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Justice Talking Radio Transcript

Are Current Water Policies Leaving Us High and Dry?—Air Date: 2/11/08

An unprecedented drought throughout the nation's Southeast has forced some of the region's largest cities to declare water emergencies. Western states have been dealing with similar water shortages for a much longer time. But what can policy-makers do when increasing populations, development and global warming place undue strains on an area's water supply, especially when current law is antiquated, complicated and varies from state to state? Tune in to this week's Justice Talking for a look at whether current water policies ought to be flushed down the drain.

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MARGOT ADLER: From NPR, this is Justice Talking. I'm Margot Adler. As drought conditions become long-term in hotspots around the country, America's water wars are heating up too.

UNIDENTIFIED MALE: We will respect the resources that we share with our neighbors. But hear me now: we will not allow others outside the state to hamper our progress by limiting our access to the waters that fall on our land. [APPLAUSE]

UNIDENTIFIED MALE: I'm increasingly inclined to believe that what is going on is we're about to embark on three more years of doing nothing about water allocation.

MARGOT ADLER: Water is becoming an evermore precious resource around the country. Is there a fair way to share it? Coming up after the news.

MARGOT ADLER: This is Justice Talking from the University of Pennsylvania's Annenberg Public Policy Center. I'm Margot Adler. Vast regions of the United States are drying out. Droughts are more severe and lasting longer. But policymakers and climatologists say smart water policies could steer us away from environmental calamity and resolve water wars across the country. On today's Justice Talking, the gift of water and how to share it in a time of growing scarcity. Scientists say they are still trying to understand the full dimensions of changing weather patterns in the U.S. In the Southwest, climatologists are trying to gauge the scale of a decade-long drought. And in the Southeast, they're still trying to understand exactly what climate forces are causing the worst drought there in 100 years. The water scarcity is exacerbating a 10-year-old fight among Florida, Georgia and Alabama over water in the Chattahoochee River. It's a small river but three states claim they depend on it. From Georgia Public Broadcasting in Atlanta, Susanna Capelouto reports.

SUSANNA CAPELOUTO: It's a sunny day at Atlanta's Piedmont Park, and Bruce and Kathy Bernstein are walking their dogs. This year they say the bright colors are missing in the park.

KATHY BERNSTEIN: They haven't put out pansies because of the drought, which is a good thing. You know, they haven't planted those.

BRUCE BERNSTEIN: You'll see little signs that they're not planting because of the drought.

SUSANNA CAPELOUTO: The Bernsteins say they do all they can to conserve water. They've stopped washing their car, and they say they're glad to live in a condo where they don't need to care for a lawn. Since the summer, all outdoor watering has been banned in North Georgia. Here at Piedmont Park, the drought has stressed the grass so much that the city has cancelled several popular festivals. Atlanta gets its water from a reservoir called Lake Lanier. It is about 20 feet below normal and winter rains have only added a few inches so far. If things get worse, Atlanta's drinking water might even be affected. Officials say lower levels could mean extra treatment to keep the tap water safe for drinking. That worries Mary Drury, who is visiting the park with a 2-year-old son, Noah.

MARY DRURY: I guess with little children you think, too, just drinking water and the health of the water. I hear – I don't know all that, but I hear that, you know, the lower it gets the worse the water is.

SUSANNA CAPELOUTO: Lake Lanier sits on top of the Chattahoochee River and the U.S. Army Corps of Engineers uses the lake to control the flow of the river, according to a plan from 1958. The Corps must balance the needs of metro Atlanta with the needs of downstream users. Alabama wants water for critical power plants and Florida has endangered species and an oyster industry that depend on the flow of the Chattahoochee. But Georgia Governor Sonny Perdue says they want too much of Lake Lanier. In his State of the State address last month, Perdue said he'll fight to keep more water in Georgia.

SONNY PERDUE: We will respect the resources that we share with our neighbors. But hear me now: we will not allow others outside the state to hamper our progress by limiting our access to the waters that fall on our land. [APPLAUSE]

SUSANNA CAPELOUTO: With all eyes on the drought, the three states have been involved in an intensifying dispute over who gets how much of Lake Lanier. There have been talks between them over the years with no consensus over how to divide the shirking supply of water. New talks are scheduled for later this month. This time Georgia lawmakers can show that they have passed a statewide water plan, three years in the making. It will take another three years to fully implement. Critics say they expect few results because there is very little state funding attached to the new water plan. Neil Herring is a lobbyist with the Sierra Club. He says it is hard to call it a plan at all. He calls it a stall tactic.

NEIL HERRING: I'm increasingly inclined to believe that what is going on is we're about to embark on three more years of doing nothing about water allocation in the state, so that metro Atlanta can continue to grow the way it's grown the last three years of supposed water planning.

