

Building Environmental Health Capacity in Allegheny County: Environmental Indicators Outcomes



Air Indicators

Indicator Name	Suggested Measure	Data Source
Air Quality Index (AQI)	Maximum Air Quality Index on any particular day	Air Quality Computer Systems
Ambient Pollutants	Attainment of ozone 8- hour standard	Air Quality Computer Systems
	Days exceeding ozone standard	Air Quality Computer Systems
	Attainment of the annual PM-2.5 standard (Fine particulates)	Air Quality Computer Systems
	Annual PM-2.5 level	Air Quality Computer Systems
	Attainment of Sulfur Dioxide Standard	Air Quality Computer Systems
	Attainment of Nitrogen Dioxide Standard	Air Quality Computer Systems
	Attainment of Carbon Monoxide Standard	Air Quality Computer Systems
	Attainment of Lead Standard	Air Quality Computer Systems
Hazardous Air Pollutants (HAPs)	HAPs emitted by large point sources	Emissions Inventory (i-Steps)
Other Pollutants of Concern	Emissions of ammonia and hydrogen sulfide	Emissions Inventory

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Maximum level on a particular day per site	(0-500) scale	2x per day (real time)	Public	Outcome
8-hour average compared to 0.08ppm (national standard) Whether the 4 th highest 8-hour average is greater than 0.08 ppm at any site	Binomial Yes or No	Annual	Public	Outcome
Number of days an 8-hour average is greater than 0.08 ppm at any site	Days	Annual	Public	Outcome
Whether the 3 year average is greater than the 15 ug/m ³ national standard at any site	Binomial Yes or no	Annual	Public	Outcome
Most recent 3 year PM-2.5 average at highest site	ug/m ³	Annual	Public	Outcome
Annual average compared to 0.03 ppm (national standard)	Binomial Yes or No	Annual	Public	Outcome
Annual average compared to 0.05 ppm (national standard)	Binomial Yes or No	Annual	Public	Outcome
8-hour average compared to 9 ppm (national standard)	Binomial Yes or No	Daily	Public	Outcome
Quarterly average compared to 1.5 ug/m ³ (national standard)	Binomial Yes or No	Quarterly	Public	Outcome
Numeric Cumulative total of 33 listed hazardous air pollutants (See Appendix A)	Tons per year	Annual	Public	Outcome
Tons of emissions <ul style="list-style-type: none"> • ammonia • hydrogen sulfide 	Tons per year	Annual	Public	Outcome

Air Indicators

Indicator Name	Suggested Measure	Data Source
Pollution Prevention	Pollutants removed (self reported)	Reports by Companies

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Sum of pounds of pollutants removed	Pounds per year	Annual	Public	Outcome

Air Indicators

Indicator Name	Suggested Measure	Data Source
Population Exposure	Population exposed to air exceeding standards <ul style="list-style-type: none">• Ozone• PM-2.5	Planning Section Records

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Total population in an area where air quality for ozone or PM-2.5 exceeds the standard	Numeric	Annual	Public	Outcome

Community Environment Indicators

Indicator Name	Suggested Measure	Data Source
School Environment Safety	School pools inspected without critical violations	Housing Database ACHD
	School structures inspected without critical violations	Housing Database
	School food inspections without critical violations <ul style="list-style-type: none"> • Minor Facilities - Satellite/contracted food services • Major Facilities - School prepares food 	Housing Database
Community Environment	Public bathing places inspected without critical violations	Housing Database
	Death/catastrophic injury at public bathing place	Housing Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Numerator: Number of school pools without critical violations Denominator: Number school pools	Percent	Annual	Public	Outcome
Numerator: Number of school structures without critical violations Denominator: Number of school structures Number of violations per school	Percent Numeric	Annual	Public	Outcome
Numerator: Number of school food systems without critical food violations Denominator: Number school food systems	Percent	Bi-annual	Public	Outcome
Numerator: Number of public bathing places inspected and in compliance Denominator: Number public bathing places	Percent	Quarterly	Public	Outcome
Number of occurrences	Numeric	Quarterly	Public	Outcome

Community Environment Indicators

Indicator Name	Suggested Measure	Data Source
Vector Control Outreach	Integrated Pesticide Management Training (IPMT) (participating)	Manual Log

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Numerator: Number of school districts that participate in IPMT (using training) Denominator: Number of school districts	Percent	Annual	Public	Outcome

Community Environment Indicators

Indicator Name	Suggested Measure	Data Source
Indoor Air Quality	Carbon monoxide (CO) morbidity	Housing Database
	Carbon monoxide poisoning mortality	Housing Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
Numerator: Number of reported cases of CO poisoning of Allegheny County residents Denominator: Total population in Allegheny County X 100,000	Rate	Monthly	Public	Outcome
Number of reported deaths by CO poisoning in Allegheny County	Numeric	Monthly	Public	Outcome

