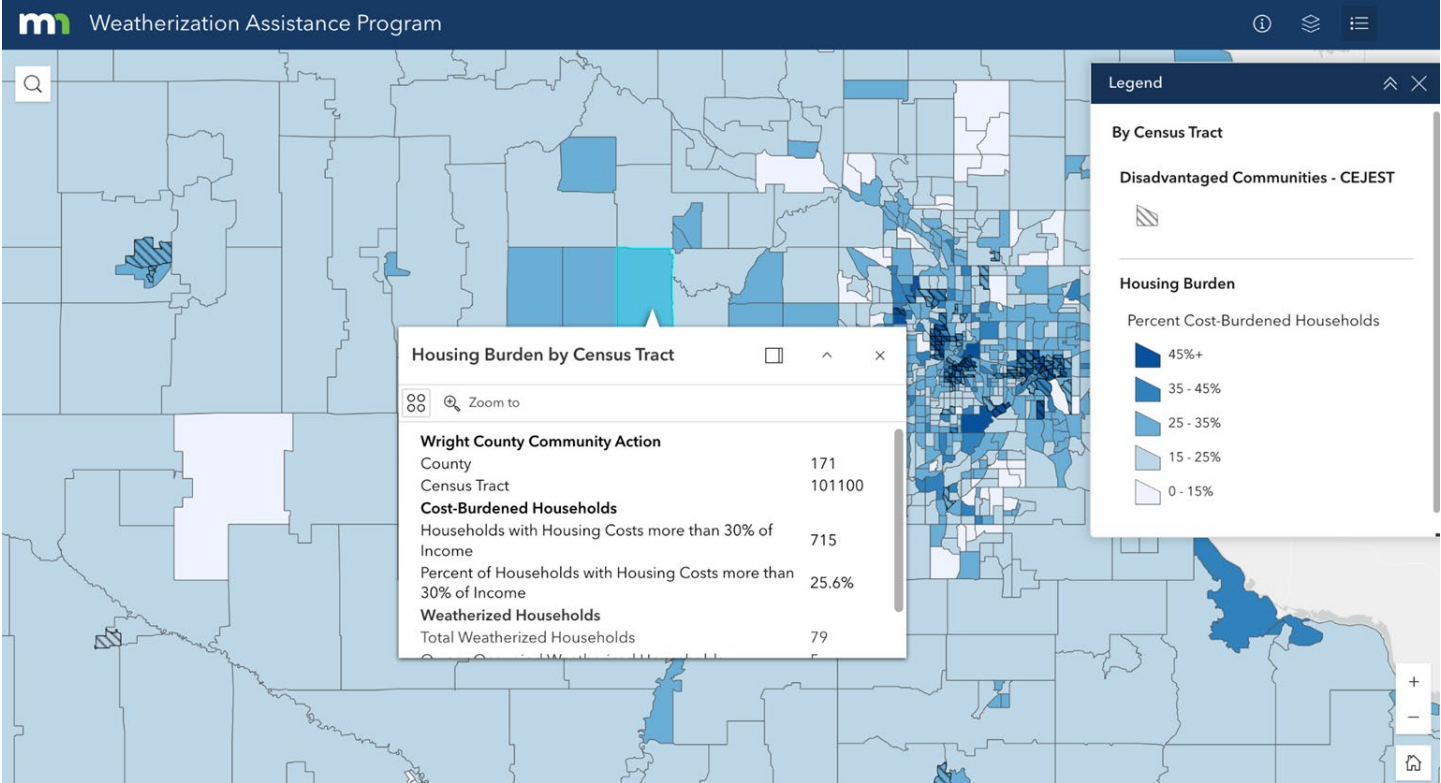


# Weatherization Assistance Program Map (WAPMAP)

An equity-focused mapping tool for the Minnesota  
Weatherization Assistance Program

# Public Map



# Internal Dashboard

**m** Weatherization Assistance Program

Select Service Provider

No Service Provider Selected

Service Provider  
**Sustainable Resources Center**

Census Tract  
**026811**

Total Population  
**5,898**

Total Households  
**1,875**

BIPOC Households  
**858**

Owner-Occupied Households  
**1,536**

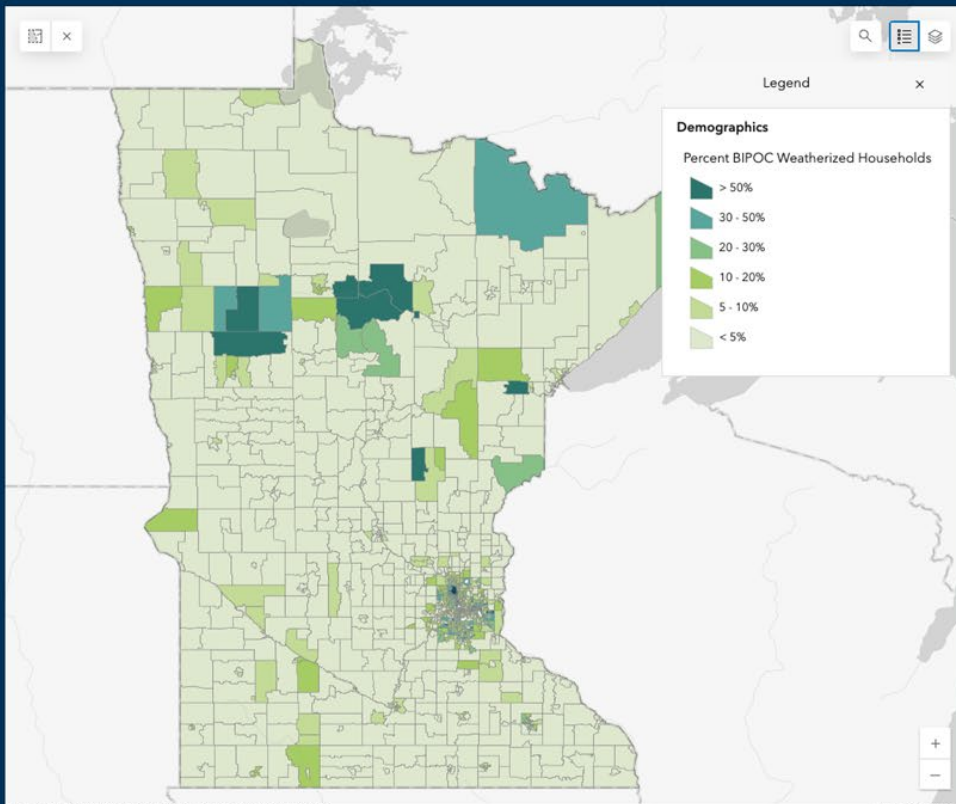
Average Energy Burden  
**6%**

Housing Burden  
**22.8%**

Families At or Below 200% FPL



Energy Burden by Federal Poverty Level



Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

Powered by Esri

WAP Households  
**86**

Owner-Occupied  
**77**  
WAP Households

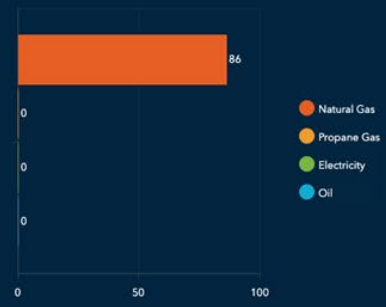
Renter-Occupied  
**9**  
WAP Households

Proportion of Eligible  
Households Served  
**3.2%**

Average Annual Heating  
Cost of WAP Households  
**\$949**

Median Household Income  
**\$83,450**

Families Living Below 200%  
of the Federal Poverty Line  
**8.2%**



Primary Heating Source for WAP Households

# Baseline Equity Reports

## Weatherization Assistance Program Baseline Equity Assessment Report

Service Provider: Arrowhead Economic Opportunity Agency

<b>79,622</b> Total households in service area (2020)	<b>39%</b> Service provider households in poverty* (2020)	<b>5,219</b> Total households served through the program (2007 - 2020)	<b>373</b> Average number of households weatherized per year (2007 - 2020)	<b>6%</b> Proportion of weatherized households that are BIPOC (2020)	<b>10</b> Total number of deferrals (2019 - 2022)
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Figure 1. Proportion of Energy Burdened Households (2022)

