Virgil Moore (slides in separate file):

Slide 1

Thank you. It's an honor to be here today. I'm not sure I know more than anybody. I've forgotten most of what I know. I'm a Fisheries biologist by training. Started my career in graduate school in 1974. Started my career with Idaho Department of Fish and Game. I've worked in a number of capacities.

Several of those capacities have put me in contact with stream flow issues. Idaho does have a minimum stream flow law. It's in place. During a period of the mid '70s through the early '80s, we had an active research program to utilize the incremental flow methodologies to quantify what that minimum flow was. We can't have optimum flows by law, but minimum.

I was part of the team that did that. I came to Fort Collins for training by the old U.S. Fish and Wildlife Service Instream Flow Group in 1985. When Christopher asked me to be on this panel, I had to think about, "When was it I did that, and what did I learn or do?" As president of the Association of Fish and Wildlife Agencies (AFWA) now, fast forward 40+ years, I have a chance to come full circle with the policy side of the business as a director.

What I want to give you is a little bit of insight. So, I want to start with an overview of the AFWA, and why it's important to the Instream Flow Council, and to our discussions about drought and management of stream ecosystems, as well as lake ecosystems

Slide 2.

AFWA was founded in 1902, our membership, same as the membership of this group, state provincial and territorial Fish and Wildlife agencies. We do have federal agencies as members, and we do also have non-governmental organization and some other life membership. Just, give me a show of hands, how many are here from state or Canadian territory and provinces here.

Slide 3.

Our mission is to support and advocate for state provincial and territorial responsibility for science-based fish and wildlife conservation. Sound familiar? Certainly, the foundation for many of our state agencies. It's the foundation for the Instream Flow Council in looking at your mission statement it's very similar.

Slide 4.

AFWA's vision: Sustainable fish and wildlife populations and habitat management, in trust, for and supported by the public. Very important component, states and Canadian provinces to a different degree, have this trust responsibility. It's what was given to us on statehood. Those were things that didn't go to the federal government that we have the trust responsibility for. Not only fish and wildlife, but water, and in navigation and stream channel. It goes on and on relative to those things that are held in trust by the state to manage. There certainly is a lot of federal interface there, because of congresses superior abilities to interfere with those trusts at times, my bias showing a bit there.

Slide 5. AFWA has a national agenda, and that agenda is to represent our members on Capitol Hill on key conservation and management policies that ensure that members' priorities are addressed and to secure broader funding for fish and wildlife conservation; and, I'll add a third bullet that's not up there, and to protect state sovereignty. It's a huge part of what AFWA is about.

We have about 25 staff stationed full-time in an office in D.C. We have a full-time executive director and legislative coordinator. So, we have a team of highly professional staff that is supported by the executive director who works for the directors of the states. To be a voting member of AFWA, you have to be a director, pay dues and support our organization.

Slide 6. Like any organization, we function on committees. Don't pay attention to all the junk in there, other than the blue. There is one committee, the Fisheries/Water Resource Policy Committee that Christopher and I, and maybe some of you have been members of. I had the opportunity to chair that committee for a number of years as a director and a deputy director. It is the real action committee and it is the one that the Instream Flow Council is an integral part of, and I want to show you that.

Slide 7. We also have the National Fish Habitat Action Plan (NFHAP) nested under and supported by this committee and by AFWA. We have multi-state grants, which is leftover or money from the excise tax on Dingell-Johnson (DJ) and Pittman-Robertson (PR) Funds, that we can allocate as an entity, about five to seven million dollars a year, and those grants are given to states and other entities to do multi-state things. And NFHAP is one of those that got funding. Christopher was a key component of that. In addition, we have supported things like the Instream Flow Council (IFC) book.

Slide 8. The AFWA IFC Scientific and Technical Input Process was established to take better advantage of IFC expertise; again, Christopher gets credit for dogging that along with a lot of other members, and it linked us together at the AFWA level. So, I tell this story to bring you full circle to, "Why is AFWA so closely tied to IFC."

Slide 9. This slide is a further clarification that the clear needs identified by the 2015 AFWA drought forum and follow-up calls for action, with the point being, we're on the same page. We're talking about drought, drought management, stream flow, maintenance of those stream channel morphologies, and number seven there I bolded a little bit; ensure that regulatory flexibility during drought does not negatively affect fish and wildlife. That's our policy statement. You've heard a number of the other speakers talk about that.

