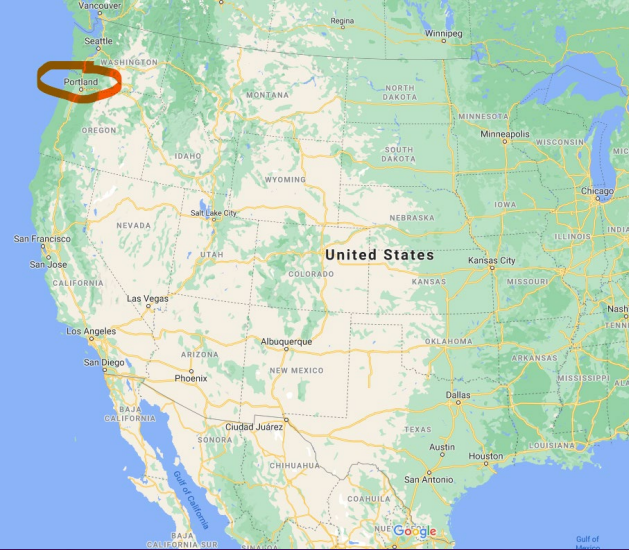




PORTLAND PUBLIC UTILITIES EQUITY DATA TOOLKIT

MAOLOUD DABAB, PH.D., TECHNOLOGY PROJECT MANAGER





PORTLAND, OREGON



- Portlanders love food carts
- Very bike friendly city
- Largest urban forest in the country
- There's a volcano in city limits
- 9th greenest city in the USA
- Best city in the USA for vegans and vegetarians
- Silicon forest: many tech companies
- Top three best coffee city in the USA
- Rapidly diversifying city



BEST WATER IN THE WORLD?

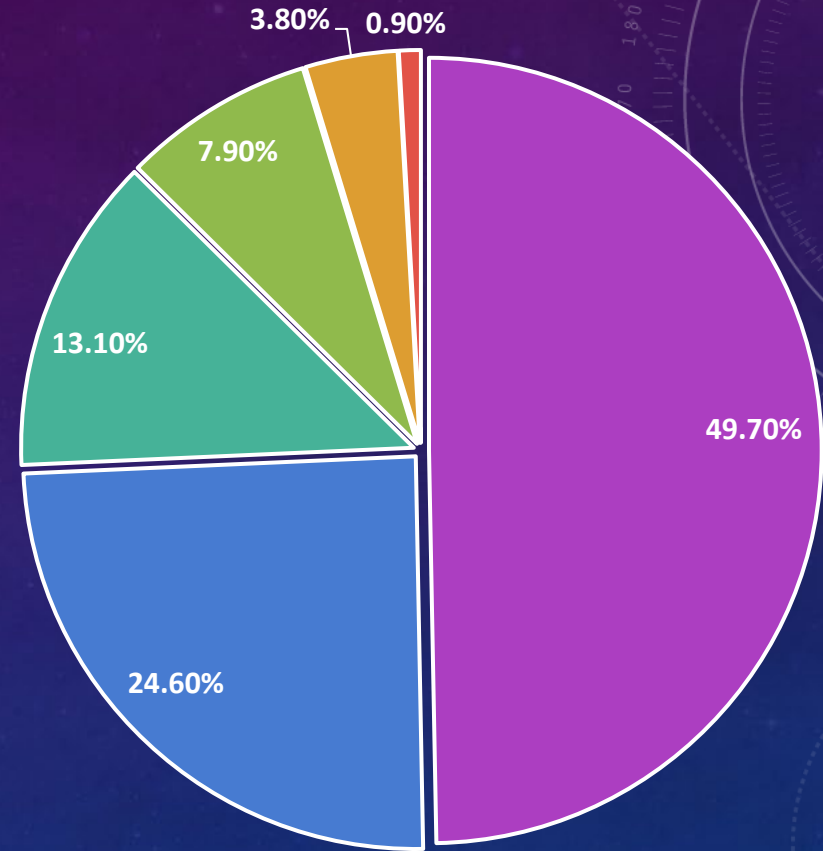
PORTLAND WATER AT A GLANCE

- 1 million served (retail and wholesale)
- 666,000 residents, 19 wholesale providers. 180,000+ accounts
- 2,200+ miles of pipe
- 2 dams surface water, 200 MGD at Bullrun watershed
- 20+ groundwater well fields, 80-95 MGD
- Average daily supply: 100 MGD, 150 MGD summer
- 600+ employees
- Budget: \$121 MM operating, \$140 MM CIP



WHY
EQUITY MATTERS
TO WATER
UTILITIES?

Racial profile of U.S. population, 2045



White* Hispanic Black* Asian* Multiracial* Indigenous*

* Non-Hispanic members of race

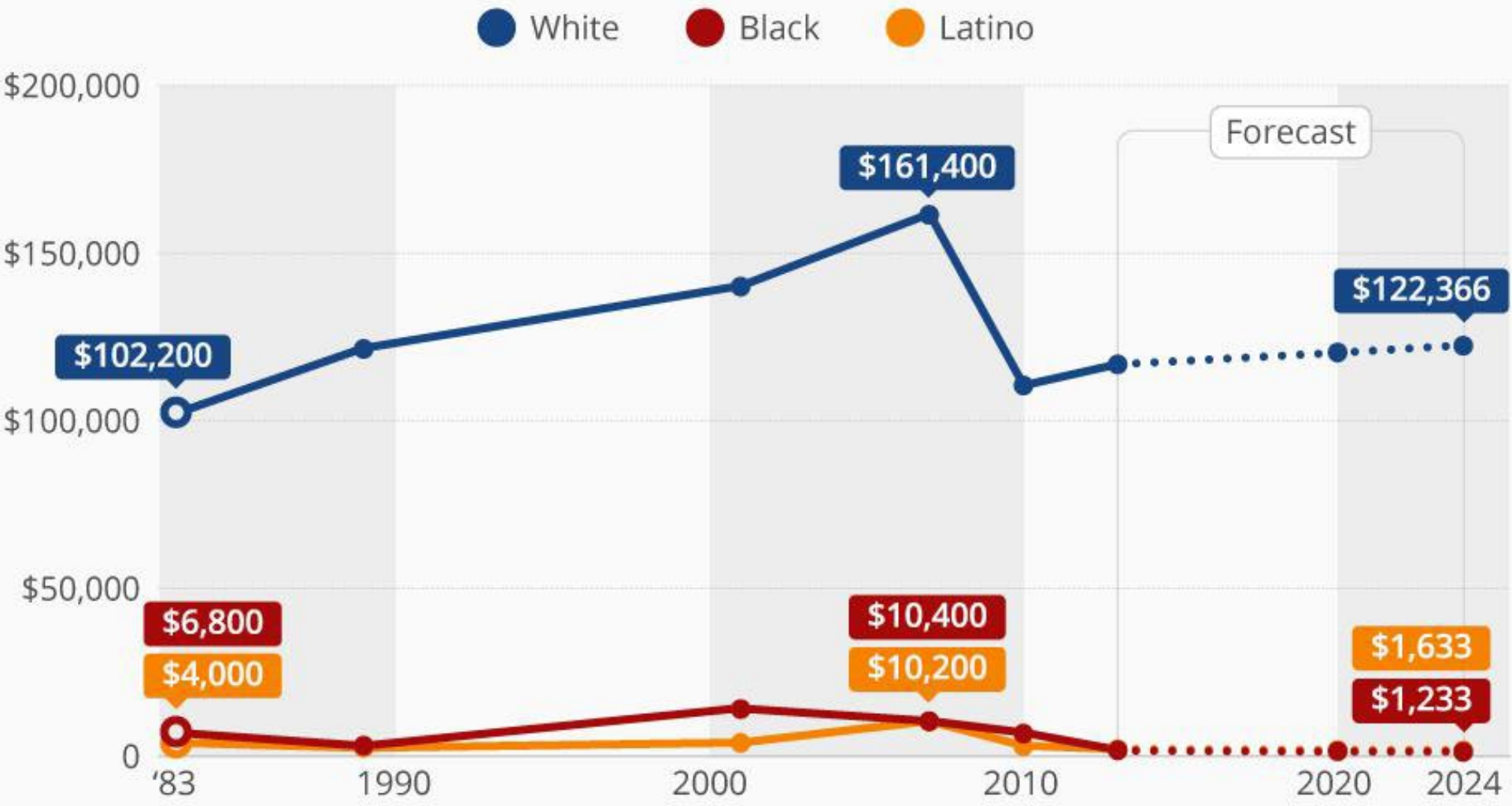
Source: William H Frey analysis of U.S. Census population projections released March 13, 2018 and revised September 6, 2018

