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Seattle Climate Challenges Atlas
Overview

• About Futurewise
• Equity Atlas Projects Evolution
• Research Justice
• Overview of an Organizational Narrative
About Futurewise

- Concentrated urban growth
- Sprawl reduction
- Regional transportation
- Affordable housing
- Economic development
- Property rights
- Permit processing
- Natural resource industries
- Open space and recreation
- Environmental protection
- Public participation
- Public facilities and services
- Historic preservation
- Shoreline management

- CLIMATE
- RACIAL EQUITY / SOCIAL JUSTICE
Equity Reports & Process

Reports:
• King County Baseline Equity Assessment (2013)
• Seattle Health and Equity Assessment (2015)
• Seattle Climate Challenges Atlas (2017)

Process:
• Engagement with community/partners
• Research and documentation
• Partner review, policy implementation
Seattle Health and Equity Assessment (2015)

What areas of Seattle have access to public health facilities?

This map depicts areas in 2000 with close proximity to public health facilities related to diversity, income, and English proficiency at the census tract level in Seattle.

Legend
Community Characteristics
- Less Diverse, Higher Income, & Higher English Proficiency
- Moderate Diversity, Income, & English Proficiency
- More Diverse, Lower Income, & Lower English Proficiency

Facility
Access Area
Buffer size based on population density at service points

Public Health Facilities 2000

What areas of Seattle have access to public health facilities?

This map depicts areas in 2010 with close proximity to public health facilities related to diversity, income, and English proficiency at the census tract level in Seattle.

Legend
Community Characteristics
- Less Diverse, Higher Income, & Higher English Proficiency
- Moderate Diversity, Income, & English Proficiency
- More Diverse, Lower Income, & Lower English Proficiency

Facility
Access Area
Buffer size based on population density at service points

Public Health Facilities 2010
Seattle Climate Challenges Atlas (2017)

Bivariate Choropleth Map

**Equity Index:**
- People of Color
- At or below 200% of federal poverty line
- Born outside the US
- Limited English proficiency

**Equity Basemap:**
Dark blue areas have the highest equity index scores, and the grey areas have the lowest equity index scores.
Air Quality Hazards
Seattle Climate Challenges Atlas

Air Quality is impacted by climate

- **Pollen**: Pollen can be a problem for people with respiratory conditions and allergies. With climate change, the pollen season will start earlier, last longer, and be stronger.
- **Particulates**: Emissions from transit and industry are a severe burden on human health. The impacts of climate change, particularly increasing temperatures, will cause these impacts to be felt more acutely.
- **Wildfire**: Wildland fire is a major source of particulate matter and is especially harmful for populations with asthma and respiratory diseases. More area is expected to burn each year under climate change.

By the 2050s, there will be a 1 in 3 chance every year that more than 2 million acres burns in Washington state.

As by 2050 we will expect the fire area burned west of the Cascades to double.

*Stated by 2050 or more area will be burned every 1 in 3 years*

- **Potential Air Quality Hazard**: Combined Highest Risk/ Priority
- **Equity Index**: The dark purple tracts that are outlined in yellow are the tracts that are most affected by both climate and equity variables.
Urban Heat Island Effect

Seattle Climate Challenges Atlas

EXTREME HOT DAYS
will happen more often in the future, and Seattle will heat up more due to the urban heat island effect.

89 deaths
The number of projected excess deaths in Seattle for age 45+ by 2080.

URBAN HEAT ISLANDS
Cities can be as much as 27°F warmer than their surrounding undeveloped areas due to the Urban Heat Island Effect.
Affordable Housing in the Flood Zone
Seattle Climate Challenges Atlas

By 2100

13% increase in days with rain over 1 inch

22% increase in days with rain over 3 inches

In the Puget Sound region, extreme precipitation events will intensify and occur more frequently. By the end of the century, the number of days with rain over 1 inch is projected to increase by 13%, and the number of days with rain over 3 inches is projected increase by 22%.27

Urban Flooding Areas29

39,000 people in Seattle live in an area vulnerable to flooding, and flooding more frequently under climate change (dark blue).28
Exposure to CSOs
Seattle Climate Challenges Atlas

UNTREATED STORMWATER threatens humans and habitat - and there will likely be more of it.

What is a Combined Sewer Overflow (CSO)?

Heavy rain: Too much water flowing through storm drains sends a mix of sewage and runoff to local waterbodies.

Normal outflow: All of the water is diverted to the treatment plant by the control device.

The dark purple tracts that are outlined in yellow are the tracts that have the highest Equity Index scores and were most exposed to CSOs by volume in 2015, a record rainy winter.
Transition

Process:

• Engagement with community/partners
• Research and documentation
• Partner review and policy implementation
• A strategic framework that seeks to achieve self-determination for marginalized communities. It centralizes community voices and leadership in an effort to facilitate genuine, lasting social change.

• Achieved when marginalized communities are recognized as experts, and reclaim, own and wield all forms of knowledge and information. With strategic support, the knowledge and information generated by these communities can be used as political leverage to advance their own agendas for change.
In order for this to become reality, the community must have:

- **Control** over information and knowledge that impact them;
- **Capacity** to produce their own information and knowledge and wield it to effectively advance their agenda;
- **Equal access** to information outside of the community despite increasing commodification, privatization, and hyper-abundance of information;
- **Authority** to determine ‘validity’ and ‘credibility’ of information and knowledge, and methods to create them…on equal footing with all other institutions in society.
Research Justice
C/O Data Center – Coalition of Communities of Color

KNOWLEDGE IN THE WORLD

TODAY

More

Mainstream Knowledge

Less

Experiential, Cultural and Spiritual Knowledge

Political Power
A framework for research justice:
Communities are experts in their own lives, possessing experiential, historical and cultural knowledge which must be centered in any data research initiative. To that end, we believe that communities have a:

**Right to research:** the right to the tools through which any individual or group can systematically increase that stock of knowledge which they consider most vital to their survival as human beings.

**Right to know:** the right to access information beyond their reach, whether that knowledge is inaccessible sue to cost, technical jargon, or other barriers.

**Right to be heard:** the right to use social science tools – such as surveys, interviews, mapping, etc. – to package their knowledge as data to convey to decision-makers and other chosen audiences.

Decolonize data
future
wise

Intentional Engagement
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