

COMMUNITY ENVIRONMENTAL HEALTH INDICATORS: V2.0

| SOCIAL & ENVIRONMENTAL DETERMINANTS OF HEALTH | DATA SOURCE | APPLICABILITY & USE |
|---|--|---|
| Social Factors | | |
| Social Vulnerability | | |
| <ul style="list-style-type: none"> ➤ The CDC/ATSDR social vulnerability index ranks each tract on 15 social factors around four themes: socioeconomic status, household composition & disability, minority & language, housing & transportation. | CDC/ATSDR Social Vulnerability Index 2018 Database, Tribal Tracts. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html . | No index or “score” for tribal tracts comparing data to other Tribes or non-tribal areas, but some of the data points might be useful, depending on the needs and issues. |
| Community Experience & Awareness | | |
| <ul style="list-style-type: none"> ➤ Survey of community members about community environmental health status, priority issues and needs, and level of awareness of environmental public health activities | Data from NPAIHB/Tribe Survey | Rating scale survey. |
| Ecosystem Threats & Pressures | | |
| Toxic emissions | | |
| <ul style="list-style-type: none"> ➤ Map and data on facilities, amounts of toxic releases, compliance information, waste management, risks, and health effects | EPA TRI (search Tribal Lands, drop-down menu to select Tribe) https://www.epa.gov/toxics-release-inventory-tri-program | Use the column on the left side to view detailed information in practical visual formats by data type. |
| Changes in ecosystem characteristics & function | | |
| <ul style="list-style-type: none"> ➤ Knowledge and experience with changes in plant and animal growth and behaviors, threats to traditional and cultural harvesting and foraging areas, fishing and hunting grounds; pressures on water supplies | Key Informant Interviews/TEK Interviews | Understand how to integrate TEK into practice. |
| Outdoor Air Quality | | |
| Air pollution | | |
| <ul style="list-style-type: none"> ➤ The number of days the air quality index (AQI) was classified as “unhealthy” or “very unhealthy” for criteria pollutants, or the PM 2.5 air quality standards were exceeded or averaged over five years. | Purple Air Monitor Data, Tribal Air Quality Index EPA Air Data (by CBSA or County) https://www.epa.gov/outdoor-air-quality-data State AQ Data | Preference is for tribal data since air quality is highly localized. AQI data is more widespread and often more helpful; info on specific criteria pollutants is limited based on the location and function of monitors |
| <ul style="list-style-type: none"> ➤ Presence or absence of a Tribal Air Quality Program | Tribe Data | Information about the air quality program, like where funding is coming from and the scope, is useful too. |
| <ul style="list-style-type: none"> ➤ Air quality alert system in place that is effective and widespread, reaching those at most significant risk for adverse health effects (i.e., children, elderly, outdoor | Tribe Data/Tribe Survey | Public health alerts and type and timing for interventions. |

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| | workers) and makes public health recommendations as needed | | |
| Water Quality | | | |
| Drinking water | | | |
| | ➤ Number of homes served by unregulated or inadequate water sources (individual wells, public water supply with health-based SDWA violations, other) | NPAIHB/Tribe Survey or EPA SDWIS https://ofmpub.epa.gov/apex/sfdw/f?p=108:200::: | Go to search options to select EPA Region 10 (Tribe), and type in the name or ID # of the system; click on the raw number under “violations” to see a list. See the appendix for a list of health-based violations. |
| Stream Water Quality | | | |
| | ➤ Temperature and dissolved oxygen data; harmful algal blooms | Tribe Data | Annual data on elevated temperature levels or average temperature; annual data on low dissolved oxygen levels or average; the annual number of HAB advisories. |
| Land | | | |
| Hazardous waste sites | | | |
| | ➤ Number of contaminated Brownfields properties, CERCLIS, RCRA, and Superfund active or closed cleanup sites | EPA Cleanups (by zip code and Tribal Land) http://www2.epa.gov/cleanups/cleanups-my-community | Using the list or tables search, you can define your geographical area, including tribal lands, and filter by property type and current status. |
| Climate Change | | | |
| Natural Disaster Hazards | | | |
| | ➤ Characterization of severe winter storms, fires, flooding, drought, and extreme heat events, average over the last five years | Qualitative and quantitative Tribe Data/TEK Interviews, NOAA-NWS Climate Data (limited to regional data, https://www.ncdc.noaa.gov/extremes/cei/data-used ; Drought Monitoring, https://www.drought.gov/about | NOAA Data and TEK provide essential information for the PNW region on extreme temperatures, precipitation, wind, and weather conditions; the drought monitoring data includes maps, temperature, precipitation, and forecasting by County. |
| Built Environment – Healthy Homes and Communities | | | |
| Housing quality | | | |
| | ➤ Percentage of housing with issues associated with one or more of the following hazards: <ul style="list-style-type: none"> • Radon • Lead / Built prior to 1978 | NPAIHB/Tribe Inspections, Tribal Housing, Tribe Survey | How many people are affected by hazardous conditions? What interventions may be needed? |