B Metropolitan Policy Program
at BROOKINGS

THIS IS WHAT OUR
FUTURE RATE
PAYERS AND
WORKFORCE
LOOK LIKE

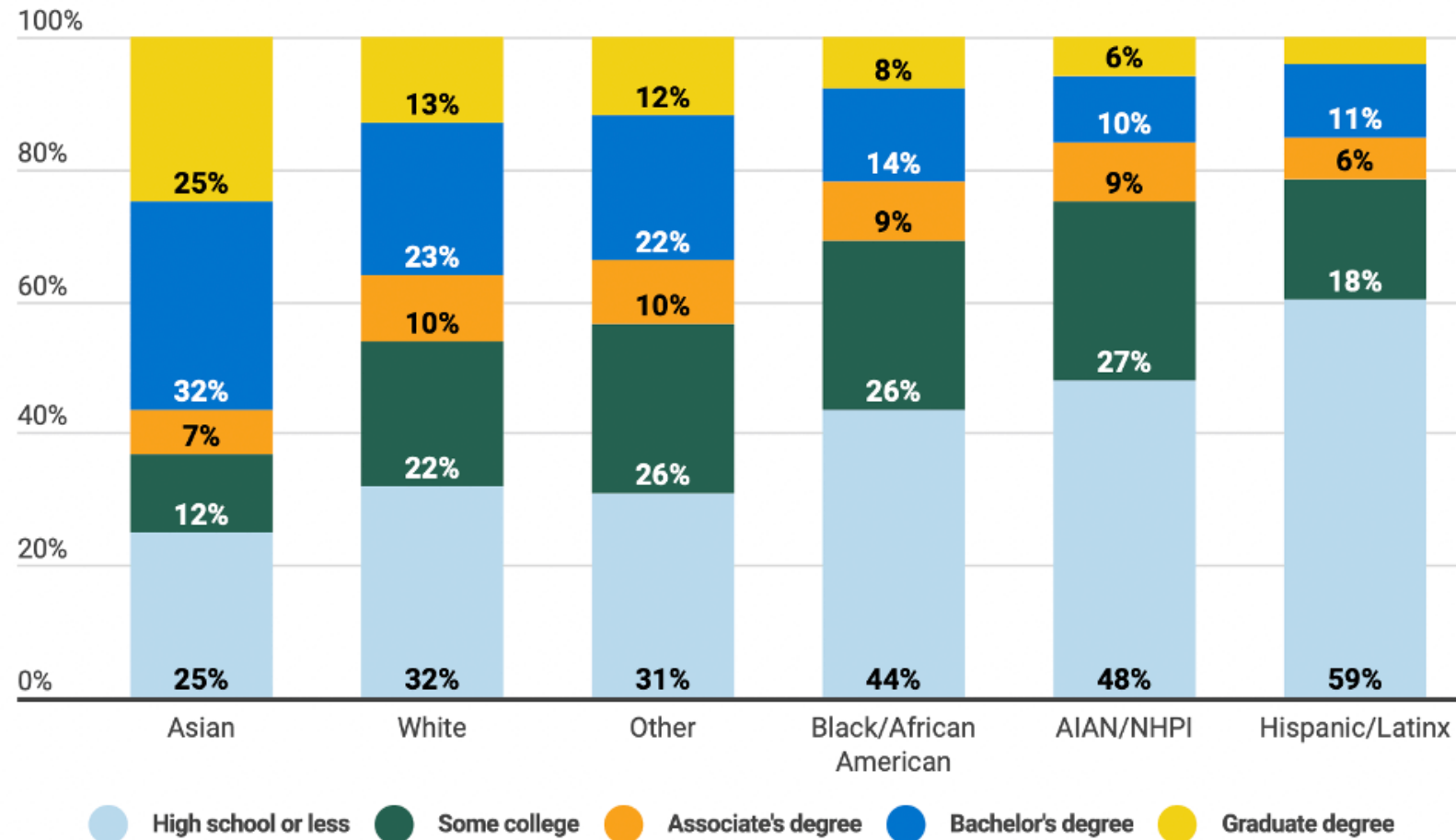
Racial Wealth Inequality Is Rampant In The U.S.

Median household wealth by race/ethnicity in the United States (1983-2024)



