Water is Gold: How Central Valley Communities are Still Fighting the Drought-- Podcast Transcript, 11/18/2020

El agua es oro: Como comunidades en el Valle Central aún estan luchando la sequía

Ahorita lo que estamos viviendo, es que antes pensaban que el oro valía mucho. No. El agua es oro ahorita- ahorita si no tienes agua no puedes producir lo que tienes.

--Tomás, residente de East Orosi y proponente por agua y justicia

California, es el estado de oro, es conocido por muchas cosas, entre ellas su estatus como proveedor de agricultura para la nación y el mundo. Pero, la habilidad de California para mantener la producción agrícola y apoyar a comunidades está limitada por el acceso al agua. Éste podcast examina cómo el acceso a aguas subterráneas está impactada, no sólo por la sequía y el cambio climático, pero tambien por la persistencia de condiciones que producen la sequía tales como la historia, decisiones humanas y el racismo institucional en el Valle Central.

Esta historia incluye co-productoras, la doctora Clare Gupta y Cristina Murillo Barrick; dos científicas sociales que son parte de un equipo de hidrólogas, ingenieras y economistats en la Universidad de California, Davis. Como parte de un projecto de investigación fundado por la Fundación Nacional de Ciencias (National Science Foundation), Clare y Cristina colaboraron con El Centro Comunitario por el Agua para hablar con residentes quienes no han tenido acceso a agua segura y economicamente accesible, recolectando sus experiencias. Ellas tomaron el tiempo para hablar con la gente quien vive y lucha con estos retos en el día a día para aprender sobre las historias, estrategias y triunfos asociadas con el acceso justo al agua. También hablaron con algunos de los investigadores más conocidos sobre estos temas.

Este podcast fue posible gracias a las colobracion del Centro Comunitario para el Agua y fondos de la Fundación Nacional de Ciencias, Coupled Human Natural Systems Grant.

Le queremos agradecer especialmente a todas las personas que colaboraron en este episodio. Historias de las comunidades fueron contribuidas por residentes y proponentes del acceso justo al agua: Lucy Hernandez, Melynda Metheney, Vergie Nuñez, Cristobal Chavez, Tomas García, Daniel Peñaloza and Susana de Anda. Investigadores include doctor Jonathan Herman, Mark Arax y Camille Pannu. Colaboradores y editores del podcast incluyen Ryan Jensen y Ildi Carlisle-Cummings. Editorial de audio hecho por Victoria Boston y música del podcast y de Cal Ag Roots por Nangdo.

Water is Gold:
How Central Valley Communities are Still Fighting the Drought

Ahorita lo que estamos viviendo, es que antes pensaban que el oro valía mucho. No. El agua es oro ahorita- ahorita si no tienes agua no puedes producir lo que tienes.

What we're learning right now is-- before we thought that gold was worth a lot. No. Water is gold now. If you don't have water you can't produce what you have.

--Tomas, resident of East Porterville and water justice advocate

California, the golden state, is known for many things, chief among them is its status as the breadbasket of the nation and the world. Yet, the ability to sustain agriculture and support the communities is limited by access to water. This podcast examines how access to groundwater is influenced by drought and climate change, but also, how the persistence of drought conditions can be tied to histories of human decision-making and structural racism within the Central Valley.

This story features guest co-producers Dr. Clare Gupta and Cristina Murillo-Barrick; two social scientists on a team of hydrologists, engineers and economists at UC Davis. As part of a larger National Science Foundation research project, Clare and Cristina partnered with the Community Water Center to collect bilingual narratives of impacted residents who don't have access to safe and affordable drinking water. They spent time talking with people who live and struggle with these issues every day to learn about experiences, strategies and triumphs related to water justice. They also spoke to leading researchers on California water issues.

This podcast was made possible thanks to ongoing collaboration with the Community Water Center/*El Centro Comunitario por el Agua* and funding from the National Science Foundation's Coupled Human Natural Systems Grant.

We would like to extend a special thanks to everyone who contributed. Community narratives feature several Central Valley residents and water justice advocates: Lucy Hernandez, Melynda Metheney, Vergie Nuñez, Cristobal Chavez, Tomas Garcia, Daniel Peñaloza and Susana de Anda. Researchers include Dr. Jonathan Herman, Mark Arax and Camille Pannu. Podcast editors and collaborators include Ryan Jensen and Ildi Carlisle-Cummings. Audio edits by Victoria Boston and podcast and Cal Ag Roots theme music by Nangdo.

Blurb edited by Clare 11/19/2020

Introduction to Podcast:

Ildi:

http://www.capradio.org/articles/2017/04/07/gov-brown-ends-drought-state-of-emergency-in-most-of-california/

Governor Brown has lifted the 2014 drought emergency order that led to unprecedented mandatory cuts for urban water users, but state legislators say that doesn't mean that water conservation is over […]

As you might remember in early April of 2017, Governor Jerry Brown, lifted emergency orders related to California's historic five-year drought. After an unusually wet year, reservoirs were brimming, the Sierra snowpack was bulging and the drought was declared officially over within the state. But what many people don't know is that for three counties in California the drought was not over then.

