

# InfrastructureUSA

## Guest on THE INFRA BLOG

**Jim Pawloski, President, Association of State Dam Safety Officials**

**Conversation with Steve Anderson, Managing Director, InfrastructureUSA**

### **Our Dams Need Investment**

American Society of Civil Engineers has the dam infrastructure rated at a grade “D.” We're not doing very well. We estimate we need about \$18 billion just to deal with the non-federal, high-hazard-potential dams, and maybe another \$36 billion to deal with all dams. Most dams are not owned by the federal government; most dams are privately owned. There are about 80,000 dams in the U.S. and so we have a huge mass of infrastructure out there, and they're not in great shape and the funding needs are huge, just like with the rest of our public infrastructure.

### **Building Awareness of Dam Safety**

National Dam Safety Awareness Day is coincident with the celebration of the great Johnstown Flood in the South Fork Dam that failed in Pennsylvania, when over 2,200 people died when the Dam failed. And what we're trying to do with the Association of State Dam Safety Officials is to improve the condition of dams and improve the safety of dams and the safety around dams. Our association does that in a couple of ways: one of them is through education; probably our biggest activity of our organization is educating engineers and educating owners, educating the public, educating legislators on the importance of safe dams. Our organization also helps support all of the state dam safety programs throughout the country. We were founded by some leaders in those state dam safety programs back in 1983. And one of the other things we've tried to do is build and encourage a unified front in the dam safety business, to try to create awareness for everyone. The number of partner organizations that we work with—American Society of Civil Engineers, the United States Society on Dams—many of the federal agencies—the U.S. Army Core of Engineers, the Bureau of Reclamation, Federal Emergency Management Agency, Federal Energy Regulatory Commission—all of these people are members of our organization, and we're trying to build that awareness and that community in the dam safety business.

### **Dam Safety Isn't Just About Infrastructure**

Just last month we had another drowning at a dam down in Texas, where dams are a recreational destination. People may be fishing around a dam or swimming in near around the dam, or running their boats, or canoes, or kayaks on the river where there's a dam. And the dams we're talking about here are these usually not very big dams. They might be three or four or five feet tall and they might span an entire river, and if you're floating your canoe or kayak you might not even see the dam coming because it's just a submerged water-level control or something. Depending on the flow conditions, a lot of times what happens is people go over the dam and they get caught in this eddy on the downstream part of the dam and you can't get out. Some people who have gotten out of it described it as being in a washing machine. I compare it to these

rip currents or rip tides you'll hear about on the ocean where people are swimming and all of a sudden a riptide carries them along and they can't get out. And so we're trying to look again at this issue and talk more about what we're calling recreational safety around a dam, where it's not necessarily the safety of the dam structure itself but it's the safety of those people who are around or near a dam.

### **Who Is Responsible for Dams?**

It's critical to keep public awareness in the forefront. Most people probably live within 10 miles of a dam and don't even know it. And so we just need to keep the general public aware, we need to keep our elected leaders aware, we need to keep the media aware, we just need to keep reaching out and keeping this awareness and the knowledge in front of people. I'm from Michigan; I work in the Michigan Dam Safety Program, and in our state if you own a piece of property where a dam is located then you're considered to be the owner of the dam. That's been upheld in our court, in our state. People just don't have an awareness, but that dam structure is infrastructure just like anything else. I liken it to a garage or a barn or a house or a bridge. If those things are founded on your property then you're responsible for that structure. They are in private ownership, and so being in private ownership in most states like mine, the responsibility for those structures lies with the owners of the structure.

### **Dams Do Fail**

We're in the business of trying to make sure that all dams are safe across the country. We only have to go back to last fall in South Carolina where we had nearly thirty dam failures in some severe flooding down there. Yes, the dams are failing. The rate at which they're failing—I'm not sure that it's any worse than it has been. It may be that now we're documenting things better, and just like many other industries the better information and the more information we have it looks, maybe it looks worse than it used to be. But, yes, dams do fail. The principal cause, or the most common cause, is dams failing because of lack of spillway capacity for those huge floods that we see happening now.

### **The Many Benefits of Dams**

We need to continue to build awareness for it just like our transportation and our other infrastructural issues. Dams are just one of the elements of our nationwide portfolio of infrastructure, but the things that dams provide, the benefits are really tremendous. You've got water-supply dams that provide reservoirs for water supply. All dams, to some degree, provide a measure of flood control. We're generating hydro-power with dams all throughout the country. Dams are sometimes involved in water treatment and wastewater treatment. You've got dams controlling water flows for irrigation purposes, for navigation up and down the Mississippi river. These lakes that are created by dams provide recreational opportunities. So you've got a huge amount of benefit that comes from these numbers of dams, and likewise a huge awareness campaign to maintain.

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