@StatistaCharts Source: Prosperity Now & Institute For Policy Studies

Highest educational attainment by race/ethnicity

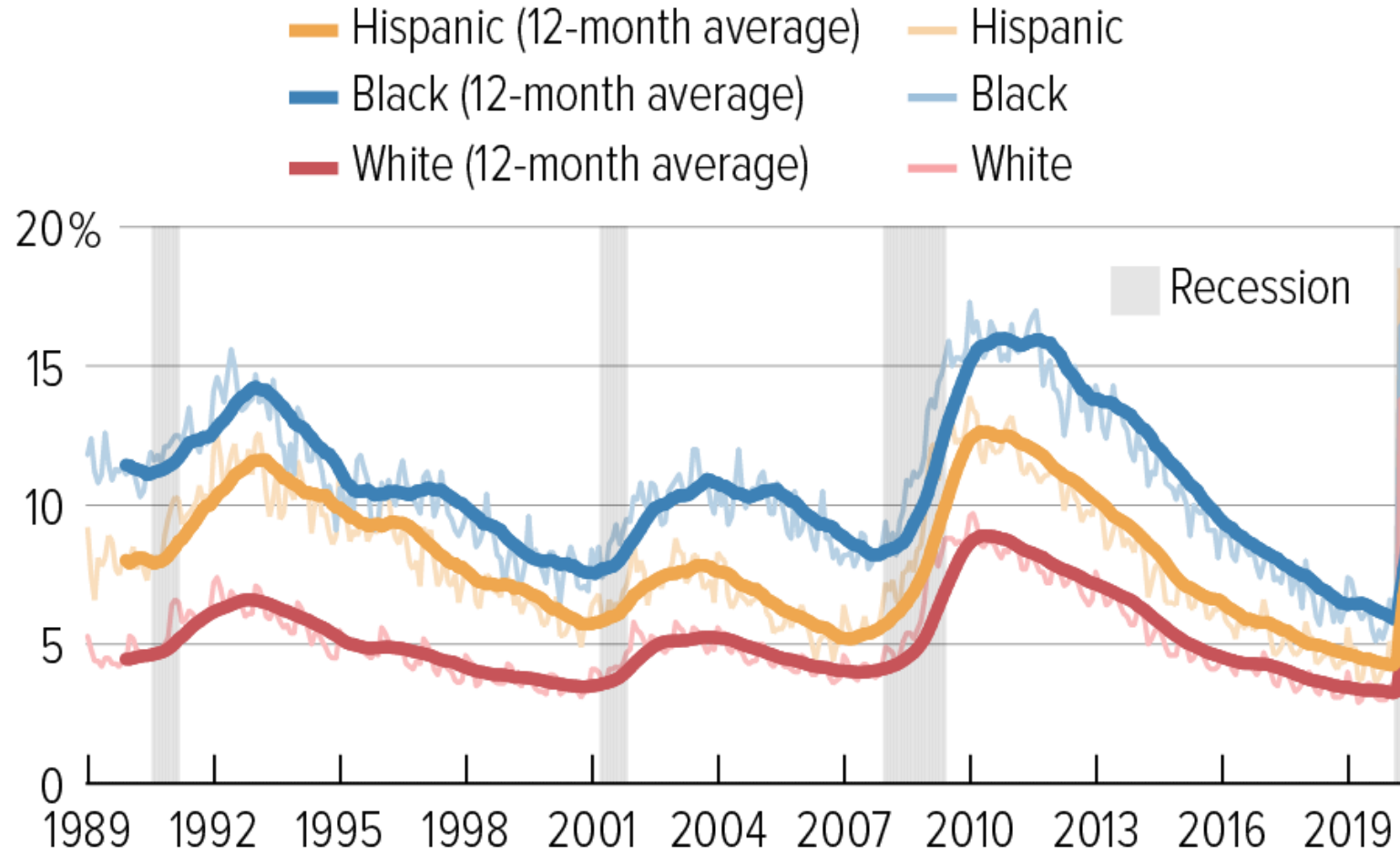


Source: Georgetown University Center on Education and the Workforce analysis of data from the US Census Bureau, American Community Survey (ACS), 2013–17 (pooled).

Note: The figure shows the educational distribution in the population ages 25 to 64. AIAN/NHPI stands for American Indian, Alaska Native, Native Hawaiian, and Pacific Islander.

Values may not sum to 100 percent due to rounding.

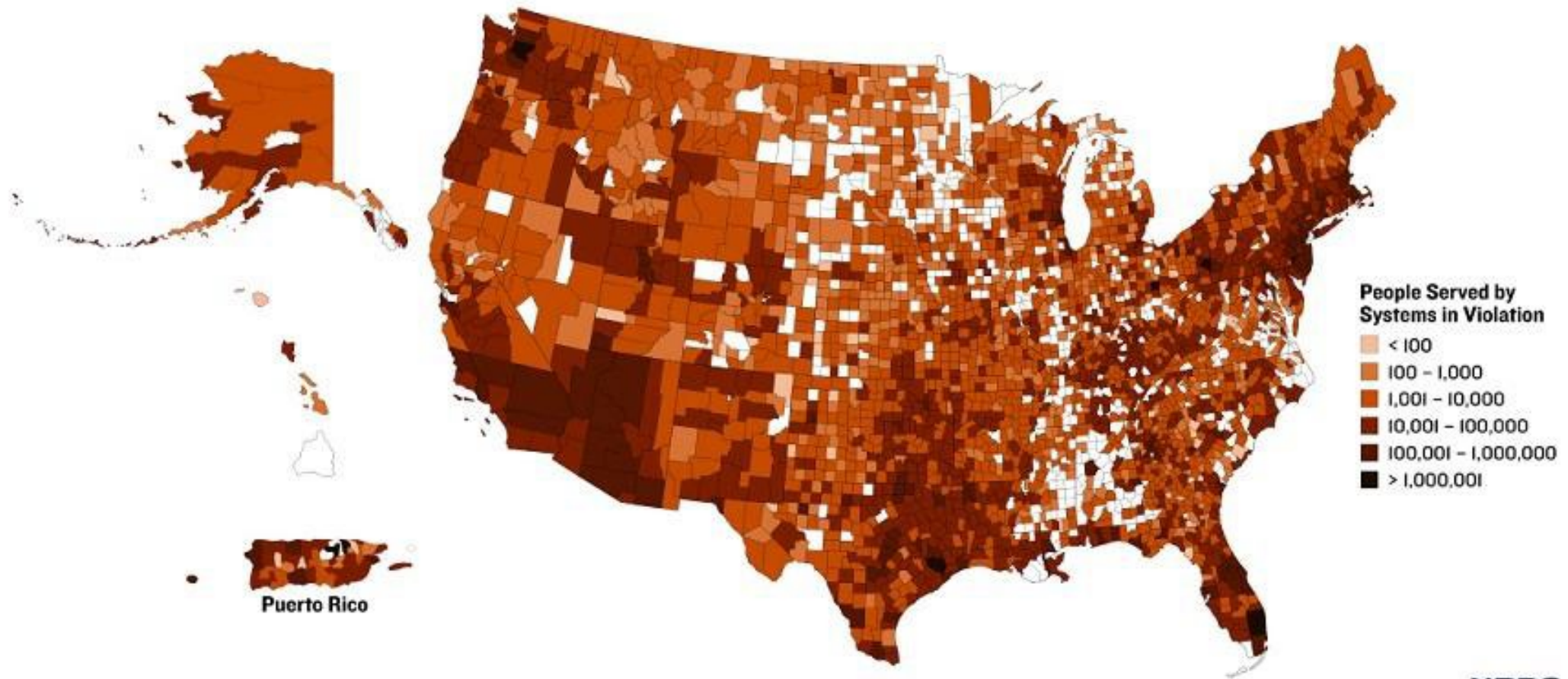
Black and Hispanic Unemployment Rates Consistently Higher Than White Rate



Note: Data are not seasonally adjusted.

