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PROTECTING ENDANGERED SPECIES, RIVERS, AND HUMANS IN TIMES OF DROUGHT

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Thank you. In the interest of full disclosure, I should say that I also represent the plaintiffs in this Silvery Minnow litigation, which I think makes me not a very popular person. But I am going to try to give a thumbnail sketch of my perspective on the Middle Rio Grande. I wanted to talk about how we might go about protecting endangered species and rivers and people during times of drought. I think it really makes sense to talk about all that has been going on in the Middle Rio Grande—it's a microcosm of all the problems that come up and it's a particularly difficult situation. If we can solve some of the problems we have been dealing with in the Middle Rio Grande, then we probably can extrapolate and take those lessons that we have learned to other rivers and other species around the state.

I should start by saying that I'm pleased to note actually how much I agree with what Dave Cowley just said. In fact, there was a gathering about a year-and-a-half ago of people advocating for the Rio Grande, up and down the entire basin, New Mexico, Texas and Mexico. One thing we all agreed on was that the single most important action to restore the health of the river would be the removal of Cochiti Dam as Dave has suggested, so I will cast a vote for that. But I think we will have to look for other solutions since that one may be a long time in coming.

Just a few words about the history of the Rio Grande, or the Middle Rio Grande. I would like to take it a couple of steps back further in time than the late nineteenth century, which is when the San Luis Valley was developed in Southern Colorado, and New

Mexico lost between a half and two-thirds of the flow of the river that was crossing the state line at that time. Before all that agricultural development, the Middle Rio Grande was a perennially flowing river with a braided channel that would migrate back and forth across the flood plain. It supported a very dense cottonwood-willow bosque and an awful lot of fish and wildlife. Of course, the flow levels have always been highly variable depending both on seasons and on climate. But the evidence seems to indicate that before the late nineteenth century, even during the most extended periods of drought, there probably was water flowing in much of the Middle Rio Grande, and there certainly were deep water holes, which preserved some fish in the river even in times of extended drought. The river was home to an abundance of fish, including some large fish species such as the shovel-nosed sturgeon as well as smaller fish, such as the American eel, speckled chub, Rio Grande shiner, phantom shiner, Rio Grande bluntnose shiner and blue catfish, all of which are gone now.

Even in the sixteenth century when the Spanish arrived there was already significant agricultural diversions by the Pueblo Indians. It's interesting to read some of the Spanish comments about the river in the Middle Rio Grande area. I'm going to give just a couple of quotes: "[A] large and mighty river" that "flows through a broad valley planted with fields of maize and dotted with cottonwood groves" (Albarado, 1540); describing the area just above Elephant Butte, "along the river banks there were many cottonwood groves and some patches of white poplar four leagues wide" (Especjo, 1583); "a deep river" and "the river with much water" (Castano de Sosa, 1590) "swift and beautiful, surrounded by numerous meadows and farms" (Obregon, late 1500s). Even now the bosque in the Middle Rio Grande is the largest intact stretch of native cottonwood-willow bosque anywhere in the southwest.

But the bosque is deteriorating as the cottonwoods that were seeded in the floods of the 1940s are dying off, and as invasive species are coming in. Every year the density of cottonwoods in the Middle Rio Grande is decreasing.

There is also an abundance of wildlife that uses the Middle Rio Grande area. About 400 of the 600 wildlife species that have historically been found in New Mexico have been found in the Middle Rio Grande area. A number of those have already gone

extinct or been extirpated from this area. There are 14 species on the state threatened or endangered species list and there are two on the federal list: the ones you have heard a lot about, the Rio Grande silvery minnow and the Southwestern willow flycatcher. Of about 17 fish species that are native to the Rio Grande, at least seven have been extirpated or have become extinct, and those are the seven I listed above.

