected urine concentration level of perchlorate among person aged 6 years and over** (EH-20.16) increased from 12.4 µg/g in 2003–2004 to 15.7 µg/g in 2007–2008, moving away from the baseline and 2020 target (Table 12–2).
 - » In 2007–2008, the disparities by sex and race and ethnicity in exposure to perchlorate among persons aged 6 years and over (EH-20.16) were not tested for statistical significance (Table 12–3).
 - The **creatinine-corrected urine concentration level of mono-n-butyl phthalate among persons aged 6 years and over** (EH-20.17) decreased from 91.60 µg/g in 2003–2004 to 57.40 µg/g in 2009–2010, exceeding the 2020 target (Table 12–2).
 - » In 2009–2010, the disparities by sex and race and ethnicity in exposure to mono-n-butyl phthalate among persons aged 6 years and over (EH-20.17) were not tested for statistical significance (Table 12–3).
 - Data beyond the baseline were not available for the **serum concentration level of BDE 47 (2,2',4,4'-tetrabromodiphenyl ether) among persons aged 12 and over** (EH-20.18) (163.0 ng/g of lipid in 2003–2004), so progress toward the 2020 target could not be assessed (Table 12–2).
 - » In 2003–2004, the disparities by sex and race and ethnicity in exposure to BDE 47 (2,2',4,4'-tetrabromodiphenyl ether) among persons aged 12 and over (EH-20.18) were not tested for statistical significance (Table 12–3).
 - The number of **states, territories, tribes, and the District of Columbia that monitored diseases or conditions caused by lead poisoning** (EH-22.1) increased from 37 in 2009 to 51 in 2011, moving toward the 2020 target (Table 12–2).
 - Between 2009 and 2011, the number of **states, territories, tribes, and the District of Columbia that monitored diseases or conditions caused by pesticide exposure** (EH-22.2) decreased from 27 to 24; **for cadmium poisoning** (EH-22.5), the number decreased from 19 to 15; **for acute chemical poisoning** (EH-22.6), the number decreased from 9 to 8; and **for carbon monoxide poisoning** (EH-22.7), the number decreased from 16 to 14, moving away from their respective baselines and 2020 targets (Table 12–2).
- ## Global Environmental Health
- The **global burden of disease due to poor water quality, sanitation, and insufficient hygiene** (EH-24) decreased from 2,200,000 deaths in 2004 to 842,000 deaths in 2012, exceeding the 2020 target (Table 12–2).

More Information

Readers interested in more detailed information about the objectives in this topic area are invited to visit the [HealthyPeople.gov](https://www.healthypeople.gov) website, where extensive substantive and technical information is available:

- For the background and importance of the topic area, see: <https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health>
- For data details for each objective, including definitions, numerators, denominators, calculations, and data limitations, see: <https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health/objectives>
Select an objective, then click on the “Data Details” icon.
- For objective data by population group (e.g., sex, race and ethnicity, or family income), including rates, percentages, or counts for multiple years, see: <https://www.healthypeople.gov/2020/topics-objectives/topic/environmental-health/objectives>
Select an objective, then click on the “Data2020” icon.

Data for the measurable objectives in this chapter were from the following data sources:

- Air Quality System: <https://www.epa.gov/aqs>
- American Community Survey: <http://www.census.gov/acs/www>
- American Healthy Homes Survey: <https://www.epa.gov/ace/american-healthy-homes-survey-ahhs>
- American Housing Survey: <http://www.census.gov/programs-surveys/ahs/>
- Beaches—Environmental Assessment and Coastal Health Program: <https://www.epa.gov/beach-tech/about-beach-act>
- Characterization of Municipal Solid Waste: <https://www.healthypeople.gov/2020/data-source/characterization-of-municipal-solid-waste>
- Common Core of Data: <http://nces.ed.gov/ccd>
- Comprehensive Environmental Response, Compensation, and Liability Information System: <https://www.epa.gov/enviro/cerclis-overview>
- Estimated Use of Water in the United States: <http://water.usgs.gov/watuse/data/>
- Global Burden of Diseases, Injuries, and Risk Factors Study: <http://www.healthdata.org/GBD>

- Homes with Radon Mitigation Systems: <https://www.healthypeople.gov/2020/data-source/homes-with-radon-mitigation-systems>
- National Builder Practices Survey: <http://www.nahb.org/en/research.aspx>
- National Emissions Inventory: <https://developer.epa.gov/category/data/>
- National Environmental Public Health Tracking Network: <http://ephtracking.cdc.gov/showHome.action>
- National Health and Nutrition Examination Survey: <http://www.cdc.gov/nchs/nhanes/>
- National Poison Data System: <http://www.aapcc.org/data-system/>
- National Report on Human Exposure to Environmental Chemicals: <http://www.cdc.gov/exposurereport>
- Safe Drinking Water Information Systems: <https://www3.epa.gov/enviro/facts/sdwis/search.html>
- School Health Policies and Practices Study: <http://www.cdc.gov/healthyyouth/data/shpps/index.htm>
- State Reportable Conditions Data Inventory: <http://www.cste.org/?StateReportable>
- Toxics Release Inventory: <http://www.epa.gov/tri>
- Waterborne Disease & Outbreak Surveillance System: <http://www.cdc.gov/healthywater/surveillance/index.html>

Footnotes

¹The **Technical Notes** provide more information on Healthy People 2020 statistical methods and issues.