Slide 10. Post drought forum action examples, through AFWA Fisheries and Water Resources Policy Committee, we did the following items. We established a water sub-committee, a separate sub-committee under that primary committee just to deal with water. We had had a lot of dispersed focus, now we have a sub-committee that focuses just on that and can interface much better with IFC on

these issues. Again, the formal mechanism for IFC input in addition to better coordination with the Western States Water Council and the Western Governors Association. We're forming very close ties with them.

And I am sorry that this is Western centric in some ways, but it also could play much larger as this organization plays out throughout the rest of the United States. And we've been involved with promoting this flow workshop.

Slide 11. Now you've seen the basis for this item, I just held it up, it's the AFWA Instream Flow Council Scientific and Technical Expertise Recognition. We helped pay for publishing that book with a multi-state grant through AFWA. Again, that's our partnership. So, now I'm going to shift gears.

Now you know about AFWA, you know about what AFWA does. As president, I'm doing my one year term as president, and in my four year cycle in the executive committee with AFWA. I've also been heavily involved with WAFWA, the Western Association of Fish and Wildlife Agencies. Was on the ground floor with a lot of folks in putting together the Western Native Trout Initiative (WNTI) and building the support for that prior to the National Fish Habitat Initiative getting formed.

Slide 12. Earlier, Christopher put up the hydro-illogic cycle. I put it back in here again, simply because, follow the arrows; rain, apathy, drought, concern.

Slide 13. I immediately looked at that, with all the floods and stuff we have with ~~the~~ regulated hydro systems that we deal with in many of our states, and reversed the arrows. It's rain, concern, then maybe man-caused drought, because of the way we manage those systems, then we go into some apathy because the flood is gone.

Every fourth fifth or tenth year in Boise, we have a man-caused flood through the Boise river in town. Channel capacity is just under 20,000 cfs. If they have to release more water from the irrigation systems above because they didn't predict right, we saw the prediction cycle where timing brings it down narrower and narrower. They're always playing that game of, "We got to store water, we got to store. Oops." It can all melt off too fast, and we have man-caused floods. And then we get that under control and people forget about it. Then we have man caused droughts the next winter, because they're storing all of the water.

And we go through these cycles much quicker than what might occur naturally because of the man-caused influences. Christopher showed this newer thinking that he developed. Certainly, average hydrological events are kind of nice to look at and draw a black line on; but, they don't occur very often. That range of bar-and-whisker graphs is getting wider and so the use of those average hydrological events is getting harder and harder to deal with, because they're just not out there in our world any longer. And so we have to go through this concern cycle much more often.

Slide 14.

Okay. I'm going to shift gears now and tell a few stories while I've got some time here as a fisheries professional. The game for water storage changed in Idaho in June 5th, 1976. I was in graduate school in Pocatello downstream about 80 miles when the Teton Dam broke. I was on-site there about two weeks later looking at the devastation that occurred from this, as a student.

This dam failed, due to an engineering flaw. It failed on its first filling. It released 885,000 acre-feet of water in less than 24 hours. I think the total peak flow was two million cfs. I mean, this is, I don't know what you would call that for how many year event, but it's on a geologic timescale that we would never see this kind of event naturally.

This event materially changed the world as we knew it in the Western United States. It was the last of the dam-building era. We have not seen a large federal dam built since. I kind of doubt we're going to see another large federal dam built, simply because of the financials involved in it. This event killed a few people, fortunately there's seven miles of river below there in a narrow canyon, then it fanned out on the Snake River Plain, and while the flood was devastating, they had enough warning and the nature of that flow spreading out over such a large area resulted in huge property damage, but a relatively small though tragic number of deaths.. Livestock deaths on the other hand were huge.

As a result of this flood, Idaho Fish and Game took on the task of quantifying the wildlife loss in 1981 to the state of Idaho as a result of this man-caused flood~~.~~. I was a fish manager in Idaho Falls assigned this work. Congress had passed a bill that allowed for the recovery of the loss value of property. The state of Idaho owns the beds and banks of all navigable streams in the state. Which in our state is anything that can float an eight-inch saw log anytime of the year, that's eight feet long.