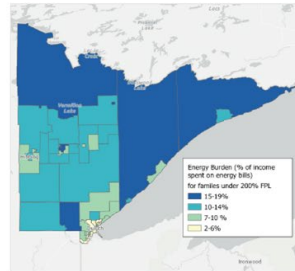


Figure 2. Proportion of Eligible Households Weatherized (2020)

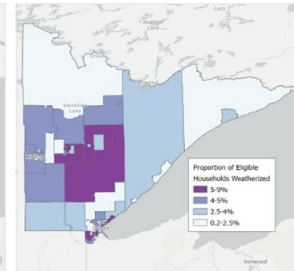
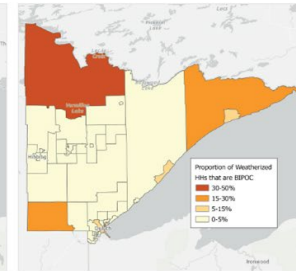


Figure 3. Proportion of Weatherized Households that are BIPOC (2020)



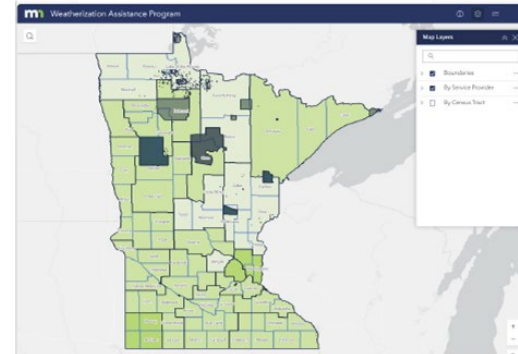
\* Below 200% Federal Poverty Level

# User Guides for Public Map and Internal Dashboard

## Technical Guide:

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Minnesota Department of Commerce  
Weatherization Assistance Program (WAP) Map



Last updated: May 2024

# Overview

1. High-Level Overview of the Project
2. Overview of Today's Training
3. Motivation: Equity and Weatherization
4. Objectives of the WAPMAP
5. What is the WAPMAP?
6. Purpose
7. Public Map
8. Internal Dashboard
9. Live Demo + Use Cases
10. Q&A
11. Survey

# Motivation: Equity and Weatherization

- Federal- *U.S. DOE Equity Action Plan 2021 New Strategies to Advance Equity (pursuant to EO 13985)*
  - Improve access and equity in DOE's Weatherization Assistance Program
  - Address gaps in data collection to facilitate data-informed, equitable decision-making
  - Supporting low-income, energy-burdened communities
- State- *Working Group Recommendations on the Minnesota Weatherization Assistance Program*
  - Ensure Equitable Service
  - Explore gaps in participation of the Weatherization Assistance Program based on: poverty, race, housing type, and household energy burden.



JANUARY 20, 2021

## Executive Order On Advancing Racial Equity and Support for Underserved Communities Through the Federal Government

 BRIEFING ROOM  PRESIDENTIAL ACTIONS

Pursuant to Executive Order 13985 (January 20, 2021) on "Advancing Racial Equity and Support for Underserved Communities Through the Federal Government"

Equity Action Plan Summary

**U.S. Department of Energy**

# Objectives of the WAPMAP

- Visualize the Weatherization Assistance Program's reach
- Compare historical data across communities
- Analyze participant demographics
- Conduct equity analysis
- Support enhanced targeting of services with data-informed decision making
- Identify gaps in coverage
- Support other implementation goals



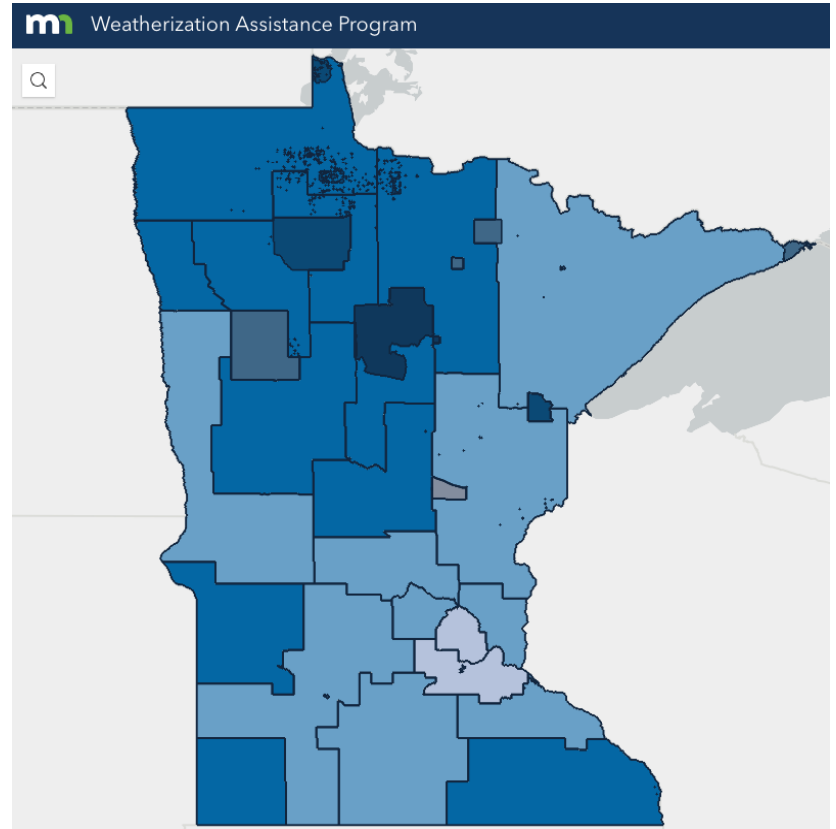
# What is the WAPMAP?

The WAPMAP is a web-based mapping tool that visualizes the impacts and equity of the Weatherization Assistance Program (WAP) in Minnesota.

The tool includes

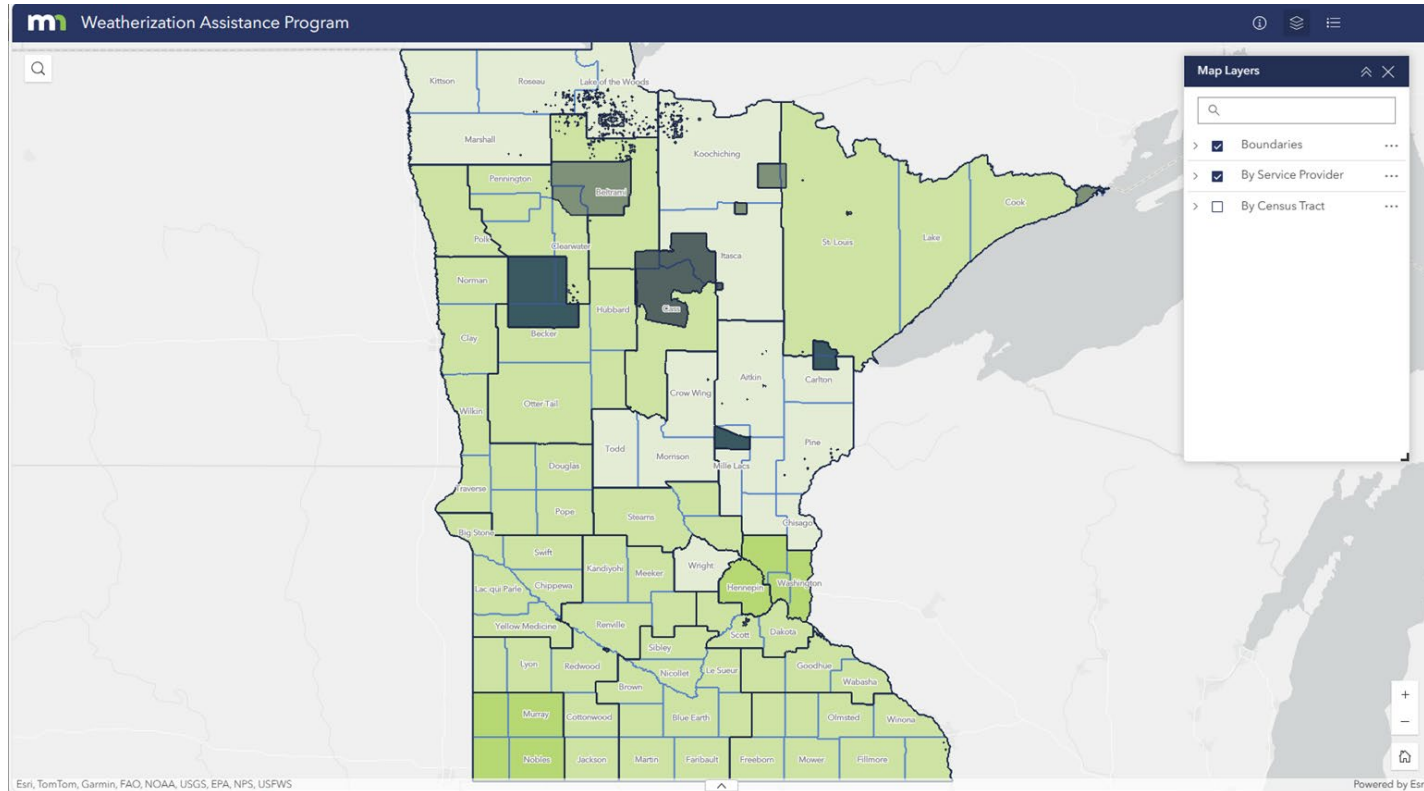
- public version (aggregated data)
- internal dashboard

