



YES! Energy Action Project Report

Willmar Senior High School

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We are the Willmar YES! Team



- Our team advisor is Rob Palmer
- 8 students were members of our YES! Team throughout the year



Summer Youth Program

Mara and Aaron taught youth about gardening and renewable energy.



Willmar Food and Nutrition services Hires a New Greenhouse Coordinator



Aaron Larson brings consistent harvests to the cafeterias at Willmar Senior High and Middle Schools



Bill Wright redesigned and repaired our hybrid renewable heating system with grant funding from the Clean Energy Resource Teams and SWIF

Bill installing the hot water tanks donated by MinnWest.



5th Grade Energy Workshop



March 2012



5th Grade Energy Workshop

Wind Power Station



5th Grade Energy Workshop

Human Power Station



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are needed to see this picture.



5th Grade Energy Workshop



Solar Ovens

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5th Grade Energy Workshop

Solar Thermal Panels



5th Grade Energy Workshop

Biomass Boiler

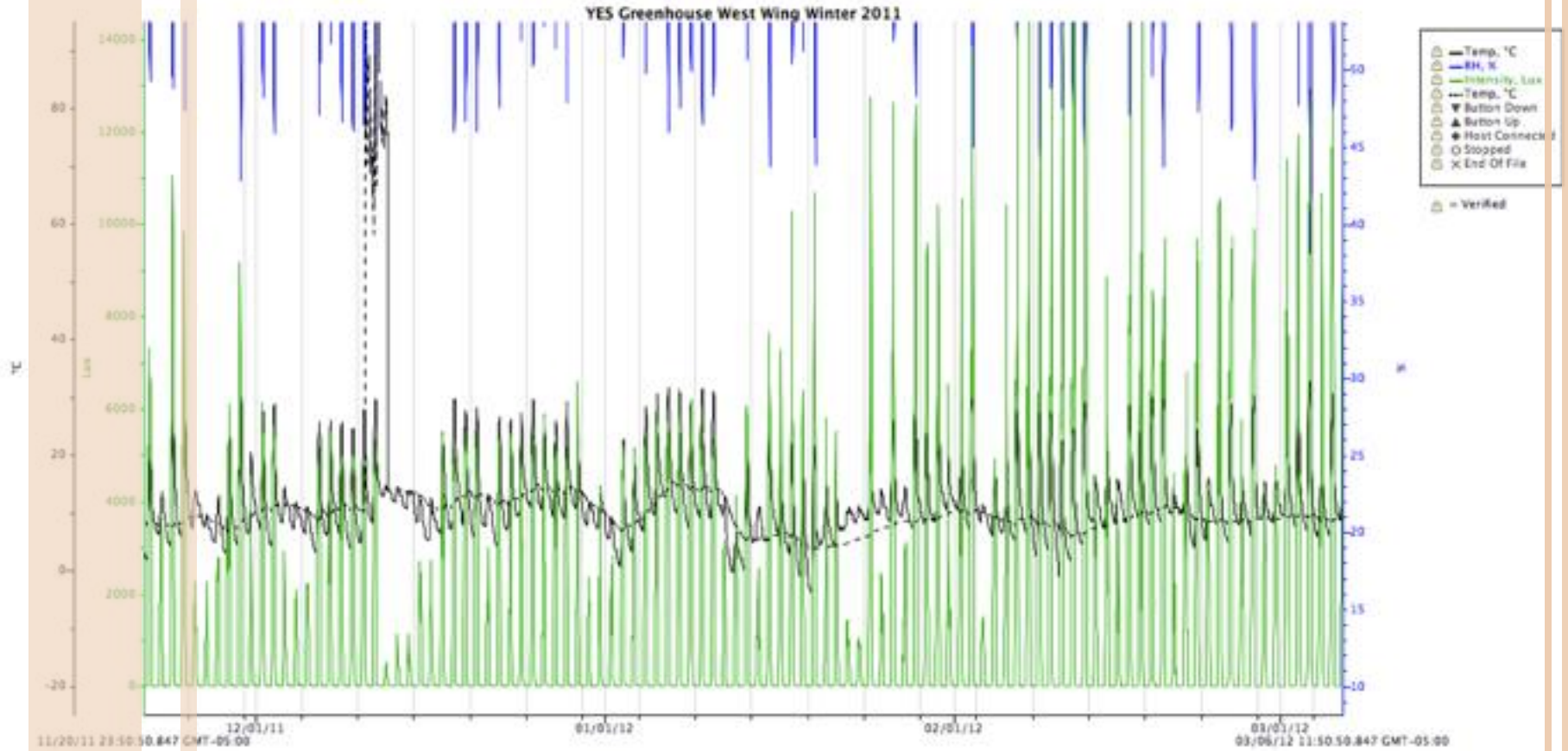


5th Grade Energy Workshop



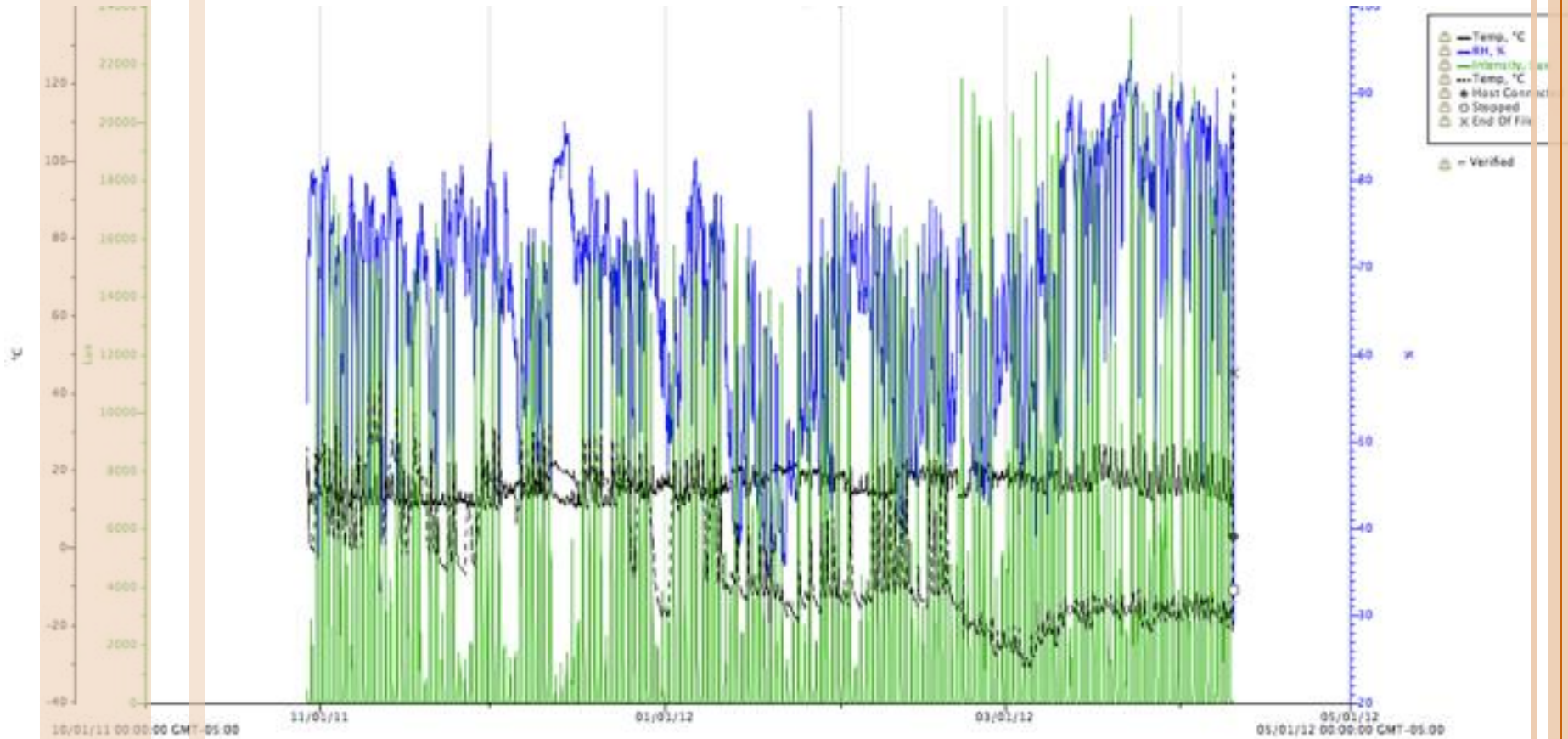
Greenhouse

West wing data



West wing and hot water tank data.