²**Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

³**Developmental** objectives did not have a national baseline value.

⁴**Measurable** objectives had a national baseline value.

⁵**Target met or exceeded**—One of the following, as specified in the Midcourse Progress Table:

- » At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)
- » The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)

⁶**Improving**—One of the following, as specified in the Midcourse Progress Table:

- » Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.
- » Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.

⁷**Little or no detectable change**—One of the following, as specified in the Midcourse Progress Table:

- » Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.
- » Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.
- » Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.
- » Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.
- » There was no change between the baseline and the midcourse data point.

⁸**Getting worse**—One of the following, as specified in the Midcourse Progress Table:

- » Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.
- » Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.

⁹**Baseline only**—The objective only had one data point, so progress toward target attainment could not be assessed.

Suggested Citation

National Center for Health Statistics. Chapter 12: Environmental Health. Healthy People 2020 Midcourse Review. Hyattsville, MD. 2016.

Table 12–1. Environmental Health Objectives

LEGEND



Data for this objective are available in this chapter's Midcourse Progress Table.



Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.



A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Outdoor Air Quality			
EH-1	Reduce the number of days the Air Quality Index (AQI) exceeds 100, weighted by population and AQI	Air Quality System (AQS), EPA	
EH-2.1	Increase trips to work made by bicycling	American Community Survey (ACS), Census	
EH-2.2	Increase trips to work made by walking	American Community Survey (ACS), Census	
EH-2.3	Increase trips to work made by mass transit	American Community Survey (ACS), Census	
EH-2.4	Increase the proportion of persons who telecommute	American Community Survey (ACS), Census	
EH-3.1	Reduce the risk of adverse health effects caused by mobile sources of airborne toxics	National Emissions Inventory (NEI), EPA	
EH-3.2	Reduce the risk of adverse health effects caused by area sources of airborne toxics	National Emissions Inventory (NEI), EPA	
EH-3.3	Reduce the risk of adverse health effects caused by major sources of airborne toxics	National Emissions Inventory (NEI), EPA	
Water Quality			
EH-4	Increase the proportion of persons served by community water systems who receive a supply of drinking water that meets the regulations of the Safe Drinking Water Act	Safe Drinking Water Information System (SDWIS), EPA/OW	
EH-5	Reduce waterborne disease outbreaks arising from water intended for drinking among persons served by community water systems	Waterborne Disease and Outbreak Surveillance System (WBDOSS), MMWR and CDC/NCID and State Health Departments	
EH-6	Reduce per capita domestic water withdrawals with respect to use and conservation	Estimated Use of Water in the United States, DOI/USGS/NWIS	
EH-7	Increase the proportion of days that beaches are open and safe for swimming	Beaches Environmental Assessment and Coastal Health Program, EPA/OW	

Table 12-1. Environmental Health Objectives—Continued

LEGEND



Data for this objective are available in this chapter's Midcourse Progress Table.



Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.



A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Toxics and Waste			
EH-8.1	Reduce blood lead level in children aged 1–5 years	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS	
EH-8.2	Reduce the mean blood lead levels in children	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS	
EH-9	Minimize the risks to human health and the environment posed by hazardous sites	Comprehensive Environmental Response and Cleanup Information System (CERCLIS), EPA/OSWER	
EH-10	Reduce pesticide exposures that result in visits to a health care facility	National Poison Data System (NPDS)	
EH-11	Reduce the amount of toxic pollutants released into the environment	Toxics Release Inventory (TRI), EPA	
EH-12	Increase recycling of municipal solid waste	Characterization of Municipal Solid Waste, EPA/OSWER	
Healthy Homes and Healthy Communities			
EH-13.1	Reduce indoor allergen levels—cockroach	American Healthy Homes Survey (AHHS), HUD	
EH-13.2	Reduce indoor allergen levels—mouse	American Healthy Homes Survey (AHHS), HUD	
EH-14	Increase the proportion of homes with an operating radon mitigation system for persons living in homes at risk for radon exposure	Homes with Radon Mitigation Systems, Radon Vent Fan Manufacturers	
EH-15	Increase the proportion of new single-family homes (SFH) constructed with radon-reducing features, especially in high-radon-potential areas	National Builder Practices Survey, National Association of Home Builders Research Center (NAHB Research Center)	
EH-16.1	Increase the proportion of the nation's elementary, middle, and high schools that have an indoor air quality management program to promote a healthy and safe physical school environment	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	

