

















Dear Shareholders,

On Friday, we closed the third quarter with the filing of our Form 10-Q. California remains mired in a drought and continues to face water supply uncertainty. In October, as the new water year began, we recognized the end of the driest year for California in over a Century (some have pegged it as among the three driest years since 800 AD), and projections for the Colorado River remain dire. This week, the Metropolitan Water District of Southern California declared a regional drought emergency and urged its members to conserve their available water supply, an announcement that comes on the heels of a shortage declaration on the Colorado River by the federal government and Governor Newsom's expansion of the drought emergency to all of California. The pressure on California's water system couldn't be clearer and the impacts will be felt most by disadvantaged communities with limited opportunities for supply diversification.

During the third quarter, our management team remained focused on purposeful investment in our assets to ensure they stand ready to meet California's needs. We moved ahead with efforts to convert the Northern Pipeline asset for water conveyance between communities in need. Technical study and engineering work has validated our earlier expectations that the Northern Pipeline could convey approximately 25,000 acre-feet (enough water for up to 200,000 people) in either direction for storage or as a vehicle to trade and swap water between communities. Any use of the pipeline would complete permitting once a source of supply and beneficiaries are identified.

There is a growing discussion around the repurposing of retiring pipeline assets for water conveyance and other longitudinal resources, such as broadband and hydrogen conveyance to disconnected communities. With the passage and signing of the Infrastructure Investment & Jobs Act this month, we recognize the federal government's prioritization of ensuring all communities have equal access to needed infrastructure. We also see continued commentary advocating for the re-use of retiring oil/gas assets. Last month, Bill Maher's popular show Real Time ran a particularly fortuitous segment supporting the use of existing oil/gas pipelines for water conveyance.

As we look ahead to the end of 2021 and beginning of 2022, we believe storage, especially groundwater storage, will be a high priority for California as an important tool to prepare for future drought and climate change uncertainty. Cadiz continues to be one of the only Southern California aquifer storage opportunities that maintains a surplus condition and that can offer multiple access points. A recent article in Forbes estimated the value of a Kern County, California groundwater storage facility similarly sized to Cadiz at \$375M - \$3B. As of this writing, California has \$2.7B of funds set aside for storage that remains unspent and the \$1.2T federal infrastructure package promises funding for needed infrastructure — including groundwater storage. Consequently, we believe it is time to raise the profile of our aquifer storage asset in the context of the current identified need in both California and the lower Colorado River basin for off-stream storage. This concept was previously reviewed in our Programmatic Environmental Impact Report, certified in 2012 and judicially validated in 2016.



We also remain committed to the sustainable development of the Cadiz Ranch and have readied 1,000 acres for winter planting. We were pleased to partner over the summer with a green organic waste company that has contributed to soil enhancements and improving yields for all of our crops. In 2022, we expect to have a variety of produce, legumes and grains growing at the Ranch.

Finally, I wanted to take a moment to reflect upon the tumultuous stock market conditions we experienced this past quarter. I recognize that many of you are frustrated and continue to search for explanation. We do not believe the activity was tied to a specific business event and are committed to ensuring we can turn the page and realize our mission of developing solutions to California's continued resource challenges.

Please find summaries of our activities in the pages of this quarter's newsletter. If you have any questions or would like to set up a time for an update on operations, please do not hesitate to reach out. Thank you for your continuing support and warm wishes for a successful close to 2021.



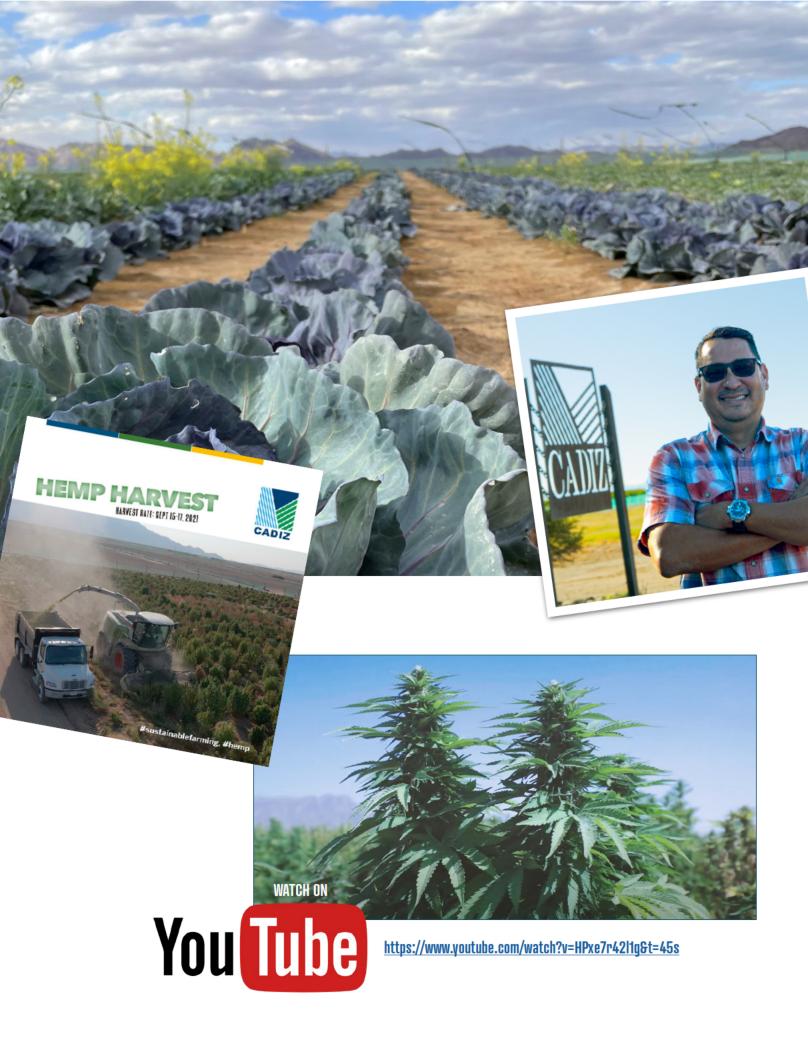




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AUTUMN HARVEST

AGRICULTURAL UPDATE

FALL 2021

Autumn is a special time of year at the Cadiz Ranch, when our crops are harvested after the year's hard work.