Source: Bureau of Labor Statistics

One-third of U.S. community water systems violated the Safe Drinking Water Act



Nearly 77 million people got water from these supplies



QUESTIONS

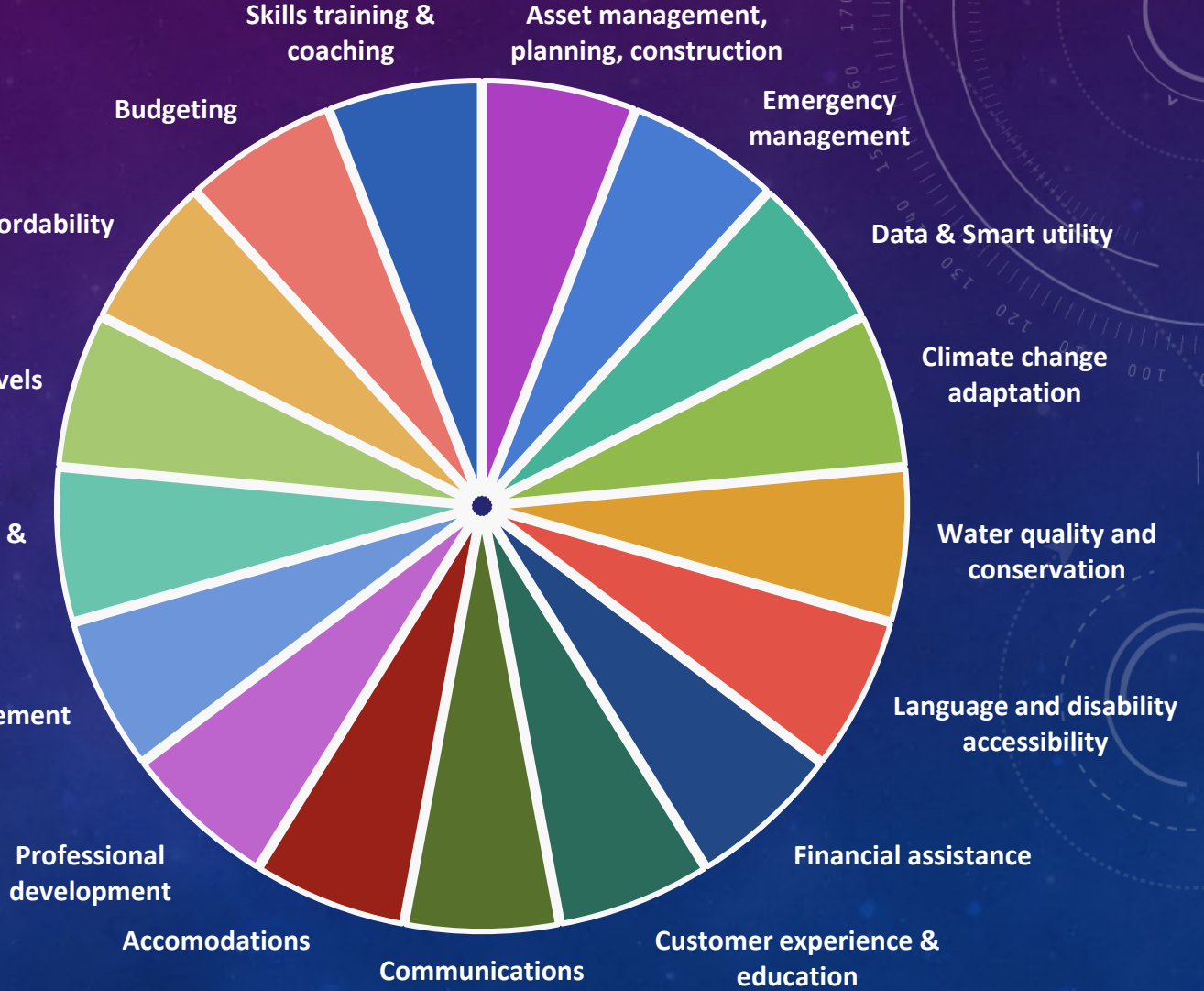
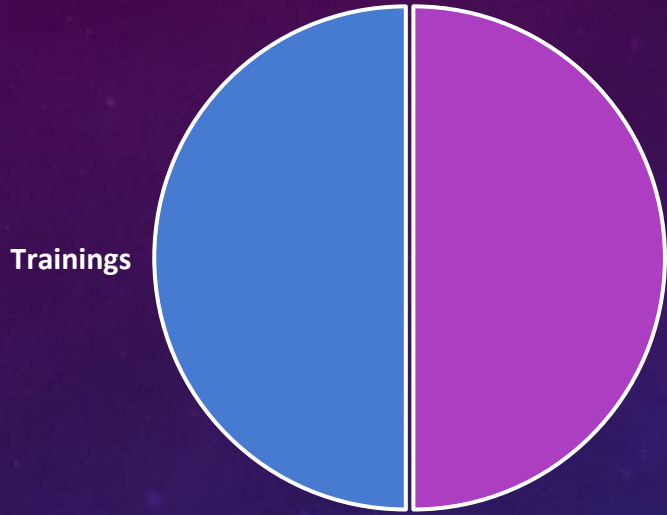
Do we have sufficient trust from communities of color to gain their support for the needed water infrastructure investments of the future?

Are we investing enough effort into building a diverse pipeline of candidates in the water field that can support our critical missions?

HOW WE
INTEGRATE EQUITY
AT THE PORTLAND
WATER BUREAU?

What EDI issues actually are in a water utility

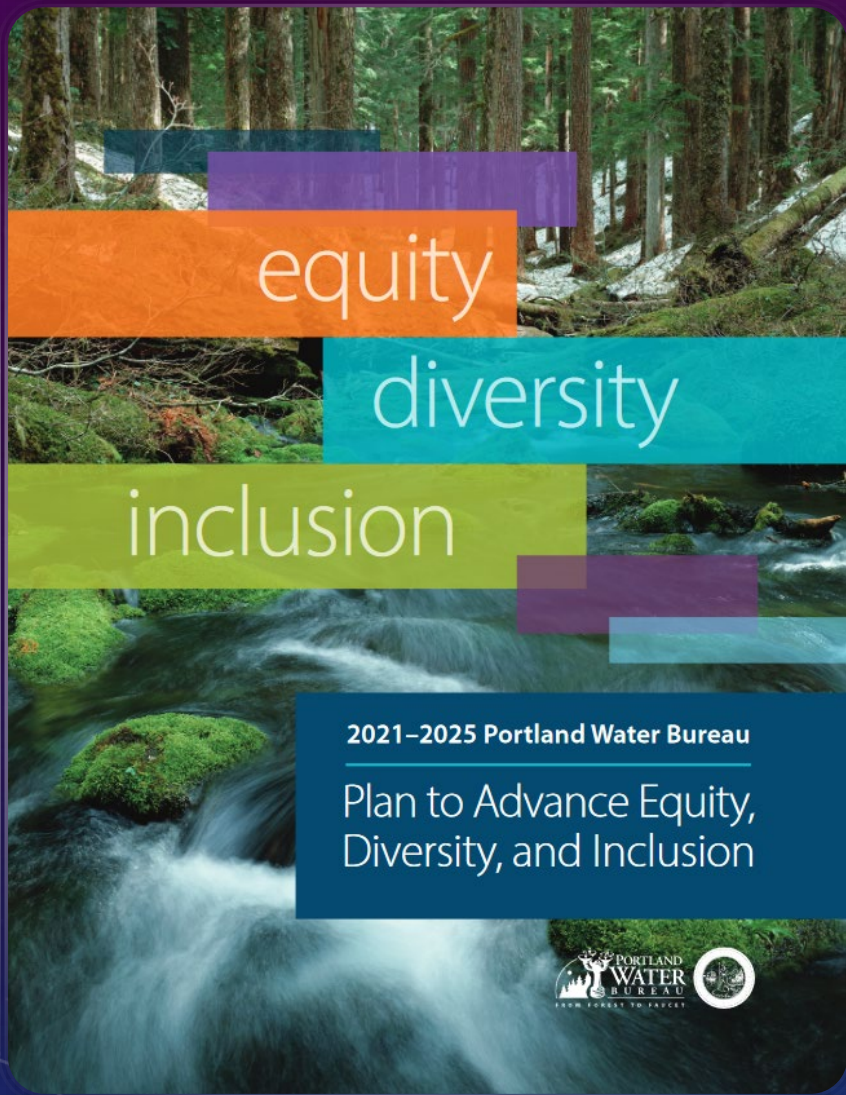
What people think equity, diversity, and inclusion issues are:



“

Create the conditions for all to have access to the resources and opportunities they need to thrive, so their identities are not a contributing factor to their outcomes”

Portland Water Bureau equity definition



Five goals: system reliability, community connections, workforce, processes, accountability

73 actions, each with an owner and a timeline

Specific goals and desired outcomes for every category

Questions for the data in each category



System reliability

- Asset management, reliability, engineering planning, and construction
- Emergency management and resilience
- Technology, smart utility, and advanced metering infrastructure (AMI)
- Climate change and extreme weather
- Education and water conservation



Community relations

- Demographic and language assessments
- Customer experience: Financial assistance programs, shutoffs, debt-collection
- Culturally relevant and accessible communications
- Community partnership and engagement



Workforce and culture

- Equitable recruitment practices
- Accommodations, employee engagement
- High-performing culture, leadership and career development
- Cross-group learning opportunities



Organizational processes

- Capital planning, design, and construction; accessibility
- Contracting, procurement, and project management
- Key service levels, budgeting, performance measures, structural affordability



Accountability and leadership

- Performance management
- Equity curriculum and trainings
- Conflict management

AN EQUITY ENABLING ENVIRONMENT

Equity Data Toolkit

Equity in budget programs

IDEA virtual library

Equity Curriculum (foundations + LinkedIn Learning platform)

Community engagement and partnership strategy

Recruitment policy

Employee development team

Employee engagement survey

Workgroup Equity Champions

Language and disability access guidance (and policies)

Equity performance objectives

WHY AN EQUITY DATA TOOLKIT?