SUSANNA CAPELOUTO: But others are backing the Governor. Sam Williams, President of the Atlanta Chamber of Commerce, says what is good for Atlanta is good for Georgia.

SAM WILLIAMS: Well, I think there is an analogy that may apply here. Some people say all of the Middle East wars are about oil – the water wars are about jobs, they're not about conservation. They're not about environmental protection or endangered species. They are efforts by neighboring states to restrict the growth and economic success of Georgia, hoping that those jobs would go elsewhere. That's what it's about.

SUSANNA CAPELOUTO: Competition for industry investment is fierce among the three states, but environmentalists argue it is not just jobs at stake. And they say metro Atlanta's unbridled growth needs to stop. Florida and Alabama are putting up a united front to get their share of water. And all three states haven't been shy about using the courts to fight for their positions. Meanwhile, the Corps of Engineers decided last month to start rewriting the 50-year-old plan it uses to manage Lake Lanier. For Justice Talking, I'm Susanna Capelouto in Atlanta.

MARGOT ADLER: That dispute in the Southeast may be more entrenched than ever. Florida recently lost a battle in federal court to hold onto more of the water in Lake Lanier. Experts say the ruling is sure to slow the pace of water-sharing talks between the three states. Here to talk about the intertwining forces shrinking our water resources, and what it will mean, is Roger Pulwarty. He is a climatologist and director of the National Integrated Drought Information System, which is a coordinated effort by government and research groups to monitor droughts throughout the country. Roger, what's going on? Are we running out of fresh water?

ROGER PULWARTY: There's been an extended drought, probably the worst in some parts in 100 years. What does a drought mean in that context? It means that we have probably the reliability of a water supply for meeting our needs – environmental, societal and impacts – are at risk. In the Southeast what we are facing now is a bit of increasing conflict between Alabama and Georgia which might not have occurred before, simply because what we're seeing is an

extended drought coupled with increasing population demand and use. And so those combined to create a situation in which we have conflict over resources.

MARGOT ADLER: What do you see as the forces that are behind all this? Why are we running out of fresh water?

ROGER PULWARTY: Well, in certain places we are. I wouldn't say that in total we are, sort of, running out of fresh water. I think what is actually happening is we're seeing some indications to what extent droughts are occurring in the Southwest. But we've had 10-year droughts in the Southwest before. This one is warmer than, let's say, the droughts of the 1950s, so that increases evaporation and increases the reliability of supply. And also increases the loss that we see in snow pack. Now, coupled with that is the obvious – the growth that we have in terms of the use of those resources – Colorado, Utah, Arizona, Nevada are four of the fastest-growing states in the country. Along with that comes increasing demand. But there are ways to manage demand as well.

MARGOT ADLER: What's the role of global warming in all of this?

ROGER PULWARTY: I'll give you an example. In 2005, we had about 105 percent of snow pack on the Colorado plateau. But that resulted in about 75 percent of run off because the January to July was so warm. We lost a lot of that to evaporation, to dry soils and things like that. So you do have a global – let's say, a warming signal in there. But on top of the warming, let's say, in the Southeast. If you add La Niña, which has a dry impact in the Southeast, and you put global warming on top of that, you have a surprise in the system. We don't actually know which way that would go. It could exacerbate the drought and situations. It could prolong them. And on top of that, we have demand.

MARGOT ADLER: Do these water wars that we're seeing in the South and the Southwest, is there a kind of ripple effect from them? I mean, do you see that there is going to be a problem of moving water from the Great Lakes to the Southwest? Are we going to see this in a, sort of, national context?

ROGER PULWARTY: I think at the national level what we're beginning to look at is what sort of information can we provide, up front, about the likely severity and duration of drought. And then what sort of efficiency mechanisms can we put into place — behavioral and institutional — so that not only do we have water, let's say, for those who need it, but also heading off conflicts.

MARGOT ADLER: If ultimately we're facing a future will there will be less fresh water, will we be thinking about our water footprints, you know, in the same way that we've begun to think about our carbon footprints?

ROGER PULWARTY: I think we do already look at how we allocate. We have water meters in some places. We don't have a hand — a good enough handle yet on how much water we use in terms of being able to get as concrete about a footprint as you're suggesting. I think it is the direction that we will end up going in order not only to say, okay, let's make some rules about who can and can't use how much, but that people know the cost of the water that they're using.

That's really the important thing here; not only the cost in terms of the economics, but how much water we use and what is lost from the environment when we use it.

MARGOT ADLER: Let's say nothing was done around this issue at all. What's the worst-case scenario?