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| <ul style="list-style-type: none"> • Mold and Moisture Problems • Wood Stoves as Primary Heat Source (particulates) | | |
| <ul style="list-style-type: none"> ➤ Percentage of occupied housing units with more people than rooms estimate | CDC/ATSDR Social Vulnerability Index 2018 Database, Tribal Tracts. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html . Tribal Data | How many people are affected by hazardous conditions? How can this data be used in decision-making on funding new homes or rehabilitating existing ones? |
| Housing Characteristics & Structure | | |
| <ul style="list-style-type: none"> ➤ Percentage multi-unit homes | CDC/ATSDR Social Vulnerability Index 2018 Database, Tribal Tracts. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html . Tribal Data | Additive |
| <ul style="list-style-type: none"> ➤ Percentage of mobile homes | CDC/ATSDR Social Vulnerability Index 2018 Database, Tribal Tracts. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html . Tribal Data | Known to have issues and hazards. |
| <ul style="list-style-type: none"> ➤ Percentage of persons in group quarters | CDC/ATSDR Social Vulnerability Index 2018 Database, Tribal Tracts. https://www.atsdr.cdc.gov/placeandhealth/svi/data_documentation_download.html . Tribal Data | May call for special care. |
| <ul style="list-style-type: none"> ➤ Percentage of the homeless population | Tribal Data | How to help with health needs and get people into housing. |
| Child care centers | | |
| <ul style="list-style-type: none"> ➤ Child care centers with health and safety violations related to chemicals or pesticides | NPAIHB/Tribe Inspections - WebEHRS | Identify at-risk populations and any interventions. |

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| HEALTH OUTCOMES & EXPOSURES | DATA SOURCE | APPLICABILITY & USE |
|---|---|--|
| Acute Conditions & Communicable Disease | | |
| Acute gastrointestinal illness | | |
| ➤ Rate of illnesses based on patient encounter diagnosis and hospital discharge data over five year period | IHS/Tribe or NWTEC or State | Threshold for syndromic surveillance. |
| Vectorborne disease | | |
| ➤ Number of fatalities and confirmed cases (ambulatory and inpatient) over five year period | IHS/Tribe or NWTEC or State | Threshold for syndromic surveillance. |
| Pesticides or other hazardous chemical exposures | | |
| ➤ Number of fatalities and confirmed cases (ambulatory and inpatient) over five year period | IHS/Tribe or NWTEC or State | Threshold for syndromic surveillance; were there investigations conducted? |
| Childhood lead poisoning | | |
| ➤ The number of children with blood-lead levels exceeding the level of concern (5 µg/dL) or any “cluster” of children with measurable blood-lead levels, aged ≤ 6, over five year period. | IHS/Tribe or NWTEC or State | Threshold for syndromic surveillance; were there investigations conducted? |
| Food and Waterborne Illness | | |
| ➤ Number of confirmed food and waterborne disease outbreaks over five years | IHS/Tribe or NWTEC or State | Were these investigated? Interventions and outcomes? |
| Chronic Disease | | |
| Asthma | | |
| ➤ Prevalence of asthma based on patient encounter diagnosis data for children and adults over five years; and the number of people hospitalized for asthma, average over five years. | IHS/Tribe or NWTEC or State | Monitoring and tracking. |
| Cancer | | |
| ➤ Incidence rates of cancer by cancer site, race, gender, and age group, over five year period | IHS/Tribe or NWTEC or State CDC/National Cancer Institute (by County) http://statecancerprofiles.cancer.gov/incidencerates/index.php | Monitoring and tracking . |

