Water Politics

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Greg Dalton: Welcome to Climate One from the Commonwealth Club, changing the conversation about America's energy, economy and environment. I'm Greg Dalton. 2014 is a big year for water politics in California. With a searing drought on everyone's mind, the legislature recently passed and Governor Brown signed a landmark bill that tightens oversight on groundwater. Looking ahead on the November ballot, voters will decide on a $7.5 billion bond for water projects, and around the state reservoirs at alarmingly low levels are prompting communities to swap cash for grass, and pursue other types of voluntary and mandatory conservation.

Over the next hour, we'll talk about water recycling, agricultural and urban use, water pricing, drilling deeper and deeper wells, and what will happen if this winter isn't a really wet one. This program is underwritten by the S. D. Bechtel, Jr. Foundation and the views expressed here are not those necessarily of the Commonwealth Club or any of its funders. Joining our live audience today meeting in Climate One today in Lafayette, we're pleased to have with us four guests. John Coleman is president of the Association of California Water Agencies. Danny Merkley is director of water resources with the California Farm Bureau Federation; and California Assemblyman Anthony Rendon is chair of the State Water Parks and Wildlife Committee, a Democrat from Lakewood in Los Angeles; and Lauren Sommer is a reporter with KQED Science. Please welcome them to Climate One.

[Applause]

Greg Dalton: Before we begin, I should mention that we also invited Frank Bigelow, vice chair, Republican of the Assembly Water Committee, and he was unable to join us. We hope to have him at another time. Anthony Rendon, let's begin with you. How is the drought changing water politics in California?

Anthony Rendon: Well I think what the drought has really -- the way the drought has changed things is the sense of urgency. We have ignored our water infrastructural system for well over a generation in California. But I think this year, because of the drought, there was a renewed sense and a desire to do something, both with respect to the bond and rebuilding our infrastructure, but also with groundwater as well.

Greg Dalton: Okay. We'll get into those more deeply in the next hour. John Coleman, what are agencies doing to respond to the drought?

John Coleman: Well a number of agencies have put in drought restrictions. They need to adopt if they haven't the state water board's measures to make sure that they can enforce the issues of the drought. Most agencies in the state have done that. It's up to them whether or not they want to do the $500 fine and things of that nature, but they need to be educating the public on how to conserve water because we don't know what we'll have tomorrow.

Greg Dalton: And that's a $500 fine for wash it off your sidewalk or spraying your --

John Coleman: Or perhaps even irrigating outside more than twice a week.

Greg Dalton: Okay. We have some examples and we'll get to that later. Danny Merkley, the ag

impact we've seen from KQED and other places some pretty tough impacts in agriculture. How is the drought affecting the Central Valley agricultural production?

Danny Merkley: Well it's had a big impact on a lot of production. We've had hundreds of thousands of acres of land not fallowed but idled. And that's a huge impact not just on farmers and the farm economy, but on people that rely on agriculture in those areas, people that work on the farms, and then related businesses. The Port of Oakland, for example, 48% of the dollar value of stuff that moves out of the Port of Oakland is agricultural products. So there's a big impact to everybody beyond just farmers.

Greg Dalton: Are people seeing that at the grocery store yet?

Danny Merkley: I don't know. My wife does most of the shopping.

[Laughter]

Greg Dalton: Is your wife here? Can we ask her?

Danny Merkley: No.

Greg Dalton: Okay. Milk prices or other things?

Danny Merkley: I would expect to see prices go up, but more than anything, what we see is a shift in where our food is coming from. Instead of from California, it might be coming from other states, other countries, Mexico, and so on.

Greg Dalton: Because there's fallowed -- we're just not producing as much in-state.

Danny Merkley: Because we're not producing as much, not able to.

Greg Dalton: Lauren Sommer, you have done reporting in the Central Valley. In fact, I spoke with one person today who went on the train over the weekend to Fresno to see some family and I said, "Well how's the drought down there?" And he said, "Well I saw some brown lawns, but people weren't talking about the water stopping from flowing out of the tap, so I guess there's no problem." But you have been down there, what have you seen from your reporting of the Central Valley?

Lauren Sommer: Yeah. It really depends on where you are. I mean that's what's kind of interesting. I think here, in the Bay Area, we're all conscious, right? We're kind of following some of the guidelines but I wouldn't say a lot of people are really hurting in a lot of urban areas this year. Next year I think is a whole other question if it's going to be another equally dry year, but the same is kind of true in the ag community. You certainly do have people that really are in trouble this year, but you also have people with these senior water rights with kind of these kind of guarantees that they are first-in-line for the water in this state. And some people have what they need this year. So you kind of -- it really depends on where you go to kind of see the impacts.

Greg Dalton: Very, very local issue water. Assemblyman Rendon, let's talk about the Groundwater Bill. It was a big deal. Perhaps the biggest thing that happened in water in California this year. Frank Bigelow, an assemblyman Republican from the Central Valley, issued a statement after the Water Bill was signed by the governor. He said the bill will undermine private property rights and set the stage for billions of dollars in new fees. Your response to that and what would the Groundwater Bill do in your view?

Anthony Rendon: Mr. Bigelow is a colleague and a good friend. I didn't agree with him then. I

don't agree with him now. I voted for the Groundwater Bill. I think it was long overdue. I think it was simply just another case of the haves and the have-nots. I think if you can afford a very expensive well drilling equipment, then you wanted the status quo. If you can't, if you're a small family farm, then you definitely wanted to make sure that the government came in and interceded. And what was important about the groundwater legislation, as it was drafted, was that it depended, it put the ultimate decision-making in local and at the local decision-making level, which is very important and I think overlooked.

Greg Dalton: And what will the bill actually do? What will those local agencies decide? They are now charged by the state to do what?

Anthony Rendon: Yeah. So basically to help in adjudicated basins.

Greg Dalton: Which means a place where the courts have hashed out who gets what water basically?