So that's pretty much every stream that has a definable bed and bank, and so this was a navigable river going into the Snake River, the Henry's Fork and the main Snake. We did geomorphological look and we lost 85% of the sinuosity of this highly productive native Yellowstone Cutthroat Trout stream. We were able to quantify an acreage lost through aerial photos, working with Idaho State University, and we recovered just under ten million dollars in value on that 14 miles of the Teton River stream.

The Bureau of Reclamation would not allow that same methodology to be accepted in the Snake River downstream of the Teton River, which would've quadrupled the claim easily down there. Yet, that loss is permanent, all of that sediment is still there in place in the Snake River. In the area above the Dam the Teton River that was inundated suffered catastrophic changes in the river channel, because the banks sloughed due to the quick draining creating a pool drop structure instead of a riffle pool structure.

Slide 15.

The bottom line was this changed materially what you will see in the Columbia Basin in the future. This is a map of the Columbian Basin, you've seen several versions of it. Note every number and every little dot on there is a dam. This is a working watershed of the highest order. These are the landscapes people live in, work in, and love.

The Southern Crescent of Idaho, the Snake River that you can see there, is essentially our Nile River. Most of the population of the state of Idaho lives within 25 miles of that river, because that's where the irrigation water is. And it's highly developed agricultural, worth a ton of money. And, what I want you to see, though, is that there is not very much of that from just outside of Yellowstone Park, Jackson Lake to the Hells Canyon Dams in the lower Snake.

The Snake River swings across that southern Idaho, goes north to Lewiston, Idaho, and then cuts across eastern Washington, where it meets the Columbia.

The other point I want to make about Idaho water, is it is a fully adjudicated system. Went through adjudication for nearly 25 years and the Snake River Basin is done, that includes the Salmon River. While the Snake River is highly managed, the Salmon River has no mainstem dams on it. So, you've got this contrast of two very large systems that one is a riparian natural flow system, the other one is a hydropower and irrigation dam and reservoir system managed flow.

Slide 16.

So, what do we do in these systems? We can legislate, we can litigate, we can adjudicate, and we can regulate. I can go on with that list of things that are in there. What has Idaho done? We've legislated minimum flows, we've litigated stream flow issues. The litigation in Idaho ... the reason we have a minimum stream flow on the lower Snake because of an early 1900 hydro power minimum flow that Idaho Power Company holds for Swan Falls Dam. Idaho would not have water in the lower Snake River, if it wasn't for the fact that that adjudication gave them the priority water rights, to 3,500 cfs in the lower river for hydropower that would not exist there otherwise.

Idaho did adjudicate. And to me that is one of the most important pieces to water and aquatic management, being able to know exactly how much water is where, what the water right is. Now we can go out and for lease and purchase, change points of diversion and move water to where it can be beneficially used for fish, irrigation, and stream flows. This is being used heavily in the Lemhi River for salmon and steelhead recovery needs. In addition to these actions, should be “and collaborate”. Collaboration is a great tool and, I'm going to tell you two stories here on collaboration, a failure where no collaboration took place. And a success where it did.

The Teton River comes out of the mountains there off the backside of the Tetons, and when it hits the Snake River Plain, it splits into the North and South Fork, two channels that go down into the Snake River. Early in my career, after we did the loss recovery work from the Teton flood, I got a call as Fisheries

Manager saying there was a fish kill in the town of Rexford. I jumped in the rig, it was 25 miles up there, I go up there and I look in, it's like, "There's no water in this thing." This was the south fork of the Teton. And there were pools of water, fish was running around everywhere dying. I got on the phone, called my staff, "Get up here, we're going to try to do some rescue."

And I went upstream where the north and south forks split from the main Teton River to the headgates for these distributaries irrigation diversions. The headgate on the South Fork was completely closed. "What the heck is going on here?" I knew that that wasn't supposed to happen. I went over and opened the headgate, no authority to do this other than the fish need water and the legal authority to prevent a fish kill. We open that headgate up, got some water in there, began to reestablish flows, went back downstream to meet my crew, to instruct them to get out there and try to save fish and quantify some of the fish kill that occurred. While doing some photo documentation, we notice the water again going back down. Drove back up to the headgate, it had been closed, chained, and padlocked. Oh yeah. I happened to have a set of cutters in my rig, so I cut the dang thing, open the gate back up.