One of these counties was Tulare County, where thousands of residents *still* to this day, do not have water coming out of their taps, and for them the drought is definitely not over.

Yet, there is a lot of water in Tulare county; the county contains over a million acres of agricultural farmland and grows over 230 different food crops.

These two things -- the fact that all this water is being used to grow food and that thousands of people living in Tulare county don't have access to water to drink or bathe with-- might seem at odds. But community experiences of water shortage are actually directly linked to the water flows that feed our crops, and indirectly to all of us, as today's podcast will uncover.

I'm Ildi Carlisle-Cummins and this is the Cal Ag Roots podcast. Cal Ag Roots is unearthing stories about important moments in the history of California farming in order to shed some light on current issues in agriculture. You can listen to all of our stories at www.agroots.org.

Today, we are lucky enough to feature a couple of guest co-producers Dr. Clare Gupta and Cristina Murillo-Barrick; two social scientists on a team of hydrologists, engineers and economists at UC Davis. As part of a larger research study on the links between agriculture, water and community wellbeing, Clare and Cristina have been collecting narratives of impacted communities who don't have access to safe and affordable drinking water. In the past year, they've spent time talking with people who live and struggle with these issues every day. They've also spoken to some leading researchers on California water issues too. Today you will hear from Cristina about what they learned. Here she is to take it away...

PART 1

Hi, I'm Cristina.

So, before we dive into issues of water in California, you might still be asking yourself --why are we talking so much about water on a podcast series that's about agriculture? To explain this, I consulted a member of our research team, Dr. Jon Herman, a professor of civil and environmental engineering at UC Davis. He studies water resource management and climate change. As we sit in our office at UC Davis, I asked him what he thinks our listeners should know about water issues in California, this is what he said:

Jon: Probably the biggest thing is just to be aware of the fact, that without the state water infrastructure we could not have the cities and the agriculture that we have in California. Just be aware of all of the water transfers and conveyance that happens throughout the state to get water to you at home and have some appreciation for that [...] It's a built environment that we have learned to become very dependent on.

Jon understands that many of us, and I include myself here, go through life not thinking much about all the things that go into making it possible for water to flow through our taps.

But Jon's research has made him very aware of how access to water and the booming agriculture industry in California can't be taken for granted-- both are the direct result of human decision making and large-scale water infrastructure investment.

You might remember that California has a Mediterranean climate- which is to say, it doesn't rain for much of the year. This means that we humans have two potential sources of water during the driest months- *surface water*, that flows from the melting snows of the Sierra Nevada, or *groundwater*, pumped from subterranean aquifers.

In the last 100 years the sustainability of groundwater in the Central Valley has become threatened. As less surface water is allocated to farmers, they have resorted to pumping more and more groundwater to maintain and grow their businesses, and this has led to problems.

Jon: The issues that we see are draw-down of the water table which can lead to water quality concerns, it leads to wells going dry which we have seen in many communities in the Central Valley.

Jon tells us that it is only in 2020, after decades of what he titles "wild west" groundwater pumping that California has finally implemented legislation to regulate and manage groundwater. This is occurring with the introduction of SGMA, the Sustainable Groundwater Management Act. This piece of legislation mandates all California groundwater basins regulate their groundwater and implement plans to avoid critical overdraft. But for some counties, like Tulare, groundwater basins are already critically overdrafted.

In talking to Jon we learned that California's water infrastructure -- makes life as we know it possible. We also learned that accessing water -- surface water and groundwater, is often

possible because of the existing infrastructure and the presence or absence of water regulation. But what exactly is California's history when it comes to water infrastructure?

In order to answer this question we contacted investigative journalist and author, Mark Arax. His most recent book, *The Dreamt Land, Chasing Water and Dust Across California* focuses on histories of water management in California and the profound effects this has on *who* has had access to water and *what* that water is used for.

In making this podcast we took the time to read Mark's book, what we did learn is just how important California's built water landscape is in making agriculture in the Central Valley so successful today. Agriculture as we know it in California today just wouldn't be possible, if it weren't for the dams, aqueducts and reservoirs that allow us access to water in the dry months.

Here's one example: The California Aqueduct delivers 1.1 million acre feet of surface water to farmers in Kern county and 2 million acre-feet to faucets in Southern California. Even in wet years Kern county has pumped nearly half a million acre feet to grow its crops.

This example shows that the large-scale state investment in water infrastructure-- much of which, Mark details in his book began in the 1950s and lasted through the 1970s-- this accelerated agricultural development by moving water, a lot of water, that benefited farmers.

Mark's book can help us understand how many of the water issues that we see in the Central Valley today are not caused by purely environmental conditions, but are legacies of decades of human decision making. I pulled out an excerpt here, where he writes, "In California, drought isn't nature. Drought is man".

Past state-wide investments in water infrastructure have effectively allowed farmers to overcome environmental limitations and grow crops by moving water, or pumping water. But-- what about the communities that live in the Central Valley? How have they fared in light of past droughts and with impending threats of more extreme droughts that are predicted by climate scientists?