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| PUBLIC HEALTH INFRASTRUCTURE | DATA SOURCE | APPLICABILITY & USE |
|--|-------------------------|---|
| Emergency Preparedness | | |
| <ul style="list-style-type: none"> ➤ Planning: The Tribe has conducted a hazard vulnerability analysis and has an emergency operations plan for preparing for, responding to, mitigating, and recovering from disasters. | NPAIHB/Tribe Assessment | Capacity Building |
| <ul style="list-style-type: none"> ➤ Climate Change Assessment: The Tribe has developed a framework for assessing the impact of climate change on communities and ecosystems, including resilience and adaptive strategies. | NPAIHB/Tribe Assessment | Capacity Building |
| <ul style="list-style-type: none"> ➤ Alert Network: The Tribe has a system for early warning and public alert in the event of a disaster. | NPAIHB/Tribe Assessment | Capacity Building |
| Policy Development | | |
| <ul style="list-style-type: none"> ➤ Codes: Number of current tribal environmental health codes adopted and administered; those listed below are the essential ordinances for environmental public health <ul style="list-style-type: none"> ➤ Animal control – domestic and livestock, sylvatic ➤ Clean water/Source water quality ➤ Drinking water quality ➤ Food safety ➤ Housing codes ➤ Notifiable disease reporting ➤ Sanitation - liquid & solid waste management, & public nuisance ➤ Vector control ➤ Zoning/Land Use | NPAIHB/Tribe Assessment | Capacity Building |
| Formal and Informal Partnerships | | |
| <ul style="list-style-type: none"> ➤ Formal agreements: Number and nature of legal agreement or partnership with local, state, and federal governments; tribal governments, consortia, or organizations; community-based organizations, non-governmental organizations, schools/universities, or other entities and businesses to leverage resources for addressing public health issues | NPAIHB/Tribe Assessment | Capacity Building |
| Environmental Justice and Health Inequity | | |
| <ul style="list-style-type: none"> ➤ Funding for services: Total funding for environmental health services and activities, through what entity (i.e., government, foundation), length of funding (i.e., indeterminate, term), and through what mechanism (i.e., grant, congressional appropriations) | NPAIHB/Tribe Assessment | Assessing and understanding funding sources can help with planning, advocacy, and collective action to address injustices and inequities faced by Tribes. |

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Please List Other Local Environmental Health Indicators or Issues

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APPENDIX

Drinking water health-based violations are grouped into the following violation types using the violation and contaminant codes:

- All health-based: Violation codes 41, 42, 45, and 48 with contaminant code 700 (Ground water rule), 40 (Filter backwash recycling rule), or any of the following violations
 - o Lead and copper: Violation codes 57, 58, 59, 63, 64, 65
 - o Total coliforms: Violation codes 21 and 22 with all contaminant codes. Violation codes 1 and 2 with contaminant code 3000 (Coliform pre-TCR) only.
 - o Chemical and radionuclide: Violation codes 1, 2, and 7 with all applicable contaminant codes*
 - o Surface water treatment: Violation codes 33, 37, 41-45, and 47 with all contaminant codes except 700
 - o Nitrate/nitrite: Violation codes 1 and 2 with contaminant codes 1038, 1040, and 1041
 - o Disinfectants and disinfection byproducts: Violation codes 11, 12, 13, and 46 with all contaminant codes. Violation code 2 with contaminant codes 1009, 1011, 2456, and 2950

* The applicable contaminant codes for Chemical and radionuclide are as follows: Volatile organic chemicals: 2265, 2257, 2378, 2380, 2955, 2964, 2968, 2969, 2976, 2977, 2979, 2980, 2981, 2982, 2983, 2984, 2985, 2987, 2989, 2990, 2991, 2992, 2996 Synthetic organic contaminants: 2005, 2010, 2015, 2020, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2039, 2040, 2041, 2042, 2046, 2050, 2051, 2063, 2065, 2067, 2105, 2110, 2274, 2306, 2326, 2383, 2931, 2946, 2959 Inorganic chemicals: 1005, 1010, 1015, 1020, 1024, 1035, 1036, 1045, 1074, 1075, 1085, 1094 Radiological contaminants: 4000, 4006, 4010, 4100, 4101, 4102, 4174, 4264