Media Briefing: Data centers and water in the West

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Panelists

Sussan Garcia, Relationships Associate, Water Hub (Moderator)
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Pablo Ortiz, Director of Innovation and Collaboration, Union of Concerned Scientists (UCS)
Steven Renderos, Executive Director, MediaJustice

Transcript

[00:02:44] Water Hub / Sussan Garcia: The Water Hub is a pro bono communications firm that works with partners around the country on water communications, which is quite broad, and as part of that offering, we create resources for media partners to deepen and expand your critical reporting, including our media briefings. We're really excited about this media briefing focused on data centers and water in the West. As many of you know and have reported on, there's a lot of headlines and concerns regarding data centers' water footprint. A lot of recent polling has shown that this is quite a defining moment for public understanding and community decision making, which makes this reporting and getting information out to the public very critical at this moment. However, despite the headlines, it's hard to make sweeping statements because both water and data center development is hyperlocal, which requires not only local considerations, but the scope and scale of data center development and water usage also has regional impact. That's why we brought three different experts from the region who can speak to different angles and perspectives. Before we delve into this exciting conversation, I'm going to give the panelists a chance to introduce themselves.

[00:04:15] Pablo Ortiz (UCS): Thank you. I'm Pablo Ortiz, originally from Mexico. I grew up in Guadalajara, and I've always been interested in water and the environment. I did my bachelor's in environmental engineering, and then came to the United States for my PhD in hydrology and water resources management. I've been working on climate change and water impacts, mostly on low-income communities. Now I'm the Director of Innovation and Collaboration at the Union of Concerned Scientists, working on things related to our internal policies — not for appropriate uses of AI, but also on the environmental implications of this technology.

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[00:04:58] Kirsten James (Ceres): Good morning from Los Angeles, everyone. I'm Kirsten James. I am the Senior Program Director for Water at the nonprofit Ceres. I've been working on water issues for about two decades now at the regional level, and also working with businesses and investors at the more global level. Ceres is a nonprofit advocacy organization, and we work to accelerate the transition to a more resilient economy. We do this by working with investors and companies to act on the world's sustainability challenges, including the issue at hand today — water scarcity and pollution. Within Ceres, I coordinate what's called the Valuing Water Finance Initiative, a global investor-led initiative supporting companies to elevate water stewardship in their sustainability strategies. I work with over 100 global investors who are engaging with companies in water-intensive industries, including the high-tech sector. A lot of that work with investors in the high-tech sector is related to data centers. Glad to be here today. I'll pass it over to Steven.

[00:06:19] Steven Renderos (MediaJustice): Thank you, Kirsten. Hi everyone. I'm Steven Renderos. I'm the Executive Director of MediaJustice. We're a national racial justice organization, and we fight to build power to challenge the way that corporations and governments leverage media and technology to shape our futures. That's the lens I come to this work from: as an organizer. A lot of my work, and MediaJustice's work, has been meeting the organizing and mobilizing energy that's emerged around this issue, and working with communities across the country to really challenge the proposals that are popping up in people's backyards, very quickly and very suddenly. We've been active in about 20 different cities across the U.S. On the west side of the country, we're doing work with folks in California, in Monterey Park, in the Imperial Valley, doing work with folks in Colorado, in Arizona, in Nevada. Excited to be in conversation with you all.

[00:07:55] Water Hub / Sussan Garcia: What do you wish the media covered and more people understood about data center development in the West? Kirsten, if you can kick us off.

