

# Innovative Outstanding Weatherization Assistance News

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**Wishing you a wonderful summer!**

From all of us in the Weatherization Bureau in Des Moines

Jim, Gwen, Mark, Chris, Mike and Rosemary

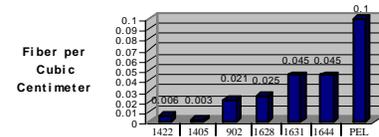
## Welcome

- In case you haven't heard, we, at the State of Iowa's Weatherization Bureau, have a new website address! It is much easier to remember than the old one. Visit us at [www.weatherization.iowa.gov](http://www.weatherization.iowa.gov). And, don't forget that the State of Iowa's Division of Community Action Agencies also has a new address: [www.dcaa.iowa.gov](http://www.dcaa.iowa.gov). Happy surfing!
- Results of air samples taken by North-east Iowa Community Action on six (6) houses (4 slate-sided and 2 insulbrick-sided) where siding was removed and reinstalled are now available. This work occurred between April 4 and May 12, 2005. The air samples were tested by Advanced Technologies Corporation, Waterloo, Iowa, using the Phase Contrast Microscopy test (Method 7400). The

analytical reports are complete and will be mailed to the agencies in the near future. Below, are charts indicating the results.

### Time-Weighted Average Siding Removal

(April 4 - May 12, 2005)



PEL: Permissible Exposure Limit

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## Statistics

ITEM	*QTRLY	**YTD
Houses Worked On	306	306
Completions	289	289
Closed Incomplete	17	17
Owner Occupied	278	278
Rentals	28	28
Elderly Occupied	118	118
Disabled Occupied	136	136
Occupied by Young Children	47	47
Furnace Replacements	140	140
Refrigerator Replacements	122	122
Freezer Replacements	50	50
Average Costs Per House	\$6,214	\$6,214

Totals for all agencies combined  
\* QTRLY (April, May 2005)  
\*\* YTD (Program year through May)

## Agency Spotlight - North Iowa Community Action Organization

### Changes and Growth

By Mike Creeden, Weatherization Coordinator

As I begin this year's annual report I am reminded of the changes and growth the Weatherization Assistance Program has gone through over the years. The program began 27 years ago emphasizing emergency and temporary self-help by handing out rolls of visqueen (plastic) to eligible households so that the occupants of the house could cover drafty windows. Sometimes we were able to assist in the installation of the plastic on the windows of clients deemed most vulnerable and in need of rescue from the cold particularly the frail elderly and handicapped. As the program caught on and the need increased, the emphasis turned to more permanent and cost-effective measures. As such, the Weatherization Assistance Program which is funded by the Federal Department of Energy (DOE) now lays claim to **"being the longest-lived and largest energy efficiency program in our nation's history and is one of the few government activities that saves more money than it costs."** One reason for this is the fact that those households with the lowest income and the highest energy usage are served first.

So today, using sophisticated testing with diagnostic equipment, and using specially equipped trucks capable of hauling and supplying most items needed to properly weatherize a home, we insulate attics, slopes, knee-walls, floors, walls and crawlspaces. We also replace furnaces, water heaters, refrigerators, and freezers for safety or efficiency reasons. On average nationwide, weatherization reduces heating bills by 31% and overall energy bills by \$237 per year.

The past year has been interesting and rewarding for this local Weatherization Assistance Program administered by North Iowa Community Action Organization (NICA/O). Since adding the third crew in November of 2003 we have seen an increase in the number of homes worked on and an increase in the weatherization measures applied to those homes. Projections for completed homes for the DOE contract year should exceed 150 homes with a spending average slightly over \$4000 per home.

Aside from the federal funding we receive we need to give a "hats off" to Iowa's regulated utilities that have generously increased their contribution to Iowa's Weatherization Assistance Program. We were able to spend approximately \$86,000 additional dollars above our original contracts, be-

cause of additional contributions from the primary utility companies in our nine county service area. These additional dollars will continue to be available to us in the foreseeable future if the Weatherization Program statewide is able to spend them. It will be our intent to diligently work toward doing just that. The down side of this additional money is that we now have limited time and resources to do houses that are not serviced by either Alliant, Mid-America, or Aquila utility companies. We will continue to do homes that are not serviced by the major utilities as time and money allows.