WAP Service Providers (SPs) and Commerce staff can use the maps to see historical WAP activity together with demographic data to make comparisons between the participating households and surrounding populations.

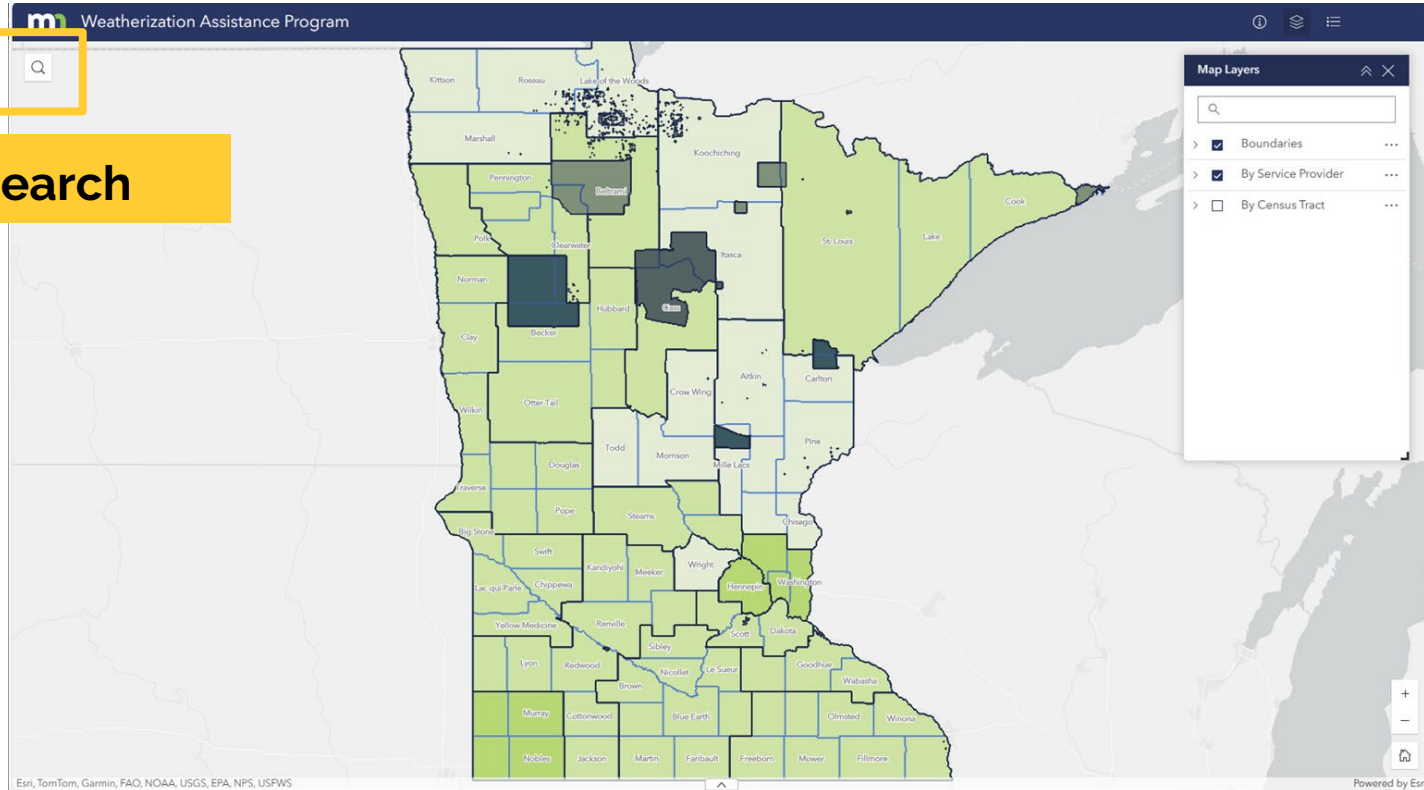


# WAP Public Map

# WAP Public Map Basic Navigation



# WAP Public Map Search Function



# WAP Public Map Search Function Cont.

The screenshot displays the Weatherization Assistance Program (WAP) Public Map Search Function. The map shows various counties in Minnesota, with a search bar highlighted in yellow. The search bar contains the text "Find address or place". The map displays county boundaries and service provider areas. A "Map Layers" panel is visible on the right, showing options for "Boundaries", "By Service Provider", and "By Census Tract".

Search

Find address or place

Map Layers

- Boundaries
- By Service Provider
- By Census Tract

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

Powered by Esri

# WAP Public Map - Zoom Function

The screenshot displays the Weatherization Assistance Program (WAP) Public Map interface. The map shows the state of Minnesota divided into counties, with several counties highlighted in dark blue, indicating areas of focus or activity. The map is overlaid with a grid of latitude and longitude lines. A search bar is visible in the top left corner, and a 'Map Layers' panel is open on the right side, showing options for 'Boundaries', 'By Service Provider', and 'By Census Tract'. A yellow callout box with the text 'Zoom in/out' is positioned over the zoom control buttons in the bottom right corner of the map. The zoom control consists of a white square with a plus sign (+) above a minus sign (-). The map is powered by Esri, as indicated by the text 'Powered by Esri' in the bottom right corner.

Weatherization Assistance Program

Map Layers

- Boundaries
- By Service Provider
- By Census Tract

Zoom in/out

Powered by Esri

# WAP Public Map - Home Setting

The screenshot displays the Weatherization Assistance Program (WAP) Public Map interface. The map shows Minnesota divided into counties, with several counties highlighted in dark blue, indicating service areas. The 'Map Layers' panel on the right is open, showing the following settings:

- Boundaries
- By Service Provider
- By Census Tract

A yellow 'Home' button is located in the bottom right corner of the map area. The interface also includes a search bar, a scale bar, and a 'Powered by Esri' logo.

# WAP Public Map - Info Button

Info

The screenshot displays the WAP Public Map interface. The map shows Minnesota counties with various data points and layers. A yellow box highlights the 'Info' button in the top right corner of the map area. A 'Map Layers' panel is open on the right side of the map, showing options for 'Boundaries', 'By Service Provider', and 'By Census Tract'. The map is titled 'Weatherization Assistance Program' in the top left corner.

Map Layers

- Boundaries ...
- By Service Provider ...
- By Census Tract ...