Table 12–1. Environmental Health Objectives—Continued

LEGEND

-  Data for this objective are available in this chapter’s Midcourse Progress Table.
-  Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.
-  A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Healthy Homes and Healthy Communities—Continued			
EH-16.2	Increase the proportion of the nation’s elementary, middle, and high schools that have a plan for how to address mold problems and promote a healthy and safe physical school environment	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.3	Increase the proportion of the nation’s elementary, middle, and high schools that have a plan for how to use, label, store, and dispose of hazardous materials to promote a healthy and safe physical school environment	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.4	Increase the proportion of the nation’s elementary, middle, and high schools that promote a healthy and safe physical school environment by using spot treatments and baiting rather than widespread application of pesticide	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.5	Increase the proportion of the nation’s elementary, middle, and high schools that promote a healthy and safe physical school environment by reducing exposure to pesticides by marking areas to be treated with pesticides	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.6	Increase the proportion of the nation’s elementary, middle, and high schools that promote a healthy and safe physical school environment by reducing exposure to pesticides by informing students and staff prior to application of the pesticide	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.7	Increase the proportion of the nation’s elementary, middle, and high schools that promote a healthy and safe physical school environment by inspecting drinking water outlets for lead	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-16.8	Increase the proportion of the nation’s elementary, middle, and high schools with community water systems that promote a healthy and safe physical school environment by inspecting drinking water outlets for bacteria	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	

Table 12-1. Environmental Health Objectives—Continued

LEGEND

	Data for this objective are available in this chapter's Midcourse Progress Table.		Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.		A state or county level map for this objective is available at the end of the chapter.
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Not Applicable	Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.
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Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Healthy Homes and Healthy Communities—Continued			
EH-16.9	Increase the proportion of the nation's elementary, middle, and high schools with community water systems that promote a healthy and safe physical school environment by inspecting drinking water outlets for coliforms	School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP	
EH-17.1	(Developmental) Increase the proportion of pre-1978 housing that has been tested for the presence of lead-based paint	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable
EH-17.2	(Developmental) Increase the proportion of pre-1978 housing that has been tested for the presence of paint-lead hazards	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable
EH-17.3	(Developmental) Increase the proportion of pre-1978 housing that has been tested for the presence of lead in dust	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable
EH-17.4	(Developmental) Increase the proportion of pre-1978 housing that has been tested for the presence of lead in soil	(Potential) National Health Interview Survey (NHIS), CDC/NCHS	Not Applicable
EH-18.1	Reduce the number of U.S. homes that are found to have lead-based paint	American Healthy Homes Survey (AHHS), HUD	
EH-18.2	Reduce the number of U.S. homes that have paint-lead hazards	American Healthy Homes Survey (AHHS), HUD	
EH-18.3	Reduce the number of U.S. homes that have dust-lead hazards	American Healthy Homes Survey (AHHS), HUD	
EH-18.4	Reduce the number of U.S. homes that have soil-lead hazards	American Healthy Homes Survey (AHHS), HUD	
EH-19	Reduce the proportion of occupied housing units that have moderate or severe physical problems	American Housing Survey (AHS), HUD and Census	

Table 12–1. Environmental Health Objectives—Continued

LEGEND



Data for this objective are available in this chapter's Midcourse Progress Table.



Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.



A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Infrastructure and Surveillance			
EH-20.1	Reduce exposure to arsenic in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-20.2	Reduce exposure to cadmium in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-20.3	Reduce exposure to lead in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-20.4	Reduce exposure to mercury among children aged 1–5 years, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-20.5	Reduce exposure to mercury among females aged 16–49, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-20.6	(Archived) Reduce exposure to chlordane (oxychlordane) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.7	(Archived) Reduce exposure to DDT (DDE) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.8	(Archived) Reduce exposure to beta-hexachlorocyclohexane (beta-HCH) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.9	Reduce exposure to para-nitrophenol (methyl parathion and parathions) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	

Table 12–1. Environmental Health Objectives—Continued

LEGEND

	Data for this objective are available in this chapter's Midcourse Progress Table.		Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.		A state or county level map for this objective is available at the end of the chapter.
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Not Applicable	Midcourse data availability is not applicable for developmental and archived objectives. Developmental objectives did not have a national baseline value. Archived objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.
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Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Infrastructure and Surveillance—Continued			
EH-20.10	Reduce exposure to 3,4,6-trichloro-2-pyridinol (chlorpyrifos) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	 
EH-20.11	Reduce exposure to 3-phenoxybenzoic acid in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	 
EH-20.12	(Archived) Reduce exposure to PCB 153, representative of nondioxin-like PCBs, in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.13	(Archived) Reduce exposure to PCB 126, representative of dioxin-like PCBs, in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.14	(Archived) Reduce exposure to 1,2,3,6,7,8-hexachlorodibenzo-p-dioxin, representative of the dioxin class, in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	Not Applicable
EH-20.15	Reduce exposure to bisphenol A in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	 
EH-20.16	Reduce exposure to perchlorate in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	 
EH-20.17	Reduce exposure to mono-n-butyl phthalate in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	 

Table 12–1. Environmental Health Objectives—Continued

LEGEND



Data for this objective are available in this chapter's Midcourse Progress Table.



Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.



A state or county level map for this objective is available at the end of the chapter.

Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Infrastructure and Surveillance—Continued			
EH-20.18	Reduce exposure to BDE 47 (2,2',4,4'-tetrabromodiphenyl ether) in the population, as measured by blood and urine concentrations of the substance or its metabolites	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH	
EH-21	Improve quality, utility, awareness, and use of existing information systems for environmental health	National Environmental Public Health Tracking Network, CDC	
EH-22.1	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to lead poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-22.2	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to pesticide poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-22.3	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to mercury poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-22.4	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to arsenic poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-22.5	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to cadmium poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-22.6	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to acute chemical poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	

Table 12–1. Environmental Health Objectives—Continued

LEGEND

	Data for this objective are available in this chapter's Midcourse Progress Table.		Disparities data for this objective are available, and this chapter includes a Midcourse Health Disparities Table.		A state or county level map for this objective is available at the end of the chapter.
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Not Applicable

Midcourse data availability is not applicable for developmental and archived objectives. **Developmental** objectives did not have a national baseline value. **Archived** objectives are no longer being monitored due to lack of data source, changes in science, or replacement with other objectives.

Objective Number	Objective Statement	Data Sources	Midcourse Data Availability
Infrastructure and Surveillance—Continued			
EH-22.7	Increase the number of states, territories, tribes, and the District of Columbia that monitor diseases or conditions that can be caused by exposure to carbon monoxide poisoning	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)	
EH-23	Reduce the number of public schools located within 150 meters of major highways in the United States	Common Core of Data (CCD), ED/NCES	
Global Environmental Health			
EH-24	Reduce the global burden of disease due to poor water quality, sanitation, and insufficient hygiene	Global Burden of Diseases, Injuries, and Risk Factors Study (GBD), Consortium including Harvard University, University of Washington, Johns Hopkins University, University of Queensland, and the World Health Organization	

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives

LEGEND

 Target met or exceeded ^{2,3}	 Improving ^{4,5}	 Little or no detectable change ^{6–10}	 Getting worse ^{11,12}	 Baseline only ¹³	 Informational ¹⁴
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Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Outdoor Air Quality						
 ² EH-1 Air Quality Index over 100 (number of days, weighted by population and Air Quality Index value)	2,200,000,000 (2006–2008)	982,186,972 (2012–2014)	1,980,000,000	553.6%		
 ² EH-2.1 Trips to work by bicycling (percent)	0.5% (2008)	0.6% (2012)	0.6%	100.0%		
 ¹⁰ EH-2.2 Trips to work by walking (percent)	2.8% (2008)	2.8% (2012)	3.1%	0.0%		
 ¹⁰ EH-2.3 Trips to work by mass transit (percent)	5.0% (2008)	5.0% (2012)	5.5%	0.0%		
 ⁵ EH-2.4 Persons who telecommute (percent)	4.1% (2008)	4.4% (2012)	5.3%	25.0%		
 ¹³ EH-3.1 Airborne toxic emissions from mobile sources (number, millions of tons)	1,800,000 (2005)		1,000,000			
 ¹³ EH-3.2 Airborne toxic emissions from area sources (number, millions of tons)	1,300,000 (2005)		1,700,000			
 ¹³ EH-3.3 Airborne toxic emissions from major sources (number, millions of tons)	800,000 (2005)		700,000			
Water Quality						
 ³ EH-4 Persons receiving safe drinking water from community systems (percent)	92.0% (2008)	93.2% (2011)	91.0%			
 ¹² EH-5 Waterborne disease outbreaks in community water systems (number)	7 (1999–2008)	12 (2009–2010)	2		71.4%	
 ² EH-6 Water conservation (gallons of domestic water usage per capita)	99.0 (2005)	89.0 (2010)	89.1	101.0%		
 ² EH-7 Beaches open and safe for swimming (percent of days during beach season)	95.0% (2008)	96.3% (2013)	96.0%	130.0%		