The Weatherization program had its yearly performance monitoring by the State Weatherization Bureau personnel. The first, in June, was a review to insure that the NICA/O Weatherization Assistance Program was in compliance with Federal and State Weatherization rules and regulations with respect to contracts, policies and procedures and that the required documentation was retained in each individual house file. There were no negative findings. The second was in December, and was a home inspection monitoring. Of the eleven homes inspected, only one needed additional minor work to pass. This required our crews to go back to complete the necessary corrections. We are always happy to have these monitoring visits as they serve to help our program improve and provide a better product for our clients.

Our program has also been fortunate during the past year in that we have been able to secure some much-needed equipment. We have on order three new 2005 Ford E-450 crew trucks with 17' van bodies. These trucks will be much

—Continued on page 5

### Service Recognition

#### 15 Year Anniversary

September—*Marilyn Rodacker* currently serves dual roles as both the Weatherization and LiHEAP Coordinator at West Central Development Corporation in Harlan, Iowa.

#### Retirements

*Paul Stumo* currently serves as a crewmember with North Iowa Community Action Organization in Mason City and has been with the agency for 17 years. He will be greatly missed.

*Marty Martinson* currently serves as an Evaluator/Inspector with the City of Des Moines in Des Moines and is new to Weatherization. He will be missed.

<sup>1</sup>[www.eere.energy.gov/weatherization/years\\_service.html](http://www.eere.energy.gov/weatherization/years_service.html)

## Agency Spotlight—Community Action Agency of Siouxland

### Visit from Bill Anderson

By: Denny Krause, Weatherization Coordinator

On April 20, 2005, Bill Anderson, Senator Grassley’s Regional Director from Sioux City, accompanied Community Action Agency of Siouxland Weatherization staff (Marla Desy, Weatherization Support/Housing Assistant; Dale Gernhart, Evaluator/Inspector; and Denny Krause, Coordinator) on a mini tour of homes the agency had weatherized.

The first home visited was occupied by an elderly, handicapped lady who was receiving LiHEAP assistance. The home had an inoperable furnace and virtually no insulation.

Mr. Anderson was shown the new furnace and how, by making changes, the existing ductwork was utilized.

We then explained how the contractors insulated the home by utilizing the dense-pack method. We also demonstrated the infrared camera and how it serves as a tool to determine where insulation is lacking in the house as well as to detect moisture problems.

Mr. Anderson visited with the client who explained that she is on a fixed income. Because of her medical condition, she must spend \$200 each month to purchase oxygen. She stated that many times she does not have the money to purchase oxygen. Because the Weatherization Program was able to: replace her inoperable furnace with a new, high-efficient furnace; replace her high energy using refrigerator with an Energy Star rated refrigerator; and insulate her home, thus decreasing her energy bills, she now has more money to purchase her much needed oxygen for her health needs.

Dalhoff and Associates, out of Wisconsin, compiles an annual report: Report on Impacts and Costs on the Iowa Low-Income Weatherization Program. This report, referred to as the SLICE Report, includes statistics regarding each agency conducting the weatherization program in Iowa. Information for the statistics is collected from the audits completed by the Evaluators/Inspectors for each house, both pre-weatherization and post weatherization. The Cost Saved per house weatherized by Community Agency of Siouxland was \$389.00 per year compared to the State average of \$250.00 per year. Mr. Anderson was not only impressed by the savings afforded to the elderly client he visited with, but he was also impressed with the savings per house achieved by Siouxland. He asked to go on a full scale inspection/evaluation of a house some-

time in the future so he could see first hand what is involved in the evaluation and why Siouxland is ranked so high in the State.

Several other houses in the area were also toured. The houses weatherized by Siouxland will have cost savings every year for as long as the houses are used as a dwelling (30 plus years on average). Not only will the weatherization measures installed save the current home dwellers energy costs, the measures will save the next home dwellers as well. We also visited a few houses that had to be walked away from and could not be weatherized. We explained they could not be weatherized because many have leaky roofs or some other type of structural damage that would not permit us to weatherize the house, but if there was a program or a funding source that would let us repair the roof or minor structural problem, then these houses could be weatherized too.