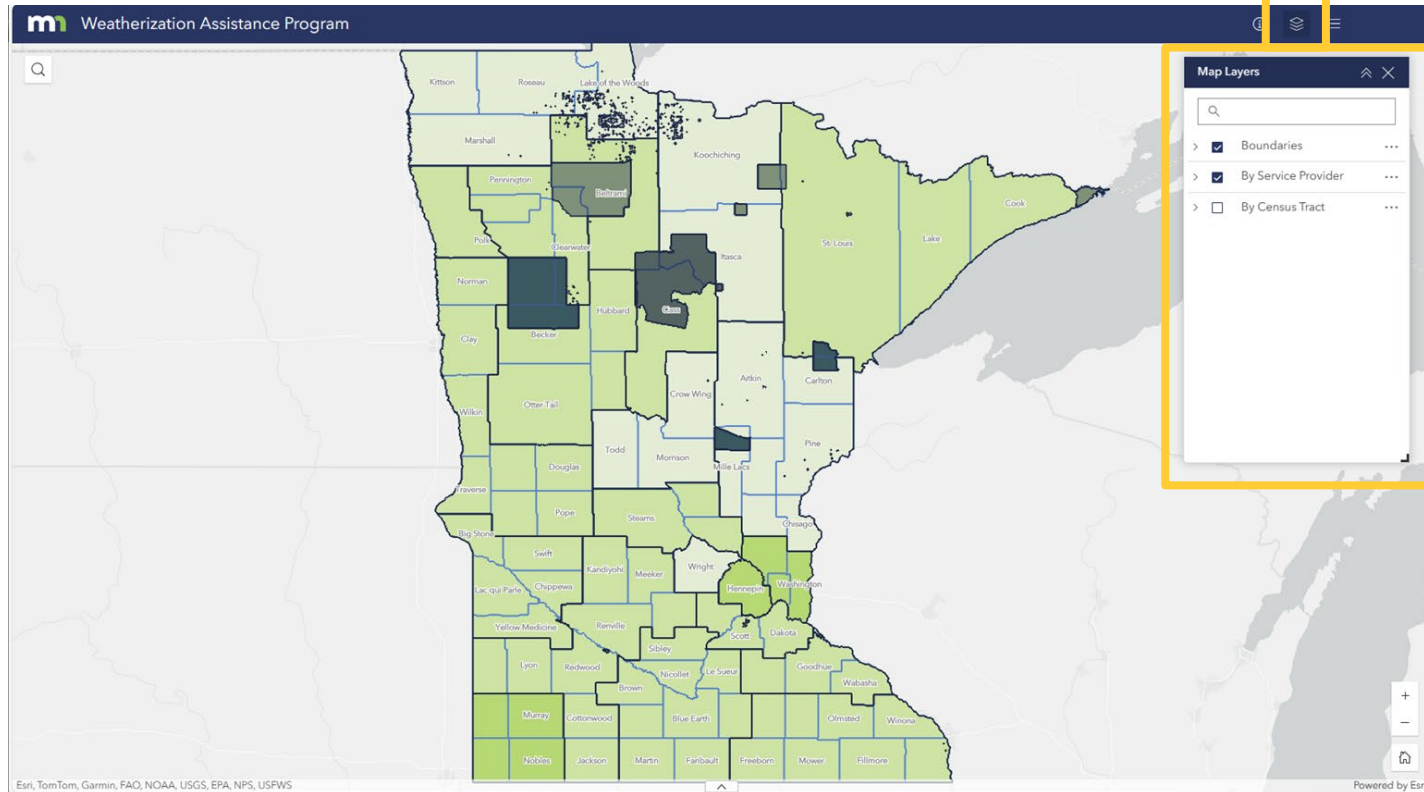
Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USPWS