[00:07:55] Kirsten James (Ceres): Data centers are expanding at such a fast clip, and we really need to understand the full picture of the implications of this, because there's a lot that is now just coming more into view. This includes the potential strain on local water and power resources and how they are connected. From the water vantage point, I think it's really critical that the media continue to dive deeper into these issues and really explore the entire suite of interrelated impacts and what it means for communities and other stakeholders who rely on sustainable water supplies. This full-picture view is especially important in water-stressed areas such as

those in the western United States. Ceres has tried to shine some light on these questions, and some of our recent research really shows the potential water impacts tied to data centers and explores the full suite of potential impacts. Our findings highlight that these impacts can really be higher than is realized or being acknowledged. For instance, focusing on our report, we look at the Phoenix, Arizona region as a case study on how direct water use in data centers, but also, importantly, the indirect water use for electricity generation can really add strain to local water supplies. We often hear, in a lot of the media reporting, the focus on direct water use, primarily from cooling systems, which our research confirmed is certainly a significant water use. But we also found that the indirect and cumulative impacts beyond the property lines of any given data center really are substantial and have received little attention to date. In Phoenix, we looked at both existing data centers and those in the pipeline. Our analysis found that in the coming years, annual water use from data center electricity demand is expected to increase by 400% in the Phoenix region, approximately enough water to supply a city the size of Scottsdale, Arizona, more than 240,000 people, for over two years.

Another piece of the picture is the geographical reach of the impact. We found that San Juan County in New Mexico, more than 350 miles from Phoenix, will see a tenfold increase in water withdrawal related to data centers in the Phoenix region because of this electricity demand increase. The last piece: data centers are often built in clusters, and a lot of these clusters are popping up in water-stressed areas. While one individual data center may have limited impact on supplies, it is a much greater risk when we look at all of these data centers coming into an already stressed basin and sharing these same water resources. Those are some of the pieces that we really need to put more focus on.

[00:12:48] Pablo Ortiz (UCS): I want to start with something simple, but still important: not all data centers are equal. That seems obvious, but it matters more than you think, because when we hear about data centers, a lot of us picture the same thing — a big box the size of a Walmart full of computers and servers. But these facilities vary in size, in the technology they use, in how much water and energy they consume, and in how much impact they have on the people living nearby. A small co-location facility serving a relatively small community of local businesses will be substantially different than a hyper-scale campus built for AI workloads.I like to think about three different levels of impacts. First, the immediate community. What the neighbors experience: the noise from cooling systems running 24 hours a day, the diesel emissions from the backup generators, construction disruptions, changes to the character of the neighborhood, maybe impacts on property values. Second, the local level. This is where we see a lot of the water's relevance. Data centers can draw enormous volumes of water for cooling, often from the

same municipal systems that serve homes, schools, and hospitals. A single data center can use over a million gallons during a day during peak summer months. That puts a lot of pressure on local supplies. Third, the regional level. These facilities run 24/7 and require massive amounts of electricity. That demand drives the need for new power plants, keeping coal plants open, new transmission lines, grid updates, and these infrastructure costs are often spread across rate payers far beyond where the data center sits.

Lastly: not all AI is equal. Data centers have existed for a couple of decades. What is new is these hyperscale data centers mostly focused on artificial intelligence. There's also traditional AI that has been used for decades, mostly for cancer research, weather forecasting, optimizing energy and water grids, agricultural efficiency. Generally beneficial applications. This is very different from what we are seeing now with generative AI, the type of ChatGPT and large language models. Those are fundamentally a different animal, and the tech industry often lumps them together to make us believe that AI in any form is beneficial, when for the most part, it's not.

[00:17:16] Steven Renderos (MediaJustice): I'll build on where Pablo was landing. There is a concerted push at this moment to build data centers at a scale that hasn't happened ever, and that push has been particularly pronounced in the last two, two-and-a-half years. We're seeing the rapid development of data centers at scales using quantities of water and electricity that are just unprecedented. There was a period of time when there was very deliberate planning around where to place these things where there is good land, good access to water, enough electricity on a power grid to absorb this. Those kinds of careful considerations in this current moment are just completely out the window.

