



COMMUNITY ACTION PARTNERSHIP OF NORTH DAKOTA
**THE WEATHERIZATION ASSISTANCE
PROGRAM IN NORTH DAKOTA**



WEATHERIZATION ASSISTANCE PROGRAM



The U.S. Department of Energy's Low-Income Weatherization Assistance Program works to increase the energy efficiency of homes owned or occupied by low-income persons, reducing their total residential energy expenditures, and improving their health and safety. The program operates in every state, District of Columbia, among Native American tribes, and U.S. territories.

North Dakota Community Action Agencies have been weatherizing homes across the state since 1976. Since 2011, more than 11,000 homes in North Dakota have been equipped with energy-conservation measures helping ease the burden of those low-income households.

The benefits to home weatherization are many, including:

- Reduced household energy usage and cost
- Improved housing conditions, which in turn improves health and safety
- Reduced greenhouse gas emissions
- Increased resilience to climate change impacts

Weatherization funds are targeted to the most cost-efficient conservation measures, determined from an on-site energy audit. Locally-based, trained energy auditors use advanced diagnostic equipment such as blower doors, manometers, and infrared cameras to create comprehensive analyses of homes to determine the most appropriate, cost-effective measures and identify any specific health and safety concerns. Each energy conservation measure must return a minimum of \$1.00 in savings for every \$1.00 expended in labor and material costs (also called the SIR requirement).

There are nine general categories from which an energy auditor may choose based upon their ability to save energy:

- General Heat Waste
- Attic Insulation
- Wall Insulation
- Perimeter Insulation
- Window Treatments to Prevent/Mitigate Heat Loss
- Door Treatments to Reduce Heat Loss
- Furnace Efficiency Measures
- Building Repair



Weatherization Mission

To reduce energy costs for low-income families, particularly for the elderly, people with disabilities, and children, while ensuring their health and safety.



ENERGY SAVINGS AND ENVIRONMENTAL BENEFITS

Household energy usage comprises approximately 22% of total energy consumption in the United States with Americans spending, on average, more than \$230 billion each year on home energy. Low-income households often carry a larger burden for energy costs compared to other households. One of the most important goals of the Weatherization Assistance Program is to help alleviate the heavy cost burden low-income households face through cost-effective building shell improvements and, in doing so, assist those households in becoming more self-sufficient.

In the first year following weatherization services and upgrades, families see energy savings of approximately \$372 and continue to see similar savings year after year. In cold weather climates, such as those in North Dakota, households may also see a reduction in heating costs by approximately 30% .

In North Dakota, the Weatherization Assistance Program completed weatherization services on 1,060 homes between January 2020 and December 2021. These homes will experience an approximate lifetime energy savings of \$6,581,982.

In addition to energy savings, the weatherization assistance program also helps reduce the environmental impact associated with inefficient housing stock. Residential energy usage in the United States accounts for one-fifth of all greenhouse gas emissions. Weatherization not only reduces greenhouse gas emissions which improve air quality, it also lessens the stress on the power grid. The use of durable, energy efficient materials also make homes more resilient to the effects of climate change.

First-Year Energy Savings



\$372
per family

Heating Bill Reduction in Cold Weather States

~30%

01/01/2020 to 12/31/21



1060
homes weatherized

Lifetime Energy Savings

\$6,581,982



Did You Know?

Low-income households carry a larger burden for energy costs, typically spending 13.9% of their annual income on energy compared to 3% for other households.

HEALTH AND SAFETY BENEFITS



Non-energy benefits are a tremendous value for the families whose homes have been weatherized. Research has shown a decrease in health care utilization by weatherized households which leads to lower out of pocket medical costs by an average of \$514. The total health and household benefits for each unit averages \$14,148. For those that are Medicaid insured, there can be fewer Medicaid claims resulting in a decline in annual Medicaid costs per year.

Physical changes made during weatherization have been shown to reduce or prevent symptoms of Bronchitis, Allergies, and Chronic Obstructive Pulmonary Disease (COPD), as well as reduce Asthma attacks in existing asthmatic occupants. Studies have also shown about a 65% reduction in the mean number of hospital visits for asthma patients.