Anthony Rendon: Right, exactly. Sorry, I shouldn't have used the phrase. In many locales throughout the state, these issues have already been resolved in terms of who has rights to drill where and how deep and those types of things. But in some locales, it's the wild, wild west out there, and this helps to provide a decision-making process for making those kinds of calls.

Greg Dalton: So neighbors are going to have to sort of figure out on their own in terms of who shares the water. My understanding was that California was the last western state to have something like this put in place. Is that true?

Anthony Rendon: Yeah, absolutely. Places like Texas, for example, had groundwater legislation before we did.

Greg Dalton: So Danny Merkley, Texas is ahead of California on this? That's kind of hurts to say but…

Danny Merkley: Well just a little factoid. If you took Texas and Iowa and put them together, they would still be the second largest ag producing state in the nation. California has produced significantly, not only for California and for the nation, 95% of the processed tomatoes - which I used to grow before I was wearing a necktie to work - that are consumed in the United States come from California. Just in the last 40 years, we've increased our productivity by over 85%. We produced 85% more by volume using about 14.5% less water.

Greg Dalton: So I think a lot of people understand California is a very productive agricultural state. The question is whether it was time to measure groundwater extraction, if there ought to be some metering, some accountability, rather than kind of a race to the bottom or sort of borrowing from the future. Everyone talks about groundwater as sort of the savings account for the future. And if you're farming and maybe you're planning on cashing out your land for a shopping mall or something like that, you might be incented to suck all the water out and not worry about tomorrow.

Danny Merkley: Well going back to my wife again, if she and I are both writing checks out of the same checking account and depositing money in there but we're not filling out the register, it's a little hard to balance it so it is important. And that was an encouraging thing I saw late last year in the meeting down in Tulare, where overwhelmingly it was the ag community in this meeting, and you saw everybody nodding and say, "We need to do something. We need to fix this." We have concerns with the way this very complex issue was dealt with in a very short period of time. This year, we think we had time to continue to work on it. And understandably, some folks thought, "If

we don't do it right now, then it will get pushed off and pushed and pushed off."

But we did overturn over hundred years of case law with this legislation this year. It's going to have very large impacts on small and large family farms, mostly small family farmers, simply because they're operating loans. The loans they get every year to produce what they produce to pay all their bills are predicated to a great extent on the value of their land, which a large part of that is predicated on their access to water. Bankers have already started questioning that and we're very concerned about how that's going to impact not only the local economy but our members.

Greg Dalton: Are you saying there's going to be litigation? It sounds to me like you're saying that the banks are going to squeeze people and they're going to sue the government. That sounds like a recipe for litigation right there.

Danny Merkley: The way I've seen the banks operate is they come to me and they say, "Your loan is due now. Pay up." And that's a little hard to do in agriculture, because you can't do that until your crop is in. And we saw that. I saw that personally in the early 80s. It put a lot of good people out of business because of bankers being scared.

Greg Dalton: Lauren Sommer, property rights. Some farmers may see their farms take a hit.

Lauren Sommer: Yeah. I mean I think it's really kind of hard to overstate how big a deal this is for Californian water. I mean just to put this in context for people. Most of the rainfalls in the top half, top third of Northern California, and we have this incredible system hundreds of miles of reservoirs and canals and it delivers it all over the state. But in dry years and in certain parts of the state, groundwater is the source of water and the idea is, in wet years, you're filling it back up. You're recharging it so in the dry times you can use it again. In drought years like this one, it's 60%-ish of the water supply that's actually used. It plays a huge role.

And what's happened in some parts of the state is, people haven't been refilling it and there's been a lot of resistance over the years. In 2009, when the legislature passed a bill to try to get people just to monitor this, to report how much was being used, there's still parts of the state that haven't done it in response to that bill. So there's a lot of anxiety around this. And I think for a good reason, we really don't know how this is going to affect the everyday grower out there. At the same time, I mean there's parts of the state where the water has dropped a hundred feet in the last year below ground. I mean just incredible changes. So a lot of people were saying, "You're kind of long overdue," but that doesn't mean -- I mean, the hard work is still to come.

Greg Dalton: Anthony Rendon, I want to ask you, where is the teeth in this bill of Groundwater Bill? Lauren Sommer just said that some people aren't complying with the 2009 law. What if some counties say, "We're just going to keep doing what we're doing."

Anthony Rendon: Yeah, that's a good question and I think it's incumbent upon the state to make sure that these bills are enforced. You asked earlier what the drought does and I said that the drought creates a system whereby there's a sense of urgency, and that's exactly what happened with this Groundwater Bill this year. There was a sense of urgency to do something about problems relating to subsidence, as Lauren mentioned, and the fact that so much of our groundwater is underutilized.

Greg Dalton: Danny Merkley, do you want to get in and respond to what Lauren was saying about --

Danny Merkley: I was just tagging on that a little bit. With that state backstop, it's an important

element if it's implemented properly. And one of the concerns that we have when we voiced throughout the process this year is that, the timeframe for areas to establish that governance is very, very small and two years is not enough time if the county doesn't step in, or if local organizations aren't already set up to develop those groundwater management plans and implement. And just to implement those things, we're talking in the billions of dollars with local fees.

Greg Dalton: John Coleman, what are agencies doing to replenish the groundwater in wet years? Is there enough being done to sort of rather than suck it out in dry years, put it back in wet years?

John Coleman: No, there's not. Part of the problem has been [unintelligible] we've tried to cut deals in San Joaquin County, Sacramento County and elsewhere, and there's been obstacles, political obstacles to overcome where that's happening. Personally, ACWA was a strong supporter of the groundwater legislation.

Greg Dalton: That's the state agency of water --

John Coleman: Yeah.

Greg Dalton: -- agencies.