It was stressed to Mr. Anderson that weatherized houses have a direct influence on the building stock of the area because it made these houses extremely desirable and livable for all the clients (regardless of income) in the area.

Mr. Anderson and the Weatherization staff engaged in an excellent exchange of question and answers. He asked how and what would help keep the excellence in the work of the Weatherization program. We explained that the continuation of funding, high quality of workmanship, and another source of funding to help repair the homes in dire need of repair is greatly needed.

We discussed how houses that are weatherized help not only the present clients who are challenged by income restraints, but it also helps the rest of the community by improving the housing stock of the community and for residents of these houses for many years to come.

A fantastic tour with a fantastic civic-minded person!

### Tentative 2005 PY Monitoring Schedule

July	Community Action Agency of Siouxland
August	(None scheduled)
September	Hawkeye Area Community Action Program

## Tips

**How Many Forms Do I Have to Take to the House?** - Do you ever feel like your forms are scattered everywhere? Have you ever gotten to a house and realized you had forgotten forms for the client to sign? What about all of the forms you need to take to complete your job? *Try this:* Gather the forms you need for each house. Put them in the order you will use them and then place them in a folder. Keep pre-made folders in a handy location so all you have to do is grab a folder instead of sifting through your file drawer for the forms you need each time you go to a house. This will ensure you always have all of the forms and brochures you will need to perform your job.

—Tip from Christine Taylor, Bureau of Weatherization

**TI-86 Calculator Cheat Sheet**—Do you have trouble remembering all of those buttons you are supposed to push to get the calculations you need? *Try this:* Just clip the cheat sheet to the right and tape it to the inside cover of your TI-86 calculator.

—Tip from Eldon Starmer, MATURA

### Resources

<http://hes.lbl.gov>

Helpful tool in studying your home's energy use.

[www3.iclei.org/co2/co2calc.htm](http://www3.iclei.org/co2/co2calc.htm)

Online calculator that calculates CO<sub>2</sub> emissions from home

*"This is a very welcome surprise. You've always been a HUGE help for me and my two girls. The help with winter bills makes Christmas more bearable. I can't say enough about how much it is appreciated."*

—Upper Des Moines Opportunities Client

#### One Point Blower Door Reading

1. Prgm key
2. F1
3. F5
4. Enter
5. F1

#### Refrigerator Equation Nugget

1. On
2. 2<sup>nd</sup> key
3. Solver/Graph key
4. Clear button
5. More key (7 times to AREFT)
6. 2<sup>nd</sup> key
7. RCL key
8. F4
9. Enter
10. Enter
11. Arrow down to KWRED
12. Install meter reading
13. Arrow down to Min. RED
14. Arrow up to KWH YR
15. F5

#### DTL (Depressurization Tightness Limits)

1. Prgm key
2. F1
3. F3
4. Enter
5. F1
6. cfmEx (total CFM's from exhausting appliances)
7. ^P (See Table Below)
8. Fx (.65)
9. Enter (Backdrafting will occur below this number)

#### ^P (5) for drafting appliances

#### ^P (10) for power-vented appliances

#### Delta Pressure (^P) \*\*

1. Prgm key
2. F1
3. F3
4. Enter
5. F3
6. cfmEx (total CFM's from exhausting appliances)
7. CFM (house CFM)
8. Fx (.65)

#### Add a Hole or Door

1. On
2. Clear button
3. Prgm key
4. F1
5. F5
6. Enter
7. F2
8. F1, F2, or F3

#### BTL (Building Tightness Limits)

1. Prgm key
2. F1
3. F1
4. Enter
5. F1
6. F2
7. Enter (sq. ft. is all floors) \*
8. # - 5 or more
9. # of stories above grade
10. Exposure

\* **BTL** ~ Include crawlspace and basement sq. ft. if it is included in the volume.