WHAT ARE THE PROBLEMS WE WANT TO SOLVE?

01

Lack the information necessary to meaningfully apply equity criteria to initiatives

02

No mechanism to identify potential service inequities

03

No understanding of equity impacts of proposed policies, projects, initiatives

04

No approach to assess trade-offs, analyze alternative scenarios

05

Lack of tool to track progress towards equity goals and desired outcomes

06

Limited ways to integrate community characteristics, needs, and perspectives in project planning and design



PRIORITY PROJECTS

- Embed equity in the Asset Management Consequence Likelihood Evaluation Matrix
- Assess equitable service levels and identify opportunities for improving service delivery
- Assess impact of financial assistance programs
- Assess impact of shut-offs and debt-collection practices
- Understand workforce and workplace trends
- Advice affordability initiatives
- Monitor equitable procurement practices
- Develop the Equity Impact Assessment tool

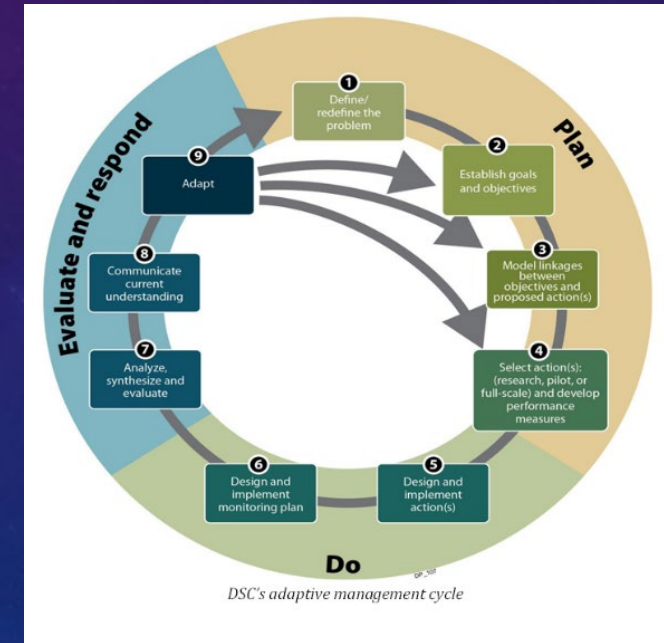
WHAT IS THE EQUITY DATA TOOLKIT?

WHAT IS THE EQUITY DATA TOOLKIT?

- A PowerBI powered platform that combines bureau data with socio-economic indicators to guide decision-making
- Automate statistical data analyses to guide decision-making
- Customizable applications and analysis to project and program needs
- Exploratory tool to evaluate potential impacts, scenarios

Five categories from Equity Plan

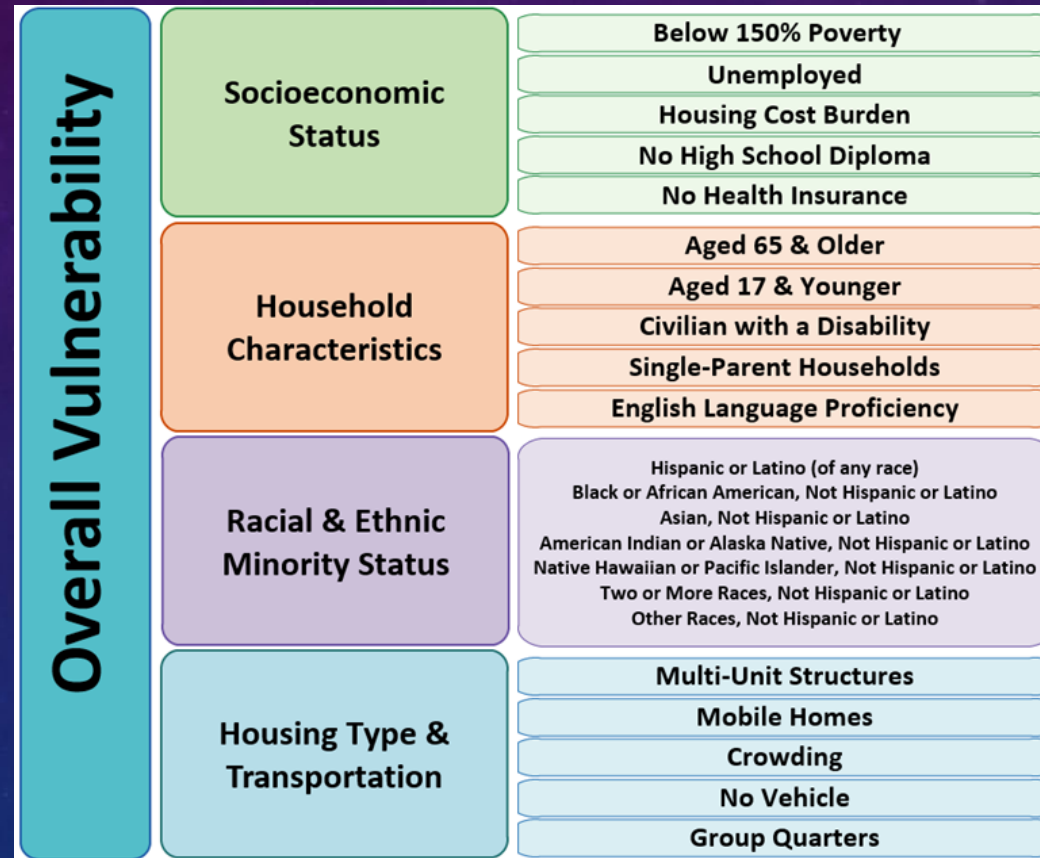
- System reliability and service delivery
- Community relationships
- Workforce and culture
- Organizational processes, responsive systems, and decision making
- Accountability, leadership, and City government



BASE LAYERS

CDC Social Vulnerability Index

- Uses U.S. Census data to determine the social vulnerability of every census tract.
 - Socioeconomic
 - Household composition
 - People of color and language
 - Housing and transportation



Additional data sources:

- City of Portland Economic Vulnerability Assessment
- EPA EJ Screen
- Civic Life Neighborhood Profiles
- Child Opportunity Index
- Racial Equity Data Hub

Equity Data Toolkit sample applications



Power BI



ArcGIS

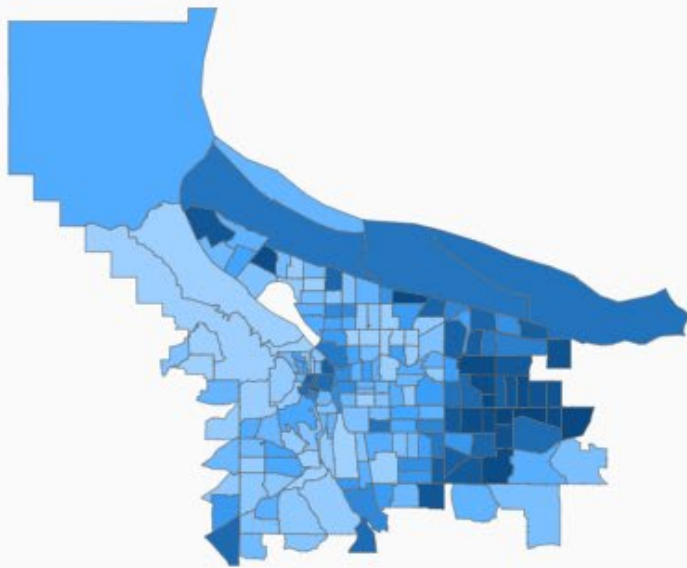


Studio[®]



