

# Watertown looms large in history of ethanol

By **AARON MATSON**  
Public Opinion Staff Writer

The city of Watertown might not be known for being a trendsetter, but in one area at least, Watertown has been, and is, home to some pioneering innovation in ethanol.

At the May 6 kickoff event for Glacial Lakes Energy's "E30 challenge" promoting the use of E30 blend fuel, Orrie Swayze, of Wilmot, a farmer, former South Dakota Corn Growers Association president and pioneer ethanol advocate, said Watertown has played a key role in the development of the ethanol industry.

"You can't talk about the history of ethanol without talking about Al Kasperson. Al put the first flex-fuel vehicle on the road back in 1992 as Lake Area Tech Auto Department head. He helped the corn-growers get it on the road. So, everything kind of comes back to Watertown, and the support of the community, Lake Area Tech, and Al Kasperson."

Kasperson, an instructor of automotive maintenance and repair at Lake Area Technical Institute from 1969 to 2000, told the *Public Opinion* he was skeptical of ethanol at first, but became interested after Bob Reynolds, then-president of Downstream Alternatives, and other ethanol advocates



Kasperson

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convinced him to attend a demonstration in Nebraska about ethanol.

"And I was really impressed with the things that I did see there," Kasperson said.

Reynolds later came to Watertown with Swayze, and met with Kasperson at Lake Area Technical Institute. The ethanol advocates wanted him to conduct the first comprehensive tests on small two-cycle and four-cycle engines.

"He said, 'You know, you have the ability, and I think you have the knowledge,' because of the questions I asked when I was in Nebraska. And I think that's what impressed him - I was trying to learn more," Kasperson said.

During the tests, which ran from March to December in 1988, Kasperson and his team put three to five years of hours of operation on all the small engines.

Among the small engines tested, Kasperson gave lawn mowers to commercial lawn care companies, and chainsaws to electric companies to use to cut and trim trees because too close to the high-line wires.

The volunteers would then run one of two identical lawn mowers, chainsaws and other small engine units on regular unleaded fuel and the other on a 10 percent ethanol blend to see if there were any ill effects.

"We only had one chainsaw that failed, and that was one that ran on gasoline," Kasperson said.

The tests found the engines ran well on both types of fuels, which was a major step in combating what Kasperson called misinformation about the use in small and large engines.

Later, in 1992, Kasperson brought the first four E85 vehicles into South Dakota from Phoenix, Ariz.

Kasperson continued his research on vehicles, testing the effects of fuel with various blends of ethanol on common passenger vehicles. He also took a special interest in comparing the trucks of two brothers in Roberts County, which were similar in nearly all respects except one was a flex-fuel vehicle and the other was not.

"The engines were the same, the heads were the same, the pistons were the same, all that," Kasperson said. "The only thing that was different was the injector flow on the flex-fuel vehicle, or the E85 vehicle, had a higher flow rate on the injectors."

Kasperson said he enjoyed the research. "I went to parts houses and dealerships. Once I asked for a head gasket for the flex-fuel vehicle, and one for the non-flex-fuel vehicle, and the lady said, 'They're the same part number.' And I said 'Thank you, that's what I wanted to know.' I bet if we talked to her this afternoon she'd still remember that."

Though it has been years since those tests, Kasperson is still an ethanol advocate.

"My favorite fuel right now is E30. Because, when I did the read vapor pressures and all the testing on the fuel and the mileages and so on, I always felt that E28 was the perfect fuel, and if we can get within 2 percent, like with the E30, I have to say that's my favorite fuel today," Kasperson said.

Kasperson's said he currently uses E30 in his vehicles and not because of the special price during Glacial Lakes Energy's "E30 Challenge."

"When I filled them, the price was normal, but still cheaper than the other fuels," Kasperson said. "But I don't care if it would have been 3 cents or 10 cents a gallon cheaper or 10 cents a gallon more expensive, I would have put the E30 in because of the fact of the benzene that's being used in the (regular unleaded) fuel."

Kasperson said benzene is a chemical that oil companies put in gasoline to raise the octane levels and make the engines run better. However, Kasperson said, benzene is a known cancer-causing agent. E30 has no benzene.

Kasperson looks back with fondness on all the tests he conducted through the years.

"Curiosity was part of it," he said. "The other was, if you know it, you can tell other people if they want to know."