\*\* **Delta Pressure** ~ Use this when calculating adding more ventilation.

**BTLa** (To find out how much ventilation is needed. Use only if house CFM comes in lower than BTL)

1. Prgm key
2. F1
3. F1
4. Enter
5. F2
6. Enter
7. CFM of house
8. Flow Exp (.65)
9. Weather Factor (.93)
10. House Volume
11. House Sq. Ft.
12. Bldg Height (ground to ceiling)
13. Story Height (floor to ceiling)
14. Occupants (5)
15. Enter
16. Enter again for all data

## Agency Spotlight—North Iowa (continued)

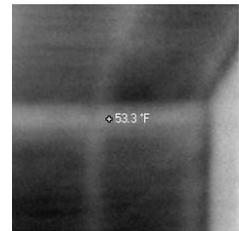
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needed additions to our program. The second major equipment purchase this year was an infrared camera, which is used by our Evaluator/Inspector. This camera gives us the ability to see inside of house walls without having to physically open them. It has the capability of scanning a wall, along with showing the temperature of that wall at any given point and retaining a photographic image of up to 150 individual shots. These images can then be downloaded into a computer, printed and placed in the house work file, as a reference, for the crews weatherizing the home. The Evaluator/Inspector checks for any areas that may have hidden problems that was heretofore nearly impossible to find. He checks these areas again, when the crews are working the house, to aid them in finding and correcting these areas. We are all very excited and grateful for our newest piece of equipment. It will greatly enhance our abilities and enable us to continue to improve on our work.

Many good things have happened for the Weatherization program during the past year. It takes a lot of effort from many people for this program to succeed. From the crews and evaluator to the fiscal office personnel, each and every one of them puts a lot of themselves into each of the homes we do. I am honored to be associated with these people and with this program. Weatherization WORKS!



1



2



3

Photo one is the new infrared camera. Photo two is a black and white infrared picture taken with the new camera. The dark areas show uninsulated wall cavities and the light areas are the wooden studs within the walls. Photo three is a color infrared picture. The bright red areas indicate heat that is escaping because of an uninsulated attic.

## Extreme Photos



Did you know you could use a plastic tote as a cold air return??!!



This water heater isn't even vented!!!



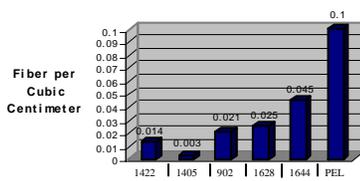
Weatherization definitely saved lives here!

# Welcome—Continued

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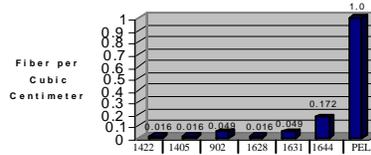
## Time-Weighted Average Siding Reinstallation

(April 4 - May 12, 2005)



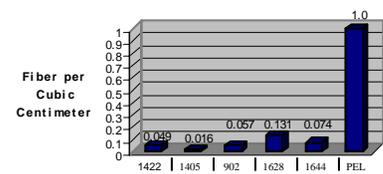
## 30 Minute Excursion Limit Siding Removal

(April 4 - May 12, 2005)



## 30 Minute Excursion Limit Siding Reinstallation

(April 4 - May 12, 2005)



PEL: Permissible Exposure Limit

# Reminders

**Deferral (Denial) Reason Information**—It is important for DCAA to know the reasons why agencies defer work on homes. Please remember to use the “Reason Denied Wx” field in the House Data screen which has a drop-down menu containing various codes corresponding to reasons weatherization may be deferred/denied. You can select the code that best describes the reason. If there isn’t a code on the drop-down menu that describes the reason you deferred weatherization, you can select “Other”. If you select “Other”, please indicate the reason for the deferral in the memo field of the MAT Temp screen.

**NEAT Audit**—Please remember that flame retention burners are not allowed as a candidate measure and that high-efficiency furnaces are allowed. In the NEAT Audit, go to “Set-up” and then to “Candidate Measures”. Uncheck flame retention burner and check high-efficiency furnace.