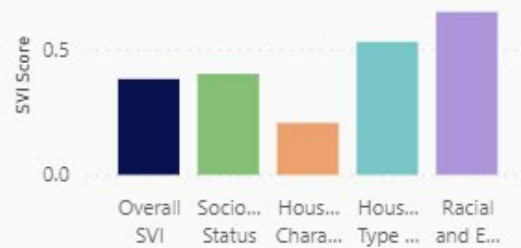
Explore the 2020 Social Vulnerability Index

Explore the 2020 SVI in Portland by selecting a census tract



Overall Vulnerability	Socioeconomic Status	Below 150% Poverty
		Unemployed
		Housing Cost Burden
		No High School Diploma
	Household Characteristics	No Health Insurance
		Aged 65 & Older
		Aged 17 & Younger
		Civilian with a Disability
	Racial & Ethnic Minority Status	Single-Parent Households
		English Language Proficiency
		Hispanic or Latino (of any race) Black or African American, Not Hispanic or Latino Asian, Not Hispanic or Latino American Indian or Alaska Native, Not Hispanic or Latino Native Hawaiian or Pacific Islander, Not Hispanic or Latino Two or More Races, Not Hispanic or Latino Other Race, Not Hispanic or Latino
	Housing Type & Transportation	Multi-Unit Structures
		Mobile Homes
		Crowding
		No Vehicle
Group Quarters		

SVI of census tract compared to Portland SVI



■ Selected tract
 ■ All Portland tracts

Explore the individual social factors of the SVI compared to the Portland average below. Scores are shown as percentage of households in the selected tract (dark color) vs the average in Portland (light color).