Powered by Esri



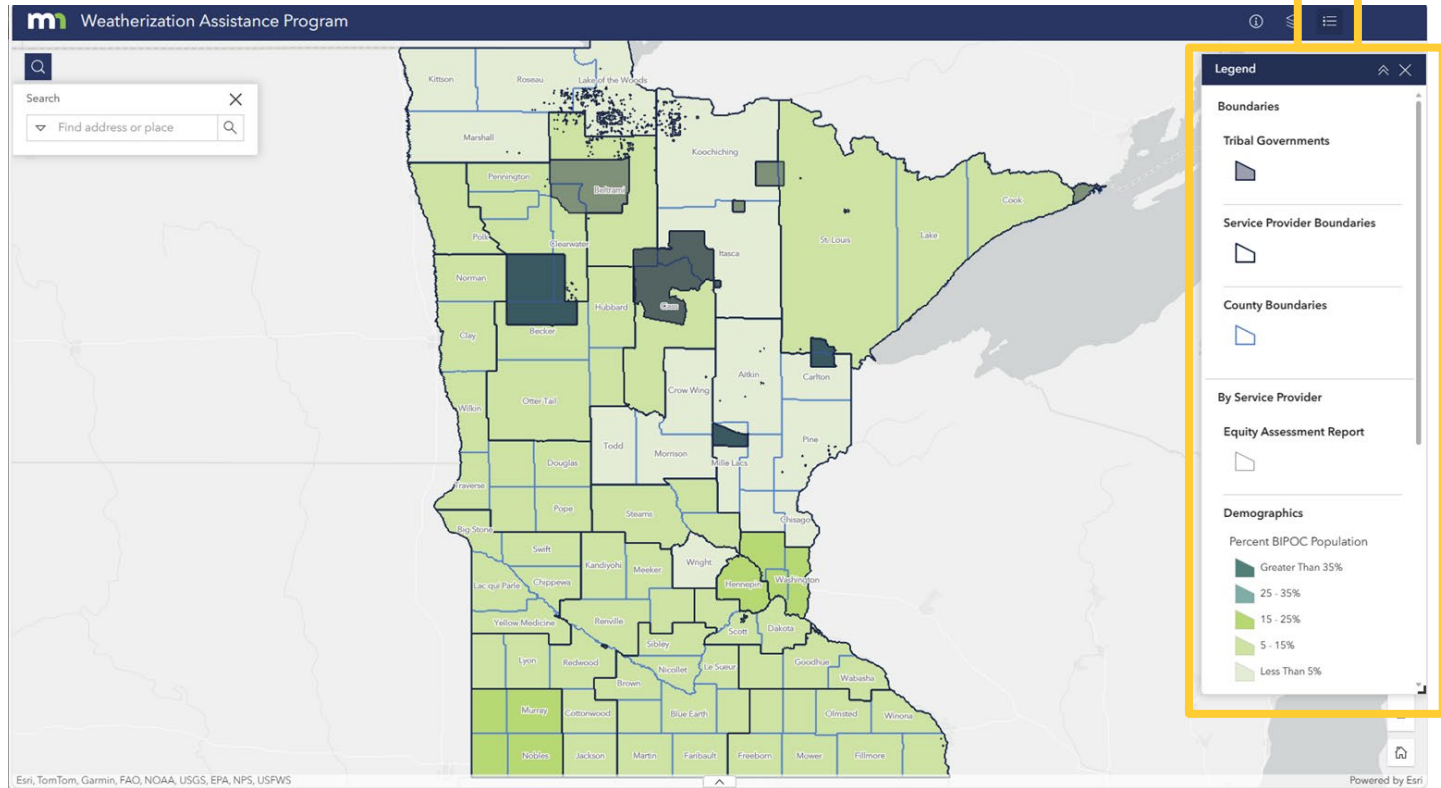
# WAP Public Map Data Layers

## Data Layers

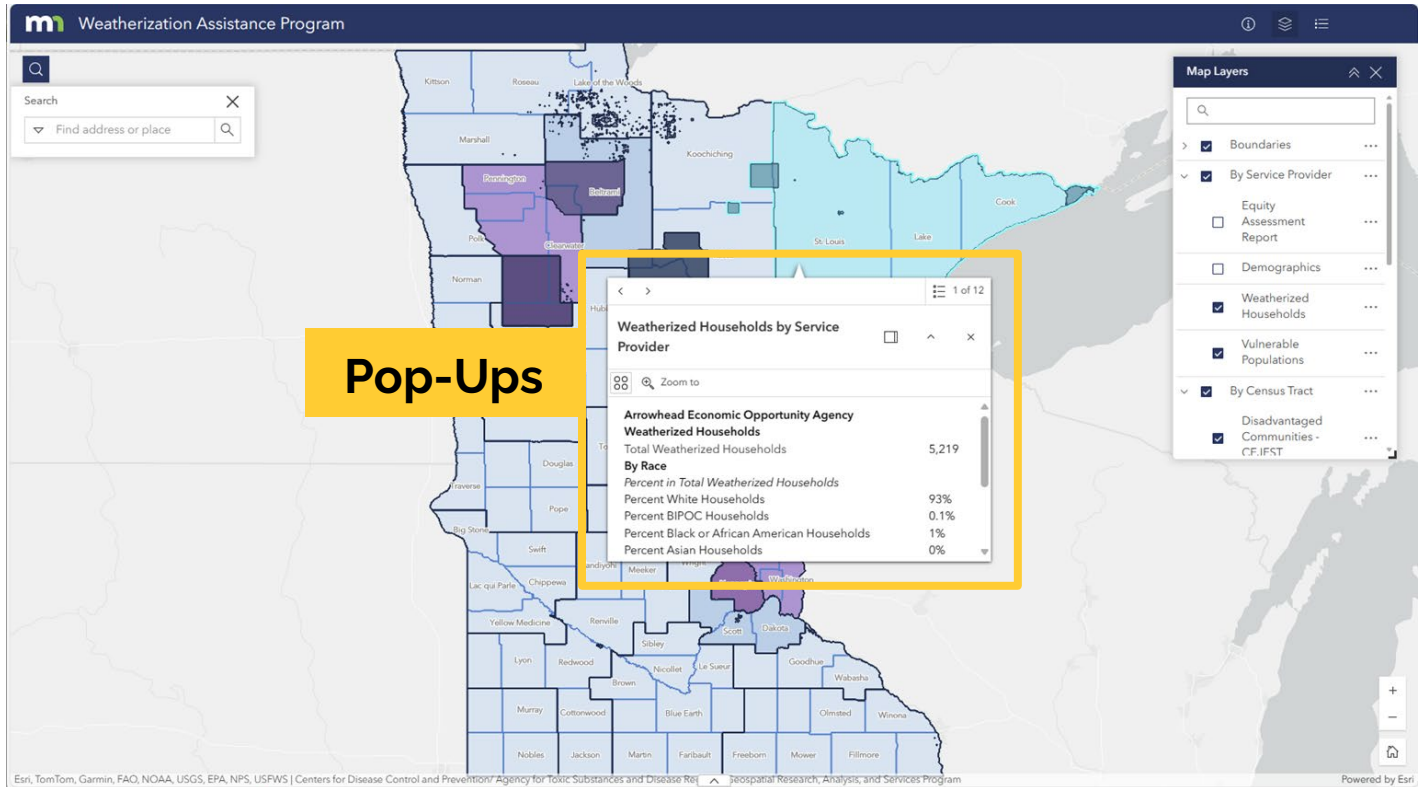


# WAP Public Map Legend

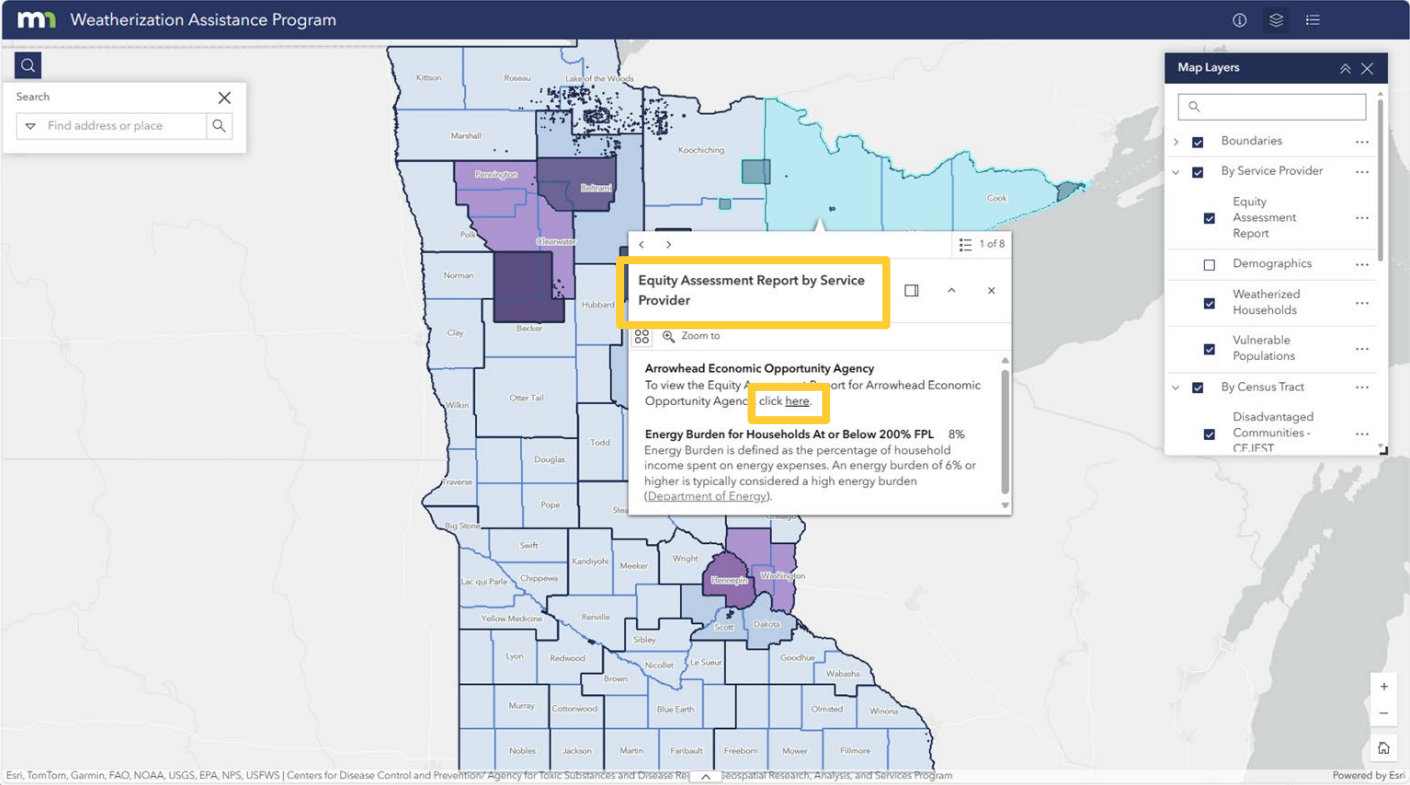
## Legend



# Map PopUps



# Baseline Equity Reports



# Baseline Equity Reports: Page 1



Last updated: April 2024

## Weatherization Assistance Program Baseline Equity Assessment Report

Service Provider: Arrowhead Economic Opportunity Agency

<b>79,622</b> Total households in service area (2020)	<b>39%</b> Service provider households in poverty* (2020)	<b>5,219</b> Total households served through the program (2007 - 2020)	<b>373</b> Average number of households weatherized per year (2007 - 2020)	<b>6%</b> Proportion of weatherized households that are BIPOC (2020)	<b>10</b> Total number of deferrals (2019 - 2022)
--	--	---	---	---	--

Figure 1. Proportion of Energy Burdened Households (2022)

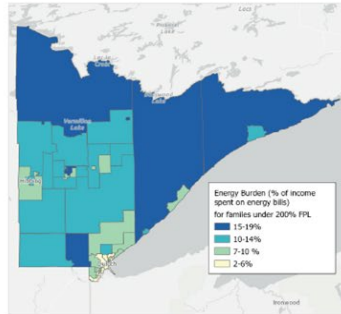


Figure 2. Proportion of Eligible Households Weatherized (2020)

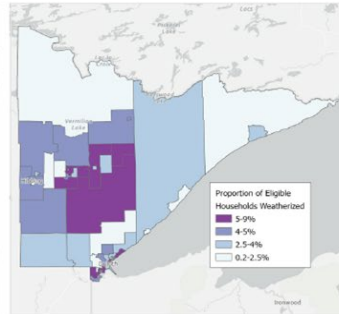
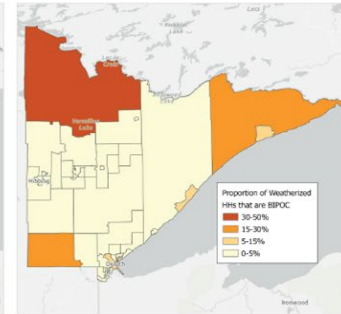