John Coleman: Yeah. I mean our concern was, if we went into another drought or continue into another drought, the legislature come out with something or probably far worse than what the governor ended up signing a couple of weeks ago, and it's a crisis situation in the state. Had we had enough storage in the state of California, the people who are pulling from the ground would not be pulling from the ground like they are today and that's part of the problem. We have not had enough storage and we have not been putting the water back in the ground in ample times when we should have been doing it.

Greg Dalton: Danny Merkley, is some of the farmers drawing from underground because there is more water than they think should be going for fish or habitat restoration?

Danny Merkley: Because their surface water supplies have either been curtailed or cut back drastically. And in order to keep their investment alive, in order to keep producing, they've got to go to their savings account, which is groundwater and that's why this needs to be a comprehensive solution. That's why the water bond is helpful to this. It's not helpful today; it's going to be decades before we see any new water come from that, if we do, but that's helpful. It still will not replace the amount of water that we're going to lose in our access to groundwater. So we've got some very, very serious concerns about what part of agriculture we're going to dewater and what's going to come out of production.

Greg Dalton: Assemblyman Rendon?

Anthony Rendon: Danny says that this is helpful to the water bond. I would argue the other way around. I would argue both ways that the water bond is helpful to this. The water bond necessitates us that we have to do something about -- we have to have groundwater regulations and groundwater parameters in order for the water bond to function effectively. There are groundwater funds in the water bond. And in order to make sure that the water bond is used effectively, that every dollar is spent effectively, we need to make sure that we have groundwater legislation that ensures that it will be used effectively.

Greg Dalton: The water system is all connected and flows all around. Let's have Lauren Sommer set for us the water bond. What will it do? Where will the money go?

Lauren Sommer: Yes, it's a little bit of everything. There's definitely some money in there for water storage. That's a big chunk of it so this could be surface storage as people say like reservoirs, raising dams, or possibly groundwater storage. There's environmental restoration. There's groundwater cleanup for contaminated water, so people can use that water. I mean there's kind of a little flavor of everything which I think is why we've seen some pretty strong support within the legislature and from the public. We'll see. But as a lot of people have pointed out, because it's a little bit of everything, it's not going to solve all the problems we have here in California. It's not going to really going to take a big bite of some of the big challenges that we have going forward.

Greg Dalton: It took what, five years or so for this to get on the ballot? Finally, there was a bigger bond that didn't go forward. Little piece of candy in there for everybody. Assemblyman Rendon, can bond money be spent on tunnels to bypass the Delta and send water down south?

Anthony Rendon: No, not in Proposition 1, which is the bond that we're discussing.

Greg Dalton: John Coleman, about $2.5 billion for storage in the bonds. Some people say that TNC, The Nature Conservancy and elsewhere, that groundwater is actually a more effective place to store water than reservoirs. There's evaporation and some wag pointed out, you can't waterski in an underground aquifer so it doesn't have the recreation benefits. But talk about the storage component of the bond.

John Coleman: The storage component, the $2.7 billion is critical in there. Some people are leveling criticism at Prop 1 saying it's going to build dams and nothing but dams. That's not the case. It will be the State Water Commission which will make the determination where that money is going to go in order to create the storage. Quite frankly, in California, we're probably going to see in the future for aboveground storage, in most cases, will be off stream, so you don't have the environmental issues. It will be more of a forebay, where in wet years, you collect it and then it's put back into the river system for the fish for flows in temperature, and then picked back up again, and put in the ground. So it's going to be used several times in that whole process. And below-ground storage is generally less expensive than aboveground storage. But the State Water Commission, not the legislature, will be making the determination what is the best public use of the money in order to create the greatest amount of storage.

Greg Dalton: But below ground it's not visible. It's hard for us to see it. It doesn't create jobs, construction jobs. It's not as positive so there's some political orientation toward concrete building things, right? Where a politician can cut a ribbon and say, "Look at this dam."

John Coleman: Well I think there will be some aboveground storage built clearly, but those who are arguing against Prop 1 saying, "It's nothing but aboveground storage," it's a false argument and they're trying to use it as a wedge issue. I think you're going to see some aboveground storage. And remember, the agencies that are buying into it are paying one half the cost. So the $2.7 billion is not the whole amount. There is a multiplying effect where -- Sites Reservoir, if that's built, 50% of it is going to be paid for by other beneficiary users, not just the state as a whole.

Greg Dalton: Assemblyman Rendon, you went around the state and had a listening tour at lots of different places. What did you hear from Californians about water in Monterey and all over the state?

Anthony Rendon: We conducted a listening tour. The way the 2009 bond was constructed was, the 2009 bond ended up being $11.14 billion and it was inclusive of a whole bunch of stuff that most everyone agreed and virtually every editorial board in the state agreed was "pork." It was a lot of special projects that added about $4 billion to the bond in the last couple of weeks. And as a result,

that bond was pulled from the ballot twice by the legislature. So when I was given this task of sort of reworking the bond, a lot of folks said, "Well just cut it by 25%. Cut it so that it goes under $10 billion," which is what all the public opinion polls seem to indicate that if it was less than $10 billion, it would have a chance to pass. What we decided to do was to do something completely different. We just blew it up and started all over again. We didn't want to take a product that had been maligned, a product that nobody seemed to like and just sort of tweak it so we just started from zero. And we went on a listening tour throughout the state and talked to people in their communities. We did 18 public hearings from Redding to Eureka in the north, to Coachella in the south, San Gabriel Valley to Seaside to Stockton and Merced. And everywhere we went that dialogue informed what became this bond and what we heard from people were a lot of different things. And Lauren said, in the Central Valley, it depends. What you hear depends on where you are. So in a place like Hanford, for example, we had to begin that hearing in Hanford in the evening because farmworkers in that community, they stand in food lines throughout the day because we have more fallow land in -- if you add up all the fallow land in California it's larger than the state of Rhode Island.