The Rio Grande silvery minnow was historically one of the most abundant and widespread fish in the Middle Rio Grande. It lived all the way from Española down to the Gulf of Mexico and through the Pecos River. Now however, it has been eliminated from 95 percent of that original habitat and is only located in the 170 miles between Cochiti Dam and Elephant Butte Dam. The whole 170 miles is chopped up by diversion dams. As Dave Cowley said, chopping up a river stretch is definitely a big problem for the silvery minnow. Also, by far the most silvery minnows are in the lower 60 miles below San Acacia Dam, and unfortunately, as statistics also verify, that's the part of the river that dries the most frequently.

Since the silvery minnow was placed on the endangered species list in 1994, notwithstanding lots of efforts, it has continued to decline. The most recent surveys done this year show that it is at the lowest levels ever. There was a brief bump up last year; but it's still at alarmingly low levels.

I know you have heard before -- but it really is true -- the significance of the minnow is not the minnow itself, it really is the canary in the coal-mine. It's the indicator of big problems with the river and the associated ecosystem. We believe that if the silvery minnow goes extinct we will not only lose a minnow, but we will lose a chance to save the Middle Rio Grande and save the bosque. We are very concerned that the Middle Rio Grande will follow the same steps as so many other rivers in the Southwest and turn into a dry wash or a concrete lined ditch. And, of course, the situation is extremely complicated. Officials from the Department of the Interior who have been working on extremely complex water problems all around the west for years, including the Everglades and the California Bay Delta and others, have told me that they think our problems in the Middle Rio Grande are harder than any of those. One of the reasons is that we are using virtually all of our replenishable water supplies even now, and yet every day the population is growing and the need for water is growing. And as the

title to this conference denotes, we are dealing with two drought years out of the last three and maybe looking at a lot more.

So how are we going to put this together? How are we going to address this, and how do we improve the health of our rivers and our native fish while still supplying the water that we need? How do we avoid killing our rural farming communities and killing our rivers in order to supply more and more water for our growing cities in the state? Well, that's a really difficult problem, and I'm not sure we can solve it. I think we can, and I think we have made some really important steps forward that we need to continue. Certainly the drought is not making it easy, but we need to redouble our efforts.

First of all we have a collaborative program with most if not all of the stakeholders participating, that is making important progress toward restoring habitat in the Middle Rio Grande and investigating how to help the recovery of the silvery minnow. Also, I believe the silvery minnow federal court litigation has helped provide an engine for that collaborative program to move forward as quickly as possible.

When I think of the things we need to do, I think back to what the high school students were talking about when they read their essays yesterday. In my view, they are wise beyond their years, because they said most of the things we need to do. None of them said that we should let the "Rio Gota" dry up and lose all the fish in that river. They had a lot of other ideas, and those are basically the ideas that we need to put into action. One thing they didn't talk so much about, but I really believe we need to do, is to move forward on our long-term water planning and budgeting. Just letting the private marketplace rule is not going to work here. We are going to lose our rural communities, and we are going to lose our rivers unless we get a state water plan that builds on the regional water plans that are being prepared now, and that we put into action.

We certainly need water conservation in every arena. We have heard today about municipal water conservation. If we could get every city in New Mexico to look closely at what El Paso is doing and what Ruidoso hopefully will be doing, a lot of progress can be made there. We just need to carry it out. I think that is actually one of the easier parts of the puzzle.

One of the more difficult riparian issues is how to conserve water used by riparian vegetation. As

you have heard, that is a huge water use. In addition, we need to figure out how to conserve water in the agricultural arena. Both those areas have been very gnarly problems, though I think we are making progress on both. With respect to invasive riparian species, we have learned that when you take them out, you have to replace them with something that uses less water or you are not going to save any water. But we are making progress on that and we can definitely improve, do more research, and get water savings there. Similarly, there are some exciting pilot projects for agricultural water conservation. We definitely cannot delay any longer on that; we have to move forward.