As you heard Ildi say at the beginning of the podcast, despite the official state-wide declaration that the drought was over in 2017, it persisted for three California counties located in the Southern Central Valley. But in many of these counties, there were deep disparities between who had access to water and who did not. Those with access to wealth and resources-- like large scale industrial farmers, for example, were able to continue producing by pumping from deeper aquifers; but what about every-day people? We decided we needed to investigate this further. So we got in our cars and drove to the Central Valley.

PART 2

In December of 2019, we headed to the Southern Central Valley; as we set out to talk to residents who experienced the day-to-day realities of living without safe water, we focused on an area called the Tulare Lake Basin. This is an area south of Fresno, and-- as its name indicates-- it used to be a lake. But in recent decades Tulare Lake's surface water has been drained and used to irrigate farmland, and as the lake dried up it has been converted to hundreds of acres of

farmland. These farms have increasingly pumped groundwater because the area has very little direct access to surface water. As a result, the area is actually sinking-- or, to use the scientific term, it is experiencing subsidence. The Tulare Lake Basin, in many ways illustrates some of the most dramatic and accelerated effects of groundwater pumping, drought and climate change.

The first person we meet with here is Lucy Hernandez. As we pull up to her house on a Monday morning she greets us with a warm smile and cushions in hand. We sit in her garden on the few dry chairs that remain after an unexpected morning rain shower. I ask her about water issues in her community,

Lucy: I was worried, I was worried for my kid's health, because I was afraid that they would just be drinking that water from the faucet, because when we would run out of water, they would want to drink from the faucet and I was afraid of them getting sick. Because I know that it's bad for you and a lot of people they don't know about nitrates,

Lucy discovered her tap water was contaminated-- nitrate contamination has been proven to have a variety of adverse health effects, effects that are especially dangerous for children. So she started buying bottled water-- this is what she used whenever she or her family needed to drink. It wasn't easy,

Lucy: Yes, everytime we cooked and every time we needed to drink water. Sometimes we had to tell our children not to be drinking a lot of water because that meant that we were going to be running out of water right away.

Lucy lives in a small community called West Goshen. It has about 130 homes. And it's a lot like many of the communities in this area. It's also unincorporated, something we will learn more about later in the podcast. When Lucy describes her community, she points out that a large percentage of the population is Latino and many work directly in agriculture.

Lucy: I know that most of the people here are low-income. And we need to make sure that we help our people, like, they shouldn't be paying twice for water. People had to make a choice between buying new shoes for their kids and buying bottled water and that shouldn't be a choice.

The demographic data indicates that-- compared to the rest of California-- almost all of the communities in this area are low-income, and they experience disproportionately high rates of environmental pollution-- in their water and their air. These communities also experience high rates of adverse health effects like asthma, cardiovascular disease and low birth weights. But of course, demographics aren't the whole story. Lucy's daughter-in-law, Melynda joins us in conversation from her house across the garden, she chimes in to explain a little bit more about what it means to live here,

Melynda: [...] I think one of the most important things to understand about communities like ours, rural communities and farming communities is that it's all families, interconnected. They own multiple properties and it'll be grandmother and then a son and daughter with their kids and it's like—exactly like in our case-- it's my mother-in-law and then my husband now and my children

and that speaks for most of our community members [...] We have animals, you can probably hear my roosters in the background, chickens and things like that,

Lucy and Melynda's homes are surrounded by fields of peaches and nectarines, grapes and corn. The smell of the nearby dairies wafts in and out of our car as we drive away. Our visit to their home makes it really apparent that in this area agriculture, water and community health are intimately connected.

But it is also apparent that many of the issues in the Central Valley are deeply influenced by questions of equity and access to water. I reflect on how, during the drought I was always able to open my tap -- but I am connected to a municipal water system. At the same time, large industrial farmers with access to resources were able to dig deeper wells and pump water to continue farming. Meanwhile, Lucy and Melynda were discovering their drinking water was contaminated, and then paying twice for it. What's even worse, is that when the drought finally did hit hard, their well actually collapsed. They went for days without water. Today their community is connected to their neighboring town of Visalia's water supply, but it took a water emergency to make this happen.

We went on to learn their challenges are not unique, but were faced by many people we spoke to for this podcast. And many of these folks agreed that environmental conditions and climate change have real and profound effects on their water availability. But, researchers and community members alike agreed that while climate change is not the sole *cause of* water issues in California, it does *exacerbate them*.

The amount of rainfall and snowmelt we get to feed our surface water supplies directly influences whether we experience droughts. But we also live in a state that has dramatically altered nearly every one of our natural waterways, and pumped and depleted groundwater supplies in entire basins. As we talked to more people it was becoming very clear that human forces-- political power, water management and regulation-- had a big role to play in determining *who* experiences drought.

And this explains why many residents we spoke to don't view water issues as strictly environmental, in fact, many view them as *water justice issues*.

Two towns over from Lucy, we spoke to Vergie. Vergie returned to her hometown of East Orosi seven years ago after living in the Bay Area. Vergie has ties to East Orosi going back five generations and she also has extensive family in the area. When coming back to her hometown, she remembers her cousins warning her to not drink the water.