We went to places in the San Gabriel Valley where people have been battling the ground water contamination for generation. We went to places like Seaside that's sort of off the grid so to speak, it's not on the conveyance system. And everywhere we heard how essential, how important water was to the livelihoods of these communities and to these families but always with sort of a different tweak, with a different ask, and with a different orientation with respect to what was important. And going back to the original theme, the original question that you asked me, the one thing that we heard was a sense of urgency, what we heard was let's do something now. So every place we went, we heard something a little bit different even like Coachella for example where the Salton Sea is receding. And what's left is along the banks of the Salton sea is this dirt that turns to dust and creates dust storms and leads to asthma all over the Coachella Valley. And we heard from families there and all over the state to please do something now.

Greg Dalton: And is it true you got this through without any earmarks?

Anthony Rendon: We got it through without any earmarks, which two newspaper editorial boards told us it was impossible, a number of legislators said it was impossible, we got it through without any earmarks.

Greg Dalton: It does, I don't think you could get the Pledge of Allegiance through without earmarks. Danny Merkley, is ag in favor of this? Lot of people in ag are very concerned about where the money might go given that much money to government?

Danny Merkley: The California Farm Bureau is very much in support of Prop 1 and the water bond. And one of the things that was essential that we've been saying along is there need to be a significant amount of dollars in there not only for groundwater solutions for the economically disadvantaged communities that are in real trouble, not just up and down the valley but other areas of the state as well. But then also new water storage and going to the water storage piece, that 2.7 needed to be continuously appropriate which meant it has been given permission once projects meet their criteria to move forward. The legislature doesn't need to pass another bill to get that money out. We felt it was important to move that as quickly as possible. Groundwater or surface water storage, they're both water storage, they're both important. You can't force water into the ground the way you can divert it when it comes in the gully washers that we're getting today like you can into surface storage.

You've got to have the surface storage in the right places to be able to help with groundwater recharge. Either through the river streams and things like that or putting in water banks. You just cannot take the type of climate we have now, no longer a nice slow Sierra snowpack that we can

gather up in the spring and in the summer and utilize, now we get gully washers that if we can't capture it for one reason or another, it's wasted out to sea beyond what the ecosystem needs and what we need. So it's very important that we have both surface and groundwater storage.

Greg Dalton: And are humans behind some of that changes, burning fossil fuels?

Danny Merkley: That's not my area of expertise.

Greg Dalton: Oh you're going to do the "No, I'm not a scientist" line okay. We're talking about water in California, Danny Merkley is the Director of Water Resources of the California Farm Bureau Federation, other guests today include Lauren Sommer from KQED Science. Assembly member Anthony Rendon, Chair of the State Water Committee and John Coleman, President of the Association of California Water Agencies, I'm Greg Dalton.

Alright, John Coleman, I did something recently, I drank water out of a toilet and it wasn't -- have you ever done that? Actually I should clarify. It was at the California Exploratorium where they have a pretty cool water tap in a toilet. Have you ever drunk toilet water?

John Coleman: I have actually here in Lafayette. Years ago, we were at East Bay MUD, we're looking at a recycle water project and some people in Miranda were opposed to it and they -- I always told staff bring a bottle and glasses just in case. And they said "if it's so safe Mr. Coleman, drink it." So I opened the bottle, I poured it out sort of smell like a grass and it was central sanitation district and I drank it, and couple of days later the guy came and he said at our board meeting "You look a little green in the gills from drinking that toilet water." I said, you know, "Not only -- Mr. Davies, not only do I feel great, my hair is growing again.

[Laughter]

But it's going to be part of the future in one component. And it is going to become part of our drinking water supply at some point in the state of California.

Greg Dalton: And it's already happened in one of the most politically conservative parts of the state in Orange County. So Anthony Rendon, recycled water, toilet to tap, I feel has a bad rep, but some source of recapturing water has got to be part of our future.

Anthony Rendon: Yeah, absolutely does. And you're right they do it well in Orange County, they do it in Santa Clara as well. And that's a big part of this bond. We were talking earlier about, about how residential uses change and water conservation has changed and I think that was one sort of change in consciousness, the way we use water as individuals. I think this bond to a large extent is about ushering in another change of consciousness. For me, what was important about this bond was to emphasize a lot of regional solutions, such as water recycling, such as groundwater remediation, such as storm water capture. A lot of the local solutions are solutions that are most economically efficient, they're least intrusive on the environment, they're the best thing for relationships between east, west, north, south. A lot of these local solutions such as water recycling are things that we ought to be doing and quite frankly, other countries are doing much better than we are.

Greg Dalton: Lauren Sommer.

Lauren Sommer: And we've talked about, you know, water storage, water recycling. I mean the overarching question here is where is the water going to come from in the future in California if we're looking at droughts, more droughts, longer droughts, more severe droughts. I mean I think the interesting thing about recycled water -- there's a lot of studies out there, but a lot of the studies

say that's the biggest potential source in the state for more water. You can build a lot of dams here in California if you had a lot of money but a lot of that water is spoken for or there are rules on when you can use it, it's very expensive to build them. So I think there's been a lot more interests here, we've seen a lot more conversations about recycled water, about some of these solutions.

Greg Dalton: Is that cheaper water than other sources of water John Coleman?

John Coleman: No. It's about over $2,000 an acre foot. Part of the problem is to do recycled water you can't even put the purple pipe in the same trenches of the potable water and so you have different pumping plants, different piping, different reservoirs. Once the department - actually I guess it's the State Water Board will make the determination, not the Department of Health Services -- where it's safe enough to be brought into your potable water system, then the cost will drop but part of it is the development cost, the capitalization cost.

Greg Dalton: Speaking of the State Water Board, do you think they've been too timid in sort of applying power. They have a lot of power in this state, they've been holding back in this election year, this election year for the governor. Do you think the State Water Board, how do you think they played it this year John Coleman?

John Coleman: I think Felicia Marcus who chairs it, they've done a phenomenal job. I mean we're in an unprecedented time, we don't know what Year Four is going to be in terms of the drought. They've been very cautious, they want to make sure that we have an adequate supply for the future.