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

LEGEND

 Target met or exceeded ^{2,3}	 Improving ^{4,5}	 Little or no detectable change ^{6–10}	 Getting worse ^{11,12}	 Baseline only ¹³	 Informational ¹⁴
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Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Toxics and Waste						
 ² EH-8.1 Concentration of blood lead among children in the 97.5 percentile (µg/dL, 1–5 years)	5.8 (2005–2008)	4.3 (2009–2012)	5.2	250.0%		No
 ² EH-8.2 Mean blood lead levels in children (geometric mean, 1–5 years)	1.8 (2003–2004)	1.0 (2011–2012)	1.6	400.0%		Yes
 ⁵ EH-9 Hazardous sites on the National Priorities List—Superfund sites (number)	1,279 (2010)	1,240 (2014)	1,151	30.5%		
 ⁵ EH-10 Visits to a health care facility for pesticide exposure (number of visits)	14,963 (2008)	13,869 (2013)	9,819	21.3%		
 ⁹ EH-11 Toxic pollutants released into the environment (tons)	1,940,177 (2008)	2,066,569 (2013)	1,746,159		6.5%	
 ⁵ EH-12 Recycled municipal solid waste (percent)	33.2% (2008)	34.3% (2013)	36.5%	33.3%		
Healthy Homes and Healthy Communities						
 ¹³ EH-13.1 Indoor cockroach allergen levels (per grams of settled dust)	0.51 (2006)		0.46			
 ¹³ EH-13.2 Indoor mouse allergen levels (per grams of settled dust)	0.16 (2006)		0.14			
 ⁵ EH-14 Homes with radon mitigation systems (percent)	10.2% (2007)	16.0% (2012)	30.0%	29.3%		
 ⁵ EH-15 New homes with radon-resistant construction (percent)	28.6% (2007)	36.0% (2012)	100.0%	10.4%		
 ⁸ EH-16.1 Schools with an indoor air quality management program (percent)	51.4% (2006)	46.4% (2014)	56.5%		9.7%	No
 ² EH-16.2 Schools with a mold management plan (percent)	67.0% (2006)	78.2% (2014)	73.7%	167.2%		Yes
 ⁸ EH-16.3 Schools with a hazardous materials plan (percent)	85.9% (2006)	84.5% (2014)	94.5%		1.6%	No

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

LEGEND

 Target met or exceeded ^{2,3}	 Improving ^{4,5}	 Little or no detectable change ⁶⁻¹⁰	 Getting worse ^{11,12}	 Baseline only ¹³	 Informational ¹⁴
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Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Healthy Homes and Healthy Communities—Continued						
 ⁸ EH-16.4 Schools using spot treatments and baiting rather than widespread pesticide application (percent)	57.9% (2006)	54.5% (2014)	63.7%		5.9%	No
 ⁸ EH-16.5 Schools marking areas treated with pesticides (percent)	56.2% (2006)	52.5% (2014)	61.8%		6.6%	No
 ¹¹ EH-16.6 Schools informing students and staff prior to pesticide application (percent)	65.4% (2006)	35.6% (2014)	71.9%		45.6%	Yes
 ¹¹ EH-16.7 Schools inspecting drinking water outlets for lead (percent)	55.7% (2006)	45.8% (2014)	61.3%		17.8%	Yes
 ¹¹ EH-16.8 Schools inspecting drinking water outlets for bacteria (percent)	58.8% (2006)	51.4% (2014)	64.7%		12.6%	Yes
 ¹¹ EH-16.9 Schools inspecting drinking water outlets for coliforms (percent)	55.2% (2006)	48.5% (2014)	60.7%		12.1%	Yes
 ¹³ EH-18.1 U.S. homes with lead-based paint (number)	37,000,000 (2005–2006)		33,300,000			
 ¹³ EH-18.2 U.S. homes with paint-lead hazards (number)	15,300,000 (2005–2006)		13,770,000			
 ¹³ EH-18.3 U.S. homes with dust-lead hazards (number)	13,700,000 (2005–2006)		12,330,000			
 ¹³ EH-18.4 U.S. homes with soil-lead hazards (number)	3,800,000 (2005–2006)		3,420,000			
 ⁹ EH-19 Occupied housing units with moderate or severe physical problems (percent)	5.2% (2007)	5.5% (2011)	4.2%		5.8%	
Infrastructure and Surveillance						
 ¹² EH-20.1 Exposure to arsenic (µg/g of creatinine, 6+ years)	50.4 (2003–2004)	80.8 (2009–2010)	35.3		60.3%	
 ⁵ EH-20.2 Exposure to cadmium (µg/L, 1+ years)	1.60 (2003–2004)	1.40 (2009–2010)	1.12	41.7%		