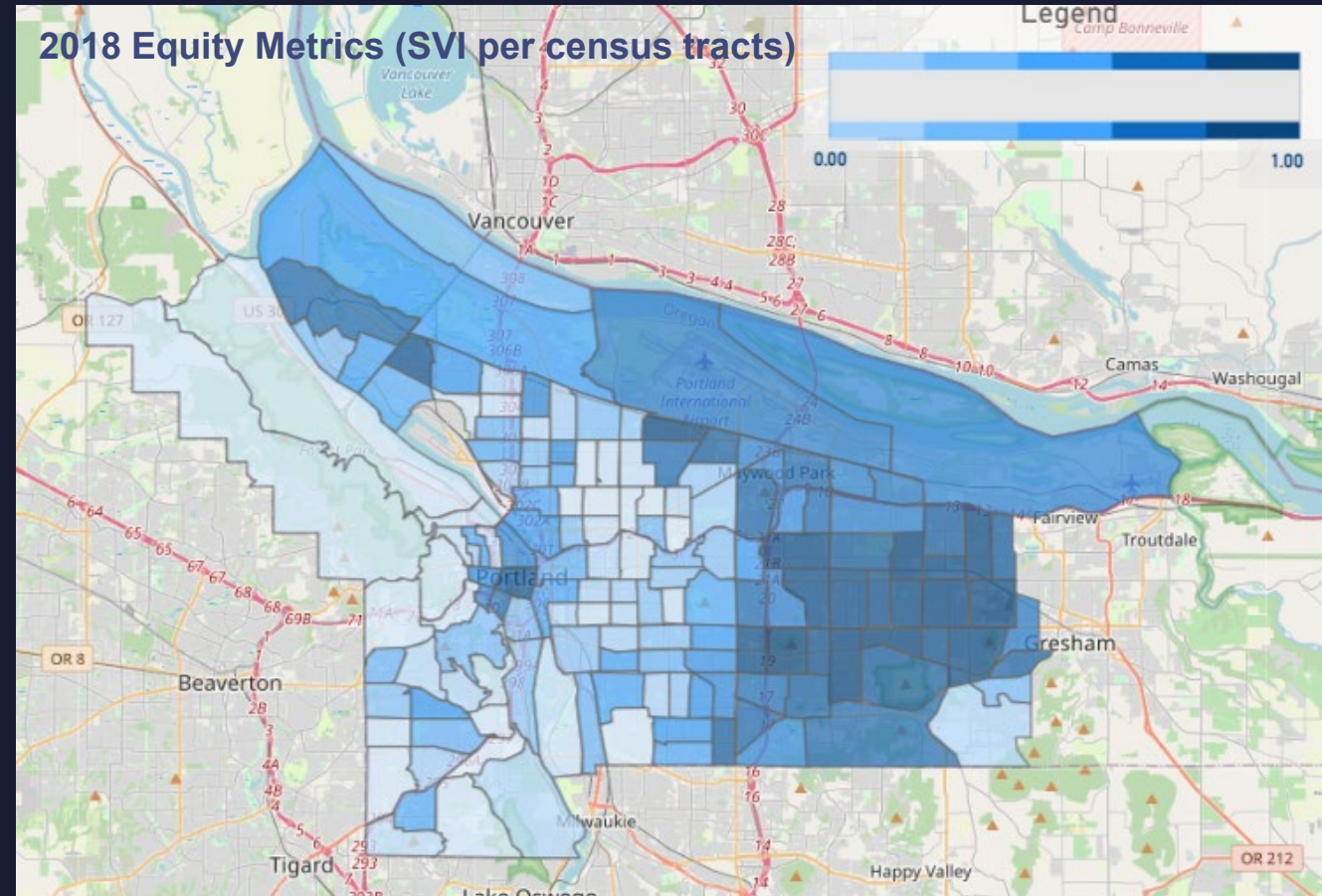


Incorporating an equity lens into the Asset Management level of service

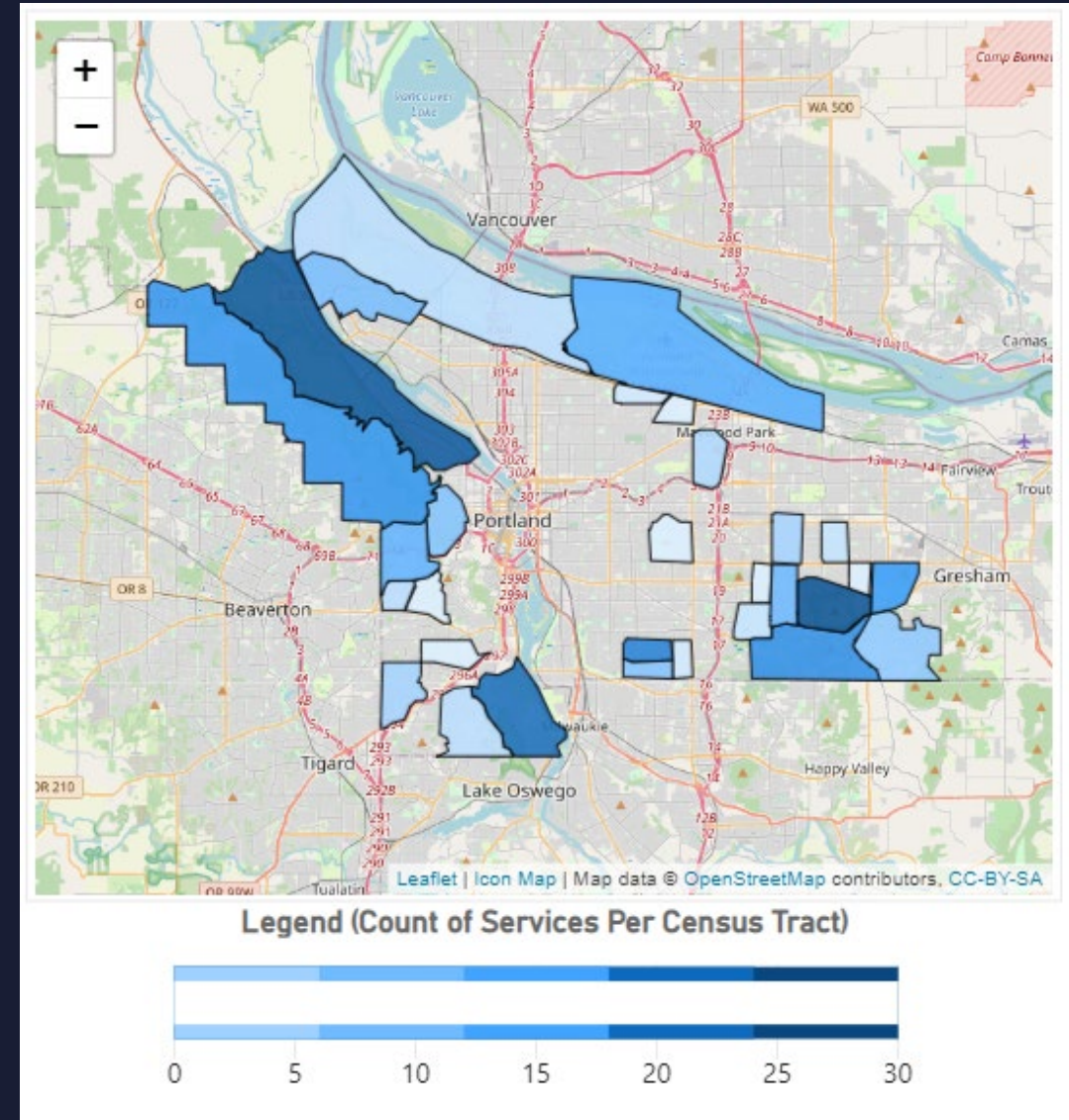
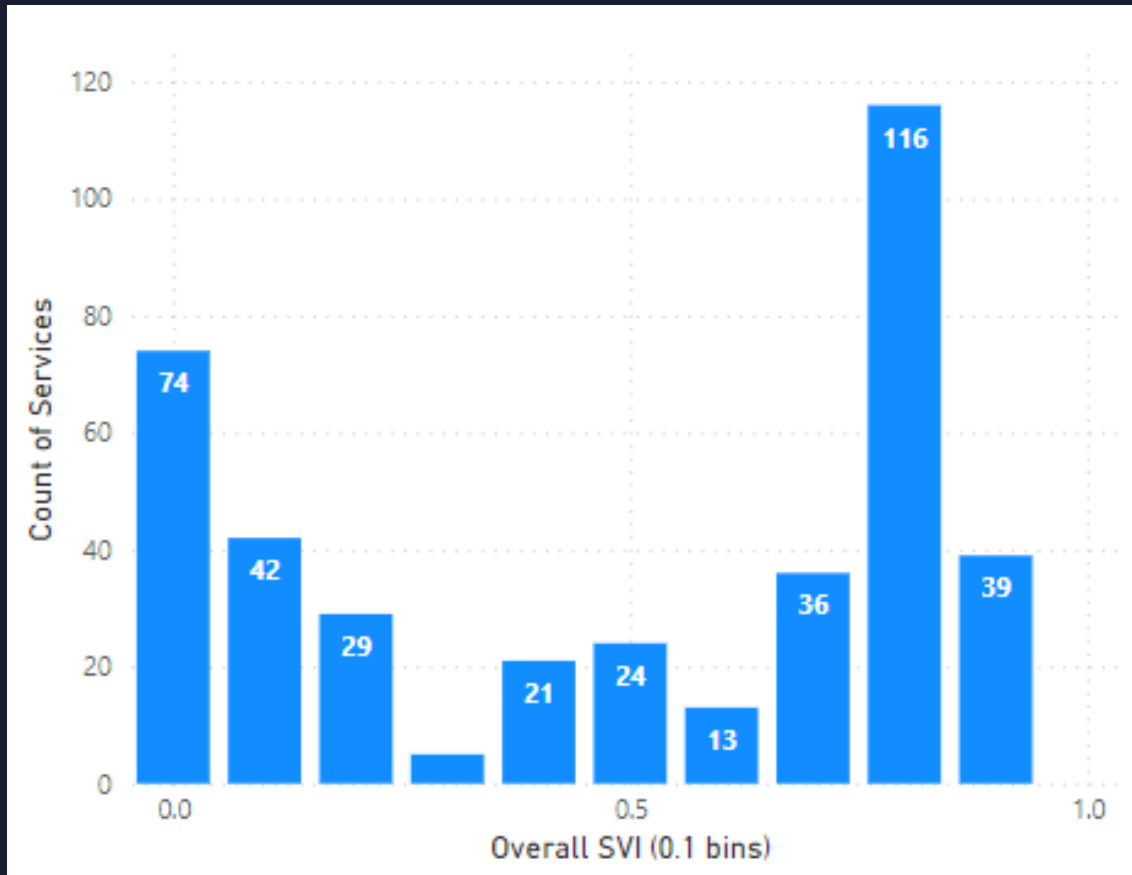
At least one hydrant within 500 feet of service connections

Highlights of our case study:

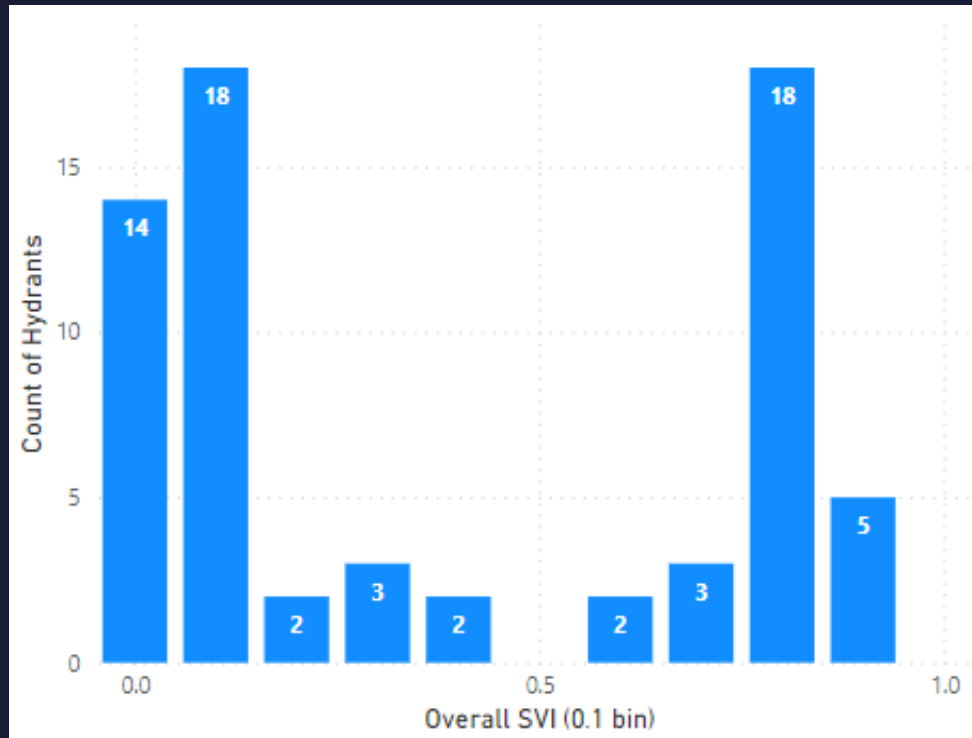
- 189,392 services IDs
- 491 services don't meet (2021 data)
 - 90 outside the city boundary
 - 401 inside the city boundary
- Using “overall” CDC SVI ratings (0-1)



