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Reno boy hits on great idea to save water; businesses are paying attention

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The science project of a 9-year-old Reno student has helped the Reno Aces ballpark save tens of thousands of gallons of water and could help homeowners cut their water bills as well.

Mason Perez's discovery of a simple way to conserve water began with a messy hot dog.

Mason was only 7 when he was at an Aces game with his mother, Stacy, in 2009.

After eating a hot dog, his hands and face were covered with ketchup and relish, so they went to one of the bathrooms to wash up.

"The water was coming out of the faucet so hard that I pulled my hands away," said Mason, a student at High Desert Montessori School. "I said, 'Mom, ouch, that's too hard.' So she leaned over and turned the valve down."

It was Mason's version of Sir Isaac Newton's observation of the falling apple. But instead of resulting in the theory of gravity, Mason theorized that reducing water pressure by turning the water supply valves to bathroom and kitchen sinks only halfway on could conserve water.

Mason's mother said construction workers leave those valves fully open to allow air and sediment to drain out, but businesses and homeowners don't think about partially closing them to save water.

Mason, who turns 10 in July, said people could save money on their water bills and help conserve a vital resource if they simply turn down those valves.

"If everyone would do this, we could save lots of water and it would be good for the environment," he said.

Putting his theory to the test

That belief became the basis for his 2009

school science project.

He tested his theory by using a half-gallon bucket and a stop watch, measuring how much water came out within a certain amount of time when the valves were wide open and when they were turned half off.

The tests were conducted three times each at his house, his grandmother's house and a friend's house, with a resulting savings in water use ranging from almost 4 percent to 23 percent.

He also went to three businesses: Reno Aces ballpark, Scheels sporting goods store and the Coconut Bowl at Wild Waters in Sparks. His tests showed savings from 6 to 25 percent.

Rick Parr, the Reno Aces general manager, said he was skeptical when Mason, accompanied by his mother, presented his idea to reduce water consumption at the ballpark two years ago.

"But after listening to him, I thought, 'This kid could be right,'" Parr said. "So I went down to the bathrooms myself to check out his theory. We didn't measure it, but you could tell right away that it worked.

"You don't have to be a scientist to see that you can save water," he said. "And it didn't make any difference in how well you could wash your hands. The only difference was you weren't wasting a lot of water in the process."

For the past two years, Mason's water-saving idea has been implemented at the ballpark in the men's and women's restrooms and in the locker rooms.

An idea catches on

It has become part of a three-pronged effort to save water at the baseball stadium, said David Avila, the Aces' vice president of operations,.

"The implementation of Mason's project opened our eyes to a simple and practical way to reduce our water use," Avila said.

Mason's idea, along with the installation of special monitors on the Aces' field irrigation system and slight changes in its stadium cleanup process, have resulted in an overall 20 percent cost savings in water usage since opening the ballpark, Avila said.

Parr said all businesses should consider following Mason's simple but effective way to save water.

"If they all cut their water losses -- wow! That would be significant," Parr said. "We need to remember that water is a precious resource in our area."

Mason has also presented his conservation project to Michonne Ascuaga, chief executive officer of John Ascuaga's Nugget in Sparks, and to the representatives of the Truckee Meadows Water Authority.

Mason said John Ascuaga said his idea might work for the casino and hotel sinks, but not the showers.

"He said people like their water pressure in their showers," Mason said.

Scott Estes, TMWA's director of engineering, said Mason gave his presentation to about a dozen members of the management team.

"We thought it was really impressive that this young man was interested in an issue that affects our region," he said. "Water conservation is very important to TMWA."

Estes said there is no way to determine how much money homeowners could save by implementing Mason's water-saving plan.

"It is going to be different for everyone because water pressure and water-use habits vary, but if someone is looking of a way to conserve, why not give it a try?" he said.

Although Mason's science project won the competition in his class at school in 2009, he did not place at the regional science fair held later that year.

But he hopes it can win some teacher his or her job back.

Mason said he spoke with representatives at the Washoe County School District about turning down the valves in its schools.

"They want me to come back and talk to the plumbers and custodians and maintenance people," he said.

"You know how teachers have kind of been losing their jobs?" Mason said.

"If we turned down every valve at every school we have in the Washoe County School District, with all that money we can save, we can save at least one teacher's job."

Water conservation results

By turning water-supply valves only halfway on

under bathroom and kitchen sinks at businesses and homes, 9-year-old Mason Perez of Reno found the following savings in water use resulted:
Aces Ballpark: 19.7 percent
Scheels: 25.5 percent
Coconut Bowl: 5.9 percent
Mason's kitchen sink at home: 23.33 percent
Mason's grandmother's sink: 6.54 percent
Mason's friend's sink: 3.69 percent