The Importance of Irrigated Agriculture in the West and Recent Developments

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Dan Keppen is Executive Director for the Family Farm Alliance, a non-profit association that advocates for family farmers, ranchers, irrigation districts and allied industries in 17 Western States. He has 24 years experience in water resources engineering and policy matters. Since the mid-1990s, he has worked primarily in advocacy positions representing Western irrigators, including over three years as executive director of the Klamath Water Users Association (KWUA), where he was intimately involved with one of the most contentious water crises in the West. Prior to that time, Dan was a water resources engineer for Tehama County, California and a water resources engineering consultant in the Portland, Oregon area.

Dan is a Registered Professional Civil Engineer in California and a past Civil Engineer and Certified Water Rights Examiner in Oregon. He has testified before Congressional environmental and water committees fifteen times on water resources, environmental and climate change matters. In his eight years at the Alliance, the organization has been asked to testify before Congress 40 times.

Dan was awarded a "Resolution of Commendation" by the California State Senate and was appointed by Governor Kulongoski to serve on the Oregon Climate Change Integration Group. In 2009, he received the first ever John Keys III Memorial Award from the Bureau of Reclamation for "Building Partnerships and Strengthening Relationships." In 2010, he received KWUA's "Distinguished Service Award."

Dan received his MS in civil engineering (water resources) from Oregon State University and his BS in petroleum engineering from the University of Wyoming.

Good morning everybody. I want to talk about the importance of irrigated agriculture in the West, recent developments, and focus on the importance of our recent economic report.

First, a bit about the Family Farm Alliance. We are a non-profit organization of irrigators in seventeen western states. We advocate for protecting and enhancing irrigation of western agriculture. That is our focus. I am an advocate, and you are going to have to take that with a grain of salt. Some of the initiatives that we have been working on the past couple years include the report entitled, *The Importance of Western Irrigated Agriculture to the U.S. economy.* The last topic that I will discuss—streamlining of low-head hydro projects—is something I normally wouldn't even bring this into the presentation, but it is very relevant because there are people in this room that made really important progress in this arena in the last couple years.

Two bills have passed recently that were signed by the President that makes it much easier for irrigation districts, farmers, and ranchers to permit the development of low-head hydro in existing canal systems. This issue was primarily elevated by Gary Esslinger from the Elephant Butte Irrigation District who is here and even helped pay for me to come to this conference today. I would like to thank him for that. Gary brought up the low-head hydro effort, and it should be a no-brainer. Say you have a canal system and you want to put in a little low-head turbine. You learn it only takes $10,000 - $20,000 to fabricate these facilities, but it takes years to obtain a permit. The purpose of these bills, without getting into a lot of detail, is that they greatly streamline the permitting involved with the Federal Energy Regulatory Commission or FERC, and the Bureau of Reclamation on developing these no-brainer kind of projects. Tanya Trujillo, who is here in the front row, also played a role in this legislation. When we began with this idea, she was counsel to the Senate Energy and Natural Resources Committee, and she helped with the House and the Senate to get oversight provided on this topic. This is hugely important. I mean, how many laws has President Obama signed this year with this contentious Congress? There haven't been many, but two of them are ours and had origins here in New Mexico. We are very proud of those bills.

Dr. Darryll Olsen will talk tomorrow about our economic report. I want to go over some of the highlights that came out of this report. We did a similar report back in the 1990s with Dr. Olsen, who is an economist from Washington State. We updated the report last year and developed a preliminary white paper because the Environmental Protection Agency was making a lot of noise about focusing on the role of water on the U.S. economy. As we saw their press releases roll out and saw the scope of their initial work, it didn't seem that agriculture was getting the sort of attention that recreational use, or fish and wildlife use, and such were getting. We wanted to demonstrate that there was a definite value associated with water going to irrigated agricultural use in the West. We commissioned our report and we were the only non-governmental agriculture association invited to testify at a workshop the EPA held last September of 2012. We travelled to D.C. and rolled our report out. It was well received because it was just so real. Darryll Olsen does a great job of talking about how important this economic engine of irrigated agriculture is, and we have seen this resonate with other audiences. The Farm Foundation in Chicago peer-reviewed the report. We also updated last year's numbers with 2011 commodity prices. We rolled out a report in conjunction with the Irrigation Association this last September and incorporated the peer-reviewed findings.