ROGER PULWARTY: Actually, now that's a good question. The drought in the Southeast is not — we haven't tied that to, let's say, a climate change and global warming. In the Southwest, it is an interesting question because there are basically four things that create a crisis situation in the Southwest: A severe sustaining drought, which some people think we're in the middle of exactly that. I don't know if we're in the middle or just starting it. Another would be an energy crisis; the demands that water places on energy. Third would be the transfer of water from other basins. And a fourth aspect is the unquantified rights of water. So what would be happening? Would we be seeing migration of those areas as a result of the increasing cost of water? There has been the suggestion that folks would be moving back into the Midwest, near the Great Lakes, that great — 20 percent of the world's fresh water is the Great Lakes, 95 percent of the U.S. supply of fresh water. So the question is: would we be moving to places of water? Well, it depends on the price. Whether or not it begins to cost us less just to move water to us, or for us to move to the water.

MARGOT ADLER: How do you raise public awareness around water? It certainly took decades for the public to respond to global warming.

ROGER PULWARTY: Well, the thing about it is, you know there's Mark Twain, possibly apocryphal, saying that, you know, whiskey's for drinking; water's for fighting over. That's a long time ago that we realized that. John Wesley Powell in the late 1800s said, we're raising — we'll be approaching the time of crisis soon. That's over 100 years ago. So there have been people out there saying, okay, let's be careful about how we're using water. And what we haven't been very good at is communicating what is lost by not having more efficient use of water, in terms of cultural attributes, farms, tribal lands, ranching. Do we want to see that change? And more than anything, the role of water in ecosystem function and support.

MARGOT ADLER: Roger Pulwarty is a climatologist and Director of the National Integrated Drought Information System. Thank you so much for coming on our show.

ROGER PULWARTY: Most certainly. Thank you.

MARGOT ADLER: Nowhere are the potential risks and losses more evident than in the water wars of the Southwest. Coming up, a Las Vegas water manager says her community understands the stakes.

UNIDENTIFIED FEMALE: We're not stupid. I mean, we fully realize that if you destroy an ecosystem and if you destroy the valley, you're going to destroy your water supply at the same time.

MARGOT ADLER: But conservationists say it is time for fundamental change.

UNIDENTIFIED MALE: The question was whether or not we ought to do a better job of addressing explicitly the question of growth rather than making our water managers meet whatever growth occurs.

MARGOT ADLER: And ranchers and farmers have their own views on what is fair and what isn't when it comes to water policy. Stay with us.

MARGOT ADLER: This is Justice Talking, the public radio show about law, justice, and American life. I'm Margot Adler. On today's Justice Talking, we're exploring how water shortages are changing landscapes and policies. In places where dry weather is threatening water sources, lake levels are lower and some of the nation's great river systems are shrinking. The Colorado River is one of them. It supports the water needs of seven different western states and 25 million people. Its diminishing volume has spurred numerous regional disputes and led some to call for systemic change in how we manage water. Las Vegas is center stage in these disputes. Here to explore how policymakers can and should respond to a drier world are Pat Mulroy and Peter Gleick. Mulroy heads up the Southern Nevada Water Authority, a regional agency responsible for acquiring, treating and delivering water for Southern Nevada, including Las Vegas. Mulroy has been called one of the most outspoken and influential water managers in the country. And Peter Gleick is the president and co-founder of the Pacific Institute, a research group dedicated to water sustainability and conservation. Welcome to Justice Talking.

PETER GLEICK: Thank you.

PAT MULROY: Thanks.

MARGOT ADLER: Las Vegas is really up against it. It has a growing population in one of the driest places in the U.S. Pat, you are working hard to boost supplies of water to the region. Some of your projects are controversial, and we'll talk about that. But first let's talk about some of the aggressive conservation policies Las Vegas has adopted. The city has rid itself of 80 million square feet of water-loving lawns, job-generating destination hotels like the Ballagio have sophisticated water recycling systems. Those fancy fountains use recycled water. Sounds like a good faith effort at conservation. So, Peter, tell me, how much more could Las Vegas be doing?

PETER GLEICK: Well, let me make a couple of points here. First of all, the question is not whether we can conserve our way out of our water problems. Conservation and efficiency is one tool of many in what will be a sustainable water future. I don't believe, however, that Las Vegas has been nearly as aggressive in conservation and efficiency as perhaps you describe and certainly as I think they could be. They have been aggressive on reducing area of lawn, although not as aggressive as Tucson or not as effective as Tucson, for example. And they've done very little on indoor. There could be much more – much more could be done to reduce inefficient indoor uses to help fuel the growth that they see coming. We did a report at the Pacific Institute

about this. We looked at the potential. It is cheaper and it is faster than building a big pipeline at this point. I'm not saying they may not need a pipeline in the future. I just think you could do a lot more now to reduce the need for a new supply.

MARGOT ADLER: Pat, do you want to respond to that?