The concern that I have as a water agency official and others have - we spent a billion dollars the last decade at East Bay MUD to drought proof ourselves to a large extent that's where 10% voluntary not, 25% mandatory. Our concern is if we continue into a fourth, fifth year of drought the state may say, we're going to take some of your water rights and re-appropriate them which then means in the future, we may have a more difficult time going to the rate payer saying allow us to raise your rates so we can do this, this and that. With the threat of the state coming in and saying, well you do that, now we're going to take and not make, there'll be less likely to make investments in the future water system --

Greg Dalton: So the people who are progressive did the right thing get penalized and then the people who kind of lagging -- Anthony Rendon, is that a political possibility that some of -- there's a sort of a perverse reward for lagging and a penalty for being ahead of the curve?

Anthony Rendon: It's something that if I were running a water district I would be pretty vigilant about making sure that that does not pass. I mean that's something that we should not allow.

Greg Dalton: One thing that is on people's radar these days is bottled water, there's a lot of bottled water that's extracted from desert areas of the state. Anthony Rendon, is that anything that can be done about or as they have those rights they can take, you know, bottled water out of the desert, put it in plastic bottles, put it on diesel trucks and we're trying to reduce carbon pollution?

Anthony Rendon: Right. I mean bottled water in general I think is problematic in some communities. I represent a community, the city of Maywood that has had famously bad water quality for a significant amount of time. Salinas has had bad water quality, Fresno has had bad water quality but for the most part I think bottled water has been a problem. I'm not sure to what extent we want to get into the issue as a legislature of water rights at this point.

Greg Dalton: Because ….those companies have powerful presence in Sacramento?

Anthony Rendon: Because it's a difficult situation for the local members who represent those districts. I think water lie itself is something that's tremendously difficult to unravel as well.

Greg Dalton: Danny Merkley, about the seventh year of the drought in Australia, they reformed water rights in Australia. Pretty big, you know, you talked about underdoing a 100-year of case a lot earlier -- the water rights system got changed because the drought in Australia was so bad. What are the chances that could happen in California that water rights could be reformed, changed in California?

Danny Merkley: I don't want to be here if they try to do that.

[Laughs]

I just --

Greg Dalton: What would happen if they try?

Danny Merkley: I just spoke last week with some folks from Australia that talked about decoupling water rights from the land. And that worked for some and --

Greg Dalton: That you don't own the water under your property.

Danny Merkley: Right.

Greg Dalton: Okay.

Danny Merkley: And they completely revamped their water rights system. Again, the best analogy I can think of is somebody coming to my parents and saying you know, it's nice that you paid this for your house, you know, 50 years ago. You paid your taxes, you paid your mortgage but these poor suckers over here that bought right before the crash in the housing market are upside down. So now you need to go back and we're going to take some of that away from you, you need to refinance to carry these other people. And I think that's a real problem not just for those that are impacted directly but for the economy as a whole.

One of the things I learned in farming is you don't do big wholesale changes. You get a lot of unintended consequences. You need to go in as you learn and adjust and tune up and change things but to do wholesale changes like that cause a lot of havoc.

Greg Dalton: Danny Merkley is Director of Water Resources for the California Farm Bureau. Anthony Rendon, water right reforms in Sacramento any possibility?

Anthony Rendon: I haven't heard anybody talk about it, no one's brought it to my committee. It's something that as Danny mentioned if it were to come to committee would be incredibly contentious.

Greg Dalton: Lauren Sommer.

Lauren Sommer: Yeah, I mean if ground water was a tough -- took decades to pass here in California, I think water rights are kind of like the electric third rail. I mean it would be incredibly challenging but at the same time it's a system that is kind of strange, it's all based on history. You either have senior rights or you have junior rights, it's all based in time. So it's not a system that makes a lot of sense inherently it's just that for a 100 years that's the way we've been doing it and there's a lot of court cases that kind of lock it in place.

Greg Dalton: John Coleman.

John Coleman: There's a lot of unintended consequences. I mean any water -- all water agencies I think would fight change in the water right structure. And teeing off what Danny said, you know, the 40% what the port of Oakland export is ag that's 76,000 jobs, the union jobs at the port of Oakland. And you start moving the water rights and start changing what can be grown, what can be grown, where it can be grown and whether you can grow it, those are jobs here in the Bay Area. Good paying jobs are going to go -- would be lost as well. So you need to look at the whole package, you just can't say this is we're going to do this and it's a panacea, it's not.

Greg Dalton: John Coleman is President of the Association of California Water Agencies. I'm Greg Dalton. We're talking about water at Climate One meeting today in Lafayette. Alright, John Coleman, let's talk about water pricing. For a lot of things, people when things get tight whether it's milk or other things, prices go up but that's not really true at least for consumers, individuals in California when the drought, we don't pay more for water perhaps that might be true at East Bay MUD where you have it some tiered pricing. Let's talk about tiered pricing, or more dynamic pricing of water that reflects its value in this drought.

John Coleman: Sure I mean we have three, we have tiered pricing at East Bay MUD, three tiers. Tier one is below the cost of water delivery. Everybody in our situation pays into tier one. Tier two is revenue neutral and it goes up to so many units and then tier three is, pays for tier one. But you have to remember about 93% of water agencies cost are -- the only variable really is energy and chemicals when you get right down to it. So you sell less water, you're going to have less revenue coming in and the only variable is you can see less energy and chemicals dropping. People always complain and justifiably raise rates during a drought, and they don't go back down. Well it takes years. It takes an average of almost seven years to come out of a drought to go back to the consumption patterns of what you were before the drought. So when -- the drought could end tomorrow and our water usage is not going to go back to what it was even a decade ago. It's going to take, you know, close to ten years to creep back up. But 93% of our costs are fixed and so you have to operate a system. And we're trying to invest more money on our system for pipes and failures, our system is old, the average pipe lasts 70 years. We got pipes that are well over 100 years old in our system and we're having to replace them at $3 million per mile. And if they break it's $7 million a mile.