The West is becoming the front lines of a lot of data center development now, not because it's the most ideal place to do it — it's because there's saturation everywhere else. Northern Virginia is at its peak. The South has seen rapid-scale development. The Midwest is already overly saturated. The West has open land in places like Nevada and Arizona, cheap land — but it's also places where there are stressed water systems, and there's a perception that there are communities there with less political power to push back. The other thing I would want to see more of is: what we're also seeing is a significant resistance and pushback to that rapid development. It would be a mistake to characterize that pushback as just NIMBYism. The people I come across are motivated by a wide range of issues. For some people in Tucson, it was water that was centrally a part of the fight. The reason why many people who've never been political in their lives are coming out to city council meetings and protesting. For other people, it is quite

literally that a massive project of this scale that is mortgaging the future of their community is coming in with almost no public process. I would encourage folks to really dig in and talk to the people who are actually showing up at these city council meetings, county board of supervisor meetings, water board meetings. What you'll find is it's not just people who are worried about parking or noise. This pushback is much more than just NIMBYism. It's people who are fighting for their homes and fighting for the future of their communities.

[00:21:50] Water Hub / Sussan Garcia: Since you talked a little bit about concerns and what you want to see, talking about solutions, what regulatory developments are you hoping to see around data center development? And if you have any examples of where they're starting to happen, that would be great to hear about.

[00:22:10] Kirsten James (Ceres): Policymakers are going to be playing an important role in really helping to ensure that the economic growth and proliferation of data centers doesn't conflict with sustainable water management. The last thing we want is for this development to conflict with conservation efforts that are ongoing, or wipe out the important efficiency gains that have been made. In areas of the Phoenix region, we saw that water stress in some basins could increase by as much as 32%. We have identified at least a dozen standalone state bills proposing things like water use disclosure or restrictions. On top of that, we've seen hundreds of data center bills that more broadly cover resource elements. In recent weeks, bills in Virginia and Utah passed the legislature, awaiting final approvals. There is a lot of momentum.

A few areas I think are really important for policymakers: First, effective governance relies on robust data, so we really need to see comprehensive disclosures from data center companies — including water withdrawal and consumption data for both direct operations and supply chains, and critically, the water use tied to electricity generation, which is something we see lacking in public disclosures. We need public disclosures at the facility level, not aggregated, because we need that local granularity. Policies can also help encourage advanced water-efficient cooling technologies. These policy discussions really should also consider other large water users in the region — not thinking of this in a silo, but looking at all users in each basin. In general, as these policy proposals move forward, we need good coordination among states, cities, water utilities, and energy providers, all coming to the table to ensure data centers are sited to minimize cumulative impacts and support sustainable and responsible long-term growth.
[00:26:58] Steven Renderos (MediaJustice): I totally agree with Kirsten's points around transparency on water usage in both direct and indirect ways. I think in many of the communities

we've been working in, we've found the value of creating space and really slowing down the process.

I'll give you Tucson, where I was living up until about a year ago. Through some great reporting by local investigative outlet AZ Luminaria, and looking through public records, we were able to figure out that a data center being developed by Beal Infrastructure was for Amazon Web Services as the primary tenant. The data center was being built just outside of Tucson city limits, so it actually needed to be annexed by the city in order to access the city's water. That became the critical choke point for local organizers. This project, in a vacuum, would have been the largest water and electricity user in that region. It had come in behind NDAs — both the city manager and the Pima County Board of Supervisors were adhering to NDAs, so things didn't become public until good reporting made it so. Ultimately, last August, the City Council voted unanimously to pause — to step away from the project and not annex the land. That was a huge victory for the local No Desert Data Center coalition. What it's led to since then is the city having the space and time to adequately consider: what is the good policy we need in place to hold the interests of our community as we think about economic development? That has led to exploring water ordinances, looking at what is the appropriate pull on the local water supply, what are the checks and balances, the transparency mechanisms? There's also stuff around land use being explored, to zone for data centers specifically. That pause has been really helpful.

In a lot of other places, there have been similar pushes for temporary moratoriums. In places where local city councils haven't been willing to go there, organizers are pushing for ballot initiatives — cities like Taylor, Texas and Monterey Park are actually bringing that matter to a vote with local citizens. One way or another, the desire of people seeing these projects pop up is: can we slow down so that we can consider what's in our best interest and ensure there's a public, transparent process? And that pause then allows for good governance to step in and good policy to be shaped. It's really hard to develop good policy when the thing's already being built. It's harder to close the tap on the water, so to speak.