PAT MULROY: Yes, I actually do. You know, the whole reason for the in-state project has absolutely nothing to do with growth. We have a community now of two million people that rely 90 percent on the Colorado River for its water supply. We stand a very real possibility of losing our operating intake by 2010. At that point, Hoover Dam stops generating electricity. There was a story in both the local and the regional newspapers recently that spoke to the stress that the Colorado River Basin is going to be in for global warming. There is no way any water manager in the West can solely rely on a single source of water anymore, and when you have a 90 percent reliance on the Colorado River, you can't conserve your way out of it. And the problem is that we're sitting, right now, with less than 50 percent storage in the two reservoirs. One watered, by 2002, where we had 25 percent inflow, will crater up. You can have all of the arrangements with other states on the Colorado. If that lake is empty, all bets are off and everything starts changing.

MARGOT ADLER: Let me just follow up a little bit with you, Pat, before turning to Peter. I know that you are pushing through, very aggressively, in-region, to reroute water. And you have this big pipeline project. And I've seen a lot of articles that have said there are real problems as far as opposition from ranchers and farmers who are extremely frightened and say that the aquifers essentially keep their farms alive, and they're very frightened about the future if this pipeline comes to pass.

PAT MULROY: This issue plays itself out on all sorts of levels. It plays itself out on rural versus urban, agriculture versus municipal, northern Nevada versus southern Nevada. There are all kinds of emotional buttons that get pushed with this project. In going into these basins, Nevada has one of the strictest groundwater laws anywhere in the country. You can only move perennial fields or that which annually is replenished in the basin. We've also bought significant service water supply that we intend to recharge the basin with. And it is going to take that kind of an aggressive management strategy as we move into global warming. At the end of the day, I think what is going to happen is the farmers are going to be benefiting from the investments the cities are making in those areas to recharge those basins and manage those basins. So we're not stupid. I mean, we fully realize that if you destroy an ecosystem and if you destroy the valley, you're going to destroy your water supply at the same time. And any water manager worth his salt today knows that they have a huge custodial responsibility, stewardship responsibility, when it comes to preserving and protecting natural resources.

MARGOT ADLER: Peter?

PETER GLEICK: Well, yes. I think without a doubt Las Vegas has one of the most difficult challenges in the West. And there's an enormous value to diversity of supply and Las Vegas is very dependent on the Colorado River, which is very vulnerable to, first of all, overuse. We've given away more of the Colorado to humans than it looks like nature is going to reliably provide to us in the long run. Climate change may make that considerably worse. But then the question

has to be, what are the relative costs of the different options that you have? There are political and environmental and social and economic costs to building a new pipeline up to rural Nevada to take water. There are very difficult political questions that are unresolved. And I can't comment on whether or not this pipeline will ever be built. That is a challenge for Nevada to wrestle with. For Utah, since they believe some of this groundwater may belong to them. But I also think that you have to look at water management in a totally comprehensive way. And if we're building in a very expensive pipeline to supply inefficient uses in Las Vegas, then I would argue the first thing you would want to do is make those uses as efficient as possible so that the size of the pipeline is smaller. Or you put it off for a couple of decades or you find other ways to meet your needs. I think that's a question that has not adequately been addressed in Nevada, in Las Vegas, and frankly not completely adequately addressed in the West in the U.S. as a whole.

MARGOT ADLER: Pat, do you think at some very basic bottom level there is an issue with growth in a desert?

PAT MULROY: Let's look at cities across this country. I mean, like with some glaring exceptions like Chicago, that sits on the Great Lakes, New York imports its water for New York City from upstate New York. San Francisco, where Peter lives, brings in a vast majority of its water supply from Hatachie, from Yosemite. The Metropolitan Water District of Southern California has two enormous water supply sources: the Colorado River and the Bay Delta in California. Every time you create a city – and it is pretty irrelevant whether it is in a desert or whether its New York City – there is never an adequate – enough water supply in that particular area to service millions and millions of people.

PETER GLEICK: The question is not whether Las Vegas ought to exist where it does. No one is disputing that. The question was whether or not we ought to do a better job of addressing explicitly the question of growth rather than making our water managers meet whatever growth occurs. And in the past, that's what we've done. The city grows and it grows and there is encouragement to developers. There are tax breaks. Because, for some reason, we like growth. Infinite growth. And the water managers have been left to deal with that. And I don't think that's going to work in the 21st century. It's time the water managers, like Pat Mulroy, had a say in the size and the details of the growth that is occurring. Because it may not make sense to encourage growth everywhere the way we've encouraged it in the past.

MARGOT ADLER: I want to ask both of you about the struggle between urban and agricultural needs. Ninety percent of Nevada's water goes to farmers. Traditionally, these water wars have played out in the press as a struggle between farmers who say we need the water for crops and cities who say we need the water for our growing populations. How do we reconcile these two sides? I'll start with you, Peter.

