

Environmental health indicators

Proposed indicators	Measure source	Data source	Other Oregon plans that use these measures	Populations that experience a disproportionate burden of illness, death or risks	Data are reportable at a county level or other geographic breakdowns	Data are reportable by race and ethnicity, gender, sexual orientation, age, disability, income level, insurance status or other relevant risk factor data (when applicable)	Strengths or opportunities of existing data source	Weaknesses or challenges with existing data source
<b>Summer heat-related morbidity and mortality</b>								
Emergency department and urgent care visits due to heat	Council of State and Territorial Epidemiologists Climate and Health Indicators	OHA electronic surveillance system, ESSENCE.	Portland Regional Climate and Health Monitoring Report	Incomplete race and ethnicity data	LPHA can acquire access and state level dashboards are set up in Summer Hazards.	REALD is not available. Data for race, gender, age, employment-related, and chronic disease are available. Reportability depends on numbers. Aggregation by larger regions or multiple years may be necessary.	Near real-time data available. Data source can be sorted by facility type (hospital, urgent care).	Syndromic data is based on more than just ICD-10 codes, so it doesn't have a 1:1 relationship with health analytics ICD-10 based ED visit counts from Healthcare Cost and Utilization Project (HCUP).
Hospitalizations due to heat	Same as above	Oregon inpatient hospital discharge data from Healthcare Cost and Utilization Project (HCUP).	Portland Regional Climate and Health Monitoring Report, Oregon Environmental Public Health Tracking Program	Inequities by housing status, occupation, race, sex, and age have been identified in existing studies.	Will require OHA and LPHA partnership to ensure LPHAs have access	Same as above	Reportability depends on numbers. Aggregation by larger regions or multiple years may be necessary.	There is a lag of several months before data are available for the previous year (ca. March).
Heat deaths	Same as above	Oregon Vital Records, OHA Oregon death certificates.	Portland Regional Climate and Health Monitoring Report	SES, housing status. REALD and SOGI not currently being collected and reported. OHA receives family identified race: white, other AI&AN, Hispanic/Latino, Asian, Black/AA	Data is available in Oregon vital statistics with an approximate 1 year lag. Multnomah and Washington County have access to Vital Records, however many counties in Oregon do not. Small numbers may require aggregation across larger regions or years.	Same as above	Details about occupation and circumstances related to the fatality may be available from data.	Data are provisional until October of the following year.
<b>Air quality-related morbidity</b>								

Respiratory (non-infectious) emergency department and urgent care visits	Air Quality-related respiratory visits syndrome definition was developed by Council of State and Territorial Epidemiologists. (Climate and Health Indicators)	OHA electronic surveillance system, Oregon ESSENCE.	Portland Regional Climate and Health Monitoring Report uses Asthma & Allergic Disease	Inequities by housing status, occupation, race/ethnicity, sex, and/or age have been identified.	LPHA can acquire access and state level dashboards are set up in Summer Hazards.	Reportability depends on numbers. Aggregation by larger regions or multiple years may be necessary.	Captures a larger proportion of the population that may be experiencing respiratory impacts from air pollution (includes asthma). Near real-time data available. Data source can be sorted by facility type (hospital, urgent care). Can include air quality index or PM2.5 values.	Syndromic data is based on more than just ICD-10 codes, so it doesn't have a 1:1 relationship with health analytics ICD-10 based ED visit counts from Healthcare Cost and Utilization Project (HCUP).
Asthma and allergic disease related hospital admissions	Council of State and Territorial Epidemiologists Climate and Health Indicators	Oregon inpatient hospital discharge data	Portland Regional Climate and Health Monitoring Report	Same as above	Same as above	Same as above		There is a lag of several months before data are available for the previous year (ca. March).
<b>Water security</b>								
# weeks in drought annually, % of population affected	NIDIS <a href="https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR">https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?OR</a> ; see <a href="https://droughtmonitor.unl.edu/Data.aspx">https://droughtmonitor.unl.edu/Data.aspx</a> for data overview	National Integrated Drought Information System (NIDIS). Drought affected counties/water systems under stress from drought, including domestic wells (OHA Drinking Water Services and Environmental Public Health data)	OHA Climate & Health Report, OHA Environmental Public Health Water Insecurity Project	Rural residents, domestic well users, farmers	County, State, Region, with statistics available by area, percent area	% of population affected is available on data source. Data can be paired with demographic and socioeconomic data from the American Community Survey	Indicator is available by 6 drought levels (none-exceptional). National Environmental Public Health Tracking Program (CDC) is developing a private well water risk index at the census tract (ready later in 2023) that can inform subsequent process measure development related to this indicator.	Extent of drought changes over time--Drought categories are available to help characterize/standardize the indicator; ODHS has water provision requirement (not OHA); no clear health-related metrics associated with drought impacts--still under development

Health-based violations	Drinking Water Services			Rural residents, domestic well users, farmers, pregnant people, infants & children, older adults, immunocompromised & other pre-existing medical conditions.	% of population affected by at least 1 health-based violation per year- can aggregate at county level/Note- may be more accurate to look at (% of population affected by HBV/% of population served by public water systems) vs. (% of population affected by HBV/% of total population) if comparing counties, as a given county may have a larger % of population served by public water systems than another	No, but aggregated county data could be paired with ACS data. Population-level data (cumulative population percent, cumulative population)		
		Safe Drinking Water Information System (SDWIS) database- health-based violations include Maximum Contaminant Level (MCL) and treatment technique violations. Could also include action level exceedances.						Limit to jurisdictional authority for water system
# of & type of advisories/# population affected would inform vulnerability to water outages	Drinking Water Services <a href="https://yourwater.oregon.gov/advisories.php">https://yourwater.oregon.gov/advisories.php</a> ;	Drinking Water Services in-house database tracks drinking water advisories. Could limit to particular advisory types (do not drink, boil, etc.)	Drinking water services, OHA Environmental Public Health Tracking Program (Community Water Systems dashboard under development)	Age (infants and children, older adults), pregnancy, health status (immunocompromised)	Every public water system is associated with a county. data are reported by public water system.	Vulnerable populations are listed based on system affected; also aggregated county data could be paired with ACS data.	Water advisories also track start and end dates so measure could include number of days and possibly even population.	Partial advisories (infrequent)- cannot determine number of population affected/Not all public water systems are overseen or regulated by LPH. does this effect how this measure is calculated and determined?
<b>Built environment</b>								
Active transportation: Percent of commuters who walk, bike or use public transportation to get to work	U.S Census	American Community Survey 5-year estimates	Previously used as public health accountability metrics, CDC Environmental Public Health Tracking Network	Populations in areas with higher rates of commuting by active transportation are at lower risk of health conditions related to physical inactivity.	Available by county	Race, ethnicity, language spoken at home and English language fluency, citizenship, income, poverty levels.	National data source released annually. Data encourages opportunities for LPHAs to work with local decision makers to prioritize active transportation in infrastructure investments.	Since the beginning of the COVID-19 pandemic, the percentage of teleworkers has tripled and percentage of workers taking public transit declined by 50% nationally.