[00:31:36] Pablo Ortiz (UCS): To summarize and add a few things: End data center tax subsidies, and also require data centers to pay for additional electricity or water costs. No more non-disclosure agreements — instead, mandatory water and energy disclosures. This should go for any industry, not only data centers. Strengthen the environmental reviews and protect what already exists — this includes adopting stronger climate, water, and energy policies. On labor and employment standards: a lot of the time, the jobs that are created are mostly during the construction phase, and not so much during the rest of the life cycle of the data center. And

beyond community benefit agreements, maybe something more innovative — like revenue sharing, where a data center shares more directly the revenue with the community.

[00:33:28] Water Hub / Sussan Garcia: Right now, there's no clear apples-to-apples way to measure AI's water use. What specific metric or disclosure should journalists be asking companies for?

[00:33:53] Pablo Ortiz (UCS): This is a really great question. The AI part makes it very difficult, because it's very hard to know which queries are going to which data center. But coming back to the data center level, there is this metric called water use effectiveness, measured in liters per kilowatt hour. Basically, how much water is required for energy provided to the data center. This can be a way of comparing different data centers. This is necessary, but sometimes insufficient. Why? Because it gives you an average. But data centers' water use often isn't average. Maybe during winter they don't use that much water, but then they draw enormous amounts during peak summer months for cooling.

Some questions journalists could be asking that are very site-specific, drawn from a resource created by the Alliance for the Great Lakes: What amount of water will the data center need each day and each year? What water quality is required? What is the source of the water: surface water, groundwater, or municipal supply? Is that water source already stressed or at risk of depletion? Have seasonal or drought conditions been considered in water planning? What percentage of the local water system's capacity does this represent and can they meet that demand during drought years?

[00:36:06] Kirsten James (Ceres): My comments align with what Pablo just said and my earlier comments as well. I'll just add that on water stewardship more broadly, Ceres every two years does a benchmark analysis of a wide variety of water-intensive industries, including high-tech and hyperscalers. Our last benchmark was released in late 2025 and includes 26 KPIs on what we look at more broadly on water stewardship and a company's response and how they're progressing over time. That's another good resource to think about different metrics.

[00:37:10] Water Hub / Sussan Garcia: Where are communities actually feeling the effects of data center water use today, and who's ultimately paying for that demand?
[00:37:28] Steven Renderos (MediaJustice): People are feeling it all over the country in terms of increased utility rates — paying more for water, paying more for electricity. That's been widely reported, but I think the direct connection to the increased construction and coming online of data

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centers is an area where there's more opportunity to explore. There's been reporting looking at a Meta data center out in Georgia, for example, and the impact it had on the local water supply. People experience a drop-off in quality of what's coming out of their taps.

The other thing is: what is lost when the data center is built? The concessions that are made to attract hyperscaler projects into local communities often come with tax breaks. Roughly half the states in the U.S. have a state law that exempts companies from paying taxes for the purchase of the land. There's just hundreds and hundreds of millions of dollars leaving communities right out the gate just from the purchase of land. A report by Good Jobs First found that many state and local governments are spending roughly $2 million per permanent job created to attract data centers. Jobs are actually one of the key arguments for building data centers. It's going to bring great jobs to the community, and oftentimes there are not enough jobs given everything that people are giving away. Alongside the tax breaks and the rise in utility costs, it's really communities that are having to bear the cost of the data centers coming to town.

[00:40:21] Water Hub / Sussan Garcia: Have you considered, or do you have thoughts about, the impacts of a data center proposed for Page, Arizona, near the Navajo Nation and Glen Canyon Dam?