East wing data



East wing and thermal storage tank data.



Willmar High School senior Aaron Phillips, 18, puts some greens on his teenager brother during the homecoming activities. The greens later from the Willmar Community Greenhouse located on the Willmar Technology Campus and added to the cafeteria menu for the homecoming students. The greenhouse is growing multi-season and winter greens for the district's food service program.

Fresh salad greens even in winter

Willmar students enjoy bounty from greenhouse on tech campus

By Linda Stephenson

Willmar High School students enjoy a bounty of fresh greens from the Willmar Community Greenhouse located on the Willmar Technology Campus. The greenhouse is growing multi-season and winter greens for the district's food service program. The greens are added to the cafeteria menu for homecoming students.



Salad greens in a bowl at the Willmar Community Greenhouse. The fresh greens are added to the menu in the district's cafeteria.

Michelle Stephens, Willmar School District nutritionist, said she and the Willmar Community Greenhouse staff are excited that the greens are being grown on the Willmar Technology Campus. The greens are added to the cafeteria menu for homecoming students.

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Once the greenhouse was up and running, Palmer approached Nutrition Director Annette Dennis about providing greens for the school district. "I said, 'If you're going to grow it, we'll eat it,'" Dennis said.

For a long time, the greenhouse was on volunteer labor, but this year the food service hired Aaron Larson to work part-time in the greenhouse along with Palmer. Students continue to volunteer in the greenhouse as well.

Larson, a 2008 Willmar grad who started volunteering at the greenhouse while he was in high school. He kept volunteering after graduation. "We've got the whole growing thing down now that Aaron's on board," Palmer said.

Larson said this winter brought the best harvest the greenhouse has had, and they're excited that the salad greens crop tolerate cold weather quite well. The harvest has been plentiful, "about 15 pounds every two weeks" he said.

Palmer realized a challenge in the greenhouse this winter after some research. The nutrition service placed its first ever order for something that was alive. Thousands of lettuce bags are now coming weekly and breeding in the greenhouse.

The aphids only seemed to like some crops, Larson said, so he was able to keep harvesting some of the greens all winter.

The greenhouse got its heat from several sources, including the sun streaming through the south-facing windows. The roof, broken in places, was replaced, the hay concrete lobby floor was poured the night before the opening party and a power outage during the party was bombed by a swallow during the night.



Student photo by Lisa Hill: Aaron Larson, 16, a junior, eats a salad Monday at the Senior High that includes greens from the Willmar Community Greenhouse operated by the school district.



Photos provided by Rob Palmer, left, senior teacher, helps lead the Willmar Community Greenhouse, together with a part-time employee. At right, is Annette Dennis, Nutrition Director.



LEFT: The greenhouse grows a variety of crops, including arugula, spinach, broccoli, beets, kale and Swiss chard. Solar panels outside the greenhouse were damaged by the storm. The solar panels were damaged by the storm. The solar panels were damaged by the storm.

4-H REPORTS

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St. John's Roadrunner
The St. John's Roadrunners 4-H club members met March 3 at the MinnWest Technology Campus greenhouse. The Willmar Community Greenhouse is a renewable energy/local foods project organized by the Willmar Senior High Youth Energy Summit Team. We were given a tour by one of the students who work in the greenhouse. There are so many different plants and experiments going on. The greenhouse is heated by using solar panels which are heated by the sun and a renewable heating system that burns corn, pellets and even leftover movie popcorn. We learned about com-

post worms and the fertilizer they produce. After the tour we gathered in one of the meeting rooms where our meeting was held. "We had project talks about gardening by two members. One talked about preparing his gardening project for the County Fair and the other talked about hydroponics, which is growing plants using water instead of soil. Cookies and a drink were served for a snack."
—Paige Hanson

March 10 in Hastings. Two senior teams and two junior teams competed against other teams from across the state. In total, 18 senior teams and 8 junior teams competed. All four teams will be advancing to the State Dairy Bowl Competition, which will be held on April 21 at the Foley High School. Senior Team members include: Team One — Nicole Krumrie of Litchfield, Tyler Eblen of Belgrade, Jon Frenchick of Painesville and Carla Bjornson of St. Cloud.



YES!
YOUTH ENERGY SUMMIT

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are needed to see this picture.



THE END of Our Good News

YES! Energy Action Project Report

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