Vergie: A lot of people take drinking water for granted, until you realize that you live in a town where you can't enjoy a cup of water, [...] it's heartbreaking in some ways. Because you just see how, how the deterioration, of just, the life of East Orosi is—it's not the same anymore. I remember growing up and running down the street and looking in people's yard, everybody's yard was grass and had flowers.

I know my grandparent's house had grass and flowers all the way around the whole property, just like a little paradise. And it's now you just come to this... you know? Contaminated water, it's just like the life out of—seems like the life just drained, left East Orosi [...] It just seems like, you know, we are just a little small town, and it's like, we are overlooked, not important enough because we aren't a big enough town, you know we aren't a city. We live in the rural areas… a bunch of minorities, you know…

As we talked to more people, we found this was not uncommon. Here is Susana de Anda, a community organizer and water justice activist. She tells us about how in her early days of door knocking she kept hearing stories-- over and over again-- of residents who were scared to drink their water. Susana explains to us that when you look at water issues in California, they don't affect everyone equally:

Susana: You know, in California, it's 2019 we still have over one million Californians exposed to toxic water on a daily basis. What that means is, we roughly have over 300 public water systems out of compliance in the state of California. The majority of those systems, it's low income communities, farm worker communities. And what that means is that we have hard working families having to pay some of the highest water rates, for water they can't drink. And they can't drink it because they have contaminants that are very detrimental to their health, such as nitrates, arsenic, 1,2,3-TCP, chromium 6.

As Susana continues she lays out why this is a water justice issue...

Susana: Listen, you know, all Californians need to have safe and affordable drinking water, but it's very clear and studies prove that if you're low income and a person of color, and you live in the Central Valley, or a farm worker community, you're going to have higher chances of having polluted water. And having to pay twice for water. For our water bill and on top of that you have to drive to get vetted water or bottled water.

These problems are made worse by the fact that many residents often don't even know their water is contaminated. Susana tells us that good information is not trickling in from Sacramento to these rural communities. Not only are residents unaware, but so are their representatives.

Cristobal, like many folks in these communities, speaks Spanish. For this podcast we decided to not translate interviews into English. We want to preserve the voices of the people who spoke to us and let them communicate their stories in their own words. We think even if you don't understand every single word, you will get a lot out of this story. And in case you do want a full English translations, we have included them in the podcast transcript-- which is available on our website. Now, back to Cristobal. Right now Cristobal is showing me around his farm.

He has a lot of really cute goats. A few cows, chickens and ducks and very noble looking steed.

Cristobal worked for many years as a truck driver, for decades he saved his money to finally retire and purchase this farm. After raising his biological children, he took on several foster kids, who he loves as his own. They all live here, surrounded by agricultural land-- there are melons and orchards growing next to his property and we can see a dairy, not too far off. I ask Cristobal what he likes about his community…

Cristobal: [...] Pues, lo bueno de la comunidad es que es muy tranquila. La mayoría de la gente se conoce y pues, se vive a gusto.

Cristobal: […] And the nice thing about the community is it's really calm. Most people know each other and well, it's a pleasant life.

He tells me that he enjoys the tranquility and the familiarity with his neighbors, it's a nice life. As we sit in the gazebo and watch the kids play with the dogs, it isn't hard to understand why. It all looks so pleasant; like a scene out of a rural postcard; but there is something that is not quite right. Cristobal explains, and it took him and his family years to figure it out…

Cristóbal: El mayor problema que tuvimos es que no nos dimos cuenta de lo contaminado que estaba el agua, y el agua lo consumimos por alrededor de doce años… Hasta que me pidieron que si hacía un test sobre mi agua. Se hacía una prueba al agua, y de ahí fue que nos dimos cuenta de que estaba muy contaminada.

Cristobal: The biggest problem that we had was that we didn't really realize how contaminated the water was. And the water we drank it for about 12 years, , until the Community Water Center asked if I would test my water. They did a water test and that's when we found out that our water was very contaminated.

Much like Lucy and Vergie, Cristobal learned his water is contaminated. But, perhaps because he lives on a more solitary tract of land, he was unaware for a long time. Cristobal and his family drank this water for about 12 years. When the drought hit, he invested about $20,000 to drill his well down deeper and make sure that he and his family had water. Soon thereafter, they tested his well and discovered his water has three to four times the amount of nitrates that would be allowed in a municipal water system; it also has bacteria.

Like Lucy, Cristobal's family stopped drinking the well water and started buying bottled water.

At this point in our research, we began to realize these stories seemed to have some common threads, so we began to do a bit of digging. Here is Susana again:

Susana: We have two sources of water-- for drinking water-- we have groundwater and we have surface water. Over 90% of the residents that live in the Central Valley rely on groundwater. In order to have access to surface water you have to have water rights, many of the local public water systems that we work with don't have that resource, they don't have the water rights to surface water. So they rely solely on groundwater.

Individual wells, and wells that serve a small number of homes-- are not connected to municipal water systems, the way you might be if you live in a city -- and this means that the water quality is not so easily monitored. Many people only learn that there are harmful pollutants in their water after being informed by their neighbors-- like in Lucy's case, or after being persuaded to test it-- like Cristobal was.