PETER GLEICK: Well, in fact, the growing question of where we allocate our water in the western U.S. is going to be key to the sustainable management of that limited water resource in the coming years. In the past, the vast majority of the infrastructure that was built and the vast majority of the allocations of water have been to irrigated agriculture in the West. Of course, we have a wonderful agricultural society in the United States. We produce a huge amount of food. But it takes a tremendous amount of water. And in recent years we've seen a growing discussion

about how to move some of that water out of agriculture while maintaining a healthy agricultural economy to the growing cities than can pay much more for water, that produce many more dollars per gallon, if you will. There have been increasing trades of water, from agricultural users to urban users. That, I think, is — we're going to see more of that. The days when it was fine to irrigate alfalfa in the desert, I think, may be coming to an end.

MARGOT ADLER: Pat?

PAT MULROY: It is also very cultural. I agree with Peter. I don't think it will completely come to an end. I think there, you know, there is a certain amount of alfalfa, Sudan grass, that's going to be needed for our own dairy, for our own cattle. But we export a lot of it, and when you export your alfalfa and you export your Sudan grass, you are exporting your water. And I think that's where the stress is beginning to show. And when, you know — this is going to sound harsh when these very ranchers in northern Nevada or central Nevada and in Utah are complaining about their livelihood being eroded, that's not necessarily true. I mean, they also don't — they're not looking for those kinds of partnerships. They don't want to change either.

MARGOT ADLER: The struggle over who gets diminishing and vital water resources seems to be an intensifying problem in all corridors of the country, from Oregon to Florida. Even the eight states that make up the Great Lakes district are expressing alarm and making territorial moves to protect what they see as a threatened resource. Peter, how do you see us moving forward? And is this a place where we need national leadership, a national water policy?

PETER GLEICK: Well, interestingly, we don't have a national water policy. That's an okay thing sometimes and it's a bad thing sometimes. So a lot of the water challenges that we face are very local, and a national water policy may not help us. But there are things we do at the national level that affect us locally and affect us internationally. And I think it is long past time that we had a discussion at the national level about what a sustainable water system would look like in the 21st century. In terms of moving forward, I think we need to really rethink the way we use water. And in the long run climate change is coming. It's going — it's going to affect every aspect of our water resources. We're just not managing our water in a way that's going to address that kind of a challenge either.

MARGOT ADLER: Pat, has your thinking about water changed in your years of dealing with water issues?

PAT MULROY: Absolutely. I don't think you can be in this business and not have it change. I think probably the most profound change is when I took over this job, there were always winners and there were losers. That's the myth of the Old West: we have priority water rights, which are my personal pet peeves. I started in that era. And then the more I stayed in it, I said — wait a minute. There can't be winners and losers. There is nothing more fundamental to human existence — at all levels. Whether it's the environment that we enjoy, the foods that we eat, or our very own sustenance, than our water supply. It doesn't belong on Wall Street. It doesn't belong commoditized. It is a very different resource.

MARGOT ADLER: Pat Mulroy is head of the Southern Nevada Water Authority. Peter Gleick is the president of the Pacific Institute. Thank you both for coming on Justice Talking.

PETER GLEICK: Thank you, Margot.

PAT MULROY: Thanks, Margot.

MARGOT ADLER: As calls go out for a more collaborative approach to water management in the United States, some agricultural groups say reformers often unfairly single out farmers and ranchers for criticism. Chris Scheuring is a lawyer with the California Farm Bureau Federation. He represents family farmers and ranchers on issues including water, land use, endangered species and air quality. Scheuring says farmers understand all too well that water sources are drying up. He says some are turning away from corn and other vegetable crops that need a lot of water. But he says that's no panacea.

CHRIS SCHEURING: Some folks are making the decision to go to different kinds of crops including trees and vines because they can do that with less water. Now, that's a situation that has its own set of pitfalls though, because once you've got trees in the ground, then you're really committed in terms of being able to apply that water or lose the crop permanently for year after year after year.

MARGOT ADLER: I would imagine that also there are certain questions about efficiency and the way people farm that comes into this. Are there techniques to conserve water that aren't currently used that could make a difference in farming?

CHRIS SCHEURING: Well, efficiency is something that farmers have been working on for quite a while. I think overall, agriculture's use of water has remained relatively flat, but over time agriculture has been producing much more with a given quantity of water. So that tells you we're making gains in terms of irrigation efficiency. At the same time, I don't think that farmers becoming more efficient is the solution to the West's water crisis. It just doesn't – isn't. You know, we've got burgeoning cities in the desert. When we've got increased employment of environmental requirements and statutes for instream flows, you know, clearly conservation is not going to save the day in the American West.

MARGOT ADLER: When you look at agricultural interests, do you see them as fundamentally opposed to urban interests? Environmental interests? Or do you see them as some way the same? How do you look at that?

CHRIS SCHEURING: Well, that — I hate to see any interest group opposed because the only way we can move forward to a solution set is to work cooperatively. I think that you will find, at least in the area of water, farm interests opposed to urban interests opposed to environmental interests if we continue to have a situation of skyrocketing demand and a fixed or declining supply situation, which is what we've got.