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

LEGEND

 Target met or exceeded ^{2,3}	 Improving ^{4,5}	 Little or no detectable change ^{6–10}	 Getting worse ^{11,12}	 Baseline only ¹³	 Informational ¹⁴
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Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Infrastructure and Surveillance—Continued						
 ⁵ EH-20.3 Exposure to lead (µg/dL, 1+ years)	4.20 (2003–2004)	3.34 (2009–2010)	2.94	68.3%		
 ⁵ EH-20.4 Exposure to mercury among children (µg/L, 1–5 years)	1.80 (2003–2004)	1.30 (2009–2010)	1.26	92.6%		
 ¹³ EH-20.5 Exposure to mercury among females (µg/L, 16–49 years)	4.60 (2001–2002)		3.22			
 ¹³ EH-20.9 Exposure to para-nitrophenol (methyl parathion and parathions) (µg/g of creatinine, 6+ years)	2.89 (2001–2002)		2.02			
 ¹³ EH-20.10 Exposure to 3,4,6-trichloro-2-pyridinol (chlorpyrifos) (µg/g of creatinine, 6+ years)	9.22 (2001–2002)		6.45			
 ¹³ EH-20.11 Exposure to 3-phenoxybenzoic acid (µg/g of creatinine, 6+ years)	3.10 (2001–2002)		2.32			
 ⁵ EH-20.15 Exposure to Bisphenol A (µg/g of creatinine, 6+ years)	11.20 (2003–2004)	8.03 (2009–2010)	7.84	94.3%		
 ¹² EH-20.16 Exposure to perchlorate (µg/g of creatinine, 6+ years)	12.4 (2003–2004)	15.7 (2007–2008)	8.4		26.6%	
 ² EH-20.17 Exposure to mono-n-butyl phthalate (µg/g of creatinine, 6+ years)	91.60 (2003–2004)	57.40 (2009–2010)	64.12	124.5%		
 ¹³ EH-20.18 Exposure to BDE 47, (2,2',4,4'-tetrabromodiphenyl ether) (ng/g of lipid, 12+ years)	163.0 (2003–2004)		114.1			
 ¹³ EH-21 Use of information systems to monitor environmental health (number of states and D.C.)	16 (2010)		51			
 ⁵ EH-22.1 Monitoring diseases or conditions caused by lead poisoning (number of states, territories, and D.C.)	37 (2009)	51 (2011)	56	73.7%		
 ¹² EH-22.2 Monitoring diseases or conditions caused by pesticide exposure (number of states, territories, and D.C.)	27 (2009)	24 (2011)	56		11.1%	

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

LEGEND

 Target met or exceeded ^{2,3}	 Improving ^{4,5}	 Little or no detectable change ^{6–10}	 Getting worse ^{11,12}	 Baseline only ¹³	 Informational ¹⁴
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Objective Description	Baseline Value (Year)	Midcourse Value (Year)	Target	Movement Toward Target ¹⁵	Movement Away From Baseline ¹⁶	Movement Statistically Significant ¹⁷
Infrastructure and Surveillance—Continued						
 ⁹ EH-22.3 Monitoring conditions caused by mercury poisoning (number of states, territories, and D.C.)	23 (2009)	22 (2011)	56		4.3%	
 ⁹ EH-22.4 Monitoring diseases or conditions caused by arsenic poisoning (number of states, territories, and D.C.)	19 (2009)	18 (2011)	56		5.3%	
 ¹² EH-22.5 Monitoring diseases or conditions caused by cadmium poisoning (number of states, territories, and D.C.)	19 (2009)	15 (2011)	56		21.1%	
 ¹² EH-22.6 Monitoring diseases or conditions caused by acute chemical poisoning (number of states, territories, and D.C.)	9 (2009)	8 (2011)	56		11.1%	
 ¹² EH-22.7 Monitoring diseases or conditions caused by carbon monoxide poisoning (number of states, territories, and D.C.)	16 (2009)	14 (2011)	56		12.5%	
 ¹³ EH-23 Public schools located within 150 meters of major highways in the United States (percent)	3.3% (2010–2011)		3.0%			
Global Environmental Health						
 ² EH-24 Global burden of disease due to poor water quality, sanitation, and insufficient hygiene (number of deaths)	2,200,000 (2004)	842,000 (2012)	1,980,000	617.3%		