This Autumn, our Ranch team harvested approximately 300,000 lbs. of hemp biomass and hemp flower as part of our SoCal Hemp joint venture with Glass House Brands. The harvest occurred throughout September and included a combination of hand cutting and machine harvesting operations. We saw significant improvements in our hemp farming technique and planting this year with total production on 50 acres approximating the hemp crop grown last year on over 200 acres of the farm. [To view a video of the hemp harvesting process, please visit cadizinc.com/socalhempharvest.]

Cadiz-grown hemp is suitable for a variety of hemp and hemp-derived products as well as hemp-derived cannabinoid products. While unfavorable market conditions for the sale of hemp biomass and CBD limited opportunities for our crop in 2021, we're hopeful California's recent adoption of a new law legalizing CBD as an additive in dozens of grocery and pharmacy products may improve demand for our hemp next year.

This autumn season a variety of partners including Limoneira Company and LA Salad have also harvested an abundance of produce at the Ranch. Limoneira harvested its lemon varieties throughout the early fall for international and domestic markets. LA Salad has increased its produce varieties at the Ranch, now growing butternut squash in commercial quantities while also trialing several vegetables including sweet potato, beans, cauliflower, and broccoli.

Extensive land preparation was successfully executed by our Ranch team throughout the year to continue growing our farmable acreage. We readied another 950 acres for service at the Ranch, bringing our total leased and farmed acreage to more than 3,200 acres.

Nearly 10,000 tons of compost was supplied for the land by American Organics, a family-owned and operated Victorville, California company specializing in the use of local organic material to create beneficial soil amendments for area growers.

As we enter the winter months, we will remain busy planting a new legume crop on approximately 800 acres. This crop will be ready for harvest throughout the spring and summer.

We also continue to actively build out our wellfield for the support of our crops and the Water Project with better than projected success. Three new wells were integrated into our irrigation system this year, and while current farming operations demand approximately 5,000 acre-feet per year for irrigation, our wellfield's total capacity is now 25,000 acre-feet per year.

We remain ever grateful, especially at harvest time, for all the dedicated hands that keep Cadiz growing and look forward to a successful winter season.

NORTHERN PIPELINE

FREQUENTLY ASKED QUESTIONS

WHAT IS IT?

In 2021, Cadiz completed the purchase of a retiring oil and gas pipeline that we had held under option from El Paso Natural Gas (EPNG) since 2011. The pipeline was a segment of EPNG's 1,200-mile Line 1900 gas pipeline extending from Texas across four states and the Cadiz Ranch, terminating in California near Bakersfield. The segment we acquired extends east-west for 220-miles across San Bernardino and Kern Counties, as well as the California State Water Project, Los Angeles Aqueduct, Mojave River Pipeline and several underserved and disadvantaged communities. The conversion of the pipeline to water conveyance creates new opportunities to connect these communities to California's primary water delivery infrastructure.

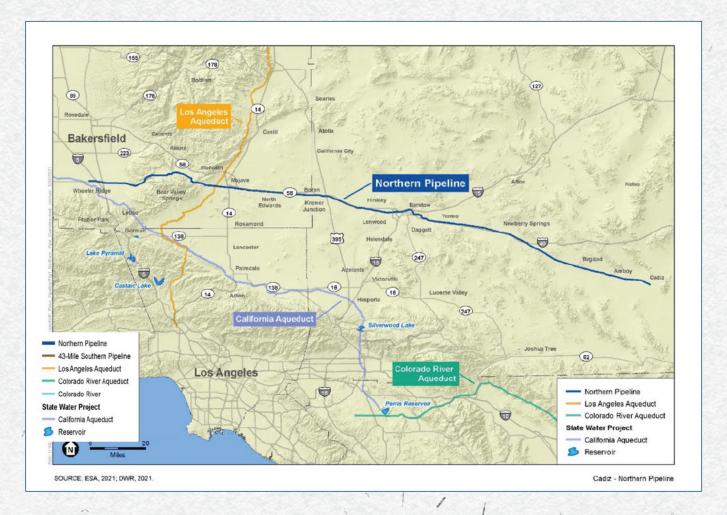
Feasibility studies have demonstrated that the 30" steel pipeline could convey approximately 25,000 AF per year (enough water for 200,000 people) between communities along the route, including a variety of rural, military and agricultural communities directly serviceable from the pipeline. The pipeline is intended to be used to complement existing water conveyance infrastructure in California in an effort to help ameliorate the structural water supply and storage shortages facing the state.

WHY DID CADIZ PURSUE AN OIL/GAS PIPELINE FOR WATER CONVEYANCE?

America's oil and gas pipeline network is extensive. When oil/gas conveyance infrastructure retires, there is an opportunity to repurpose these lines for water or other needed utility conveyance, such as hydrogen or broadband. With the country moving toward renewable energy to address climate change, the extra capacity needed is available in the U.S.'s oil-gas pipeline system.

