Changing Climate Yet Another Stressor on Western Ag Water Supplies

By Dan Keppen
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With public exposure and media coverage of climate change and global warming at a near-fever pitch, the Family Farm Alliance this past June was given an opportunity to provide guidance to a congressional committee on potential impacts to irrigated agriculture. At a time when Western farms and ranches are disappearing and water demands are increasing from exploding growth and expanding energy needs, Alliance President Patrick O'Toole on June 6 warned policy makers to stop talking and start acting on measures to protect domestic agricultural production, should drier climate conditions prevail in the future.

"Now is the time to enact sound policies that encourage continued investment in irrigated agriculture," O'Toole told the U.S. Senate Energy and Natural Resources Committee at the oversight hearing. "Allowing water-short cities to absorb farmers' water supplies will significantly diminish domestic food production at exactly the same time climate change is predicted to severely adverse impact food production worldwide."

O'Toole was one of eight witnesses – including representatives from Metropolitan Water District of Southern California, the National Hydropower Association, Trout Unlimited, and federal government agencies – that were asked to testify before the committee.

O'Toole – who served on the federal government's Western Water Policy Review Advisory Commission in the 1990s - walked through some specific studies undertaken throughout the West that demonstrate consistent projections associated with potential warming climate conditions.

"Despite the highly variable and uncertain nature inherent with climate change predictions, it can safely be concluded that, in the West, with a warming climate, there will be less water stored in our biggest reservoir...the snow pack," he said. O'Toole added that more water in the form of rainfall and runoff will come at farmers and ranchers sooner in the season, when it may not be useful and may even present a threat.

He then outlined anticipated impacts feared by Western farmers and ranchers, and summarized specific examples of how Western water users and their communities are planning to meet those impacts.

"If the effects of climate change are anything like those outlined in the research discussed here today, Western irrigated agriculture could be largely eliminated," O'Toole warned.

This is, of course, worrisome to farmers and ranchers and their communities. It ought to be of great concern to nation as a whole because climate change may result in a disruption of food production worldwide. If that is what is in store for us, then this country cannot afford to lose the food production capacity of Western irrigated agriculture.

O'Toole closed his testimony with specific recommendations intended to stimulate development of water supply enhancement measures, continue proven water conservation measures, and prioritize climate change research. He then urged the committee to take a hard look at the big picture.

"Europeans aggressively protect their farms and food production capability because they still remember the hungry years during and after World War II when they relied on other nations, America in particular, to feed them," he told the subcommittee. "The time has come – indeed, it's long overdue – for the United States to similarly adopt an overriding national goal of remaining self-sufficient in food production. Policy decisions on a wide range of issues ranging from taxation to the management of natural resources should then be evaluated to be sure they are consistent with that goal."

The Alliance Board of Directors at its 19th Annual Meeting in Las Vegas last February established a subcommittee to develop a white paper that addresses the important issue of climate change, its possible impact on Western water supplies and irrigated agriculture, and recommendations on how to plan and provide stewardship for this change. Many of us involved in the crafting of this white paper will admit that the intensely partisan debate surrounding climate change can sometimes be a distraction from more pressing issues. First, it triggers endless discussions regarding causation of said warming (i.e. human-related, or natural). Second, it often appears that agency modelers will expend seemingly infinite amounts of funding based on their hope to create predictive tools, even though we may be years way from models that will have enough reliability to commit money or other resources. Climate scientists love their models, but when asked if they have enough confidence in them to make irreversible commitments of resources, the message invariably becomes a more subdued "no, but we hope to get there".

However, we know that the climate has changed for the worse in the past. A study released earlier this year by the National Research Council includes tree-ring based reconstructions of the Colorado River's flow over hundreds of years that show average annual flows vary more than previously assumed and that extended droughts are not uncommon.

So, we can expect periods of extended drought to re-occur in the future. When that happens, fresh water supplies in the American West and all over the world will be strained. We must begin to plan for that now, and not wait until we are forced to make decisions during a crisis.

The ivory tower academics and well-intended conservation groups love to talk about "sustainability" of agriculture. Why isn't anyone talking instead about "redundancy" of American agriculture, especially in terms of our ability to feed ourselves in times of war, after acts of massive agro-terrorism, and, yes – those lean years when climate change could further limit our capacity to produce domestic food stuffs?

Relying on agriculture to be a "shock absorber" to soften or eliminate the impending water shortage is <u>not</u> planning. It is a decision to put our heads in the sand and hope for the best. It is a decision that could worsen the overall impact of climate change on the economy and security of the country.