Greg Dalton: Anthony Rendon, obviously water is a basic human right, the access, there's some people in California don't have access to clean drinking water at least guaranteed so. And yet we have this commodity that's really in many ways underpriced, how should we approach the pricing of water?

Anthony Rendon: Well, if groundwater was a big fight, which it was, and if altering water rights would be a big fight, which it would be, having people pay what water costs for them for it to get to their homes would be an astronomical fight.

Our water is heavily subsidized. In communities, there are communities in Southern California, for example the city of Claremont which right now has a proposition, a measure on their ballot to make public their water service treatment -- their water system to their homes because people are complaining about the price of water from a private company. In a place such as California where you have this incredibly complicated water conveyance system, I can't imagine anyone who'd really want to pay what it costs to deliver water to their homes.

Greg Dalton: So we built this ideal society in a desert and we're angry that we have to pay a little bit, pay a little more for it.

John Coleman: We're not in a desert. I always -- the desert is less than five inches of rain per year. Right here we get about 32 inches of rain per year in Lafayette. We have a Mediterranean climate.

Greg Dalton: Beautiful. Yes, Lafayette is beautiful. An arid state, anyways. We move water around to different parts of the state. Anyone else on water pricing? Danny Merkley, water pricing? A lot of people think that we get it too cheap.

Danny Merkley: Water costs are based on your proximity to the source. On the quality it needs to be, what it takes besides transporting it, if you're further away. How much treatment it takes to get it to that quality, whether it's drinking water quality or for irrigation purposes, and it also depends on your infrastructure and if it's paid for. And so you have more senior water right holders irrigation districts - their system's paid for, they don't have the same cost than someone who's built a new -- a brand new facility that's still making payments on it. So really -- and this is a little bit over the top but one way to look at it really is water is free. It costs to capture it, to transport it and to treat it.

And we have members in some parts of the state that are paying over $2,000 an acre foot for water and we have other members that are paying well under a $100 an acre foot and it depends on where they are, the quality of the water that they're getting and how much it needs to be treated and how far away they're transporting it.

Greg Dalton: Lauren Sommer.

Lauren Sommer: It's a kind of like but I think it's a really important point. It's the kind of Catch-22 of conservation, right? People start conserving and then water rates have to go up. I mean what's interesting is, you know, East Bay MUD has tiered rates and they have for a while. There's a lot of water districts out there that don't. I mean we've seen a lot of our electric utilities kind of switched to this kind of conservation systems right; it's more you use the more expensive it is. There's a lot of water districts that don't do that right now. And electric utilities also have this thing called decoupling which means they kind of set their rates kind of independent of how much power they're selling. So it's kind of a way of kind of breaking that chain of having to sell more in order to make more. And so I don't know that we've really seen a lot of discussion of that but I'm kind of interested to hear if it's going to happen in terms of whether kind of water districts are going to have to start looking at some of these policies that maybe the electric utilities have been doing for a while.

Greg Dalton: Anthony Rendon.

Anthony Rendon: To Lauren's point, to make matters worst or to compound that problem, we have communities such as Sacramento for example where the individual apartment buildings aren't metered.

Greg Dalton: Are not metered. I think they're going to be metered but over a very long timeframe. Danny Merkley, rice, alfalfa, cotton -- why is that grown in California during -- if we have such water stress, is there a future for those kinds of crops in California?

Danny Merkley: You can't grow some of those things other places. Alfalfa, you can grow on other states and we do import a considerable amount into California which is another issue the air board may want to talk about at some point because they're trucking it in. Alfalfa is used for primarily for dairies and that's a high value commodity and it's an important one.

Rice, you know, without getting into too far down into the weeds on that, no pun intended. Much

has been done with laser leveling fields. I've laser leveled fields so that you're putting on much less water. Very small little amounts over the top to keep that rice growing and alive. And then when you look at what rice does beyond just the commodity -- by the way, the varieties we grow in the Sacramento valley, you can't grow but a couple other little places in the world and they can't meet the market for those varieties. But what it does for the ecosystem, what it does for the Pacific Flyway for endangered species, the endangered garter snake and other things like that, are real big assets

It's really important if you want to understand ag, don't go into your garden because that's not a good comparison. Don't drive up and down Highway 99 or I-5 and look through your windshield. My dad used to tell me when I was a kid, you can't farm from the windshield, get out of the pickup, get your boots on the ground and figure out what's going on. And that's one of the challenges because agriculture is unique, we've got about -- the vast majority of people in the United States are three generations removed from having a family member directly involved in production agriculture. And we haven't done a very good job of being able to explain what we do and how we do it.

It's fun when I get the chance to, especially with teachers and young kids in school, getting them to get their hands in the soil. By the way, it's soil out in the field when you're growing and when there's water there, when it's on my boots and tracked in my wife's kitchen it's dirt.

Greg Dalton: We're talking about water at Climate One. Danny Merkley is director of Water Resources at the California Farm Bureau Federation. Lauren Sommer, I've moved my family away from animal protein to come to a plant protein for climate and health reasons. Almonds are a super food, you go to Whole Foods and they say how great almonds are and yet almonds are a water hog. Have I done a bad thing?

Lauren Sommer: It's -- I love almonds too. I'll just put that out there. But California --

Greg Dalton: But they're a big deal of water.

Lauren Sommer: Yeah, and California grows a huge -- it's like almost 100% or something of the country's almond supply comes from California. I mean what we've seen is a lot of acres go from crops like row crops into almonds. I mean, if anybody's driven kind of down 5 if you kind of get off 5 into some of those areas, you really see a lot of almond trees and when I've been out there talking to folks this year to do stories, I mean one of the things people are really struggling with is in a really dry year like this one, if you had row crops that you plant every single year you would fallow land. Well, trees you can't do that. You have give them water every year or you've lost an investment that a decades-long investment. And so certainly the prices have been very good for almonds. The export market has been very strong, particularly because of support from Asia and so there's been a real incentive to plant orchards. But I think that's put a lot of people in a really tough spot this year in the sense that they have to have water and they're paying these really high prices to kind of keep these almond trees alive and the larger question is whether that gives California's ag industry the flexibility it needs for droughts because we're gonna have more droughts.