When groundwater is contaminated in the Central Valley, there are two leading contaminants: arsenic and nitrates.

And the arsenic contamination that we see in these wells doesn't come from human infrastructure, but from drilling deep into the ground, where these heavy metals are more abundant. And arsenic levels can increase with subsidence-- which you now know is occurring in these areas.

So, it's just like our researchers and community members said-- climate change has made the problem of water pollution worse.

And then there is the second contaminant we mentioned: nitrates. Here is Susana, again, she explains the connection between agriculture and water pollutants,

Susana: Well, our groundwater for decades has been polluted from a variety of industries, for example, nitrates are coming from three major sources in the Central Valley. One, from chemical fertilizer. You know California's known for producing and creating food for the world, well that's one, you know, we use a lot of chemical fertilizer. The second major contributor to nitrate pollution is coming from animal waste, manure. And the third one is leaky septic tanks.

Susana, explains that unlike the naturally-occurring arsenic, nitrate contamination is different,

Susana: You know, as it relates to nitrates, because it's man-made, a man-made problem, that means that we can fix it, and we need to stop and prevent further contamination of that source into our drinking water.

Unfortunately, many of these families have been living with contaminated water for decades, and most of them haven't gotten a lot of attention. Yet, living with these kinds of pollutants can lead to very serious problems. Cristobal tells me that one of his children, now 18 years-old, has had several different health problems. He can't prove that the fainting spells and episodes that sent her to the emergency room over the years are directly related to the water, but he believes they have something to do with it.

Living in these conditions is a real challenge for Cristobal, he tells us a bit about what daily life is like:

Cristobal: Y además de eso en el 2014 la noria, el pozo, se secó. Y tuvimos como seis meses acarreando. Como por seis meses nos bañábamos con una jícara, pues con un plato [...] para bañarnos, lavar trastes, osea que no teníamos en el sistema. No había agua.

Cristobal: And besides that, in 2014 the pump of the well, it dried out and we had six months where we were bringing in, carrying the water for six months you know with like different containers [...] for bathing, for washing our dishes. I mean, we didn't have a system. There was no water.

Cristobal is telling me that in 2014 his well completely dried out and for six months he had to haul water-- not just water for drinking, but for doing dishes, for showering, and anything else water is used for. Living with these water problems has been traumatic; he is uncertain about the future, he worries about the health of his children and his ability to overcome.

And Cristobal wasn't the only one who was so severely affected-- we began to realize this was an especially daunting problem for residents that live in unincorporated areas. For, living in unincorporated communities often means that there aren't city resources available to regulate or fix water problems-- when water is unsafe or unavailable there isn't a municipal water system to tap into. This means that when times are already hard-- when there are less jobs in agriculture due to a drought, residents are burdened with water troubles.

Here is Tomas Garcia, he lives in one of the communities that was most hard-hit by the drought: East Porterville. Tomas also predominantly speaks Spanish,

Tomas: Si, cargaba yo agua, cargaba seis galones de cincuenta y cinco, en mi van. Una vez me encontró un noticiero de aquí de Fresno, llenando los tambos de agua, y me pregunto- le puedo tomar una foto? Le digo, si. ¿Qué está haciendo? Llevando agua para mi familia. En el van? En el van.

Tomas: I carried the water. I carried six fifty-five gallon containers, in my van. And a reporter, from around here in Fresno saw me and asked if he could take my picture. I said sure. What are you doing? [the reporter asked] Getting water for my family. In the van? Yeah, in the van.

Like Cristobal, Tomas' taps completely dried up during the drought. For over six months he had to fill large containers with water and transport them in his van, to ensure his family could drink. The drought led to what many of our interviewees described as "third world" conditions, some of them described having to bathe out of buckets. It was a struggle.

And these conditions led some residents to mobilize. Tomas tells me about how he started organizing in 2015-- for three years his family and his community of about 1,300 families didn't have water.

Tomas: Lo que nos pasó en el Este de Porterville, en 2015 fue cuando nos quedamos, la mayoría de nuestra comunidad, sin agua, los primeros tres años de ahí fueron muy difíciles, tanto como para mí, como para el resto de la comunidad.

Tomas: We have to kind of deal with it and suffer through it, like what happened in East Porterville in 2015 when most of our community didn't have water. The first three years that we were there it was quite difficult, not just for myself, but also for the rest of the community.

When I ask Tomas to describe his community he says…

Tomas: [...] la comunidad donde yo vivo, es una comunidad donde vivimos, la mayoría de Latinos casi la mayoría de la comunidad trabaja en el campo, el campo agrícola. Muchos de mis amigos, familias, que viven alrededor, trabajan la agricultura, como la pisca de naranja, uva, todo lo que se da aquí en el valle… con el trabajo que hay, sin el agua, yo pienso que, no tienen trabajo, la gente.

Tomas: The community where I live is a community where most of us are Latinos and the majority of the people there work in the fields, in the field of agriculture. Many of my friends, families, that live around here, they work in agriculture, you know, like in picking oranges, grapes, all of the

things that are found in the valley… with the work that there is, without water, I think that there is no work for people.