California's conveyance infrastructure has not been significantly updated in decades and does not equally serve or reach all California communities. There are more than 1 million Californians who lack reliable access to safe, clean water. California's frequent droughts and water shortage unfairly burdens disadvantaged and rural communities, as people with the fewest options receive less water during these times but typically at higher costs. Most of these Californians live in communities not accessible to the State's traditional mainline conveyance infrastructure. Additionally, Southern California presently relies heavily on water delivered via the State Water Project and Colorado River Aqueduct, yet neither are delivering at capacity. As those systems are challenged, there are few options for conveying water between the two.





Testing and feasibility analysis have confirmed the pipeline's capacity to be repurposed to convey approximately 25,000 acre-feet in either direction.



FREQUENTLY ASKED QUESTIONS - CONT'D

WHAT CONDITION IS THE PIPELINE IN? WHAT IS REQUIRED TO CONVERT A PIPELINE LIKE THIS?

The pipeline began its retirement process by EPNG in 2005 and was subsequently cleaned and filled with a nitrogen gas blanket and sustained cathodic protection. Prior to moving water for municipal, agricultural uses, the pipeline would be further cleaned and will also require variety of air relief and other valves along the route. Once interested parties are identified there may be additional appurtenances required on the pipeline depending on the use.

WHAT ARE POTENTIAL USES OF THE PIPELINE? WHAT TYPE OF PARTIES CAN PUT IT TO USE?

The pipeline is engineered for oil and gas distribution, but it has been authorized to convey water and water has been conveyed in the pipeline for cleaning, and other uses, in various segments and across the entire route.

Cadiz plans to ready the 220-mile line for water conveyance in both directions. The pipeline crosses California's main North-South conveyance infrastructure, and several water agencies, agricultural districts, cities, farming, ranching and groundwater basins that may benefit from swaps, trading, and storage. There are more than 20 state designated disadvantaged communities serviceable by the pipeline. In such a scenario, Cadiz would be the operator of the pipeline and wheel water for other parties.

Cadiz has also evaluated the pipeline as a potential conveyance facility to enable imported aquifer storage in the Cadiz groundwater basin.

This opportunity was evaluated at a programmatic level in the Cadiz Water Project EIR, but any use for such a purpose would be subject to additional review once a storing party were identified.



WHAT'S NEXT?

In December 2020, Cadiz secured from the federal government rights-of-way to operate the pipeline and began engineering, design, testing, and cost analysis necessary to convert the entire pipeline to water conveyance. Testing and feasibility analysis have confirmed the pipeline's capacity to be repurposed to convey approximately 25,000 acre-feet in either direction.

In March 2021, environmental NGOs opposed to increasing California's water conveyance system, filed lawsuits in federal court to challenge the federal rights-of-way Cadiz. The federal government is considering filing a motion for remand with the Court, which could lead to additional environmental review of the use of the pipeline for water conveyance. Several community interests and organizations have already expressed support for the pipeline conversion project and urged the government to defend the permits in Court. There will be a hearing on the motion in March 2022.

We are actively marketing the pipeline to any parties that may benefit from this additional infrastructure. If you are interested in more information about the Northern Pipeline, please contact cdegener@cadizinc.com

The conversion of the pipeline to water conveyance creates new opportunities to connect these communities to California's primary water delivery infrastructure.





SIRIUS XM.



CADIZ CEO SCOTT SLATER ON SIRIUS XM'S WHARTON BUSINESS RADIO

On October 6, 2021, Cadiz Inc. CEO Scott Slater was interviewed on Sirius XM Channel 132's Wharton Business Radio program by host Dan Loney. The interview focused on California's ongoing water challenge and solutions being contemplated to innovate and address these issues. Scott was invited to discuss Cadiz's water solutions and plans to repurpose oil and gas lines for water conveyance. Transcript here:

LONEY:

California has been in a drought for the better part of the last decade but it's not only California dealing with the drought many other parts of the West as well as other parts of the country are having to figure out ways to deal with drought. So, what can be done to help ease the pain that some of these areas are feeling. Scott Slater is the CEO of Cadiz, a natural resources company which is working in California to do what they can to try and ease some of these issues. Scott, welcome to the show, thanks for a few moments.

SLATER:

Thank you. Good to be here.

LONEY:

Let's start with where the drought in California is right now in terms of severity.

SLATER:

The drought in California, is really representative I think of a new baseline or a new paradigm. This is the driest year in the last 100 in portions of the state. And in terms of its severity, there's no water in Lake Folsom very little water in our massive Lake Oroville, and the Colorado River and Lake Mead are crashing so I don't think we've experienced the breadth and depth of this kind of drought in a very, very long time.

LONEY:

So the work that you're trying to do there in California, what is it based around?

SLATER:

Well, if you look at, Really, that the condition of the drought, as I alluded to, it's really a form of a new baseline. This generated by changes in our precipitation pattern. If you think about it, with California and, and, in particular the northern part of the state, would have a wet or average year seven out of nine, or ten years and we'd have two or three years of drought. That has actually inverted itself, and so we're now seeing sort of a flood or incredibly dry paradigm where you are always operating at extremes. And so we are seeing two out of a nine year period being super wet, floods, and the balance of the cycle being dry. So while total precipitation may not have changed, how, where and when the precipitation falls to the Earth has changed, and as a consequence, we need to better be able to address those super wet periods, conserve and save what we can get, and then be able to normalize conditions through the combination of storage and conveyance. Specifically, what we're working on at Cadiz is trying to put a large groundwater aquifer, which has immense capacity to store water in wet years. into service and connect that storage unit to the marketplace through conveyance facilities. We've been intrigued by something that's getting a lot of press now, which is the concept of refurbishing repurposing, natural gas and petroleum pipelines to be able to bring that water from where it is to where it's needed.