I want to outline some of the key findings, and Dr. Olsen will provide more details tomorrow. First, for the 17 western states, when you look at the impact to the economy and household income associated with the irrigated agricultural sector—which we call the irrigators, farmers, producers, ranchers, the service industry, and even food processing and packaging industries—it is $156 billion. When you break it down, more money goes into the irrigated agriculture industry than goes into Intel and Nike in my homestate of Oregon. I am going to leave Figure 1 up for the rest of my presentation. The graph is very telling and has implications for policy makers dealing with water issues.

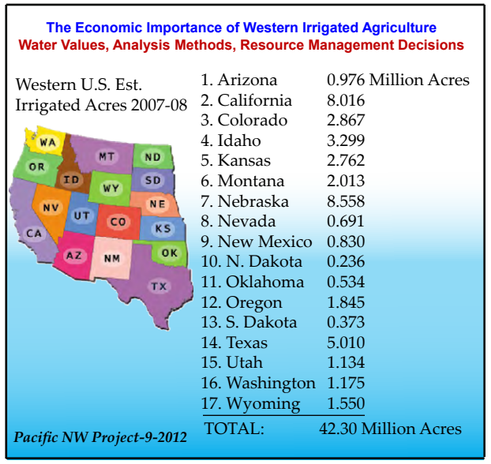

Figure 1. Western U.S. Est. Irrigated Acres 2007-08

There are some key take-aways that came out of the economic study. Basically, the importance of irrigated agriculture's contribution toward the U.S. economy is huge. The $156 billion is not a small figure and should get people's attention. The other thing that is really interesting is the so-called silent opportunity costs associated with decisions that may take water away from irrigated agriculture and move it to other sectors. One of those silent opportunity costs has to do with Figure 2. This figure shows the percentage of disposable income that Americans have that is dedicated to food spending since WWII. In the late 1940s, it was up around 25%. Now, we are at about 7%. A typical Chinese consumer spends 21.3% of their disposable income on food. Can you imagine spending four times the amount that you do now on food? That would take away people's ability to spend money on all the other things that consumers like. The consumer spending component is the most important part of our economy. Nobody ever seems to talk about that when it comes to making decisions about water resources. We put together a great focus on impacts to fish and wildlife, impacts to growth, impacts to energy development, and so on. We don't see a focus on these so-called silent opportunity costs.

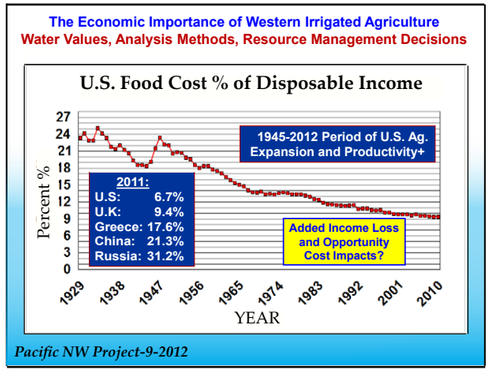

Figure 2. U.S. Food Cost % of Disposable Income

There is another factor to consider as well, and that is that by 2050 we are going to have to double our food production capacity to keep up with the growing population. That means that we are going to have to increase our ability to produce food on the order of around 1.75% a year. This is happening at a time when many of our own government policies are encouraging agricultural lands to go out of production and that water be used for other purposes. The report we put together shows that we have good arguments for protecting agriculture. We have a great need to feed the world and our country, and this is happening at a time when only 6% of our farmers nationwide are age 34 years or younger. We are in danger of losing a generation of farmers at a time when we need them to feed the world more than ever. Again, this has a huge impact to our overall economy.