Most folks in Tomas' community are Latinos, and the majority of people work in the fields, in agriculture, they work with oranges and grapes, as well as a variety of other crops like pistachios. But when the drought hit, that was hard, because, without water, he says, people didn't have much work, and this went on for three years.

Tomas: Pues, en realidad la agricultura pues, usa mucho [agua]- ahorita lo que estamos viviendo, es que antes pensaban que el oro valía mucho. No. El agua es oro ahorita- ahorita si no tienes agua no puedes producir lo que tienes.

Tomas: Well in reality agriculture-- it uses a lot [of water]. What we're learning right now is-- before we thought that gold was worth a lot. No. Water is gold now. If you don't have water you can't produce what you have.

Water is worth gold, Tomas says. Within many communities in the Central Valley the flow of water has direct influence on their income and their ability to meet their basic needs. The recent drought compounded challenges that had existed before it and threatened both economic and health conditions. And Tomas tells me that these aren't the only needs they have in his community-- they need streetlights, they need sidewalks and other basic infrastructure that can be found in the nearby city of Porterville. But asking for help doesn't come easy for members of his community, Tomas explains:

Tomas: Aunque muchos, no queremos hablar de los problemas. Porque después… la comunidad Latina es muy, muy difícil para hablarle de sus problemas aunque las tenga uno. Nos guardamos, decimos que estamos bien...

Tomas: Many of us, we don't want to talk about our problems because, you know, the Latino community, it's difficult to talk about problems, even though we might have them. We keep them to ourselves, we say that we are fine...

For Tomas, lack of access to water was such a pressing issue, that he overcame his tendency to not ask for help; he got connected with local organizers. He tells me he felt like he had nothing to lose. Many of his own community members told him his efforts wouldn't pay off-- no one cared about them-- but Tomas joined forces with a handful of others and went to the city of Porterville to ask for help.

Their response was not encouraging. The city responded that they would help supply water *but* only for six months. After six months, Tomas was told, there was no more help on the local level, they had to find their own solution. Tomas explains to me that the reaction he got was both sad and hurtful…

Tomas: Pero como nosotros vivimos en el este de Porterville, no nos pertenecía a nosotros ir a la ciudad, teníamos que ir al condado. Fue algo triste y doloroso para todos porque nos, pues, nos ayudaron pero solo por unos dos o tres meses a lo más.

Tomas: But we live in East Porterville. We don't live in Porterville and they told us that we didn't belong to the city. So it was really sad and really hurtful for all of us, because they helped us, but they only helped us for two or three months, at the most.

The city of Porterville's response was that *East Porterville*—where Tomas lives-- doesn't belong to the city. And this is true. Tomas' community is officially outside of city boundaries despite being only a few miles away. It is an "unincorporated area", which means it is under the jurisdiction of the county and not the nearby city.

PART 3

It seems that these unincorporated community designations have some very profound effects on lack of access to water in the Central Valley. So we decided to talk to Clinical Professor of Law and water justice advocate, Camille Pannu. Camille explains that unincorporated designations are common within the Central Valley of California, in many ways they are legacies of structural racism-- communities that are predominantly composed of low-income people of color, are left out of city boundaries.

In practical terms this means that unincorporated communities are the responsibility of the county—which has less funding and fewer representatives. These communities also don't have many things we might take for granted in cities- things like clean water, waste management systems, even bus stops, sidewalks and streetlights.

For Tomas this meant that East Porterville does not have access to a municipal water system.
We spoke to a resident of the city of Porterville, his name is Daniel Peñaloza; he tells us about how shocked he was to discover that his neighbors didn't have access to water,

Daniel: And so they actually went through a run-through of how they experienced their daily life. And for me it was like—it was shocking because I couldn't believe that two blocks away from where I live, we had community residents that were having to live their life like they were living in a third world country. Or it was—I could not imagine that this was America, right? And they took their Honda Civic and we put a huge barrel and they went to the fire station, the county fire station, to fill it up and then they brought it up, back into their car and they were just describing this whole process. And I was like, "What?"

Daniel tells me that he thinks people didn't realize how bad things could get. East Porterville was a worst-case scenario during the drought. Hundreds of families did not have access to water for years. At the time, Daniel was doing advocacy work with undocumented community members. Undocummented people are a population that is both disproportionately vulnerable to be exposed to contaminated water and often limited in their political engagement due to their status, which often leads to fear of exposure or fear of legal action that could separate them from their families. Daniel believes that many of these issues are interconnected and rooted in histories of oppression.

Daniel: There's a whole power structure in the Central Valley that has existed for over a hundred years that have got us to where we're at. So it's not something—like I think the more we study about this issue, the more we find out —why we're here today. Right?

Because there's a history of why we got here today and there's a history of where water has been going for many years and decades. And why our communities have been neglected—for many years they were neglected here in East Porterville, but they're just one of many communities that have been neglected when it comes to water.

Like Camille, Daniel sees water access issues as tied to deeper legacies of structural racism in the Central Valley. The reality is that in times of drought municipal water systems ensure that city residents had access to safe and affordable drinking water, but communities of color, undocumented people and lower-income communities that were just outside of cities were systemically denied access to water.