LONEY:

Yeah, when I read that I was intrigued by it, what would be really the process to be able to retrofit or repurpose as you say, all of these old pipelines to be able to use them for the purpose of transporting water.

SLATER::

We have to sort of understand the basket of opportunity. There's about 1.6 million miles of natural gas pipelines alone, aside from the petroleum lines, in the United States. About 300,000 miles of that is characterized as transmission lines. That number hasn't really changed since 1990. So what that tells you is that those lines are getting a little long in the tooth and need some care. There is an overarching regulatory element which is: replace and update for safety reasons that are unique really to petroleum products running through the lines. And there is a regulatory overlay that's associated with the economics of that, that useful life of a pipeline and then and then taking it out of service and replacing it. So of those 300,000 miles of natural gas pipeline, those are all steel and the process to put those into service is really a simple cleaning process that that doesn't generally require any form of lining it's just cleaning it, running water through the line, disposing of the water safely, and changing some of the miniscule elements of relief valves. Also recognizing that you're not going to be able to apply the same type of pressures for water that you can for natural gas and also recognizing that natural gas can be pushed in highly pressurized and more accelerated volumes. The key thing is waters a lot heavier than natural gas and so while we're not talking about these feasibly moving water from the Mississippi River to California you can see over a couple 100 miles were water on a steel pipe that's been built to convey either natural gas or petroleum products is able to convey water.

LONEY:

It's certainly a heavier component but obviously a less potentially destructive component as well. When you're talking about having a natural gas leak or an explosion of some kind. So the element of bringing this forward I think is interesting when you talk about, as you said, the areas to which you can potentially bring this with all of these pipelines that are out there and not being used. I know you've also talked about the issue of equitable distribution as a component here.

SLATER:

Yeah, I think we all recognize that there's an important demand that's not being met in all places and not equally. So, we have portions of the state, and really in the west, where you have fewer options and fewer supply sources that can be made available to specific communities. Poor, impoverished, disadvantaged communities lack access to clean, reliable water. With the emphasis on reliability, if you have a single source of supply you're heavily dependent on localized climate conditions — whether there's rain in a specific year, you don't have a backup supply, you don't have protection against seismic activity. There are instances in which communities in California go weeks months without a main source of supply that that serves their community. So redundancy is key where you have such wide variability in the climate and in access to water. Having more sources of supply, having more conveyance is in an important feature to be able to match up supply with demand. And, as I said, with 300,000 miles of transmission lines and a bunch more of distribution lines, you don't need to be moving water for 400,000 to 500,000 people to make a difference. Pipelines that can distribute water for 1000s of people can be really important to rural America.

LONEY

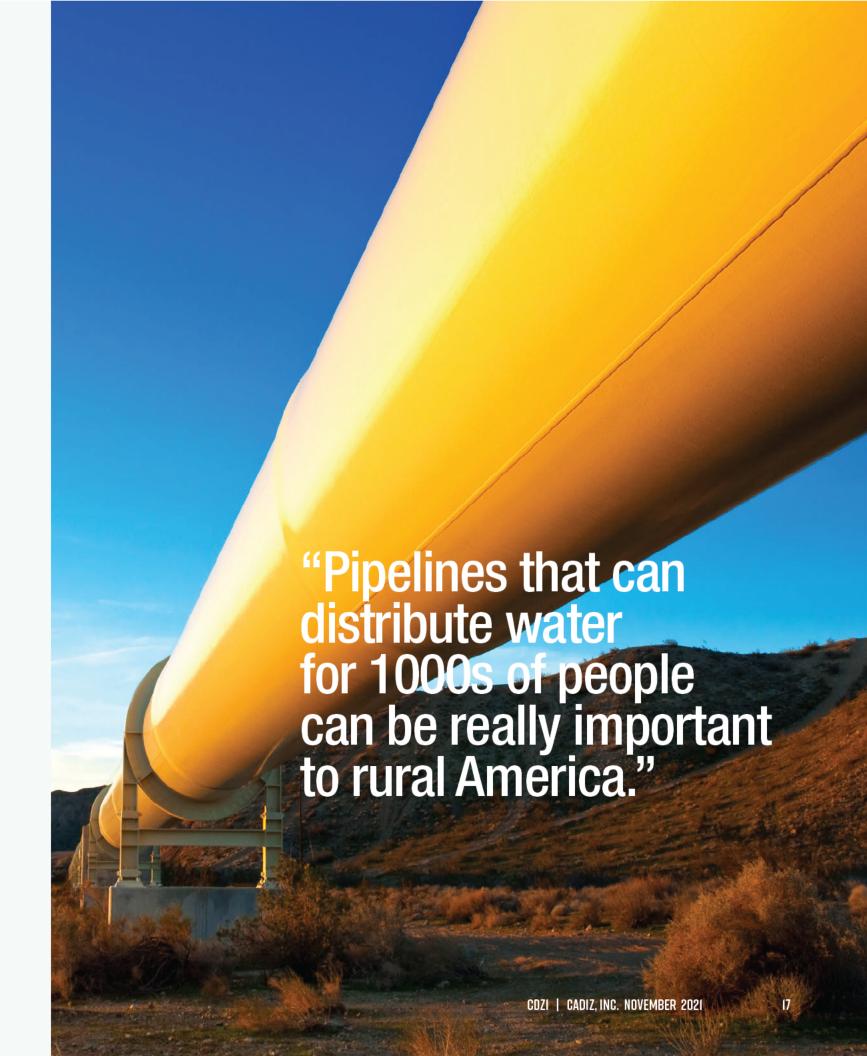
Scott, thanks very much for your time today, all the best with your work there.

