Infrasonic device listens for tornadoes

By Shannon Davidson
The Goodland Star-News

There's an octopus sitting outside of Goodland, listening for tornadoes.

Really.

The Environmental Technology Laboratory of Boulder, Colo., developed the Octopus, an infrasonic device designed for detection of tornadoes device. The experimental device detects sounds that are subaudible, too low for humans to hear.

Humans can hear down to about 20 hertz and the device is designed to pick up sounds at about half that wavelength, down to 10 hertz.

The Octopus is a set of four sensors surrounded by soaker hoses, each about 50 feet long. The whole setup is arrayed in a field around the Goodland weather station at Renner Field.

"Recent research indicates that strong, rotating thunderstorms generate low-frequency sound waves, and sometimes these sound waves appear tens of minutes before tornado development," says a note on Goodland National Weather Service web site.

Bruce Entwistle of the National Weather Service Forecast Office explained what the Octopus is made of and its capabilities.

"The soaker hoses are used to measure very subtle pressure changes, the thickness of a sheet of paper," he said. "They work as a low frequency ear drum. They are spread out in order to detect from what direction the infrasounds are coming.

This arrangement gives the device its octopus-like appearance.

Similar units have been installed in Pueblo, Colo., and in Boulder.

"The octopus will be used in conjunction with radar to better detect the presence of tornadoes," Entwistle said. "The Octopus will be in Goodland as a trail process. It was installed June 18 and it will be here at least through the summer and until thunderstorm season is done."

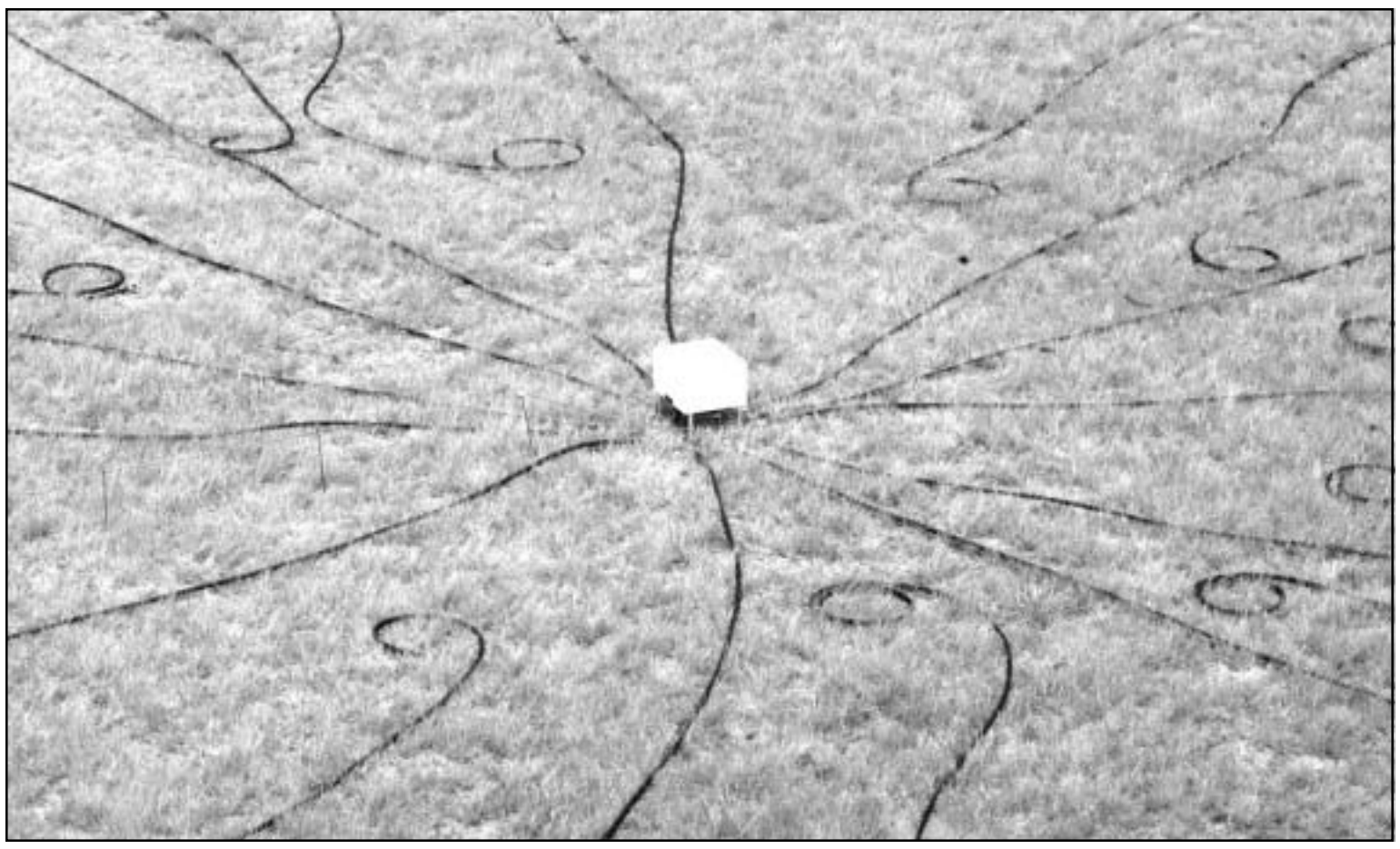
The infrasonic detection devises in Goodland and Pueblo are monitored in Boulder by the environmental technology lab, though forecasters here also can access the data. If they detect something, Entwistle said, they'll call the Goodland office.