Here is Daniel again,

Daniel: You have communities that suffer from lack of water, access to clean and affordable water, from the immigration status, they already have—they are barely making enough money to survive.

Seeing the confluence of all of these issues makes it more clear to see why these residents characterize these accessibility challenges as water justice issues. And, it is important to note, many of them have taken direct action to address these issues.

And, many of them have done so by partnering with a very important player for water advocacy within the region: the Community Water Center.

Remember Tomas? When we left off in his story he was struggling to get access to water in his community. When Tomas went to the city of Porterville to ask for help, he was not alone, at that point he had already gotten connected to the Community Water Center. And when he received such sparse aid on the local level they went big—they decided to go straight to Sacramento.

Tomas: Gracias a la presión que se hizo, también de los miembros de las non-profits que nos ayudaron, y toda la prensa que estuvo presente y ha estado presente hasta ahora. Para mi es como un sueño hecho realidad, porque nunca pensé que tendría agua en mi casa, especialmente en un corto plazo de tres años, a pesar de que hay comunidades que tienen de diez a veinte años luchando por el mismo problema.

Tomas: Well thanks to applying pressure- by members of the nonprofits that helped us and all the press that was present and is still present today. For me it's like a dream that came true, especially to be able to have water in my household after a short period of three years, even though there are communities that have been struggling with this same problem for ten to twenty years. For now we have resolved this problem because the state gave the money to the city, for them to help us and they began to connect themselves to us.

Tomas tells me that he made several trips to Sacramento, where he and his fellow residents spoke to state representatives about the issues they were facing. They also spoke to international and local reporters. And their story gained traction on Facebook and other sources of social media. This was a multi-faceted effort, he tells me. But there were several components that played a major role in the success:

Tomas: Cuando van los miembros de la comunidad a expresarse los que están pasando, ellos miran que si hay necesidades. Pero como comunidad tiene que ir uno para expresarse, porque localmente no se hace nada, menos que vaya uno en grupo y gracias a que las non-profit organizations que nos estaban ayudando

Tomas: When community members go to express themselves, what they are going through, they see that there is a need. But as a community you have to go express yourself, because locally nothing gets done, unless you go as a group and thanks to the nonprofit organizations that were helping us.

He tells me that the Community Water Center played a major role in helping him get educated on the issues, connecting community members to each other and helping them voice their concerns to State representatives when their concerns were not addressed locally. Tomas believes that following these steps will allow other communities to effect change.

In Tomas' case there were already waterlines crossing East Porterville that could be used to connect them to Porterville, but trying to get East Porterville connected to these was met with initial resistance. But by directly speaking with representatives of the state they began to negotiate and offer funding to connect the two communities. And after three years of struggle Tomas' family and hundreds of others finally got access to safe and affordable drinking water. He tells me that to him it is a dream come true, in addition, Tomas tells me that while the success of East Porterville has laid out a template for other communities, the battle is far from over:

Tomas: Hay cambios y va ver cambios para todas las comunidades que necesiten ayuda también. Pero, como les digo, tienen que estar unidos, tienen que hacer el sacrificio de ir, con sus representantes, y dar a saber su problema. Para que haya movimiento, pa' que ellos no, nomas piensen que se terminó el día y se acabó el día de mañana. No, no nos olvidamos, agradecemos que nos ayuden, y pues, que tengan conciencia que no, no mas es una familia, son varios.

Tomas: There can be changes for the long term for all the communities that need the help, but as I said they have to be united, they have to make the sacrifice of going, to their representatives and let them know what the problem is. So that there will be some movement. So that they don't think that, well we got through today, and it's over tomorrow. No, no, we can't forget, we are grateful that they help us, and well, they need to be mindful that it's not just one family, it's many.

After acquiring water in his community, Tomas remains connected to the Community Water Center and although he tells me he wouldn't want even his worst enemy to go through what he did, he is very glad to have spoken up and learned how to effect change.

Daniel also decided to take on a more active role in his community. After getting fired up about water access issues, Daniel joined the Community Water Center staff:

Daniel: *Part of my reason, why I joined CWC, was-- organizing is a beautiful thing, and it could build powerful movements and regional movements. But you also need the voices of the community to be in positions of power to be able to reflect the policy making that is happening at the local level, all the way to the state level—how do we build a pipeline of leaders that reflect the communities, that are being impacted by these issues?*

Daniel has also become just such a leader—Daniel ran for and won a position as a City Council Member in Porterville where he is continuing to advocate for communities. You remember Lucy? She ran for and was elected, as a local Water Board Member and now West Goshen has safe water flowing in their taps.

As for Vergie-- when we met her she was preparing to be sworn in to her role as a Water Board Member for her little town of East Orosi. Her family members say she has always had a strong voice and she plans on using it.

While organizing from the bottom up can be very effective, Daniel very aptly points out this work needs to also come from the top-down, here he is again,

Daniel: I know that there is more that will be needed to get to where I feel we need to be at for our communities to not be suffering from a lack of access to water. The state needs to definitely continue to build stronger relationships with these communities through their agencies that they have to provide resources to the community.