The next thing I know, I'm there with the county commissioner and water district folks and we had a conflict of the first order. We got that head gate open by the watermaster and neither the county or Fish and Game had the authority to mess with headgates. But, why did the County close that water? Because as a result of the flood, they were trying to fix their bridges on the south fork that went over the rivers to connect their golf course. They had money, as part their damage claim from the Teton River flood to do that. But their permit did not allow them to work below the high water mark. Their solution? Shut the water off, there's no high water mark.

Out of that came a lot of tension. It resulted in legal charges against the county, some very hard feelings between our agency and the county commissioners. We won that challenge, we did get a small payment for the loss of fish from them and we established a legal precedent for fish from unauthorized dewatering. It took years to overcome these hard conflict ridden feelings.

Now fast forward to a collaborative near this same river, the Henry's Fork Foundation, small hydro power development threatening flows in the river by diverting water out and running them through penstocks down existing abandoned railways and dumping them back in and resulting in dewatering of a portion of the Henry's Fork of the Snake, the world renowned blue ribbon trout streams that we have in Idaho. That and a few other issues, resulted in the people who lived there, these same county commissioners, these same irrigators, recognizing that they don't want to lose that fishery.

This is home. This is community. This is spiritual. I loved Aaron’s presentation this morning. And they came together into the Henry's Fork Watershed Council. A good friend of mine, Jan Brown, helped form that collaborative in 1989. She was, at that time, head of the Henry's Fork Foundation that had recently

formed. And she invited me over, I was in Boise at that time, as state fish manager. And she said, "Come on up, I want to you to see this." Everybody's sitting around in a circle, I mean, literally these are irrigators with bib coveralls on that still had mud on their boots from being out in the field, coming in to sit down and talk about what we're going to do to make sure our Henry's Fork stays a fishable stream.

Jan said, "Everybody stand up, we're going to hold hands." And I'm thinking, "You're going to do what?" And all of these people stood up and held hands together. It was a personal, spiritual, connection. Today, we have a legislatively approved minimum streamflow on the Henry's Fork that has water rights senior enough that no hydropower can go in there.

We did the same thing on the south fork of the Payette River, as a result of a hydropower proposal, with the local communities coming together. We have collaboratives on the Clearwater Basin, the Kootenai River, and others throughout Idaho. All of these collaboratives are what is making good things happen today with streamflows. Where people sit down, learn to trust and share what they want to celebrate about those waters.

Collaboration, it is our future, but it's got to be done both on large scales and small scales.

Slide 17

So what can you do next? I think you need to learn more about AFWA on the big scale. And how to engage through your respective agencies and entities. I also think that you're going to have to be ready to collaborate a local level. This stuff scales down. It's got to be done like on the Lemhi River, it's got to be done locally. It's where people live, it's where they care.

And our part, my part, as a director is hiring the right people that understand and empathize and respect that local aspect of working landscapes. Because by and large that's what we got in Idaho is working landscapes.

Slide 18.

Real quick, how do you pay for this? Where do we get the money from? As president of AFWA, one of my big initiatives, and I'm really shifting gears here with a few minutes left, is the Recovering America's Wildlife Act. I don't know how many of you have heard of this. A blue ribbon panel put together some recommendations a few years ago on how to get permanent long-term funding for all wildlife in this nation.

This bill (HR 4647) was introduced by Rep. Jeff Fortenberry from Nebraska and Debbie Dingell of Michigan, she is of the Dingell-Johnson lineage. This act would take 1.3 billion dollars annually from the royalties off of mining and the oil and gas leases, and move that money into a sub-account that's already in place. We got that much done under Pittman-Robertson.

That money then would go back to the states, under a similar formula as we do now, but not based on licenses, but on population and size of the state on an annual basis. It would not be appropriated by Congress it would just go into the trust fund and go back to the states on an annual basis to take care of the needs of all wildlife.

That is more than my DJ and PR funding put together, it's almost equal to that. This is some power, $1.3 billion annually out to all the states and for the state of Idaho, its $18 million annually. It's the kind of money we can partnership up a storm since water is needed by all fish and wildlife I see states granting some of it to the Instream Flow Council. To you as members, it's important for you to get on board with this. We have 45 sponsors in the House, we are just about to announce a lead sponsor in the Senate. If we can get this thing through a hearing this session, we have a chance of making this thing go.

Slide 19. So with that, I'm done. Questions?