Figure 3. Proportion of Weatherized Households that are BIPOC (2020)



\* Below 200% Federal Poverty Level

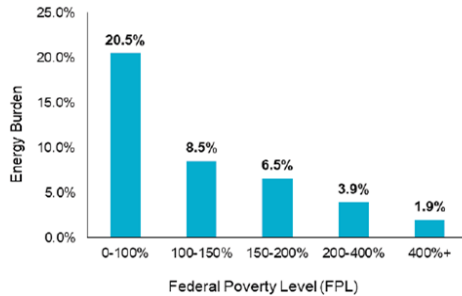
# Baseline Equity Reports: Page 2

Service Provider: **Arrowhead Economic Opportunity Agency**

Last updated: April 2024

## Weatherization Assistance Program Baseline Equity Assessment Report

Figure 4. Energy Burden by Federal Poverty Level (2022)



WAP Service Provider Area (2022)

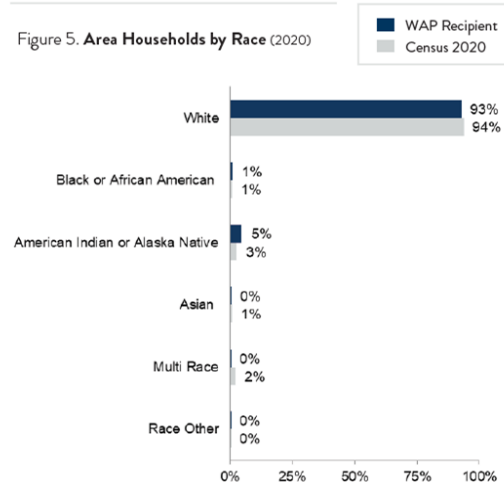


\* Possible scores range from 0 (lowest vulnerability) to 1 (highest vulnerability). A score of 0.59 indicates a medium to high level of vulnerability.

WAP Applicants with (2007 - 2020)



Figure 5. Area Households by Race (2020)



# Baseline Equity Reports: Page 3

Service Provider: **Arrowhead Economic Opportunity Agency**

Last updated: April 2024

## Weatherization Assistance Program Baseline Equity Assessment Report

Figure 6. Trend of Weatherization Applications (2007-2020)

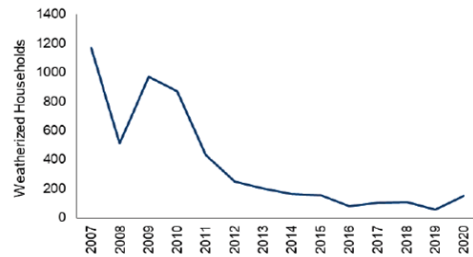


Figure 7. Area Housing Type (2020)

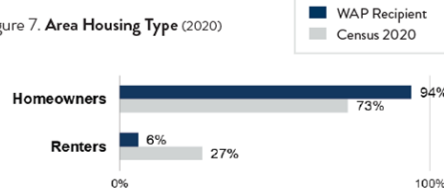
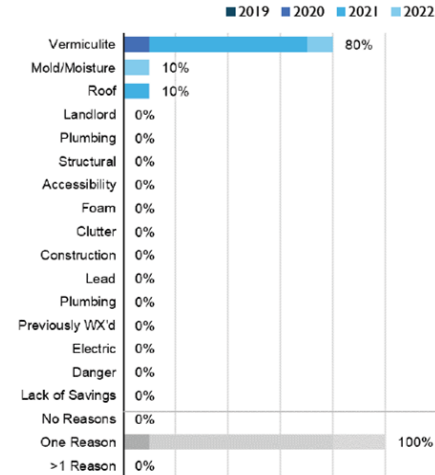


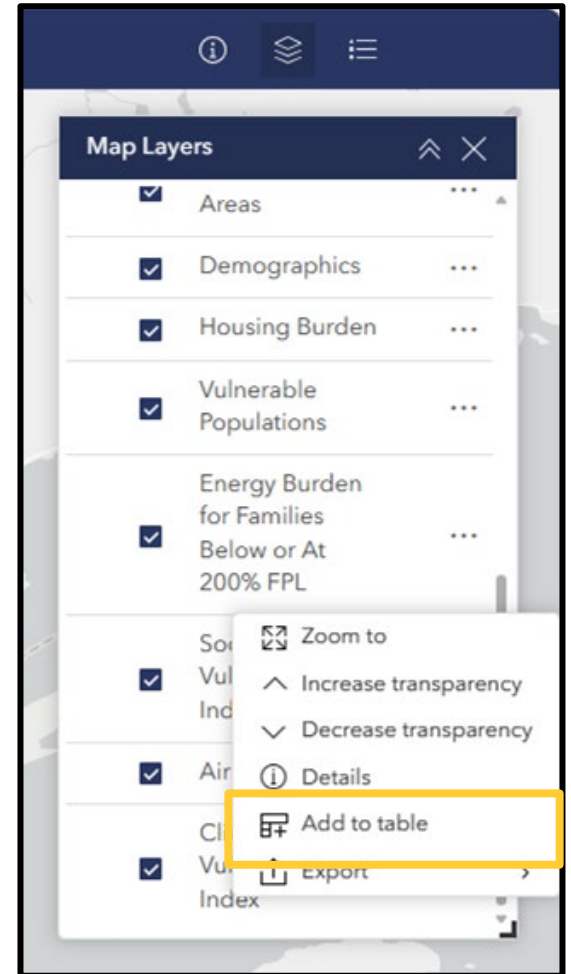
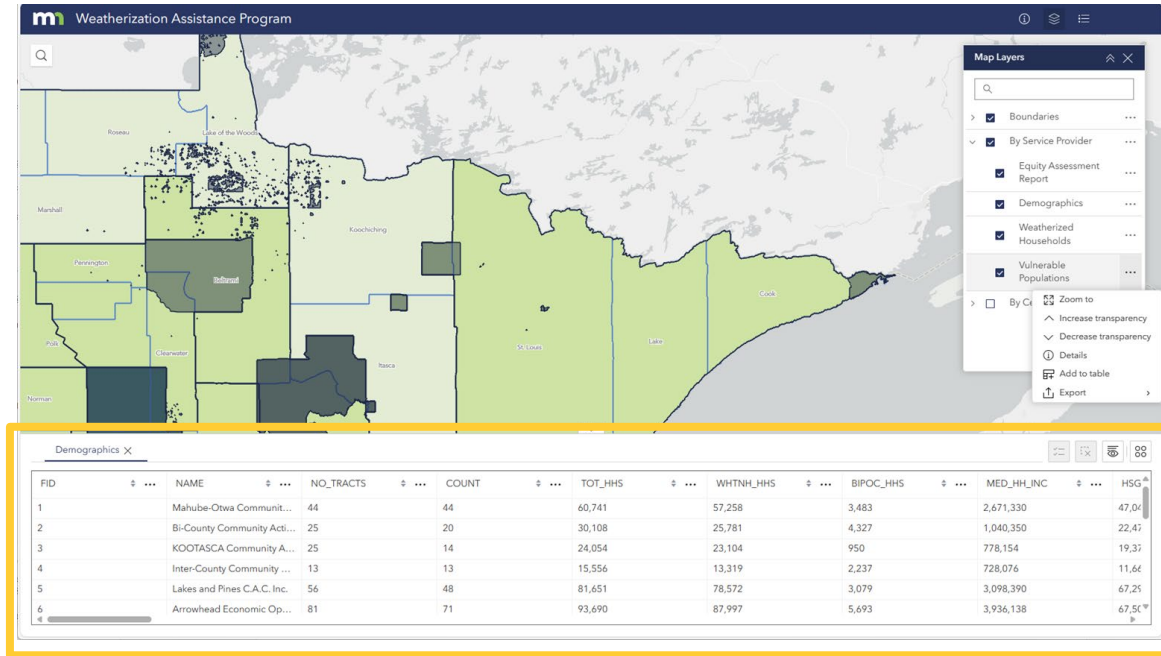
Figure 8. Weatherization Deferrals by Coded Reason (2019 - 2022)