MARGOT ADLER: And when you think about water shortages and the environmental changes that are going on, how do you see these as impacting America's food supply?

CHRIS SCHEURING: Well, that's the other piece of it, quite frankly. What we do with water policy in the American West in the next 50 years is going to translate into a number of things. There's a food security question involved, which is that we alter federal policy and state policy with respect to water to the detriment of agriculture, we're going to lose some of the agricultural production that we have here at home. That translates into, sort of, a food security issue. Do we want to get more and more of food from the third world? It seems to be contrary to what people are asking for these days, which is more local production of food. You know, eat local, buy local, that sort of thing. If we dry up the water supply of the farms, eating local is going to be real difficult.

MARGOT ADLER: Chris Scheuring is a lawyer with the California Farm Bureau Federation. Thank you so much for speaking with me.

CHRIS SCHEURING: Thank you, Margot.

MARGOT ADLER: Farmers, conservationists and city water managers are drawing attention to the water crisis they see on the horizon. But for some the crisis is already here. Coming up, an expert on endangered species says the loss of water sources is a major killer.

UNIDENTIFIED MALE: It's a very widespread problem, and only going to get worse with all of the global warming models that are out there today.

MARGOT ADLER: And America's mayors are raising their own alarm. It's estimated that up to half a trillion dollars will be needed for America's pipes and sewers.

UNIDENTIFIED MALE: Our infrastructure is aging. There has been no major new investment in water and sewer infrastructure in decades and decades.

MARGOT ADLER: Stay with us.

MARGOT ADLER: This is Justice Talking, where we make the connection between law, justice and American life. I'm Margot Adler. Today we're talking about America's water resources in a period of climate change. Heavily populated regions of the country are also getting drier. And one expert on endangered species says the threat to wildlife cannot be underestimated. Kieran Suckling is the Executive Director of the Center for Biological Diversity in Tucson, Arizona. Welcome to Justice Talking.

KIERÁN SUCKLING: Glad to be here.

MARGOT ADLER: Endangered species are at the heart of some of the most visible water wars in the country. Where are shrinking water sources threatening animals right now? Tell us about that.

KIERÁN SUCKLING: Well, it's happening everywhere, unfortunately. Some of the most high profile areas are the Clackamas River in southern Oregon where we've got endangered salmon and endangered Clackamas suckers being endangered by water withdrawals.

MARGOT ADLER: Are suckers like leeches?

KIERÁN SUCKLING: [LAUGHTER] They are not, no. They're a bottom-dwelling fish that eats mostly vegetation, hence the sucking. Actually, a handsome creature, but very imperiled. But that is just one of many. In the San Francisco Bay delta we're having a – just a biological meltdown right now due to water diversions. And up there a fish called the delta smelt is perilously close to extinction. Then there's the Sacramento splittail, another fish. And the salmon are also doing very poorly. Over in Georgia in the Southeast, of course, you've got this whole issue of now with the Appalachian Basin, this big water war between Georgia and Florida and Alabama, which a whole series of endangered freshwater mussels are quite in the middle of. So it's a very widespread problem, and it's only going to get worse with the global warming models that are out there today.

MARGOT ADLER: And do you see this as a series of local problems, or are you seeing this as a problem of national proportion?

KIERÁN SUCKLING: Oh, it's definitely a problem of national proportions. In fact, if you look at the problems over in Georgia, Lanier Lake, that has ended up going all the way to the Secretary of Interior coming in, trying to moderate because the economic issues at stake are enormous. The environmental issues are quite spectacular. We have a similar thing going on in the San Francisco Bay delta where if you look at the forces involved in these negotiations, it's everything from the Secretary of the Interior to the governor. So they are very big and they're happening everywhere. I could talk to you about the desert pupfish in Nevada and species that have already gone extinct due to water withdrawals in the Everglades. It's a looming and ever-present crisis.

MARGOT ADLER: Let's focus on a couple of these examples. What's threatening the mussels and the gulf sturgeon in Georgia?

KIERÁN SUCKLING: They're threatened by water pollution, by dams which block their passage upstream, and then simply by low water levels, which take away the habitat they need to survive. All three of those problems – dams, pollution and low water levels – come back ultimately to the amount of water in the river and is being diverted off for agricultural uses, for urban water uses. And there's just not enough there for these species to survive.

MARGOT ADLER: When I've read about this conflict in the press and I've heard characterizations by Georgia officials, I just keep on hearing, you know, this is a battle, you

know, of man versus mussel. I'm going to make a wild assumption that you don't think that's a correct characterization.