### Tentative 2005 Fiscal Monitoring Schedule

July	West Central Development Corporation Northeast Iowa Community Action
August	(None scheduled)
September	Operation Threshold North Iowa Community Action

**Compact Fluorescent Light Bulbs**—The maximum number of light bulbs allowed per home (12) applies irrespective of the funding source(s). If any light bulbs ordered from the winning bidder are broken, contact the vendor for a replacement.

**Refrigerators with Ice Makers**—If a water line is already available to the refrigerator, the vendor may hook up the water line. However, if a water line does not already exist, the program will not pay for running a water line to the refrigerator.

*“We would like to thank you for all the work you’ve done to make our house warmer. A special thank you for all the guys that worked on our house. They were a great bunch of guys.”*

- Operation New View Client

## Upcoming Events

### July 2005

*Postponed* **Advanced Blower Door/Zonal Pressure Diagnostics.** To be held at Operation Threshold in Waterloo, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov)

*Postponed* **Advanced Combustion Health & Safety.** To be held at Hawkeye Area Community Action Program in Hiawatha, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

### August 2005

2—3 **Mold/Moisture/Ventilation/BTL.** To be held in Ames, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

16—17 **Advanced Furnace/Duct Leakage.** Location to be determined. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

18 **ICAA Meeting.** For more information, contact Tessy Pratt at [THPratt@dmgov.org](mailto:THPratt@dmgov.org).

24 **IWAC Meeting.** To be held from 9:00am-12:00noon at Best Western Suites and Inn at 1450 NW 118th Street, Clive, Iowa. For hotel reservations call toll free 1-866-788-7013. Visit their website at <http://bestwesterniowa.com>. For meeting information, please contact Julie Colling at 712-786-3415 or [jcolling@midsioux-opportunity.org](mailto:jcolling@midsioux-opportunity.org).

### September 2005

13—14 **Advanced Blower Door/Zonal Pressure Diagnostics.** To be held at MATURA Action Corporation in Creston, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

25—28 **DOE National Weatherization Conference.** To be held in New Orleans, Louisiana. Visit [www.eere.energy.gov/weatherization/conference/](http://www.eere.energy.gov/weatherization/conference/) for more information.

### October 2005

3—5 **ICAA Annual Training Conference.** To be held in Des Moines, Iowa. For more information, visit [www.iowacommunityaction.com](http://www.iowacommunityaction.com).

4—5 **Advanced Combustion Health & Safety.** To be held at MATURA Action Corporation in Creston, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

18 **Lead Safe Work Practices.** To be held at Operation Threshold in Waterloo, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

25—27 **Basic Evaluator.** To be held in Ames, Iowa. To sign up for the training or for more information, please contact Marcia Thompson at 515-281-3861 or [Marcia.Thompson@iowa.gov](mailto:Marcia.Thompson@iowa.gov).

**Be sure to check our website for training updates at [www.weatherization.iowa.gov](http://www.weatherization.iowa.gov) !**

## Speed Bumps

- Exhaust fans need to be 1.0 sones or less as described in Section 2090 of the *Work Standards*.
- Non-combustible materials need to be used when sealing around chimneys.
- Car siding doors are to be done as specified in the standards (screwed and glued). In most instances, a lockset is preferred and in some instances it is required.
- Furnaces need to have a bottom. When it is a separate piece of metal, it should be fastened and sealed with mastic.
- Duct leakage needs to be under 1 pa.
- Aluminum roof vents are not allowed.
- When new furnaces are installed, the filter needs to be accessible without removing panels from the furnace.
- Metallic cardboard used for duct panning needs to be sealed.
- Garage leakage testing is still not being done as required in Section 2052 of the *Work Standards*. This testing must be completed on all tuck-under and attached garages.
- Wood panel doors, such as 6-panel doors, are not allowed for exterior applications.

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*Please feel free to copy and distribute.*

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### Iowa Bureau of Weatherization

Department of Human Rights  
Community Action Agency  
Lucas State Office Building, 2nd Floor  
Des Moines, Iowa 50319

*We're on the Web!!!*  
[www.weatherization.iowa.gov](http://www.weatherization.iowa.gov)

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