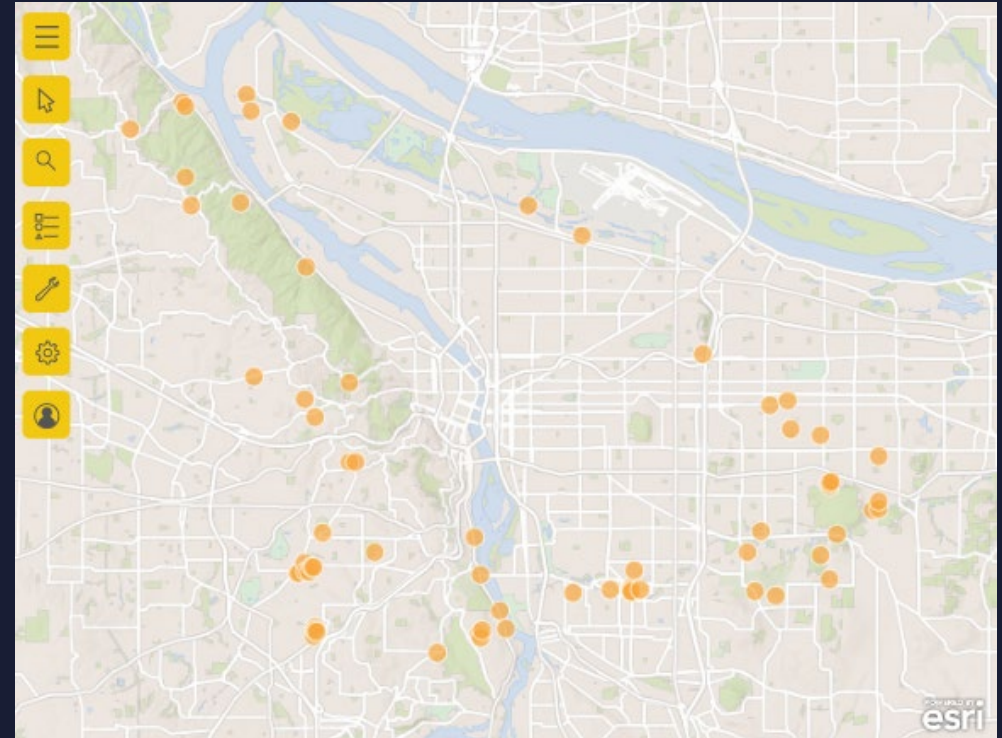
401 of unmet services



Count of proposed hydrants per census tract



Location of proposed hydrants (Possible Points)



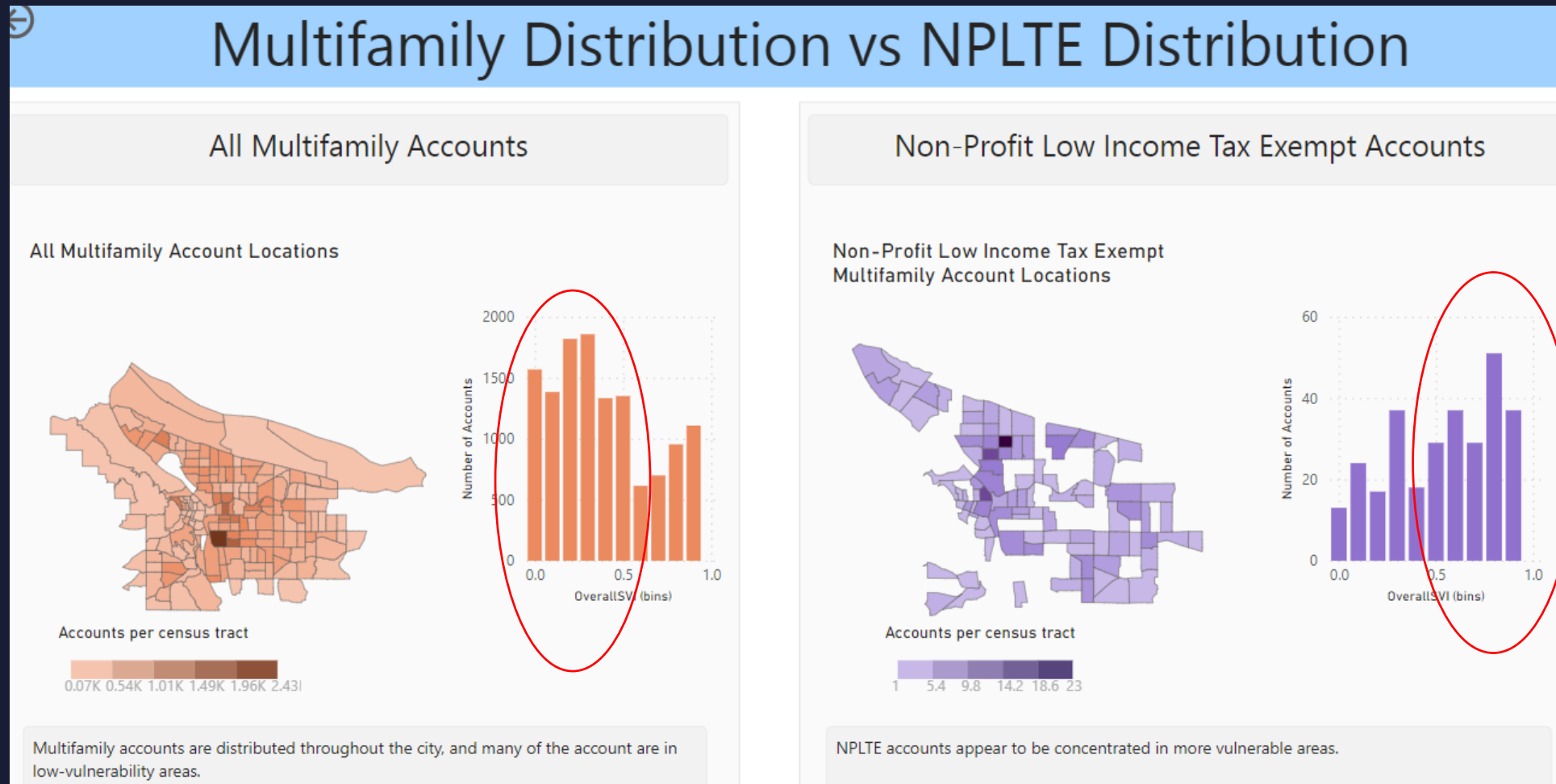
Action: prioritize the installation of new hydrants in the high vulnerable communities

Incorporating an equity lens into the Multifamily Benchmarking Project

Highlights of our case study:

- Pilot project, we seek to provide intensive and intentional outreach, education, and technical assistance
- Data driven approach to prioritize outreach to multifamily customers
- The goals for properties that receive outreach through the MFBP show a decrease in gallons/unit from one year to the next and an increase in satisfaction with PWB
- Around 13,000 multi-family properties or 7% of all services
- Starting with Non-Profit Low Income Housing Limited Tax Exemption (NPLTE) properties (around 300) as the focus
- Assess the focus using “overall” CDC SVI ratings (0-1)

We confirmed that NPLTE is the good starting list



NEXT STEPS

- Evaluate criteria for creating a multifamily financial assistance program
- SVI and water consumption will be used to prioritize these 300
- After these 300, the SVI and water consumption will be used to select a new list
- Community and internal feedback
- Establish data practitioners cohort
- Create a data governance policy
- Centralized data repository: quality control, documentation, catalogue
- Develop processes for integration of analyses into decision-making



Thank You.

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