[00:40:37] Steven Renderos (MediaJustice): We haven't connected with any of the direct organizers down in Page, Arizona. Very similar to what we've seen in other fights: a data center gets announced, it happens kind of behind closed doors, and local residents are upset about it. I know there was a local referendum that folks were gathering signatures for, which the city council opted not to accept. We have connected with a lot of the organizers doing work in Tucson and the region, up in Pinal County and up in the Phoenix area, and a lot of those groups are actually in relationship with each other. I'm happy to follow up with whoever asked the question. I'm sure in the next week or so we'll have an inroad to folks down there. The proximity to Navajo Nation and the concerns that are coming up for Indigenous folks in that region. Just about their ability to have agency and autonomy over their local water sources is critically important, as well as the concerns of the residents in Page who don't want to see their futures mortgaged for a data center that it's not quite clear what benefit it brings to the community.
There's a real necessity for local elected officials in Page and everywhere else to pay attention to those local concerns and to try to design a process that actually feels democratic, that actually brings people in and allows communities to consider these kinds of economic proposals without it being an all-or-nothing fight.

[00:43:11] Water Hub / Sussan Garcia: Are there any tech companies or data center developers who are doing things right?

[00:43:22] Kirsten James (Ceres): As part of our benchmarking and research work, we do a very close look at public disclosures from these companies, and we do pull out a lot of examples of what we see as bright spots and good leading examples of company practice.

On transparency and disclosures: the data center company CyrusOne has begun efforts to quantify its energy supply chain water consumption to understand both its full impact on water resources and the risk of electrical supply disruption due to increased water stress. We found this really leading the pack in terms of transparency and disclosure. They also evaluated trends in their water use effectiveness and the broader impact of increased renewable energy use. Amazon Web Services has a couple dozen data centers already using recycled water for cooling, and is looking to quadruple the number of data centers using recycled water by 2030. They've also developed agreements with various utilities to help support freshwater being preserved for community use. Google has taken work beyond their four walls and into the watershed — with the idea that the health of the watershed more broadly needs to be supported. They have applied a data center water risk framework to measure and evaluate site-level water risk and potential watershed impact, to inform their decision-making process for new site selection, cooling system design, and ongoing operations. Of course, the devil is in the details, and we need to explore really how this is mitigating impact and supporting watershed health, but those are good bright spots to reflect on.

[00:47:29] Water Hub / Sussan Garcia: Can you share more information about community benefit agreements? What are they, and how should communities use them to protect themselves?

[00:47:54] Steven Renderos (MediaJustice): A community benefit agreement (CBA) is a legally binding contract, in this scenario, between a developer and the community, with the government entity engaged as well. There are several things that could be negotiated inside a CBA to ensure that an incoming project delivers the best possible benefit for the community: jobs, water usage caps, local hiring requirements, environmental standards.From my vantage point as an organizer: a community benefits agreement is only as strong as the leverage that the community has behind it. A community that's negotiating quietly, where there's very little organized opposition and a city council that already wants the thing, is going to end up with something that lets the

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company check a box to say they did community engagement, but I would argue that's not what we want here. I think about this from the framework of a CBA should ensure that the project coming in does no harm. That's the baseline. I often think about a community we've been organizing with in Memphis, with a group called Memphis Communities Against Pollution. Elon Musk has built a data center in South Memphis in the neighborhood of Boxtown, a Black neighborhood that was founded by freed slaves, a neighborhood that has been dealing with environmental racism for decades, first with an oil refinery, a Valero gas plant, and now a data center powered by 30-plus gas turbines that pump toxic air into the neighborhood. That community has been actively pushing back and won some interesting concessions, leveraging some of the tax revenue being generated through property taxes, and making sure there's a commitment to actually spend that money in Boxtown. But you need really strong opposition even beyond the moment a CBA is signed. You need community pressure to continue to hold companies accountable to their pledges. Organized opposition is going to be key at the beginning, in the middle, and on the back end of CBAs.

[00:52:27] Water Hub / Sussan Garcia: Pablo and Kirsten, can you tell us if tech companies are seriously considering non-water alternatives for cooling systems?

[00:52:29] Pablo Ortiz (UCS): In short, yes, but they are more expensive. And sometimes what you're doing is just shifting the water use from being inside to being off-site. Instead of being inside the cooling system, you require more energy, and that energy is generating water use somewhere else.