Weatherization measures also reduce irritants and allergens such as mold, dust mites, extreme heat/cold, humidity, pests, and moisture. This can help decrease instances of respiratory symptoms that would normally result in missed school or work, emergency room visits, and hospital admissions. In addition, weatherization measures that help eliminate pests and reduce the need to crowd for warmth, may also help reduce infectious disease transmission.

The poor housing conditions found in many homes prior to weatherization increase the risk of accidental injury such as trips, falls, and electrocutions. Weatherization measures help reduce the risk of accidental injury making the overall living environment safer.

Weatherization can also reduce poverty-related stressors faced by occupants. Their overall better general health, improved sleep quality, feelings of safety and the ability to allocate more money to necessities like food and medication improves occupants mental and social health.

Seniors, in particular, benefit from receiving weatherization services which can make their home safer and keep them healthier. These services increase a seniors ability to remain and age in their own home and community safely, independently, and comfortably.

Household Out Of Pocket Medical Cost Savings

\$514

Non-Energy Benefits Per Unit

\$14,148

Reduction in Asthma Related Hospital Visits



65%



Improves mental and social health by reducing stressors and improving feelings of safety



WORKFORCE RELATED BENEFITS

The Weatherization Assistance Program benefits extend well beyond the individual household, helping to spur economic growth within communities. The program is the largest whole-house energy retrofit program in the nation and its workforce is highly skilled and trained.

The program directly supports 8500+ jobs nationwide and approximately 60 dedicated weatherization staff in the state of North Dakota alone. Agencies that facilitate the program also have staff (e.g. human resources, fiscal, etc.) that provide essential support to those who work directly with the program.

 **8500+**
Jobs Supported Nationwide

 **60** Dedicated
Weatherization
Staff in
North Dakota

 **280+**
Contractors and
Suppliers

The Weatherization Assistance Program utilizes local contractors to help provide other specialized services (e.g. electricians, HVAC technicians, plumbers, etc.). The program also obtains their supplies/equipment from a variety of, primarily, local vendors. Across the state, the program has partnered with approximately 280+ area contractors and vendors to aide in completing their work. The continued purchase of equipment and supplies for weatherization projects as well as specialized services received by contractors indirectly supports employment in various other sectors of the economy through out the state and the nation.

The Weatherization Assistance Program plays an essential part in introducing and deploying technology as well as facilitating greater industry adoption. Weatherization Program managers, trainers, and technical experts were key in developing the "Guidelines for Home Energy Professionals," a collaborative, industry-wide effort to establish work quality specifications, job task analyses, training program accreditation, and nationwide certifications for home energy efficiency retrofit workers.

The Weatherization Assistance Program has created an industry - producing new jobs and technologies while helping those households who need it most.



Did You Know?

The supplies and equipment purchased by the Weatherization Assistance Program indirectly support employment in various sectors of the economy (e.g., firms that produce insulation, manufacture furnaces, etc.).