I want to talk about other silent opportunity costs that nobody wants to discuss. First, I am sure that many of you are familiar with the principles and guidelines that are being developed in the agencies right now. Has anybody heard of the PNGs? Anybody? I hope you are following these developments because they are hugely important. Since the last Water Resources Development Act, there are new guidelines to reevaluate how the Corps of Engineers and the Bureau of Reclamation assess and determine whether a water project is feasible or not. Some proposed principles and guidelines have been developed by the White House Council on Environmental Quality. They will apply not just to the Bureau and the Corps, but to every federal agency that deals with water except for emergency repairs, development of regulations, and research. That is how the rules are currently written. This has huge ramifications; it isn't like the good ol' days when you simply look at a potential project, do a cost-benefit analysis, and take that to Congress to find out if you meet certain requirements to get funding. Now you will have to look at things like environmental justice, social justice, climate change, impacts to fish and wildlife, and all the things that probably should be looked at, but which are probably already dealt with through agencies such as the EPA. This will require managers to develop a whole new layer of criteria as they assess water projects. It isn't just water projects. I participated in a conference call with the White House CQ and a bunch of other folks from around the country last week. Right now, it is so subjective and hard to figure out what exactly is going to happen. We are asking the agencies to develop specific examples to show how they would currently assess projects versus how they would assess projects in the future with these PNGs to give us an idea how the agencies will deal with issues like environmental justice, social justice, or climate change.

With that said, we are saying that if you are going to look at those sort of issues, you also need to take a hard look at the impacts to agriculture with every water project decision that you make. We have examples of why that needs to happen. If you look at what is happening in the Central Valley of California, you see how the decisions made there have almost destroyed communities in the San Joaquin Valley. Another example has to do with the EPA. The Clean Water Act and the definition of U.S. waters are being looked at. Guidance was being proposed but got pulled back at the last minute; now there will be a rule-making process that accompanies the new definition of waters in the U.S. This has huge implications for agriculture. I think the rules being talked about could definitely have more agriculture activity brought in under EPA jurisdiction. The Clean Water Act originally had some exclusions that were intended for agriculture, but we hear that is probably going to change.

As part of the rollout of the new rules, there are two reports that the EPA has released. One is the conductivity report that looked at how groundwater and surface water are related and how wetlands tie into surface water. EPA also came out with a "value of water" report, which is what triggered our efforts long ago to develop our own economic report. I just looked at this value

of water report that was released about a week or two ago. Consultants hired by the EPA put it together. I don't want to be critical of the EPA, but their report doesn't really say a lot. Basically, what it says is that it is hard to determine what the value of water is and more study is needed. But, water is important, clean water is important, and the EPA is important because we care about clean water. That is basically the take on the report that I have received from several folks. These two reports have come out around the same time that more aggressive rule making is being proposed and I don't think that it is a coincidence. We think our report could be used in that forum to show that agriculture is just as important as some of these other uses.

Finally, I want to talk a bit about the Colorado River Basin Study. The Bureau of Reclamation just released a study that looks at future demands and needs for water in the Colorado River Basin. It looked at a lot of scenarios out to the year 2060. From an agricultural perspective it is very concerning because the models were run based on different types of assumptions. Every single scenario shows that there will be a water shortfall of irrigated agriculture by the year 2060. Up to one million acre-feet of water might be required to be conserved according to the Reclamation's report to make up this difference. This represents 6-15% of existing irrigated agriculture in the basin would be taken out of production. Again, there are ramifications there. Reclamation is looking at scenarios that assume certain population growth, or certain environmental needs, or hydropower needs, and then running its model, which spits out how many irrigated acres will need to be taken out of production based on other demands.

We are saying that Reclamation also needs to assume that we will need to keep all of our agricultural land to feed the world, and maybe even increase that acreage. What happens to the other sectors if you make those assumptions? There is a paradigm in use that looks at modeling future water planning. I'm not blaming Reclamation, it is how many agency planners do things in the West. Planners plug in inputs, and the output is how many acres of agriculture we are going to take out of production to meet those demands. We would like to see Reclamation or other water policy officials run another scenario, one that assumes that Basin irrigated acreage will not be diminished, and may, in fact, need to be expanded. If it is going to be water transfers to meet these needs, then they need to be short-term transfers that properly mitigate impacts to communities. We also need new infrastructure as well as to continue to do great conservation work.

I will close by saying that you will learn more about our report tomorrow during Dr. Olsen's presentation. He is a very compelling, interesting, and entertaining speaker and he will handle some of the economics in more detail. I have to say, too, that we are pleased that the Bureau of Reclamation is conducting a huge river basin study. But they and other policy makers need to understand the importance of western irrigated agriculture and the implications of drying up land that is currently producing food in the West and elsewhere. The Family Farm Alliance will continue to advocate to that end.

Thank you.