The trial process will determine if in the future forecasters will be able to use the technology to help spot tornadoes and funnel clouds.

"Local weather service people have not had an opportunity to get to know the device," Entwistle said, "but if the trial process goes well, the Octopus will be used to incorporate sound data for real-time warnings in addition to radar.

"So far, the Octopus has detected a couple of signals and reports of possible funnel clouds. Goodland is still waiting on fences to go around the set of four sensors to help manage the high wind speeds around the device."

By providing a vortex detection capabilities where radar can't look, such as obstacles blocking the radar, the Octopus is designed to help reduce those blind spots, the Boulder lab says.



The National Weather Service in Goodland has an experimental device that listens for tornadoes by detecting subudile sound. Nicknamed "the Octopus," it is set up in the grassy field behing its building. The black soaker hoses spread around the detection box gave device its name.

Photo by Shannon Davidson/The Goodland Star-News

Offices see changes

CHANGES, from Page 1

assistants, Donna Price and Jo Simmons being named to manage the visitors bureau and chamber respectively.

The Chamber board decided the old location on 11th Street was too big for their needs and moved the office to 1002 Main Ave. in early spring. In May, Simmons turned in her resignation. Justin Bentzinger was named the interim manager, and has been working to keep the programs moving forward.

On the economic development front, Applegate got the county's dormant revolving loan program moving, and the first micro-loan was completed with El Reynaldo's restaurant, which relocated from the corner of 17th and Cherry to Business U.S. 24 where Sharon's Taco had been. A new sign and bright colors make the restaurant visible.

Applegate has been meeting business owners and assisting in a variety of ways with new locations, expansions and the like. She also is talking with businesses that are considering moving to Sherman County. She says several projects are moving along, and they may announce plans for expansion and new businesses before the end of the year.

One of the priority projects has been helping companies that wanted information about the former Apple Trail truck stop, which had gone into bankruptcy and now is owned by a bank in New York. At one time, there were nine companies asking about the location, and Applegate and the council provided as much information as possible.

A decision is expected soon by the bank to sell the truck stop to one of the firms.

The original seven-person Economic Development Council was expanded in January with the addition of four members, a representative from each of the banks in the city. The council meets regularly, and the meetings are open to the public.

The three offices have been working together on several projects, including a request from the Kansas Film Commission for sites in the city as possible locations for a Harley-Davidson motorcycle commercial.

Price said commission officials were impressed with the quick turnaround on photos, and believes there will be additional possibilities in the future. One effort was a video presentation to the film company considering doing a "Little House on the Prairie" reunion show.

A joint effort of the visitors bureau, economic development and S&T Communications produced an impressive short presentation which was shown to the company. A decision about the location is expected this month.

A new Goodland visitors guide is out and being distributed throughout the state by the visitors bureau.

Bentzinger has been busy as the new chamber manager, and his first big event was the Freedom Fest on July 4. The festival was well attended, and the home-owned carnival reported a record number of kids enjoying the rides that night.

Upcoming events include the Sunflower Ag and Farm show on Aug. 15-16 and the Flatlander Fall Festival at the end of September.