REGIONAL NUMBERS AND OUTLOOK

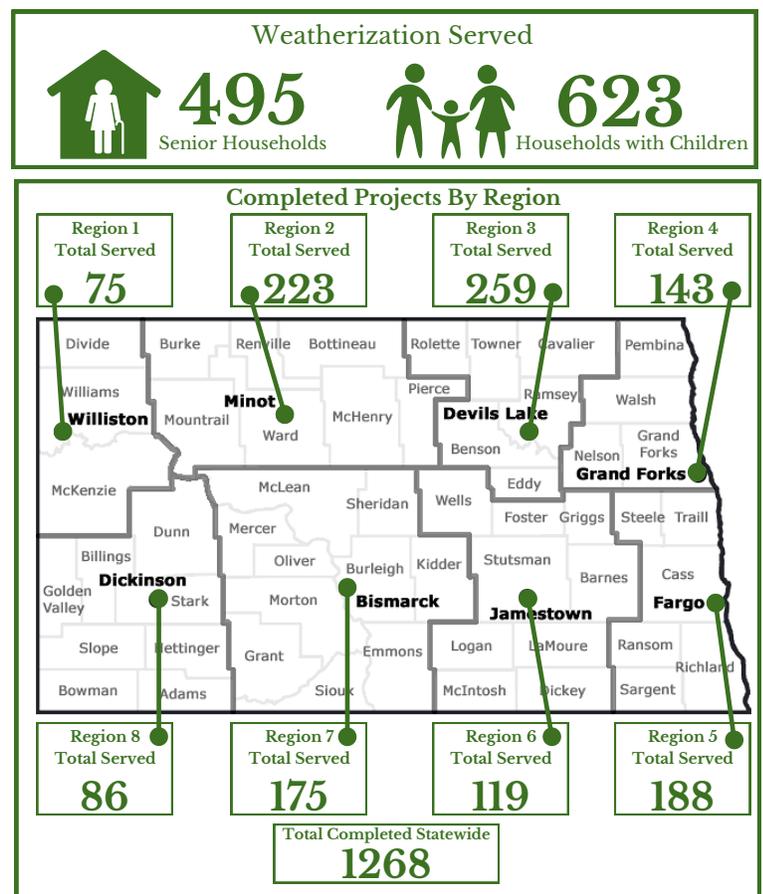


From January 1, 2020 to May 31, 2022, the Weatherization Assistance Program in North Dakota completed 1,268 projects statewide. The rate of completed weatherization projects slowed in recent years due to a variety of factors including the COVID-19 pandemic, as well as supply chain issues and workforce shortages. The program has now begun to return to normal levels of operation, however the program is still facing supply chain related issues like supply shortages and wait times for certain materials, as well as a continued need for additional staffing. There are approximately 400+ North Dakota households currently on the waitlist to receive weatherization services with that number continuing to grow.

Once a weatherization application has been received and approved, households may wait approximately 2 months before an estimate is completed. After the estimation has concluded, households often must wait, on average, an additional 2 months before weatherization crews can begin work on the project.

There are a variety of factors that contribute to these wait times including the staffing levels in each region, availability and time to obtain specialized materials, and availability of contractors for specialized work (e.g. electricians). Once crews begin their work, the process normally takes on average 3-4 days for them to fully complete.

There are currently 11 weatherization crews across the state of North Dakota with a total of 42 crew members. Community Action Agencies throughout the state are actively recruiting for additional workforce including crew technicians, administrative staff, and more to help ensure that families are receiving the services they need as quickly as possible.



Total Completed Projects and Actual Direct Labor/Material Costs			
	Completed Projects	Labor Costs*	Material Costs**
Region 1	75	\$128,674.27	\$97,460.33
Region 2	223	\$560,751.68	\$383,992.05
Region 3	259	\$330,512.40	\$489,949.57
Region 4	143	\$260,322.27	\$234,517.18
Region 5	188	\$356,822.42	\$387,512.85
Region 6	119	\$203,382.38	\$300,434.09
Region 7	175	\$249,949.31	\$366,437.54
Region 8	86	\$173,204.35	\$201,344.97
State Totals	1268	\$2,263,619.08	\$2,461,648.58

* Direct labor costs do not include travel time, training, administrative tasks, etc.
** Direct material costs include supplies to complete weatherization projects not including office supplies and other items needed to administer the program.



IN CONCLUSION

The long-standing benefits of the Weatherization Assistance Program are many and varied. The program has historically been a successful, cost-effective investment to both the state of North Dakota and the nation as a whole. As the largest residential energy efficiency program, it plays a vital role in reducing the heavy burden of energy costs for low-income families while providing economic and environmental benefits to many communities throughout the nation.

Americans spend around 90% of their time indoors, much of it in their own homes. Substandard living conditions can cause serious health problems for those that reside in them. The Weatherization Assistance Program helps those who need it the most obtain a healthy, safe, indoor environment which is essential for their overall health and well-being. This also allows seniors to age in place in a safe, comfortable dwelling in their own familiar communities.

Many homes across the nation are ill-equipped to handle the stresses associated with climate change, including extreme heat and cold. The services provided by the Weatherization Assistance Program help make those dwellings more resilient to the effects of climate change and the threat of extreme weather events, as well as reducing residential greenhouse gas emissions.

Across the state, weatherization crews work to complete weatherizing as many homes as possible despite challenges like supply chain issues, workforce shortages, and higher costs for materials and equipment. Their work is integral and the services they provide to households leave a lasting impact for the occupants of the home, their communities, and the state.