SLATER:

Thank you very much, appreciate you having me.

LONEY

Thank you Scott Slater, who is the CEO of Cadiz.



SYSTEMIC WATER SHORTAGE IN CALIFORNIA INTENSIFIES

ON THE HEELS OF ONE OF THE DRIEST YEARS IN RECORDED HISTORY CALIFORNIA SEPTEMBER 15, 2021 - BY CADIZ TEAM

On the heels of one of the driest years in recorded history California will begin a new "water year" on October 1st.[1] An inventory of existing water assets does not build confidence that we are prepared for yet another dry year. Photos prominently placed in print media are circulating the internet of an empty Folsom Lake, a small puddle formerly known as Oroville reservoir and a crashing Lake Mead.[2]

To address the challenge, the California State Water Resources Control Board is taking the unusual step of curtailing diversions on the American River, the Sacramento River and most northern California streams going so far as limiting users with priority dates in the 19th Century.[3] The California State Water Project (SWP), which delivers water stored in the Sierra Nevada, delivered only 5% of its capacity in 2021 and next year, it is expected to start the Water Year forecast deliveries at 0% of capacity.[4] This month the California Department of Water Resources began preparing to take the unprecedent step of invoking Article 18 for the SWP which would enable it to override whatever contract entitlements there might be in favor of domestic use, fire protection and sanitation requirements. This step might ensure water for particularly hard-hit communities, but it could actually make things worse by casting a cloud of uncertainty over the entirety of the SWP. How will essential uses be measured, how will necessary water be delivered and how will the rules impact pending and planned transfers of SWP all remain open, unanswered questions.

Meanwhile, Lake Mead and the entire Colorado River storage system sits at its lowest point in history and the United States department of interior's Bureau of Reclamation is in the process of implementing shortage sharing regulations in the lower Colorado river basin. [5] This will undoubtedly impact the 40 million people and 5 million acres of farmland that rely on water from the Colorado River system, including urban, suburban, rural, and farming communities across southern California. [6]

Against this backdrop the California Legislature ended its session on Friday September 10, 2021 with surprisingly very few bills passed addressing the water supply and infrastructure challenge. [7] For example, a bill sponsored by Senator Melissa Hurtado (D- CA) of the Central Valley that would have spent \$785 million to fix water infrastructure in the area, was shelved despite making it through several committees. [8] The Legislature did pass a budget trailer bill before the session ended that dedicated approximately \$1.2 billion to fund augmentation of existing programs, additional studies, water recycling projects and cleaning up contaminated water sources. However, the trailer bill does not expressly or urgently address storage and infrastructure that can also improve the outlook for hard hit communities. [9]

It is true that the Federal government is poised to adopt a new infrastructure package that includes provisions that aim to improve western water infrastructure and make investments that should in the long-term assist water short communities, but the path to adoption is unclear. [10] Regardless, it is expected that the federal government will need to focus on the Colorado River in 2022 as Lake Mead and Lake Powell continue to be pushed to their limits.





The news cycle covers the spectacle of drought very well – but not the human cost. The economic consequences of shortage can be measured by metrics: Lost jobs, lost farms, lost business, forgone commercial opportunities. Human suffering and dents in the quality of life are much more difficult to capture. These impacts are felt typically in underserved and disadvantaged communities.

Cadiz stands ready to do its part in addressing the long-term systemic shortages now facing the state of California. We believe in providing new water to needy people, through conservation, repurposing existing infrastructure and harnessing the natural advantages of our land holdings. We offer one of the only off-river, unpolluted and largely untapped groundwater basins in the West with the physical capacity to store more than 1 million acre-feet and deliver 50,000 acre-feet per year off property wherever it may be needed in California. Our 220-mile pipeline provides a route to help underserved areas of California. These are communities in need that can be assisted by direct delivery of water and exchanges. Regardless, it will take an "all of the above" strategy and commitment to meet the Herculean challenge that faces our state. We are ready to do our part.

CITATIONS: https://www.cadizinc.com/2021/09/15/systemic-water-shortage-in-california-intensifies-2/

THE VALUE OF STORAGE

STORING EXCESS SURFACE WATER UNDERGROUND

NOVEMBER 1, 2021 - BY CADIZ TEAM

Changes in California's long-term precipitation patterns have increased demand for greater accessibility of storage in wet years to normalize supplies over long periods. Surface storage (aka Dams) is fiercely resisted by environmental NGOs and has turned focus on aquifer or below ground storage options. According to PPIC, California's current storage and conveyance infrastructure, and its water operational and regulatory practices, are not primed to take advantage of water available for banking and aquifer recharge, especially during wet years.

WHAT IS AQUIFER STORAGE?

According to the USGS, aquifer storage is a water resources management technique for actively storing excess surface water underground during wet periods for recovery when needed, typically during dry periods. Surplus water is typical spread over open ground where it seeps between the sand/gravel/rock and joins the water table. Water in storage is then managed and recovered when needed using wells. There are more than 100 aquifer storage and recovery projects active worldwide.

CADIZ GROUNDWATER STORAGE

- Cadiz aquifer system includes 1 million acre-feet of storage capacity, similar to Kern Water Bank and Semitropic Water Bank in Central California.
- Cadiz location in proximity to the Colorado River and the State Water Project would allow for storage of multiple sources. Northern & Southern pipelines increase optionality for storage and return. Interconnects multiple State systems.
- Highly porous clays and silts support high infiltration rates, and ease of management and recovery;
- Very low TDS maintains high water quality
- In-lieu storage options also available
- Judicially validated groundwater management plan already in operation maintaining sustainability;
- No overlying land competition (Cadiz only farmer in the area) and protected headwaters.