Greg Dalton: Danny Merkley, quickly then we're gonna get to the audience questions in a bit.

Danny Merkley: And that's just touching the head of the issue.

Where I live in Yolo County and you look in other parts of the State, previously unirrigated land, land that couldn't be irrigated, it's not level, not prime land because of our more efficient irrigation systems now, drip and micro-sprinklers, we're seeing irrigated crops like almonds go into those areas. I don't have an answer for that. I don't know what to tell you. I don't think we need to

dictate what people should grow. I think the market will do that and so will the availability of water.

Greg Dalton: Lauren Sommer, one big thing in the energy markets is fracking. A lot of people are concerned about water impacts, water quality, water supply. The industry's moving toward recycled water. They say they don't really need a lot of fresh water. What's the impact on fracking in California in terms of water?

Lauren Sommer: Yeah, this is an issue that really has been in the news a lot and there's a lot of confusion about it. So, most of the fracking that's happened in California has been in the oil fields that have been producing for a really long time. And those wells -- the reason they need water is that's what they're kind of mixing the sand and the chemicals into, it goes down into an oil well and that's what's making these little cracks in the rock, they're fracturing the rock so the oil can flow more freely. And so in these older oil fields they actually don't use quite as much as you might hear about in the news. I think in other States it's like a million gallons per well easy. In these older oil fields in California it's not anywhere close to that. Now, the question is whether we're gonna see an expansion of drilling because of fracking that the technology's gonna kind of incentivize oil companies to start drilling in new places and start using some of the techniques that we've seen in North Dakota and in other places. And those types of wells do use more water, a lot more water. And so, certainly when you look at the kind of total use of water in fracking in California today it's really not that much at all, but the question is are we gonna see more drilling and more fracking and then what will the pressure be in the water supply because it does happen in some areas where the water supply is already really stressed.

Greg Dalton: In fact, there's a ballot measures this fall in San Benito and Santa Barbara Counties to ban fracking, but all fracking is not created equal.

Greg Dalton: We're talking about water at climate one today. Our guests are John Coleman, president of the Association of California Water Agencies; California Assemblyman Anthony Rendon, chair of the State Water Committee; Danny Merkley form the California Farm Bureau Federation; and Lauren Sommer from KQED. Let's go to our audience questions, welcome.

Male Participant: Do you agree that water is over allocated? And if you agree that water is over allocated, does this bond do anything to move us toward the problem of over allocation?

Greg Dalton: Danny Merkley, over allocating, meaning there's more water on paper than in reality?

Danny Merkley: Well, and we don't have the time to get into how the water rights system works to that degree to answer that question satisfactorily, but if you understood how water rights works at the State Water Board, the myth that water is over-allocated by five or eight times, I've heard different figures, is at best a very poor understanding of how the system works.

Greg Dalton: Anthony Rendon.

Anthony Rendon: I've heard competing arguments about that as well. I mean in general, what we're battling with is a water infrastructural system that's built for 11 million people in a State that currently has 38 million people and is on its -- well in its way to 50 million people. We don't have enough water whether or not-- there are arguments -- varying arguments of varying degrees about the extent to which water is or is not over allocated. The bottom line is we have not enough infrastructure for the number of people we have.

Greg Dalton: And as the climate is changing the whole system is built on this slow steady melt from the Sierras and more of that is coming as water, less as snow, and that's kind of rocking the system too. John Coleman.

John Coleman: That's why it's so important to -- when I talk about the forebay concept of picking it up in the high flows and it's not a reservoir that's used for boating and the typical view of a reservoir, then it's released quickly back into the system, into the rivers for the fish and picked back up to put into the ground. If 10 million acre feet of groundwater storage available beneath the ground that's more than what we have above the ground in the State today, that we could be storing water in.

Greg Dalton: Let's have our next question. Welcome.

Male Participant: I understand the groundwater issue is very complex viewed statewide. I was just wondering what's the groundwater situation around where we live here in Lafayette?

Greg Dalton: It's fortunate that two our panelists actually grew up in Lafayette. John Coleman, what's --

John Coleman: We don't have -- the groundwater bases beneath where we're standing are basically, they're minimal. There's not enough really to go -- to put new water into and they're not being over drafted. They're not utilized and most of it is just the runoffs coming off the hills feeding the creeks going eventually to the bay.

Lauren Sommer: But is something that we don't really think about here in the Bay Area and this true all over the State. Our water travels hundreds of miles, hundreds and hundreds of miles in some cases. East Bay MUD's water travels a very long way to get here, not in rivers actually, in pipes a lot of times or in canals and stuff like that. So, I think it's something that we don't think about. We think water as a local issue. In California, there's an incredible system that your water came from a very faraway place.

Greg Dalton: And the San Francisco Public Utility Commission has been handing out rain barrels, perhaps others, the idea that people try to capture their water where it is and water their garden from water from the roof rather than hundreds of miles away. Anthony Rendon.

Anthony Rendon: And to that Lauren makes a good point but I think it's important to remember that a lot of our water infrastructural system that brings water hundreds and hundreds of miles, delivers it throughout the State was built 50 to 100 years ago by an incredibly engaged Federal Government, or helped by a Federal Government that engaged and believed that there was a certain amount of value to those types of projects. Regardless of what your politics are, whether you're on the left or the right, I think it's fairly safe to say that we have a Federal Government today that isn't that engaged in terms of these large infrastructural projects or any sort of public works projects.

So to a large extent we are sort of at this on our own and those sorts of local solutions, like water recycling, like groundwater remediation, like storm water capture, those types of local solutions are the things that we have to invest in because; A they're cheaper and B they're local.