**Data Sources:**


Minnesota Department of Commerce WAP, 2005-2022  
 ACS 5-Year Estimates, 2015-2022  
 CDC/ATSDR Social Vulnerability Index 2020  
 Princeton University, Eviction Lab 2022  
 US Department of Energy, Low-Income Energy Affordability Data, 2022.  
 US Department of Energy, Justice 40 Initiative Tool

# Data Table





# Data Table Filters



Demographics X

FID	NAME	NO_TRACTS	COUNT	WHTNH_HHS	BIPOC_HHS	MED_HH_INC	HSG
7	Mille Lacs Band of Ojibwe	1	1	687	390	40,699	696
8	Fond du Lac Reservation B...	2	1	601	558	54,107	832
9	White Earth Reservation E...	3	3	3,378	1,899	1,479	2,466
12	Northwest Community Act...	14	13	13,281	12,805	476	10,84
4	Inter-County Community ...	13	13	15,556	13,319	2,237	11,66
19	Prairie Five Community Ac...	19	18	18,947	17,689	1,258	13,85

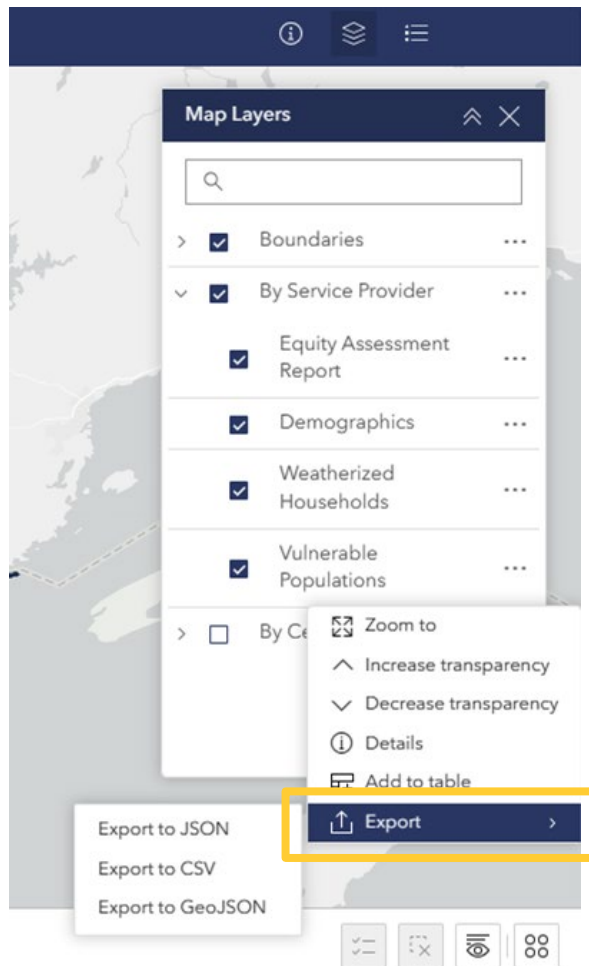
A yellow box highlights a sorting dropdown menu for the 'COUNT' column, showing options for 'Sort ascending' and 'Sort descending'.

# Data Table Use Cases

The screenshot displays the Weatherization Assistance Program interface. At the top, the title bar reads "Weatherization Assistance Program". Below the title bar is a search bar and a map of Minnesota. The map shows various counties and reservations, with a data table overlaid on the bottom portion. The table is titled "Demographics" and contains columns for FID, NAME, NO\_TRACTS, COUNT, TOT\_HHS, WHTNH\_HHS, BIPOC\_HHS, MED\_HH\_INC, and HSG\_C. The table is highlighted with a yellow border. On the right side of the map, there is a "Map Layers" panel with several layers checked, including "Boundaries", "By Service Provider", "Equity Assessment Report", "Demographics", "Weatherized Households", and "Vulnerable Populations".

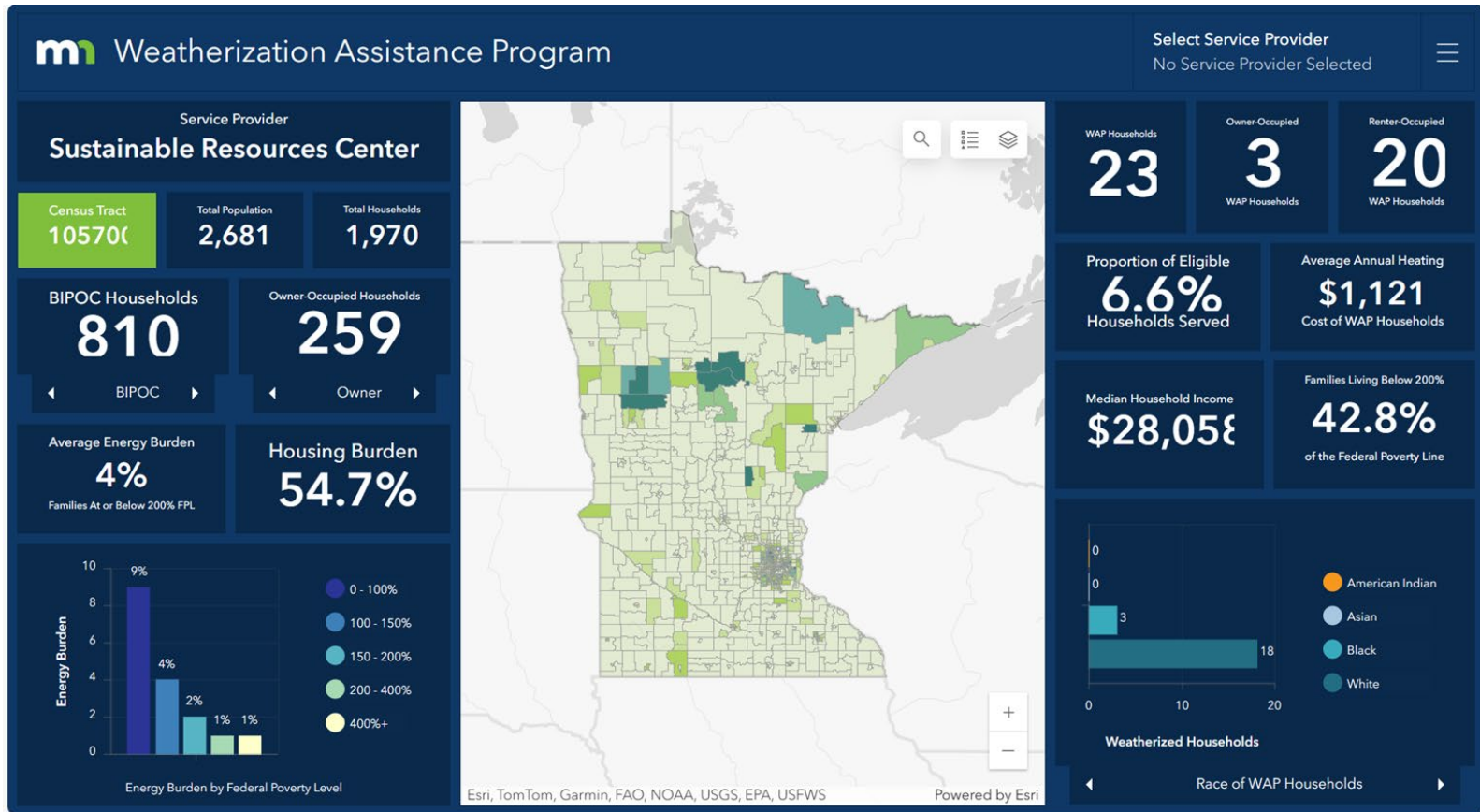
FID	NAME	NO_TRACTS	COUNT	TOT_HHS	WHTNH_HHS	BIPOC_HHS	MED_HH_INC	HSG_C
8	Fond du Lac Reservation B...	2	1	1,159	601	558	54,107	832
9	White Earth Reservation E...	3	3	3,378	1,899	1,479	138,854	2,466
12	Northwest Community Act...	14	13	13,281	12,805	476	763,061	10,843

# Data Download (if available)



# Internal Dashboard

# Internal Dashboard



# Select Service Provider

## m Weatherization Assistance Program

Service Provider  
Dakota County Community Development Agency

Census Tract <b>105700</b>	Total Population <b>1,628</b>	Total Households <b>837</b>
-------------------------------	----------------------------------	--------------------------------

White Households <b>1,160</b>	Owner-Occupied Households <b>259</b>
White	Owner

Average Energy Burden <b>5%</b> Families At or Below 200% FPL	Housing Burden <b>54.7%</b>
---	--------------------------------

Energy Burden by Federal Poverty Level

0 - 100%	9%
100 - 150%	4%
150 - 200%	2%
200 - 400%	1%
400%+	1%

Select Service Provider  
Dakota County Community D...