Sources:

https://www.ppic.org/publication/groundwater-recharge/

https://www.usgs.gov/centers/ca-water/science/aquifer-storage-and-recovery?qt-science_center_objects=0#qt-science_center_objects https://www.ngwa.org/docs/default-source/default-document-library/groundwater/usa-groundwater-use-fact-sheet.pdf?sfvrsn=5c7a0db8_4 https://www.forbes.com/sites/chloesorvino/2021/09/20/amid-drought-billionaires-control-a-critical-california-water-bank/?sh=363f4af22e7a http://www.semitropic.com/GroundwaterBanking.htm



BENEFITS OF GROUNDWATER STORAGE INCLUDE:

- Can take advantage of the natural storage capacity of groundwater aquifers to manage CA hydrological cycles
- Low construction cost
- No surface evaporative loss
- Small energy footprint/ limited GHG emission than surface storage
- Limited surface environmental disturbance, reduced habitat/environmental impacts
- Maintenance of groundwater system, prevents saltwater intrusion

COSTS-PRICING:

- Construction costs for groundwater storage can be minimal, depending on facilities requires.
- Recharge/Infiltration requires conveyance to the site; Management underground and return of stored water requires wells and conveyance, as well as potential for pumping station and power.
- Existing groundwater banks charge a onetime capacity reservation fee, and annual maintenance fees. Once water is returned, there are delivery fees to recover power. Value of the bank increases with optionality to return water when needed.
- Comps for storage reservation at \$1500/AF.

CADIZ

FORM 100 FILING

CDZI + CDZIP

On Nov 12, 2021, the Company filed its third quarter results on Form 10-Q with the SEC. As resported in the Management Discussion and Analysis, . Our main objective is to realize the highest and best use of our land, water, and related infrastructure assets in an environmentally responsible way. WE believe that the highest and best use of our assets will be realized by offering a combination of water supply, storage and conveyance projects and agricultural development at our properties in ways that are sustainable and responsive to California's resource needs. (CLICK HERE)

CORPORATE PRESENTATON



DOWNLOAD NOW

LOS ANGELES BUSINESS JOURNAL THE COMMUNITY OF BUSINESS* OCT 18, 2021

"At some point, all this selling triggered sell algorithms among index funds and other (Cadiz) investors," the financial adviser said. "And that multiplied the sell effect, and it created a vicious circle."

CDZIP: DIVIDEND

CADIZ DECLARES QUARTERLY DIVIDEND ON SERIES A CUMULATIVE PERPETUAL PREFERRED STOCK



Cadiz Inc. (Nasdaq: CDZI/CDZIP) ("Cadiz" or the "Company") today announced its Board of Directors has declared the following cash dividend on the Company's 8.875% Series A Cumulative Perpetual Preferred Stock (the "Series A Preferred Stock").

Holders of Series A Preferred Stock will receive a cash dividend equal to \$630.00 per whole share.

Holders of depositary shares, each representing a 1/1000 fractional interest in a share of Series A Preferred Stock (Nasdaq: CDZIP), will receive a cash dividend equal to approximately \$0.63 per depositary share.

STOCK UPDATE SEPTISTH

CADIZ INC. ISSUES STATEMENT ON RECENT STOCK VOLATILITY

The Company reports that there have been no new material developments nor pending announcements concerning its business operations contributing to market activity. The Company remains confident in its plans to execute on its mission to dedicate its unique and significant land and water assets to the implementation of sustainable water supply, water storage, and agricultural projects responsive to California's resource needs.





REAL TIME W/BILL MAHER (HBO)

New Rule: America's Pipe Dream

Before we spread democracy around the world, America has to figure out how to spread water around America.

https://www.youtube.com/watch?v=SAsExSNfNXQ



September 10, 2021

FAST COMPANY

It's time to repurpose our oil and gas infrastructure to do something good for the planet: transport water to the parched West.

We will eventually stop burning fossil fuels. The question isn't if oil and gas fades from the picture, but whether it can happen quickly enough to stave off environmental catastrophe. Here in Louisiana, with our enormous investment in oil pipelines and tank farms fed from oil platforms in the Gulf, this is an issue of more than passing concern. It's time now to begin thinking about how we can repurpose these potentially enormous assets.

https://www.fastcompany.com/90677922/the-american-west-is-running-out-of-water-and-big-oil-of-all-things-can-help-fix-it

By Steven Bingler & Martin C Pedersen - September 20, 2021



60 MINUTES

Southwest states facing tough choices about water as Colorado River diminishes

This past week, California declared a statewide drought emergency. It follows the first-ever federal shortage declaration on the Colorado River, triggering cuts to water supplies in the Southwest. The Colorado is the lifeblood of the region. It waters some of the country's fastest-growing cities, nourishes some of our most fertile fields and powers \$1.4 trillion in annual economic activity. The river runs more than 1,400 miles, from headwaters in the Rockies to its delta in northern Mexico where it ends in a trickle. Seven states and 30 Native American tribes lie in the Colorado River Basin. Lately, the river has been running dry due to the historically severe drought.

https://www.cbsnews.com/news/colorado-river-water-level-60-minutes-2021-10-24/

By Bill Whitaker - October 24, 2021

U.S. NEWS

California Farm Town Lurches From No Water to Polluted Water

TEVISTON, Calif. (Reuters) - The San Joaquin Valley farm town of Teviston has two wells. One went dry and the other is contaminated. The one functioning well failed just at the start of summer, depriving the hot and dusty hamlet of running water for weeks. With temperatures routinely soaring above 90 degrees Fahrenheit (32 degrees Celsius), farm workers bathed with buckets after laboring in the nearby vineyards and almond orchards.