Greg Dalton: Lauren Sommer.

Lauren Sommer: I was gonna add, you know, people hear them in news a lot about the wildlife, right, about fish, about whether the water is going to the ecosystem, whether it's going to people. I mean, this is kind of the fundamental basis, right, kind of this whole problem, right. The system was built a long time ago. It was built before the Endangered Species Act, before there was a lot of

awareness about what ecosystems and endangered species needed. And so when we hear about these issues in the news a lot it kind of is that fundamental disconnect, is that our water system was built before that time and now we have a lot more awareness or concerns and that's where we really kind of see this conflict.

Greg Dalton: Danny Merkley, should the Endangered Species Act be relaxed because of the water stress in California?

Danny Merkley: I think the Endangered Species Act was a very important piece of legislation in its time. It is very inflexible and for that reason we're not able to adapt when things change. We shouldn't throw it out. I wouldn't for one second suggest that. But it certainly needs to have some more flexibility, just like our aging infrastructure that's over 50 years old, needs the flexibility. And that flexibility is the changes that we've seen and it's three real main changes. It's the change in our weather patterns from that Sierra snowpack to more volatile rain storms to population increase and to environmental policy. We kill more delta smelt with fish agencies doing research, hundreds fold, from what we're allowed to take and have entrained in the pumps.

Greg Dalton: Anthony Rendon, let's get you quickly on that. Should environmental laws be relaxed because of the drought?

Anthony Rendon: No. I don't believe so and again going back to what I've been saying throughout, I think the more we rely on local solutions the better we are and the less we have to look at suspending environmental legislation.

Lauren Sommer: But they have been.

Greg Dalton: Lauren Sommer.

Lauren Sommer: In dry years, the environmental rules are much less stringent. So they automatically get relaxed during a drought.

Greg Dalton: Let's have our next audience question. Welcome to Climate One.

Female Participant: As much as we need to rely on local solutions I also think that we should remember that water actually doesn't travel hundreds of miles in this country, it travels thousands of miles, and in this country we have developed an interstate highway system, an interstate national gas system, why aren't we developing for the long-term solution in interstate water system.

Greg Dalton: John Coleman, let's tap the Great Lakes.

[Laughter]

John Coleman: I've asked -- people said why don't you take the water from the Columbia River and I can assure you, the people in Oregon would be adamantly opposed to it. It's not gonna happen. There are water markets that are available which are coming being developed up in Humboldt County. They used to do a lot of milling for trees. Well that used 60, 70% of the water. Those mills are now gone. They would like to sell the water. It's a question of how do they get it here and you can't -- people talk about floating an iceberg, that's not gonna happen. We need to, as Mr. Rendon talked about, we need to locally look at what we can do. We need to make the investments working with other agencies. No agency can work in its own silo anymore. They have to work together. We need to work together as partners with the State and business, industry and labor. We are all in this together or we're gonna fail.

Greg Dalton: What happens in 2015 if this is not a wet winter? John Coleman.

John Coleman: Well, it depends on the agency you're in.

It's gonna be dire in many parts of the State. Some parts of the State now you're only allocated 50 gallons of water per house per day regardless of the number of people living in them -- living in your house. We don't want to get back to that, but if it's a dire year again, you're gonna see agencies that are gonna, in most cases, ban outdoor water use entirely because that's in summertime upwards of 70% of your water usage. You're going to see -- hopefully the State Water Board moving quickly with regulatory reform to deal with recycled water. You're gonna see more de-sal plants. There's 10 on the drawing board now in the State that will be sped up. Things that people may have opposed in the past are going to fall to the side to some degree and it's just -- it will kill our economy. We need to remember that water is the lifeblood of this State and if we don't have the water resources available were not gonna produce the widget, we're not gonna grow whatever and those are jobs, and even if you don't see it here it's your job, you're gonna pay for it one way or the other and it's gonna have an impact.

Greg Dalton: Anthony Rendon.

Anthony Rendon: All of that and more. All that would happen and it will all be played out in Sacramento in this already incredibly politically contentious environment. It would have dire consequences.

Greg Dalton: And there's this possibility out there that we may be -- may not be just another cyclical drought. This could be, you know, a mega drought or a new normal where we're adding a real dry period where this isn't like, well the 70's we got through it, it was tough but you know, eventually the rains came back. Is that awareness -- that possibility resonating in Sacramento yet? No one knows yet, Anthony Rendon, but.

Anthony Rendon: I think it is. I mean, obviously we deal with dozens and dozens of different public policy areas. I think folks in my committee we had -- because of the 18 hearings that we had we heard from climatologists and scientists and folks who warned us that this might be the case.

So I mean, I think that led to our tremendous sense of urgency to actually do something. But that being said, I mean keep in mind I've said this so many times before -- we have the U.S. EPA has estimated that if you take one category of the water bond, the water bond's divided into about 11 or 12 different categories; groundwater, water recycling, etc. One single category is safe drinking water. We have, according to U.S. EPA, we have 20 billion dollars in safe drinking water infrastructural needs in the State, 20 billion. This bond allocates less than 5% of that. So the need for investment is urgent, the need for investment is timely regardless of what happens with our waters -- our weather cycles in the future.

Greg Dalton: I want to thank our panelists. First, I want to thank our crew here at Climate One. Why don't you give them a round for helping put this together?

And also our thanks to our conversation today here at Climate One at the Commonwealth Club Meeting in Lafayette with Lauren Sommer, reporter with KQED Science; Danny Merkley is with the California Farm Bureau Federation; California Assemblyman, Anthony Rendon, chair of the State Water Committee; and John Coleman with East Bay MUD. I'm Greg Dalton, thank you for listening to this Climate One program and thanks for coming out today in Lafayette. And thanks to our funders at the Bechtel Foundation and thank you for filling out the survey here today. If you get a chance to do that, that really helps us.

[Applause]

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