KIERÁN SUCKLING: You're quite, quite correct. [LAUGHTER] What's really going on here is that the mussels have been caught up in a water war between Florida and Georgia and Alabama to a lesser extent, because every drop of water that Georgia keeps in its reservoirs and is not allowed down the river is a drop of water that does not flow to Florida. And Florida wants that water badly for all of the same reasons: agricultural, urban development, also for cooling power plants. So those are the primary forces at loggerheads here. In fact, if you look at this battle as it has been playing out over the last decade it's really been almost entirely Georgia and Florida suing each other. It is only recently that endangered species have come up. And even there what you see is Florida suing Georgia over impacts to endangered species. And I don't want to make it sound like Florida is simply cynical in this matter. I do think that Florida does want to protect these mussels; they are endangered. Florida is also smart to realize that these mussels are protected by the Native Species Act and there's a lot of muscle behind that law to keep the water flowing. I view the mussel crisis going on there now as, really, they're just caught in the middle of this gunfight between these two very powerful states. As much as I hate to see these issues ever get pitted as endangered species against humans, I have to say that I'm glad that people are talking about mussels at all. Because the biggest extinction crisis we have in all of North America is Southeastern mussels and it's never talked about. So at least they're getting some big attention now, even if it's not entirely positive.

MARGOT ADLER: I've read comparisons that have said that these mussels in Florida are like canaries in a coal mine. Can you explain that?

KIERÁN SUCKLING: Yes. These mussels live in the water 24 hours a day. The way they feed is to absorb that water through their body while they filter out the nutrients and back out the other side. So any pollution that is in this water completely envelopes these species inside and out. And so there really is no better indicator of your water quality than your mussels. Secondly, they have these wonderful and very complex ecological interactions with other species, and so when you see the mussel start to decline you can very quickly surmise that other species are declining as well. For example, mussels themselves don't swim and don't crawl very far. They're in the river. They're constantly getting washed downstream. They have to find a way to get upstream, and it's not going to be under their own power. What they do is they hang out these little lures for fish passing by. The lure will actually mimic exactly the food that each particular fish wants to eat. Fish comes, grabs the lure, and then the mussels spread its eggs onto the fish, fish swims upstream and deposits the eggs. That's the cycle of reproduction for this species. Well, these dams all throughout the Southeast have blocked the ability of these fish to move upstream. So when we see the mussels decline, part of what we're seeing is the fish have declined as well. They can no longer get upstream to do this kind of work. So mussels really provide an excellent window onto the health of these entire systems. We should be very, very concerned that they are doing so badly.

MARGOT ADLER: If you were going to make a list of what is threatening animal life, where would the loss of water rank?

KIERÁN SUCKLING: It would be right at the very top, if you want to put it in that way. Usually people are a lot more general about habitat loss. That's the number one threat to endangered species. About 86 percent of all species are threatened by the loss of their habitat. But if you then look and say, okay, what do we mean by habitat loss? What's that look like in more detail? The majority of these habitat loss situations involve water because that is the limiting factor for all these species. So if you were to, say, rank mining, logging, development and then against water withdrawals, water completion, drought, the water issues are going to trump them all in terms of affecting the most species. Unfortunately, what we're seeing with all of the global warming models is that these water problems are going to increase with global warming, especially in the Western states.

MARGOT ADLER: Kierán Suckling is the Executive Director of the Center for Biological Diversity in Tucson, Arizona. Thank you so much for coming on our show.

KIERÁN SUCKLING: Glad to be here.

MARGOT ADLER: While many are watching and worrying over falling lake levels, low snow melt and river systems in danger, there is another risk to water resources in America that few see. The nation's municipal waterworks are mostly old and many say they are in need of critical repairs. Martin Chávez is Mayor of Albuquerque, New Mexico. He is also co-chair of the Mayors Water Council for the United States Conference of Mayors. Welcome to Justice Talking.

MAYOR CHÁVEZ: Great to be with you.

MARGOT ADLER: The U.S. Conference of Mayors has made upgrading the water infrastructure of the nation's cities and towns a top priority.

MAYOR CHÁVEZ: Providing good water sure doesn't get you elected, but not providing it gets you fired immediately.

MARGOT ADLER: And I gather some of these water and sewer pipes beneath our streets were built to last, oh, 50 to 75 years, and some of them are even older than that. Do you feel we're pushing up against those expiration dates?

MAYOR CHÁVEZ: Well, there's no question. And we are incredibly unfunded. There's the gap of what we need and where we are today. Mayor Rybak in Minneapolis is a very dear friend. And of course we all watched in horror the collapse of the bridge. That's above ground. If folks really understood what's going on beneath the ground, we're in far worse straits ...

MARGOT ADLER: How so?

MAYOR CHÁVEZ: ... throughout the country.

MARGOT ADLER: Explain that.

MAYOR CHÁVEZ: Our infrastructure is aging. There has been no major new investment in water and sewer infrastructure in decades and decades. We know that the gap is in the hundreds of billions of dollars, so throughout America — particularly if you're on the east coast and in the older cities, nobody knows exactly what's going on underground. So water systems collapse, sewer systems collapse. It becomes intertwined. Substantial health hazards.