When it comes to building up local leadership, and implementing state-wide change, the CWC has played a pivotal role. This is probably a good place to tell you that Susana de Anda, that voice you have been hearing through the podcast, is not only a water activist, but she is also the Executive Director of the Community Water Center and an absolute powerhouse in the water justice world:

Susana: In 2019, we finally passed, after a decade of work, the Safe and Affordable Drinking Water Fund. Very significant, huge movement towards the right direction to implement the human rights to water in California.

Because it's going to provide 1.4 billion dollars for the next 10 years for these public water systems that have been out of compliance,

Susana has been pushing for this legislation for over a decade, and she is careful to remind us that this struggle is one that stemmed from leadership and courage of many that came before her. She reminds us that many of the folks who spent their entire lives fighting for their community's right to water; sadly did not live to see the day. But their efforts have yielded very important victories,

Susana: We believe that all Californians should have safe and affordable drinking water as a basic human right and it should not be a privilege [...] Every year we've managed to provide and pass significant policies and build bottom up power... and one I can tell you, that in 2012 we are able

to pass the human right to water in California, AB 685 and it's this law that was passed that basically sets the framework that the state of California has recognized that water needs to be provided for all basic necessities, for sanitation and for drinking water as a basic human right.

While the passage of this bill isn't the end of the battle, it is a major step in the right direction. When I asked scholar Camille Pannu about it she stated that it was undeniable, it represented a significant shift in water policy.

2019 was a good year for water justice-- the passage of the Safe and Affordable Drinking Water Fund now allocates millions of dollars to improve access to drinking water in the areas that need it most. Camille shared with me that these pieces of legislation represent important policy shifts that encourage state agencies to lead and innovate around water access. Additionally regulations, like the Sustainable GroundWater Management Act provide necessary regulation to avoid overdraft.

Throughout our reporting for this podcast, we heard stories from individuals who were faced with significant water challenges; and who didn't initially see themselves as activists or even as particularly outspoken. But today they are all involved residents who share information, mobilize and take policy actions on water issues. And this kind of mobilization is tremendously important, here is Susana again:

Susana: People at the forefront of the impact, need to be at the forefront of change; if that's not happening, then we're going to have a flawed approach and a flawed solution.

But what about those of us that aren't directly affected by these issues? Do we have a role to play too? Susana thinks we do:

Susana: You know, there's a call to action for all residents of the state to ensure that—let's solve this issue. And allow these residents who've been mobilized for decades to be able to live with safe drinking water in their home and not have to wait another decade or have other generations condemned to living in this crisis of not being able to drink your tap water at home and go to school and can't drink it there.

We have to stop condemning future generations to that. And it's going to take a collective of recognizing that as a human right, all humans deserve to have safe and affordable drinking water. It's also recognizing that those folks that don't have access to that in the state are hard working families that are part of the fabric of-- in this case, the agricultural community-- or part of that fabric of life and the economy. And we have to just remember that at the end of the day we have to prioritize those that don't have safe drinking water at the forefront of that.

Everyone, all humans, need water to survive. It made us wonder if this may be one issue around which people can unite. Back in West Goshen, Lucy and Melynda don't agree with the political beliefs of some of their closest neighbors, but when we ask about water issues, Melynda replies:

Melynda: It doesn't matter what political lines you fall on, what religious lines you fall on—any of that all—at the end of the day, we all have the same problem.

But nevertheless, implementing the kind of structural changes that are necessary, won't be easy. And it will require that we think about unincorporated communities and small scale water systems, and individual water users like Cristobal, to get the water they need isn't going to be easy. And it will require those of us who aren't directly affected by the issues to reflect on the role we play in benefiting from or sharing the flow of water and political power. Here is Daniel again,

Daniel: —it may be hard for us to —think outside of our own lives, sometimes, but it's really important. We need to think beyond because our world is ours. And part of being human is that it's going beyond just being an American citizen, it's going beyond being a Mexican citizen, it's really thinking about the relationship that water has to every human being...

The world is ours, and it is a world that is full of very real and sometimes daunting challenges. Californians are most likely facing more frequent and extreme droughts as the effects of climate change increase. As this happens, will we ensure water infrastructure and regulations are in place to grant justice? And who will be prioritized in accessing water--

The tricky part here is that while everyone needs water for immediate survival-- water to drink, to cook and do our daily domestic tasks. We also need water to grow food and provide Californians with jobs. This podcast focused on impacted communities and the actions they have taken to remain resilient in the face of these challenges. But we are fairly sure that the issues would be framed very differently if we talked to farmers, or water managers. But that's a story for a whole other podcast.

Water issues are complicated. But we hope that what is clear, is that drought, at least as far as the Tulare Lake Basin, is concerned, is not purely environmental. Our collective decision making, even if it is over decades and at a state-wide level-- has profound effects on who has access to water and what that water is used for.

And if Californians have the power to move millions of acre feet of water, to reshape landscapes and be the breadbasket of the country and the world at large, do we not have a responsibility to make sure that all Californians have their basic water needs met? I suppose many of our interviewees would argue that the answer is up to us.

Ildi:

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