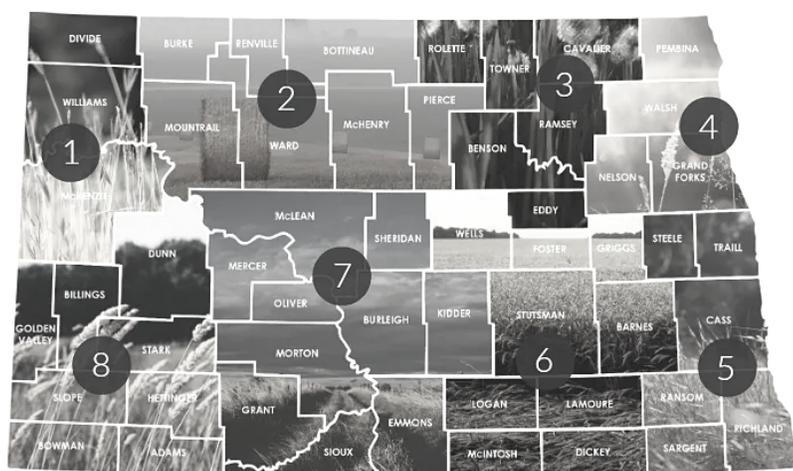
The Weatherization Assistance Program not only helps those households who need it most thrive, it also works toward revitalizing communities across the nation by reducing environmental impacts, spurring job growth, and leading the way in industry innovation and technology.

COMMUNITY ACTION IN NORTH DAKOTA



Community Action Agencies were originally established under the Economic Opportunity Act of 1964 to fight America's War on Poverty. By combining local, state, private, and federal resources the Community Action Agencies enable low- and moderate-income people of all ages to secure the opportunities they need to obtain and maintain self-sufficiency.

Established in 1976, the Community Action Partnership of North Dakota is a private, non-profit membership organization representing the seven Community Action Agencies in North Dakota. Community Action Agencies in North Dakota provide programs and services in all 53 counties. We serve the collective interests of our members and the low-income population of the state through representation and education. In addition, the Community Action Partnership of North Dakota administers several statewide programs including the Supportive Services for Veteran Families (SSVF) program, the Weatherization Assistance Program (WAP), ND Rent Help, and Sportsmen Against Hunger.



- Region 1: Community Action Partnership - Williston/Dickinson Regions**
- Region 2: Community Action Partnership - Minot Region**
- Region 3: Dakota Prairie Community Action Agency**
- Region 4: Red River Valley Community Action Agency**
- Region 5: Southeastern North Dakota Community Action Agency**
- Region 6: Community Action Partnership - Jamestown Region**
- Region 7: Community Action Program - Bismarck Region**
- Region 8: Community Action Partnership - Williston/Dickinson Regions**



The Promise of Community Action

Community Action changes people's lives, embodies the spirit of hope, improves communities, and makes America a better place to live. We care about the entire community, and we are dedicated to helping people help themselves and each other.

SOURCES

Weatherization Assistance Program Fact Sheet US Department of Energy Office of Energy Efficiency & Renewable Energy

Weatherization Works – Summary of Findings from the Retrospective Evaluation of the U.S. Department of Energy's Weatherization Assistance Program (ORNL/TM-2014/338) Oak Ridge National Laboratory, Oak Ridge, Tennessee

Background Data and Statistics on Low-Income Energy Use and Burden for the Weatherization Assistance Program: Update for Fiscal Year 2020, (ORNL/TM-2020) 1566, Oak Ridge National Laboratory, Oak Ridge, Tennessee, June 2020.

Environmental Emissions Nonenergy Benefits: Working Paper (ORNL/TM-2015/126) Oak Ridge National Laboratory, Oak Ridge, Tennessee

Health and Household-Related Benefits Attributable to the Weatherization Assistance Program (ORNL/TM-2014/345), Oak Ridge National Laboratory, Oak Ridge, Tennessee



COMMUNITY ACTION PARTNERSHIP OF NORTH DAKOTA
 WEATHERIZATION ASSISTANCE PROGRAM
 WWW.CAPND.ORG

701-232-2452 | INFO@CAPND.ORG | 3233 S UNIVERSITY DRIVE | FARGO ND 58104