

Tony Williardson: Thank you, Jonathan. Jason? We will get you pulled up here. While Jason brings up his slides, I would just mention that the National Drought Mitigation Center is a great resource. There're a couple of other areas that you may want to keep in mind and also for fish and game representation, I co-chair the National Executive Council of the National Integrated Drought Information System and I double checked and we have no official fish and wildlife representation either federal or state on that executive council. I would invite you to think about that and if someone's interested, I'm sure we could get you a seat at the table. Also, I think we'll hear later on, today or tomorrow, about the national drought resiliency partnership from Roger Gorky with EPA that's head of that.

Jason Persinger: Can everybody hear me? Okay so, as you can see here are the Region 2 states in the upper Midwest and this morning conversation about riparian states and how there is some drought planning but there's not a lot of accounting for fish and wildlife needs in drought planning in this region. A lot of the drought planning in this region, pretty much follows Christopher's slide. I almost could have just used that slide for all the states of the hydrologic cycle of, we get a drought, everybody gets fired up in a particular state. We start a process and then water comes back and that process sits there. That seems to be a fairly common theme in this part of the country.

It's one of those things a lot of these states still have the perception that we have lots of water because, water can be the common enemy at times. I think we worry more about the flooding aspects instead of the droughts until we're in the middle of one. Of the 12 states in region two, I got responses back from six in terms of the IFC members kind of giving me an idea of what their plans were and what they were doing. We're just going to run through those today. Our view is kind of unique in that we have a mix of prior appropriation and riparian doctrine states. Most of the responses I did get were from the riparian states. You'll see a theme of what I talked about is those hydrologic cycle type of things. Starting with Iowa, coming out of drought in 2008, they updated their plan in 2010.

They were going to establish rules on priorities and emergency storage priorities and how local response would prioritize water shortages. They were going to promote water conservation and all this was in the new plan. When I asked Greg, "Where are you in doing these things?" He said, "Well, we haven't been in drought since," you know, some of these things are further along than others. A lot of it is, "This is in our plan, we're going to do this," but we haven't actually had the opportunity to follow through and set a lot of these priorities and make the decisions to make this plan useful and really work for them in the way they hoped it would. That's because there hasn't been the motivation to get there because of what Christopher talked about. "Hey, we've had rain now, so we're not worried about it, or we actually had flooding, so we're actually worried about the other aspects of water at the moment."

So Iowa has this nice plan in place and it's laid out a process to really get some of their priorities. Potentially that includes fish and wildlife but they haven't actually followed through to make this work.

Next up, we're going to talk about Kansas. Basically there's no formalized procedure or plan in Kansas. Technically, the Governor or the Kansas Water Office can declare

drought and then once that occurs, they solicit other agencies for input and what steps to take and how to deal with the drought. There's not necessarily a plan to deal with drought before they're actually in one. Typically, when this comes around, instream flow tends to rank lower than most other uses, even reservoir levels help stream flows. Kansas does have some minimal desirable stream flows that are on the books that they try to maintain. But more than anything, they seem to be, the fact that they exist makes them targets during periods of drought. It's like, "Oh, there's a place where we're maintaining water that we might be able to get it."

Then, it has the opposite effect of what you would necessarily want that to be and it ends up becoming a target instead of a protective opportunity. In Michigan, I don't know how many of you guys are familiar with Michigan, and how they go about regulating water usage and their water permits. They don't actually have a drought plan as part of their water use advisory council or how they're regulating permits. Basically, what they do is they have very strict legislative guidelines on permitting water and what it takes to get a permit and how that permit is going to be. Its individual and cumulative effects on each system are then part of getting that permit, taking into account low flow periods or drought periods. All permits include conservation measures but there's no process directly related to drought.

It's not that their permits have conservation measures but there's nothing like if they get into a severe drought beyond what they're anticipating, there's no further steps in terms of trying to deal with the drought related to their permits. There are no guidelines or rules that they're following in terms of how they lay out their permits and how they're going to deal with it beyond their conservation measures that are already built into those permits.

Minnesota actually has one of the more extensive and well-defined processes for dealing with droughts. It was authorized by legislation that they would develop this process and plan and I list the major participants in their drought planning and drought response. Numerous other agencies are considered minor participants. I didn't list them all because it was basically every other agency that you could think of that might have any input into drought.

Their plan can be found here at the link that I have on this slide. It divides the state into watershed drought planning areas. Each of these 12 drought watersheds has its own trigger for each of the phases. They have five triggers in their drought program that trigger different steps and different amounts of reduction that they expect and different water conservation issues and so each of these has their own triggers. They're based on drought indices coming up with whether it's normal, dry, or moderate drought. They're following drought indices and/or in some cases Mississippi River gauges. You can kind of see here the process. They have a non-drought stage where they're trying to do planning and strategy development when they're not in a drought.

They have a process to try and avoid some of their hydrologic cycle. Ian could probably tell you how that works. I don't know how they deal with that, but it is part of the plan to try and get out of that cycle of only worrying about drought when you're in the middle of drought. Then, they have multiple steps here and they eventually get to a

restrictive phase and then an emergency phase of dealing with drought. There's not any necessarily a fish and wildlife dedicated portion to this. It comes from human use and that kind of thing.

Now, I'll talk about one that I feel I actually know a little bit about and that's the Missouri situation. The Missouri DNR, first developed the drought plan back in 1995. Then they had a drought in '98 and realized that that drought plan wasn't good enough and did a revision in 2002. This is still the drought plan that we work under. It is based on determining drought, based on the indices you see here. We're using the stream flow, using the Palmer drought Index, precipitation to determine the different stages of when we're in a drought and how severe that drought is. We have four phases plus we have an advisory phase where they're monitoring conditions to look for drought but that doesn't really have any steps in it for planning beyond the plan that exists in terms of taking steps to try and avoid droughts.

Once we get into an actual drought alert, the Governor can then convene the drought assessment committee which then pulls together the technical experts from different agencies to come up with how to deal with that specific drought. Then, we have conservation phases and water rationing and drought emergency phases as well when a water emergency can be declared by the governor. This all sounds well and good. We have a good plan, it's been on the books for a long time. The last time we had a drought in Missouri in 2012, it just happened to be an election year and the governor wanted another term so he decided he was the man for managing the drought and we didn't do any of this. We didn't follow the plan. There's a good plan but it's not always necessarily configured in a way that this is what we must do and the governor decided that was not the path he wanted to go down.

The final state I'm going to talk about today is Wisconsin and I don't know that any formal drought plan actually represents Wisconsin very well. If you go down there to the second to last board under Wisconsin's Home Rule, drought prevention and response are considered local activities. The state government in Wisconsin, basically cannot get involved in helping with drought unless the county or local municipality requests assistance from the state government. It is a local issue unless they ask for help. The only thing Wisconsin state government has is their drought tool kit that they've put together of how you might deal with a drought. That's for municipalities and counties to use. It's a rather different approach compared to what I've seen from anywhere else but under Wisconsin law, that's how they go about it.

With that, that's really all I had today. Thank you guys, for your time.