Food Safety Indicators

Indicator Name	Suggested Measure	Data Source
Food Safety Assessment	Critical Risk Factors <ul style="list-style-type: none">• Cooking• Cooling• Cold Holding• Personal Hygiene• Employee Health• Facility sanitization	Food Oracle Database
Illnesses Caused by Food Pathogens	<ul style="list-style-type: none">• Salmonellosis• Shigatoxin from Ecoli• Shigellosis• Hepatitis A• Campylobacter• Giardia• Yersiniosis• Listeriosis• Botulism• Norwalk• Staphylococci	Infectious Disease Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of times the risk factor was cited on initial inspection for compliance</p> <p>Denominator: Number of inspections for the risk factor</p>	Percent	Quarterly	Public	Outcome
<p>Numerator: Number of cases identified</p> <p>Denominator: Total population in Allegheny County X100, 000</p>	Rate	Daily Note: real-time data	Public	Outcome

Food Safety Indicators

Indicator Name	Suggested Measure	Data Source
Facility Outbreaks	Outbreaks confirmed: <ul style="list-style-type: none">• Positive hospital report• Positive food sample• Verify positive agent at facility• Epidemiological evidence	Manual

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of confirmed outbreaks in regulated sites</p> <p>Denominator: Total number of outbreaks that were investigated in regulated facilities</p>	Percent	Quarterly	Public	Outcome

Injury Prevention Indicators

Indicator Name	Suggested Measure	Data Source
Injury Mortality	Deaths by motor vehicle crash (MVCs) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Blood alcohol level • Toxicology • Mental status • Location in the car • Seatbelt usage • Time of the accident • # of vehicles involved • Type of vehicle • Location of the accident 	ACHD Injury Database
	Death to pedestrian <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Blood alcohol level • Death to driver • Mental status of pedestrian • Who is at fault 	ACHD Injury Database
	Death by motorcycle crash <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Blood alcohol level • Helmet usage 	ACHD Injury Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of deaths of Allegheny County residents by motor vehicle crashes in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of pedestrian deaths due to MVCs of Allegheny County residents in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of motorcycle deaths in Allegheny County residents in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome

Injury Prevention Indicators

Indicator Name	Suggested Measure	Data Source
	Deaths by homicide (all types) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Method utilized • Relationship of victim to actor • Precipitating incident • Location of homicide • Residence of perpetrator • Alcohol and drug levels 	ACHD Injury Database
	Deaths by homicide with firearm <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Relationship of victim to actor • Precipitating incident • Location of homicide • Residence of perpetrator • Type of weapon • Owner registration • Stolen weapon? 	ACHD Injury Database
	Deaths by homicide with firearm and associated alcohol and drug use <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Relationship of victim to actor • Precipitating incident • Location of homicide • Residence of perpetrator • Type of weapon • Owner registration • Stolen weapon 	ACHD Injury Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of homicides of Allegheny County residents in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of homicides of Allegheny county residents by firearm in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of homicides by firearm associated with alcohol use in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome

Injury Prevention Indicators

Indicator Name	Suggested Measure	Data Source
	Deaths by suicide <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Location • Method utilized • Previous suicide attempt • Toxicology 	ACHD Injury Database
	Deaths by suicide with firearm <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Type of weapon • Owner registration • Stolen weapon? 	ACHD Injury Database
	Deaths by suicide with firearm and associated alcohol use <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Blood alcohol level • Toxicology 	ACHD Injury Database
	Deaths by fall <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • How the fall occurred • Blood alcohol level • Toxicology 	ACHD Injury Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of suicides of Allegheny County residents in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of suicides of Allegheny County residents by firearm in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of suicides by firearm with alcohol usage in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of fall deaths in Allegheny County to county residents</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome

Injury Prevention Indicators

Indicator Name	Suggested Measure	Data Source
	Deaths by poisoning <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Overdose • Type of poisoning 	ACHD Injury Database
Injury Morbidity	Motor vehicle injury <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Type of crash 	Traffic Crash Data Reporting System
	Burns in children/adolescents (0 to <20) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Type of burn • Location of burn • How fire occurred? 	Child Data Registry
	Falls in children/adolescents (0 to <20) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Type of fall • Location of fall • Where the fall occurred • How the fall occurred 	Child Data Registry

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of poisonings in Allegheny County</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of motor vehicle injuries sustained by Allegheny County residents</p> <p>Denominator: Total population in Allegheny County</p> <p>X 100,000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of childhood/adolescents (0 to <20) treated for burns in emergency departments in Allegheny County</p> <p>Denominator: Total number of children/adolescent (0 to <20) in Allegheny County</p> <p>X 100, 000</p> <p>Note: Baseline data to be established through the use of Children's Hospital Emergency Department registry.</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of children/adolescents (0 to <20) treated for falls in the emergency rooms</p> <p>Denominator: Total number of children/adolescent (0 to <20) in Allegheny County</p> <p>X 100, 000</p> <p>Note: Baseline data to be established through the use of Children's Hospital Emergency Department registry.</p>	Rate	Monthly	Public	Outcome

Injury Prevention Indicators

Indicator Name	Suggested Measure	Data Source
	Falls by elderly (>64) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) • Type of fall • Location of fall • Where the fall occurred • How the fall occurred 	ACHD Injury Database
	Poisonings in children/adolescents (0 to <20) <ul style="list-style-type: none"> • Age • Gender • Race • Socio-economic status (SES) 	Child Data Registry
Injury Prevention	Home smoke alarm installation	Manual Log

