

Few consider climate change's impact on water

Written by Johanna Zeller, SCD.Com Staff Writer
Thursday, 29 November 2012 00:00



SolarChargedDriving.Com series: Climate change, water & renewable energy



SolarChargedDriving.Com reporter Johanna Zeller takes a close look at links between climate change, water resources and renewable energy in this exclusive four-part series. In this installment, the second of the series, Zeller looks at the question of a climate-change induced worst-case water resource scenario in a specific but also instructive case: That of Colorado's Front Range, where several million people are living in a semi-arid region whose water supplies could be profoundly impacted by global warming to a degree, which as Zeller's story illustrates, few are aware of. The first part of the series = [Climate change already affecting water resources](#).
The third story in the series = [Rene](#)

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[wables, climate change & the future of water.](#)



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Issues surrounding depletion of water resources are becoming of national and international concern. Drought and water scarcity are being experienced more and more throughout the world.

What are the possible outcomes if water resources go dry? How will humans respond? What will happen?

I went around the city of Denver, Colo. asking people if they had ever thought about the way they use water. I wanted to know if they had thought about water scarcity and its possible outcomes, and how they felt about worse case scenarios surrounding water problems.

Poll: Global warming

How concerned are you about global warming?

Very concerned

Somewhat concerned

Not Very concerned

Not at all concerned

Worst case water scenarios

Most responded that they really had not thought about the way they used water. Others seemed very aware of the issue. However no one had thought about the possible worse case scenarios that could play out.

“Water is essential to our survival so I always try to conserve as much water as possible,” says

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Summer Cepeda, a marketing student at the University of Colorado at Denver. "I haven't thought about how depletion of water resources might affect us in the future though."

Cepeda is not the only one ignoring potential future outcomes linked to a changing climate. Dane Wallace, a pilot with Great Lakes Airlines, states he never really thinks about the way he uses water.

"It's never been an issue for me, I open the tap and there it is," he says.

While Wallace – and probably most of us – rarely think about all that must happen in order for us to simply open the water tap and be able to say "there it is,"

Denver water researchers have been thinking about severe drought scenarios and how would they respond.

Drought response plans

Travis Thompson, a Denver Water representative, explains how Denver Water has studied different types of droughts and has created drought response plans depending on drought severity.

According to Denver Water metrics on water management and use, the worst drought condition in Denver is a so-called Stage 4 Drought. In fact, conditions that would lead to this scenario are not outlined specifically by Denver Water.

However, stage 4 severity is made clear by a [Denver Water Drought Response Plan](#) . Among other things, a stage 4 drought would require a dramatic 50 percent reduction in water use and a concerted effort to increase water supply.

Additionally, declaration of stage 4 drought conditions in Denver would require:

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- Limiting outdoor watering to monthly tree watering;
- Eliminating nonessential water uses;
- Designing a water-rationing program to provide customers water for essential uses for an;
- indefinite period of extreme drought;
- Making the entire emergency water supply available for use during the drought;

Extreme water rationing unlikely

"Conditions that would lead to a stage 4 drought are highly unlikely," says Thompson. "However, if conditions warrant, Denver Water may implement a rationing program for an indefinite period of time to ensure, to the extent possible, that there is adequate water for essential uses."

It is crucial to start thinking of the future and how we might be impacted. Understanding the importance of water now is essential for water conservation and future water resources.

-- Dr. Michael Kerwin, Geology Professor, University of Denver

In fact, notes Thompson, during the 2002 drought, Denver Water came "perilously close" to running out of water in its Moffat Collection System.

"Without water in this system, we would lose the operation of one of our three treatment plants and have difficulty meeting the needs of our treated water customers and raw water contractors such as Arvada, Westminster, Consolidated Mutual and others," explains Thompson.

Fortunately, so far at least 2002 has stood as a highly unusual year for Denver Water.

Current Denver water demand down

"Customer demand is currently 20 percent below pre-drought levels, which extends the length of time that our system can withstand a severe drought," notes Thompson.

After learning about the stages of drought and how Denver water would respond, I went out and asked another group of people how they would respond to the implementation of rationing programs and what measures they thought the U.S. government would take if the U.S. were to experience a severe water shortage.

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Chelsea Rebro, an international studies student at the University of Denver, thought the U.S. government would be likely to take extreme measures to secure water for its citizens if necessary.

"I think that there would definitely be uprisings and a lot of complaints from the people," says Rebro. "However, if the situation came to the point where it would be a threat to human security I think the U.S. government could go to great extents to get water resources to its people."

Kyle Beckner, a grocery store employee, sees the issue differently.

"I think that people would move to a place where water is not as expensive, and I think that the government would find a way to transfer water from states that have enough to those that don't, but I don't think it would become a huge issue unless the whole country goes dry," he says.

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America's water resources timeless?

The opinions surrounding water shortages and droughts are many, and people seem to be confident America's water resources are here to stay for a long time regardless of the potential depletion of water resources.

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Although most people might not be thinking about the future of water and its possible impacts on us, climate change and its effect on water resources is clearly underway.

"It is crucial to start thinking of the future and how we might be impacted," says Dr. Michael Kerwin, a geology professor at the University of Denver. "Understanding the importance of water now is essential for water conservation and future water resources."



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