Even as officials restored a modicum of pressure with trucked-in water, and after the well was repaired, the hardships have endured. Teviston's 400 to 700 people - figures fluctuate with the agricultural season - have received bottled drinking water since the well failed in June.

https://www.usnews.com/news/top-news/articles/2021-11-02/california-farm-town-lurches-from-no-water-to-polluted-water

By Daniel Trotta (Reuters) - November 2, 2021



LOS ANGELES TIMES

Newsom declares statewide drought emergency, urges California to conserve water

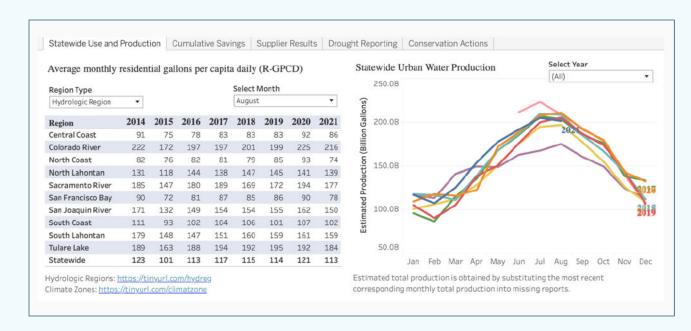
Gov. Gavin Newsom declared a statewide drought emergency on Tuesday, appealing to all Californians to do more to conserve water in the face of one of the state's most severe droughts on record.

"As the western U.S. faces a potential third year of drought, it's critical that Californians across the state redouble our efforts to save water in every way possible," Newsom said.

While most of California's 58 counties have been in a state of drought emergency since July, Newsom's proclamation added the last eight remaining counties, and further bolstered his call for everyone to voluntary reduce water use by 15%. The proclamation notes that the State Water Resources Control Board may adopt emergency regulations to prohibit wasting water, such as hosing down sidewalks or driveways, allowing drinking water to flood gutters or streets, or washing a car without a shut-off nozzle.

https://www.latimes.com/california/story/2021-10-19/california-cut-water-use-by-5-percent-in-august

By lan James - October 19, 2021



https://www.waterboards.ca.gov/water issues/programs/conservation portal/conservation reporting.html



LOS ANGELES TIMES California records driest year in a century

In a year of both extreme heat and extreme drought, California has reported its driest water year in terms of precipitation in a century, and experts fear the coming 12 months could be even worse.

The Western Regional Climate Center added average precipitation that had been reported at each of its stations and calculated that a total of 11.87 inches of rain and snow fell in California in the 2021 water year. That's half of what experts deem average during a water year in California: about 23.58 inches.

The climate center tallies rainfall by averaging all of the measured precipitation in the state at the end of a water year, which runs Oct. 1 through Sept. 30.

https://www.latimes.com/california/story/2021-10-18/california-records-driest-year-in-a-century

By Laura Anaya-Morga - October 18, 2021

SF GATE

La Niña is coming. What does that mean for California's rainy season?

The Climate Prediction Center, an arm of the National Weather Service, announced Thursday that La Niña conditions have developed and are expected to extend through winter, influencing weather worldwide.

In a drought-plagued California that's desperate for a champagne-popping forecast loaded with rain, this news begs the question, what does this mean for the winter?

Meteorologists agree, especially amid a changing climate, that there's no clear answer to this question and a number of scenarios could unfold, ranging from a dry to a wet winter.

"When people mention La Niña, the first word that should come to mind is variability," said Michael Anderson, the state climatologist with the California Department of Water Resources.

https://www.sfgate.com/weather/article/What-does-La-Nina-mean-for-California-winter-16535880.php





FORBES

How Much Is Water Worth? Why A Billionaire-Owned Stake In A California Water Bank Could Be Worth More Than \$1 Billion

How much is access to water worth? In this episode, we aim to answer that question by looking at the Kem Water Bank, one of California's largest underground water storage facilities. From above, it looks a lot like a giant puddle. But underneath it has the capacity to hold the equivalent of roughly 500 Central Park Reservoirs. And, as one expert says, it's the "absolute jewel" of California water banking.

It's also part-owned by Stewart and Lynda Resnick, the billionaire couple behind fruit and nut giant Wonderful Co., which makes everything from Halos mandarins to POM Wonderful juice. As California and the western U.S. sinks deeper into a 20-year megadrought, Forbes estimates that the Resnicks' 57% stake in the water bank could be worth \$1.7 billion—and counting.

https://www.forbes.com/sites/michelatindera/2021/10/12/how-much-is-water-worth-why-a-billionaire-owned-stake-in-a-california-water-bank-could-be-worth-more-than-1-billion/?sh=43b5e8bd2bf5

By Michela Tindera & Chloe Sorvino - October 12, 2021

LOS ANGELES TIMES

As drought worsens, California farmers are being paid not to grow crops

BLYTHE, Calif. — Green fields of alfalfa and cotton rolled past as Brad Robinson drove through the desert valley where his family has farmed with water from the Colorado River for three generations. Stopping the truck, he stepped onto a dry, brown field where shriveled remnants of alfalfa crunched under his boots.

The water has been temporarily shut off on a portion of Robinson's land. In exchange, he's receiving \$909 this year for each acre of farmland left dry and unplanted. The water is instead staying in Lake Mead, near Las Vegas, to help slow the unrelenting decline of the largest reservoir in the country.