Concerning river habitat restoration, I agree with David Cowley and Subhas Shah, that water is not everything for fish. Fish do need water as we heard—they don't burrow into the riverbed. They need water; but they also need habitat, particularly in areas of the river where there are perennial flows. Those ought to be areas where we need to be doing the most habitat restoration, and we are. There are some exciting projects, but it is going to take quite a bit more work.

Another real key here is re-establishing the silvery minnow in parts of its historic habitat. We need to get out of the situation of having virtually the entire population of an endangered species in a 60-mile river stretch that goes dry very frequently. Obviously that is not going to work over the long-term. So we need to re-establish that fish and hopefully we can re-establish them in parts of their original habitat that have much better perennial flows. The Fish and Wildlife Service is looking at the Big Bend area as a possible location for restocking silvery minnow, although perhaps Texas won't be interested in having the silvery minnow come stay there. The Service is also looking at the Pecos River as a possible location. Since it is unlikely that we will ever take out Cochiti Dam, perhaps there will be some way of building structures whereby fish can migrate up and down past Cochiti Dam and can be re-established upstream of Cochiti.

We are also going to need some federally funded water lease programs to be worked out with the irrigation districts, which are agreeable to them and to farmers. We need voluntary water leasing whereby we can have water go into the river at times and in places where it is most needed.

In the long-run, in terms of water supply, I believe we are going to have to do desalination. We will

probably also have to look at moving our water storage away from high evaporation surface reservoirs to underground reservoirs.

I want to speak briefly about the litigation that has been going on and about Judge Parker's recent order requiring some release of water from Heron Reservoir to avoid massive river drying this fall. Unfortunately, it is exactly the kind of court blow-up that we the plaintiffs and a lot of other people have been working very hard to avoid. We did not want this to happen. We tried everything to avoid it, including settlement offers that didn't ask for much water. But it's been a very difficult situation: extreme drought and an extremely imperiled species. We couldn't get anyone to talk about settlement. So we did have to go back to court, because what would have happened is that virtually the entire Middle Rio Grande, which is the only place where the silvery minnow is left, was going to go dry, with the exception of sewage effluent from Albuquerque, and a few miles just below Cochiti Dam, which right now is not good habitat for the silvery minnow. So the plaintiffs had to go back to court and make sure that the few minnows that we still have in the river get through this year. If we lose them, we don't have enough minnows in tanks yet to repopulate the river. No fish species has ever been successfully repopulated into the wild once it has been taken out of the river and put into tanks. Repopulating a river with fish from tanks is particularly difficult when you are talking about a short-lived species like the minnow that basically lives only one year.

Just a couple more things about the court order. Judge Parker—contrary to what the mayor of Albuquerque said—Judge Parker actually chose a middle ground. He didn't even require that the government meet the minimum flows that were specified in the 2001 Biological Opinion. He said, "The Government can let the 60 miles of river between Isleta Dam and San Acacia Dam go dry because I don't want to use too much water." Now it appears that with the rains we had in September, maybe only a small amount of water will be needed to comply with that order. Right now the estimates are that it would take somewhere between 10,000 and 12,000 acre-feet of water to keep much of the river flowing. If you take that amount of water out of Heron Reservoir, it is really not clear that will ever result in any reduced deliveries to the San Juan/Chama contractors. The San Juan/Chama project is not yet fully contracted; there is about 3,000 acre-

feet per year that is unallocated. If you can get through four years, then maybe you won't have to reduce deliveries at all.

In conclusion, I would just say that I hope this situation will lead all of us stakeholders to try all the harder to negotiate a solution to this problem for next year and for the following years. Speaking for the plaintiffs, I can say that we would give up Judge Parker's ruling in the snap of a finger if we could get people to agree to some sort of long-term solution to the problems of the Middle Rio Grande. We know that litigation cannot solve these problems; we have to solve them ourselves. Let's use the crisis of the drought to force ourselves to take actions we did not really want to take in order to solve these problems.