MARGOT ADLER: I live in New York City and some of those types of sewage systems are really old.

MAYOR CHÁVEZ: There's no question about it. And then what we've done at the Water Council is also not just look at the basic service aspect of water and sewer, but also from the perspective of adaptation to climate change. Because we know if we do everything exactly right, there still will be adverse impact from climate change. So the wetter areas need to be more prepared for rain. That may involve levee systems. Certainly, anyone who looked at what happened after Katrina to the water and sewer systems backfilled with sand knows that those have to be addressed as well. Then the drier areas have to look to their conservation programs to reduce that water supply and, again, adapt to the realities of climate change, some of which, you know, are inescapable and unavoidable.

MARGOT ADLER: What impact does these sewage overflows and overspills have on our life?

MAYOR CHÁVEZ: Well, obviously when you have an overflow it is a public safety — direct public safety hazard. And, of course, we know that historically the incidents of disease dropped overnight when we took our sewers underground as opposed to above ground. It is just basic municipal service, basic municipal public health. So all of these things are there. And I don't know what it will take for Congress to wake up, for the nation to wake up to the frightening deterioration of water and sewer infrastructure in this country.

MARGOT ADLER: If we ignore this issue, do you think that we face a future where maybe it will be more difficult to have access to clean water?

MAYOR CHÁVEZ: There is no question. As someone said not long ago: you fix the roof when it's not raining. And that's part of what we're trying to do as mayors is sound the call. To say look, we need to focus public opinion, public dollars, frankly, on this problem because it is not going to go away. It's going to get worse and worse and worse.

MARGOT ADLER: Martin Chávez is Mayor of Albuquerque, New Mexico. He's also co-chair of the Mayor's Water Council for the United States Conference of Mayors. Thank you so much for coming on our program.

MAYOR CHÁVEZ: Thank you.

MARGOT ADLER: The question of well-maintained municipal waterworks has been a clarion call for environmentalists who have been taking aim at the bottled water industry. The critics say that tap is a precious public resource and people are taking it for granted. The argument has fueled a campaign to get people to stop buying bottled water. But the Tribune's Red Eye reporter, Alexia Elejalde-Ruiz has been looking into the matter, and has learned that it is not so easy to find an alternative.

ALEXIA ELEJALDE-RUIZ: The environmental push to wean Americans off bottled water has been accompanied by an equally impassioned health prerogative to get Americans to drink more water. What's a thirsty planet-loving person to do? There are alternatives to the single serving plastic water bottles that have been demonized recently as landfill-clogging oil-wasting enemies to the environment. Get a reusable bottle. Drink from a glass. There are even biodegradable bottles made from corn. But even seemingly green friendly options have their drawbacks. Take reusable plastic bottles. They get an A from an environmental standpoint because you can use them over and over again instead of launching them into the waste stream after a single use. But there are health concerns. That number 7 on the bottom of those bottles indicate that it is made of polycarbonates, also used in baby bottles and water coolers. Polycarbonates contain a controversial chemical called diphenol A, which at high enough levels could increase the risk of cancer, birth defects or reproductive problems. The plastics industry insist those levels are never reached. After some digging into the research, scientists remain unresolved on this question.

So why not reuse that old Ice Mountain or Dasani bottle that's been sitting on your desk since yesterday or even last week? It turns out that unless you're a stickler about cleaning it after every use, bacteria accumulates. You can't actually see or smell the microbes but health officials say they can make you sick. Makers of those PET bottles insist there is a way to reuse their products safely: wash with hot soapy water, dry thoroughly. But not so fast. Some environmentalists say a chemical called antimony found in PET plastic can leach over time into the water and cause nausea, dizziness and depression. Research on the question? Not conclusive. The favored choice among environmental groups is the stainless steel water bottle. It doesn't leach chemicals and it lasts. It does take more energy to produce it. And you've got to pay for it at about 20 bucks apiece. Better not lose it. So why don't we just go back to glass? Made of sand, limestone and soda ash. One scientist told me glass is the gold standard of what everyone hopes their container will be like. Nothing can leach from it and it can be recycled over and over again, while plastic bottles are typically recycled only once. And a carpet fiber, for example, which in turn is not recyclable. Alas, we come full circle. Manufacturers started using plastic in the first place because it is so much lighter, which means transporting plastic bottles around the world takes a lot less fuel. For Justice Talking, I'm Alexia Elejalde-Ruiz.

MARGOT ADLER: America's water wars. How should a vital resource be shared? Tell us what you think at justicetalking.org. You can post on our message boards, learn more about our guests and sign up for our free podcast. Check out our blog where many of the nation's commentators give their views on law and American life. Thanks for listening. I hope you'll tune in next week. I'm Margot Adler.