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

NOTES	DATA SOURCES
See HealthyPeople.gov for all Healthy People 2020 data. The Technical Notes provide more information on the measures of progress.	<p>EH-1 Air Quality System (AQS), EPA</p> <p>EH-2.1 American Community Survey (ACS), Census</p> <p>EH-2.2 American Community Survey (ACS), Census</p> <p>EH-2.3 American Community Survey (ACS), Census</p> <p>EH-2.4 American Community Survey (ACS), Census</p> <p>EH-3.1 National Emissions Inventory (NEI), EPA</p> <p>EH-3.2 National Emissions Inventory (NEI), EPA</p> <p>EH-3.3 National Emissions Inventory (NEI), EPA</p> <p>EH-4 Safe Drinking Water Information System (SDWIS), EPA/OW</p> <p>EH-5 Waterborne Disease and Outbreak Surveillance System (WBDOS), MMWR and CDC/NCID and State Health Departments</p> <p>EH-6 Estimated Use of Water in the United States, DOI/USGS/NWIS</p> <p>EH-7 Beaches Environmental Assessment and Coastal Health Program, EPA/OW</p> <p>EH-8.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS</p> <p>EH-8.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS</p> <p>EH-9 Comprehensive Environmental Response and Cleanup Information System (CERCLIS), EPA/OSWER</p> <p>EH-10 National Poison Data System (NPDS)</p> <p>EH-11 Toxics Release Inventory (TRI), EPA</p> <p>EH-12 Characterization of Municipal Solid Waste, EPA/OSWER</p> <p>EH-13.1 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-13.2 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-14 Homes with Radon Mitigation Systems, Radon Vent Fan Manufacturers</p> <p>EH-15 National Builder Practices Survey, National Association of Home Builders Research Center (NAHB Research Center)</p> <p>EH-16.1 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.2 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.3 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.4 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.5 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.6 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.7 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.8 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-16.9 School Health Policies and Practices Study (SHPPS), CDC/NCHHSTP</p> <p>EH-18.1 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-18.2 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-18.3 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-18.4 American Healthy Homes Survey (AHHS), HUD</p> <p>EH-19 American Housing Survey (AHS), HUD and Census</p> <p>EH-20.1 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH</p> <p>EH-20.2 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH</p> <p>EH-20.3 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH</p> <p>EH-20.4 National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH</p>
FOOTNOTES	
¹ Measurable objectives had a national baseline value.	
Target met or exceeded:	
² At baseline the target was not met or exceeded and the midcourse value was equal to or exceeded the target. (The percentage of targeted change achieved was equal to or greater than 100%.)	
³ The baseline and midcourse values were equal to or exceeded the target. (The percentage of targeted change achieved was not assessed.)	
Improving:	
⁴ Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was statistically significant.	
⁵ Movement was toward the target, standard errors were not available, and the objective had achieved 10% or more of the targeted change.	
Little or no detectable change:	
⁶ Movement was toward the target, standard errors were available, and the percentage of targeted change achieved was not statistically significant.	
⁷ Movement was toward the target, standard errors were not available, and the objective had achieved less than 10% of the targeted change.	
⁸ Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was not statistically significant.	
⁹ Movement was away from the baseline and target, standard errors were not available, and the objective had moved less than 10% relative to the baseline.	
¹⁰ There was no change between the baseline and the midcourse data point.	
Getting worse:	
¹¹ Movement was away from the baseline and target, standard errors were available, and the percentage change relative to the baseline was statistically significant.	
¹² Movement was away from the baseline and target, standard errors were not available, and the objective had moved 10% or more relative to the baseline.	
¹³ Baseline only: The objective only had one data point, so progress toward target attainment could not be assessed.	
¹⁴ Informational: A target was not set for this objective, so progress toward target attainment could not be assessed.	
¹⁵ For objectives that moved toward their targets, movement toward the target was measured as the percentage of targeted change achieved (unless the target was already met or exceeded at baseline):	
$\text{Percentage of targeted change achieved} = \frac{\text{Midcourse value} - \text{Baseline value}}{\text{HP2020 target} - \text{Baseline value}} \times 100$	
¹⁶ For objectives that moved away from their baselines and targets, movement away from the baseline was measured as the magnitude of the percentage change from baseline:	
$\text{Magnitude of percentage change from baseline} = \frac{ \text{Midcourse value} - \text{Baseline value} }{\text{Baseline value}} \times 100$	
¹⁷ Statistical significance was tested when the objective had a target and at least two data points, standard errors of the data were available, and a normal distribution could be assumed. Statistical significance of the percentage of targeted change achieved or the magnitude of the percentage change from baseline was assessed at the 0.05 level using a normal one-sided test.	

Table 12–2. Midcourse Progress for Measurable¹ Environmental Health Objectives—Continued

DATA SOURCES—Continued

EH-20.5	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.9	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.10	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.11	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.15	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.16	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.17	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.18	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-21	National Environmental Public Health Tracking Network, CDC
EH-22.1	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.2	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.3	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.4	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.5	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.6	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-22.7	State Reportable Conditions Data Inventory, Council of State and Territorial Epidemiologists (CSTE)
EH-23	Common Core of Data (CCD), ED/NCES
EH-24	Global Burden of Diseases, Injuries, and Risk Factors Study (GBD), Consortium including Harvard University, University of Washington, Johns Hopkins University, University of Queensland, and the World Health Organization

Table 12–3. Midcourse Health Disparities¹ for Population-based Environmental Health Objectives

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios^{2,3} for selected characteristics at the midcourse data point

LEGEND		Characteristics and Groups																											
At the midcourse data point		Group with the most favorable (least adverse) rate		Group with the least favorable (most adverse) rate		Data are available, but this group did not have the highest or lowest rate.		Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed.																					
Population-based Objectives	Sex		Race and Ethnicity						Education ⁴					Family Income ⁵				Disability		Location									
	Male	Female	Summary Disparity Ratio ²	American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic	Summary Disparity Ratio ³	Less than high school	High school graduate	At least some college	Associate's degree	4-year college	Advanced degree	Summary Disparity Ratio ³	Poor	Near-poor	Middle	Near-high	High	Summary Disparity Ratio ³	Persons with disabilities	Persons without disabilities	Summary Disparity Ratio ²	Metropolitan	Nonmetropolitan
Toxics and Waste																													
EH-8.1 Concentration of blood lead among children in the 97.5 percentile (µg/dL, 1–5 years) (2009–2012)			1.233								1.459								 a	 b	 c		2.381						
EH-8.2 Mean blood lead levels in children (geometric mean, 1–5 years) (2011–2012)			1.126		 d						1.289*								 a	 b	 c		1.552*						
Infrastructure and Surveillance																													
EH-20.1 Exposure to arsenic (µg/g of creatinine, 6+ years) (2009–2010)			1.312 [†]								1.039 [†]																		
EH-20.2 Exposure to cadmium (µg/L, 1+ years) (2009–2010)			1.036 [†]								1.013 [†]																		
EH-20.3 Exposure to lead (µg/dL, 1+ years) (2009–2010)			1.367 [†]								1.229 [†]																		
EH-20.5 Exposure to mercury among females (µg/L, 16–49 years) (2001–2002)								 e			1.243 [†]																		
EH-20.9 Exposure to para-nitrophenol (methyl parathion and parathions) (µg/g of creatinine, 6+ years) (2001–2002)			1.053 [†]					 e			1.032 [†]																		