[00:53:01] Kirsten James (Ceres): The short answer is yes. There are a lot of interesting technologies out there that minimize and provide more water efficiency, but there are trade-offs. We've seen companies implement technologies they refer to as near-zero water cooling or zero water cooling. But you have to dive deeper into the details of those systems. Even if reclaimed water is used within a facility, that water is initially coming from somewhere, often potable water supplies. So you have to unpack each technology to really understand what the water footprint is. Another thing to consider: many data centers that are already in the ground do not currently have these more water-efficient technologies, and retrofit may not be possible or cost-viable in some cases. And back to the cumulative risk, when we started the research for our regional case study 'Drained by Data' in the Phoenix region last spring, there were 124 data centers in the ground or in the planning process. Fast forward to about a month ago, and there were nearly 170 facilities. So, there's just a tremendous amount of growth, and we need to get ahead of this and look at what it really adds up to cumulatively.

[00:55:42] Steven Renderos (MediaJustice): One quick point: I was in conversation at an event last week with Karen Hao, the author of Empire of AI. A point she was making is that some of the newer generation computer chips actually run hotter because they're able to process higher and higher quantities of data, but it has the unintended effect of the chips running hotter than they normally have. So, the cooling needs are actually increasing, even with newer generation chips. Further putting stress on the need for effective cooling systems and the most effective one for now is water. So that continues to be a challenge.

[00:56:48] Water Hub / Sussan Garcia: What is at stake here in regards to data center development and water in the West, and what are the opportunities?

[00:57:00] Pablo Ortiz (UCS): This explosion in demand is happening at the same time that we need to decarbonize the grid. Every gigawatt of new data center load in the energy grid that gets served by fossil fuel generation is a step backward. That's the uncomfortable reality in many regions. Data centers have been used as an excuse to keep coal plants open and build new gas plants. This infrastructure is built to last 15 to 25 years, maybe more, so whatever decisions are being made today are going to stay with us for a long time. And there's a vicious cycle: climate change is making heat waves more frequent and more severe, which will require more cooling, which requires more energy, which drives more climate change.

[00:58:21] Kirsten James (Ceres): From the private sector standpoint, companies are facing the potential for higher operating costs, disruptions, regulatory risk, and reputational damage. We are seeing communities revoke social license to operate for data centers. This risk is real, and it's playing out. There clearly is a lot at stake for many different stakeholders, and from a company vantage point, I think this just makes it all the more important that we understand and address the full range of water risks. But on a brighter note, there are a lot of opportunities to set the data center build-out on the right course. There's also a big opportunity to work together and contribute to watershed health, really helping restore and conserve water in high-stress basins. And this can be a bridge to making progress across industries as well. A lot of challenges, but definitely opportunities.

[01:00:05] Steven Renderos (MediaJustice): For the communities we organize in, communities of color, low-income communities who are actually on the front lines of the build-out of data centers, they're not communities that started this AI arms race, which is the impetus behind the accelerated build-out we're seeing. But they are the communities being asked to pay for it. To me, that's the core moral center of this debate.

The single greatest opportunity we have right now is time. The organized resistance that we've seen is working and helping to really slow down the pace of data center construction. Just in the past year, in 2025, you saw 26 projects stopped or delayed as a result of local organizing and local resistance, totaling well over $100 billion worth in data center projects. That pause is creating opportunities for communities to decide what it is that they want, what it is that they're willing to fight for. That slowing down isn't obstruction. It's communities really insisting and demanding that they have a place in shaping what happens to the future of their communities, to the future of their homes. I think that's worth fighting for. As my organizer friend in Memphis, KeShaun Pearson, likes to say: every single day, our side gets bigger. We are building more community power and more of a say in what happens in the backyards where these data centers are being built.

[01:02:11] Water Hub / Sussan Garcia: Thank you, Steven, Kirsten, and Pablo, for sharing your time and expertise with us. Thank you, everyone who attended. We will be sharing the recording and transcript soon, and if you have any questions, please feel free to reach out to us. Thank you so much, everyone. Have a good day, and we're happy to keep the conversation going.