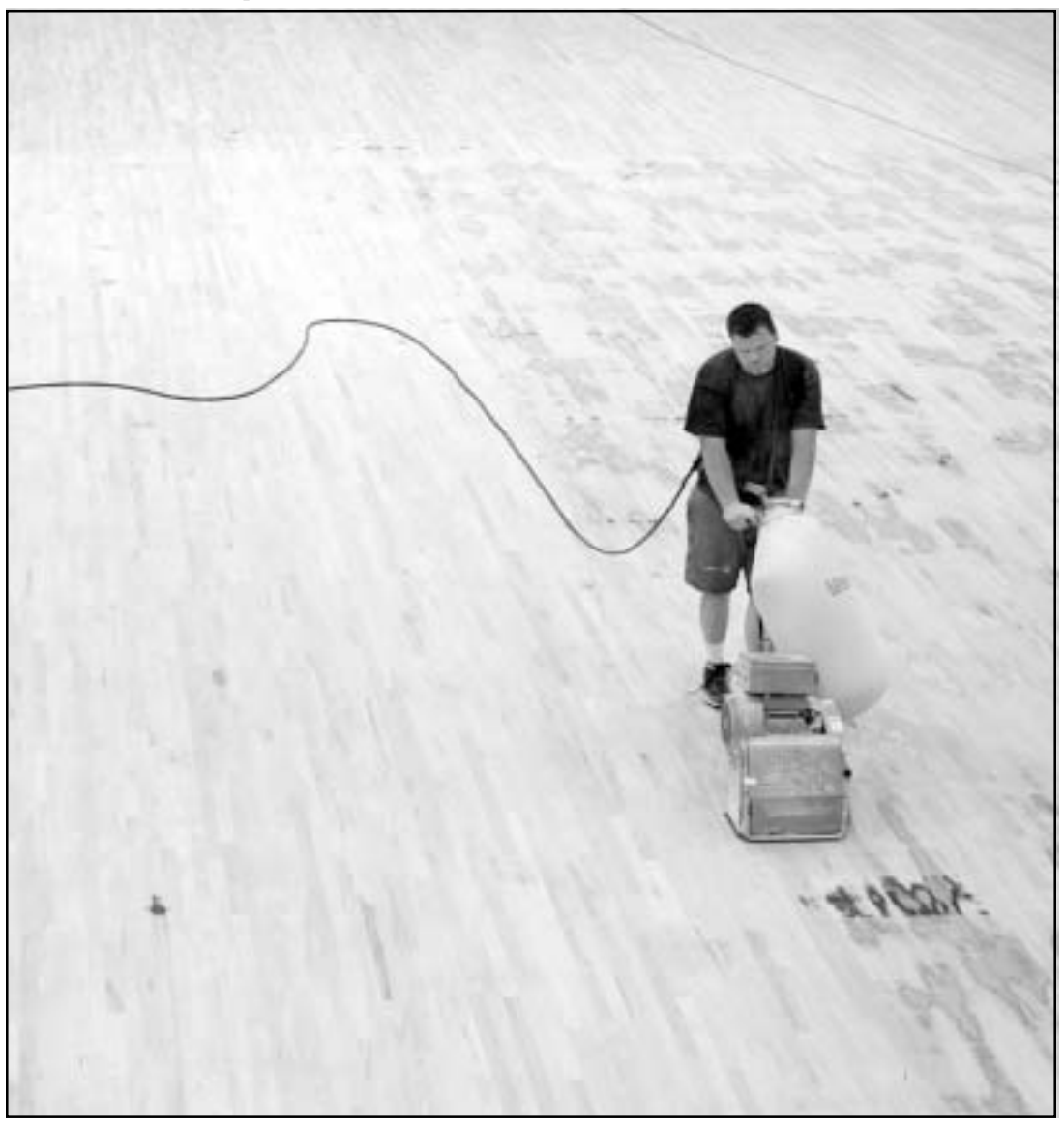
Settlers Day, scheduled in May, was scrubbed this year because of the change in chamber manager. Bentzinger says he is planning to hold Settlers Day next year, and Goodland will be hosting the Rattlesnake Festival for the next two years. The festival has been in Sharon Springs for 13 years, but the promoters felt it might be good to move the event. Bentzinger, with the help of Price, convinced them to give Goodland a try for two years. The festival then plans to move to Colby for two years, and may return to Sharon Springs, Goodland or another city after that.

Bentzinger and the Chamber board are working to establish a more open operation, and have established new membership dues levels and has new board members. In May, the Chamber president, Tim Rath of the Sherman County Farm Bureau, resigned to take a new job in Greeley, Colo., and Cesar Miller, owner of Goodland Medical Arts Pharmacy, has taken his place.

The Chamber continues to hold monthly Business After Hours receptions, and with the help of the Goodland Ambassadors has ribbon cuttings and welcomes groups and businesses to the community. The Ambassadors also do special send-offs for the Goodland athletes.

One of the most recent joint efforts of these groups was arranging the visit of Gov. Kathleen Sebelius, who came to Sherman County and Goodland to celebrate a wheat harvest that has been judged the best in over four years. It was the governor's first visit to northwest Kansas since taking office.

Sand the floor



Jeff Vahling of Von Lintels Refinishing Co. out of Hays sanded down the floor of the Max Jones Field House. The main floor is being completely refinished over the summer, and should be ready by the time school starts this fall.

Photo By Shannon Davidson/The Goodland Star-News.

corrections

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Rich Hinkhouse of Burlington is living proof that entering contests can pay off, even if you don't live in a largely populated area. Hinkhouse was in Mangus Irrigation a few months ago picking up parts when owner Merle Mangus urged him to enter a Zimmatic national contest; he signed up and soon forgot about even entering. Hinkhouse just recently found out that he was the winner of a 100th Anniversary Harley Davidson motorcycle. Left to right are Merle Mangus, Wanda Mangus, Susan Hinkhouse, Rich Hinkhouse and Lindsay (Zimmatic) regional representative Kirby Bradley, who came to Burlington to present Hinkhouse with his motorcycle.

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