Table 12–3. Midcourse Health Disparities for Population-based Environmental Health Objectives—Continued

Most favorable (least adverse) and least favorable (most adverse) group rates and summary disparity ratios^{2,3} for selected characteristics at the midcourse data point

LEGEND

At the midcourse data point		Group with the most favorable (least adverse) rate		Group with the least favorable (most adverse) rate		Data are available, but this group did not have the highest or lowest rate.		Data are not available for this group because the data were statistically unreliable, not collected, or not analyzed.
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Population-based Objectives	Characteristics and Groups																						
	Sex		Race and Ethnicity						Education ⁴					Family Income ⁵			Disability		Location				
	Male	Female	American Indian or Alaska Native	Asian	Native Hawaiian or other Pacific Islander	Two or more races	Hispanic or Latino	Black, not Hispanic	White, not Hispanic	Less than high school	High school graduate	At least some college	Associate's degree	4-year college	Advanced degree	Poor	Near-poor	Middle	Near-high	High	Persons with disabilities	Persons without disabilities	Metropolitan

Infrastructure and Surveillance—Continued

EH-20.10 Exposure to 3,4,6-trichloro-2-pyridinol (chlorpyrifos) (µg/g of creatinine, 6+ years) (2001–2002)			1.169 ¹																													
EH-20.11 Exposure to 3-phenoxybenzoic acid (µg/g of creatinine, 6+ years) (2001–2002)			1.221 ¹																													
EH-20.15 Exposure to Bisphenol A (µg/g of creatinine, 6+ years) (2009–2010)			1.173 ¹																													
EH-20.16 Exposure to perchlorate (µg/g of creatinine, 6+ years) (2007–2008)			1.153 ¹																													
EH-20.17 Exposure to mono-n-butyl phthalate (µg/g of creatinine, 6+ years) (2009–2010)			1.558 ¹																													
EH-20.18 Exposure to BDE 47, (2,2',4,4'-tetrabromodiphenyl ether) (Ng/g of lipid, 12+ years) (2003–2004)			1.084 ¹																													

Table 12–3. Midcourse Health Disparities¹ for Population-based Environmental Health Objectives—Continued

NOTES

See [HealthyPeople.gov](https://www.healthypeople.gov) for all Healthy People 2020 data. The [Technical Notes](#) provide more information on the measures of disparities.

FOOTNOTES

¹**Health disparities** were assessed among population groups within specified demographic characteristics (sex, race and ethnicity, educational attainment, etc.). This assessment did not include objectives that were not population-based, such as those based on states, worksites, or those monitoring the number of events.

²When there were only two groups (e.g., male and female), the **summary disparity ratio** was the ratio of the higher to the lower rate.

³When there were three or more groups (e.g., white non-Hispanic, black non-Hispanic, Hispanic) and the most favorable rate (R_b) was the highest rate, the **summary disparity ratio** was calculated as R_b/R_a , where R_a = the average of the rates for all other groups. When there were three or more groups and the most favorable rate was the lowest rate, the summary disparity ratio was calculated as R_a/R_b .

⁴Unless otherwise footnoted, data do not include persons under age 25 years.

⁵Unless otherwise footnoted, the poor, near-poor, middle, near-high, and high income groups are for persons whose family incomes were less than 100%, 100%–199%, 200%–399%, 400%–599%, and at or above 600% of the poverty threshold, respectively.

[†]The summary disparity ratio was not tested for statistical significance because standard errors of the data were not available or normality on the natural logarithm scale could not be assumed.

*The summary disparity ratio was significantly greater than 1.000. Statistical significance was assessed at the 0.05 level using a normal one-sided test on the natural logarithm scale.

^aData are for persons whose family income was at or below 130% of the poverty threshold.

^bData are for persons whose family income was 131% to 350% of the poverty threshold.

^cData are for persons whose family income was 351% or more of the poverty threshold.

^dData do not include persons of Hispanic origin.

^eData are for Mexican-American persons.

DATA SOURCES

EH-8.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
EH-8.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS
EH-20.1	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.2	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.3	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.5	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.9	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.10	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.11	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.15	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.16	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.17	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH
EH-20.18	National Health and Nutrition Examination Survey (NHANES), CDC/NCHS; National Report on Human Exposure to Environmental Chemicals, CDC/NCEH