- Arrowhead Economic Opportunity Agency
- Bi-County Community Action Programs
- Community Action Partnership of Ramsey & Washington Counties
- Dakota County Community Development Agency

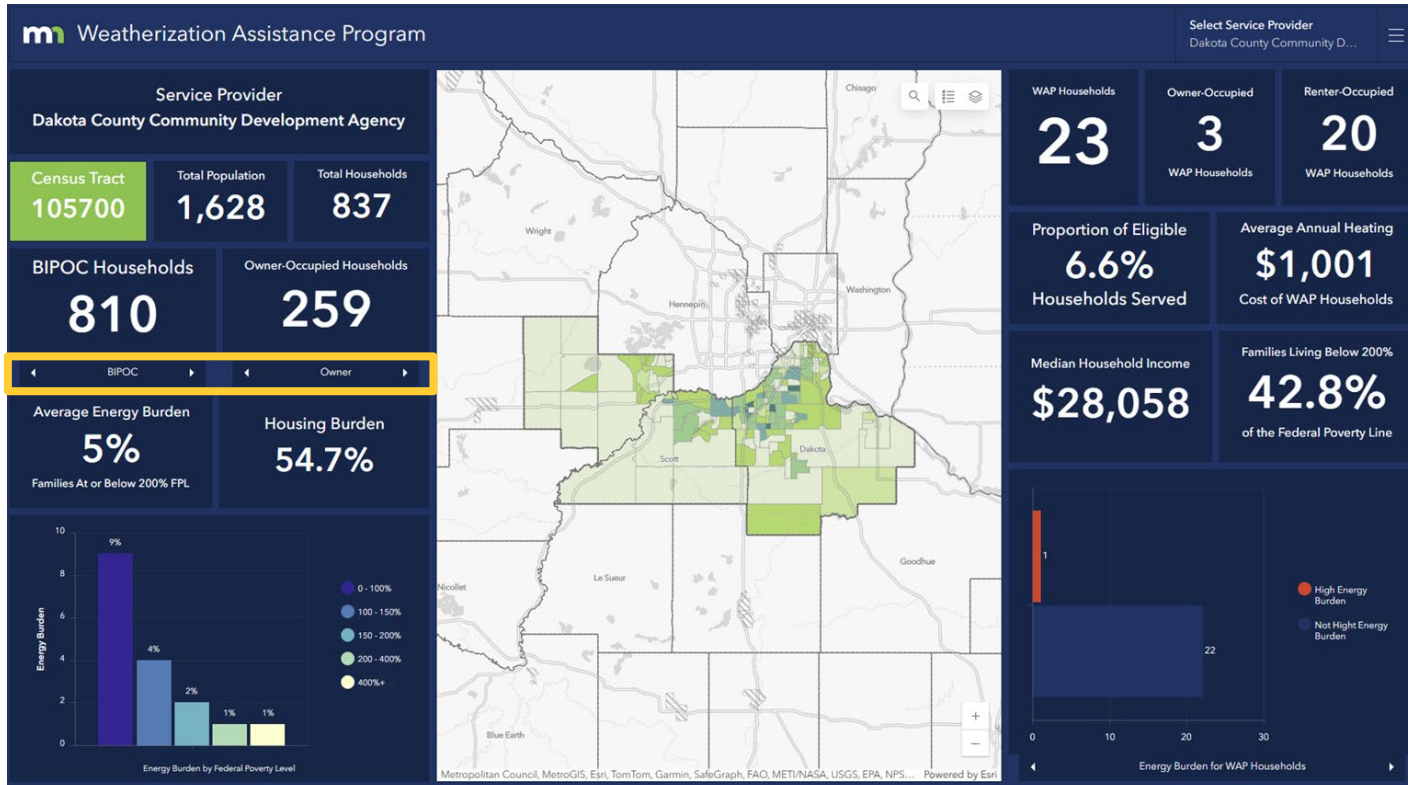
\$28,058	42.0%
of the Federal Poverty Line	

Energy Burden for WAP Households

High Energy Burden	1
Not High Energy Burden	22

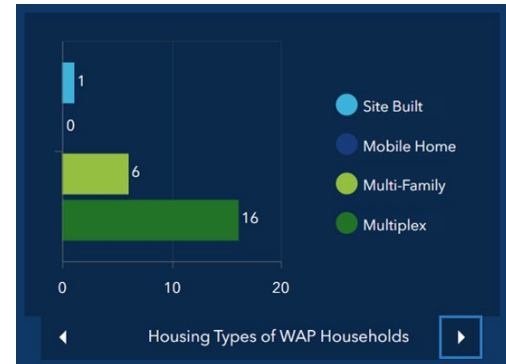
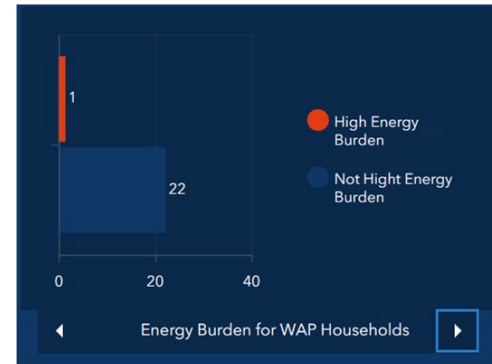
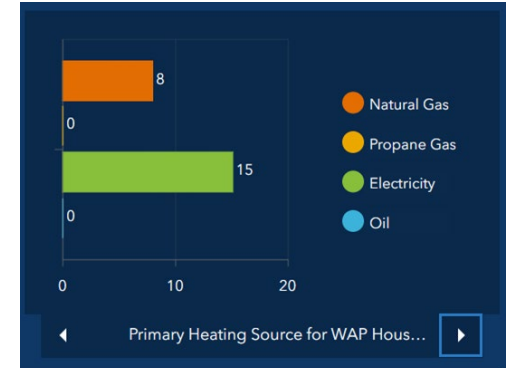
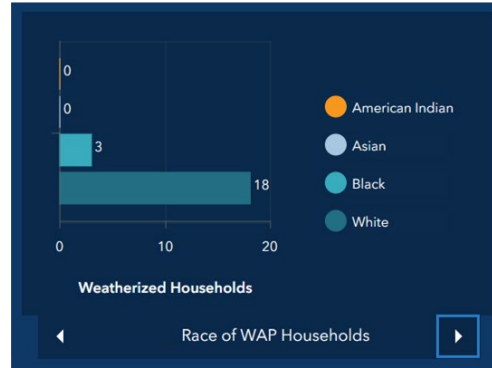
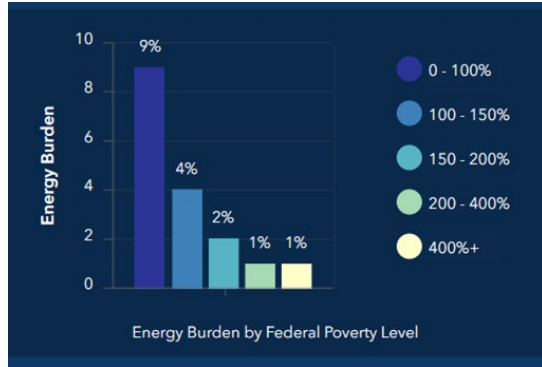
Metropolitan Council, MetroGIS, Esri, TomTom, Garmin, SafeGraph, ... Powered by Esri

# Indicators, Maps, and Charts



# Indicators, Maps, and Charts cont.

## WAP Households





# Accessing Layers