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of elderly (>64) treated for falls in the emergency room</p> <p>Denominator: Total number of elderly in Allegheny County</p> <p>X 100, 000</p>	Rate	Monthly	Public	Outcome
<p>Numerator: Number of children/adolescents (0 to <20) treated for poisoning in the Emergency Department</p> <p>Denominator: Total number of children/adolescent (0 to <20) in Allegheny County</p> <p>X 100, 000</p> <p>Note: Baseline data to be established through the use of Children's Hospital ED registry.</p>	Rate	Monthly	Public	Outcome
Number of smoke alarms installed by the Injury Prevention Program	Numeric	Annual	Public	Outcome

Lead Prevention Indicators

Indicator Name	Suggested Measure	Data Source
Lead Poisoning	Elevated child blood lead levels Note: (6 months of age up to the 6th birthday-nothing over)	STELLAR Database
	Elevated child blood lead levels Note: (6 months through 12 months of age-nothing over, this is the 1 year screening)	STELLAR Database
	Elevated child blood lead levels Note: (at 24 months of age-nothing over, this is the 2 year screening)	STELLAR Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of children from 6 months of age up to the 6th birthday with blood levels ≥ 10 ug/dL</p> <p>Denominator: Number of children from 6 months of age up to the 6th birthday that are tested</p> <p>X 100, 000</p>	Rate Age Specific	Daily Note: real-time data	Public	Outcome
<p>Numerator: Number of children 6 months through 12 months of age with blood lead levels ≥ 10 ug/dL</p> <p>Denominator: Number of children 6 months through 12 months of age that are tested</p> <p>X 100, 000</p>	Rate Age Specific	Daily Note: real-time data	Public	Outcome
<p>Numerator: Number of children equal to 24 months of age with blood lead levels ≥ 10 ug/dL</p> <p>Denominator: Number of children equal to 24 months of age that are tested</p> <p>X 100, 000</p>	Rate Age Specific	Daily Note: real-time data	Public	Outcome

Drinking Water Indicators

Indicator Name	Suggested Measure	Data Source
Public Drinking Water	Drinking water standards (Federal Standards)	Environmental Facility Application Compliance System
Medical Surveillance	Waterborne outbreaks	ACHD
Drinking Water Supply	Population served	ACHD

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of public drinking water suppliers in compliance with public drinking water standards at last inspection</p> <p>Denominator: Number of public drinking water suppliers inspected</p>	Percent	Monthly	Public	Outcome
<p>Number of outbreaks associated with water sources identified by agent—chemical and bacteria (See Appendix B)</p> <p>Number of people affected by occurrence</p>	<p>Numeric</p> <p>Numeric by municipality</p>	Monthly	Public	Outcome
<p>Numerator: Number of persons supplied with public drinking water in compliance with drinking water standards</p> <p>Denominator: Number of persons in Allegheny County</p>	Percent by municipality	Annual	Public	Outcome

Water Pollution Indicators

Indicator Name	Suggested Measure	Data Source
River Water Surveillance	Recreational exposure (Proposed for May 15—September 30, 2003)	Survey
Sewage Treatment Plant Compliance	Sewage treatment facility compliance	ACHD
Municipal/Authority Waste Water Capacity Assurance Maintenance Operation and Management Program	Persons served	ACHD

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of illnesses (bacterial) reported by person surveyed</p> <p>Denominator: Number of recreational users surveyed in Allegheny County</p>	Percent	Monthly	Public	Outcome
<p>Numerator: Number of sewage facilities inspected in compliance with sewage facility treatment standards</p> <p>Denominator: Number of sewage facilities inspected</p>	Percent by municipality	Monthly	Public	Outcome
<p>Numerator: Number of persons served by waste water treatment plants (not including on-lot)</p> <p>Denominator: Number of persons in Allegheny County</p>	Percent by municipality	Annual	Public	Outcome

Solid Waste Indicators

Indicator Name	Suggested Measure	Data Source
Solid Waste	Land fill compliance	Environmental Facility Application Compliance System
Recycling Efforts	Waste recycled	Recycling Database
	Recycling by county owned & operated facilities (baseline)	ACHD

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of permitted facilities found to be in compliance with land fill regulations</p> <p>Denominator: Number of permitted facilities inspected</p>	Percent	Monthly	Public	Outcome
<p>Numerator: Total amount of household and commercial waste recycled</p> <p>Denominator: Total amount of household and commercial waste generated</p>	Percent	Annual	Public	Outcome
<p>Numerator: Number of owned & operated county facilities that recycle</p> <p>Denominator: Number of county owned facilities</p>	Percent	Annual	ACHD	Outcome

Plumbing Indicators

Indicator Name	Suggested Measure	Data Source
Plumbing Compliance	Plumbing standards	Plumbing Database

Method of Calculation	Unit Measure	Frequency of Reporting	Audience Served	Type of Indicator
<p>Numerator: Number of inspected plans that follow plumbing rules and regulations</p> <p>Denominator: Number of plumbing plans filed</p>	Percent	Monthly	ACHD	Outcome



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