Robinson and other growers in the Palo Verde Irrigation District are taking part in a new \$38-million program funded by the federal Bureau of Reclamation, the Metropolitan Water District of Southern California and other water agencies in Arizona and Nevada. The farmers are paid to leave a portion of their lands dry and fallow, and the water saved over the next three years is expected to translate into 3 feet of additional water in Lake Mead, which has declined to its lowest levels since it was filled in the 1930s following the construction of Hoover Dam.

https://www.latimes.com/environment/story/2021-10-10/colorado-river-california-farmers-dry-fields-fallow-drought? amp=true



By Thomas Fuller - Aug. 14, 2021 CADIZ, INC. NOVEMBER 2021

OILPRICE.COM

Could Oil Pipelines Solve America's Water Crisis?

Big oil could help tackle the water shortage in the western United States by repurposing existing infrastructure to help transport clean water to the areas most in need. Innovations such as this highlight how oil and gas majors, and their infrastructure and knowledge, will always be relevant even in a country continually pushing for decarbonization and renewables. As severe weather events appear to be happening on a more regular basis, hitting the same areas of the U.S. year after year, flooding and drought is not the only thing that the western United States needs to be concerned about. At present, Louisiana is facing severe water shortages. Groundwater levels in the state are decreasing more rapidly than in other areas across the country and underground aquifers are at an all-time low.

This is largely due to decades of heavy use, the lack of regulation in water use by the industrial and the agricultural sectors, and little action by legislative bodies to respond to the issue in the past.

https://oilprice.com/Energy/Energy-General/Could-Oil-Pipelines-Solve-Americas-Water-Crisis.amp.html

By Felicity Bradstock - September 25, 2021

LOS ANGELES TIMES

October's torrential rains brought some drought relief, but California's big picture still bleak

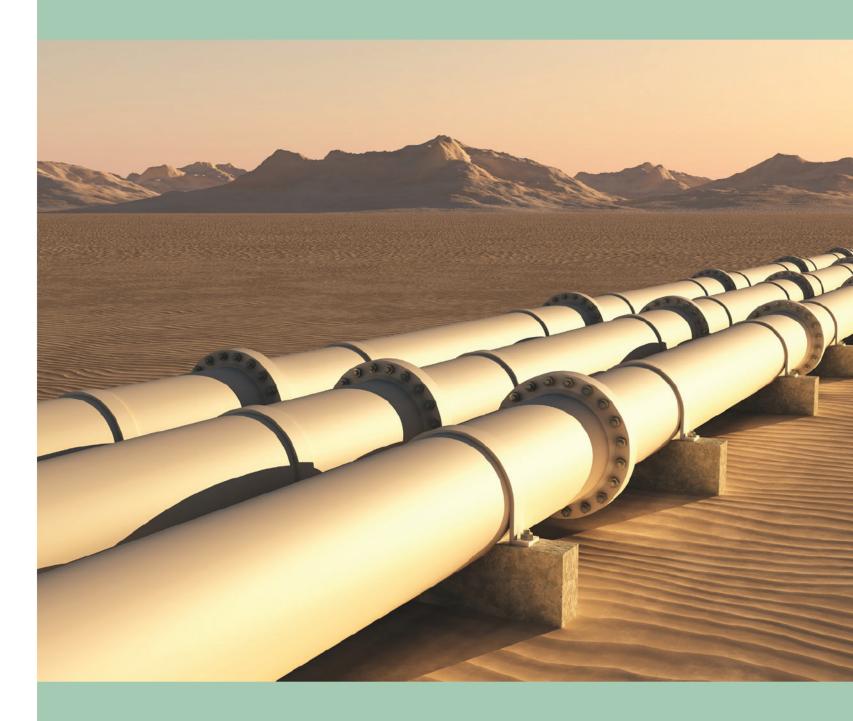
When a fierce early-season storm drenched parts of Northern California last month, some experts said it was in the nick of time.

Reservoir levels were critically low. Soils were parched. Fires rampaged through dry forests.

There was general consensus among climate experts that not even the record-breaking downpour would end the two-year drought plaguing the state. There was too much of a deficit, and a single storm — even of biblical proportions — would not be able to solve it in one fell swoop.

https://www.latimes.com/california/story/2021-11-08/california-storms-brought-only-short-term-drought-relief



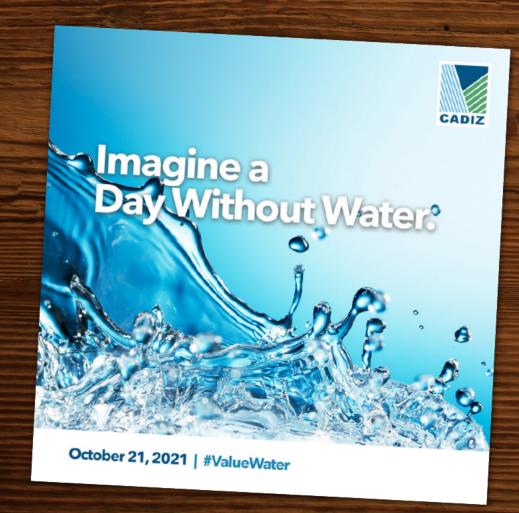


By Lila Seidman - November 8, 2021

IMAGINE A DAY WITHOUT WATER

OCTOBER 21, 2021

No water to drink, or wash your hands with. No water to shower, flush the toilet, or do laundry. Hospitals would close without water. Firefighters couldn't put out fires and farmers couldn't water their crops. Disease would spread.



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Millions are suffering without reliable access

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