NEWS | Control | Control

CADIZ, INC. | JANUARY 1, 2020









Happy New Year. I hope you had a wonderful holiday season. This quarter's newsletter features a recap of news and highlights from our final quarter of 2019, as well as a new article posted to our blog today. We will press relentlessly forward in pursuit of our objectives in 2020 and as always, appreciate your support.

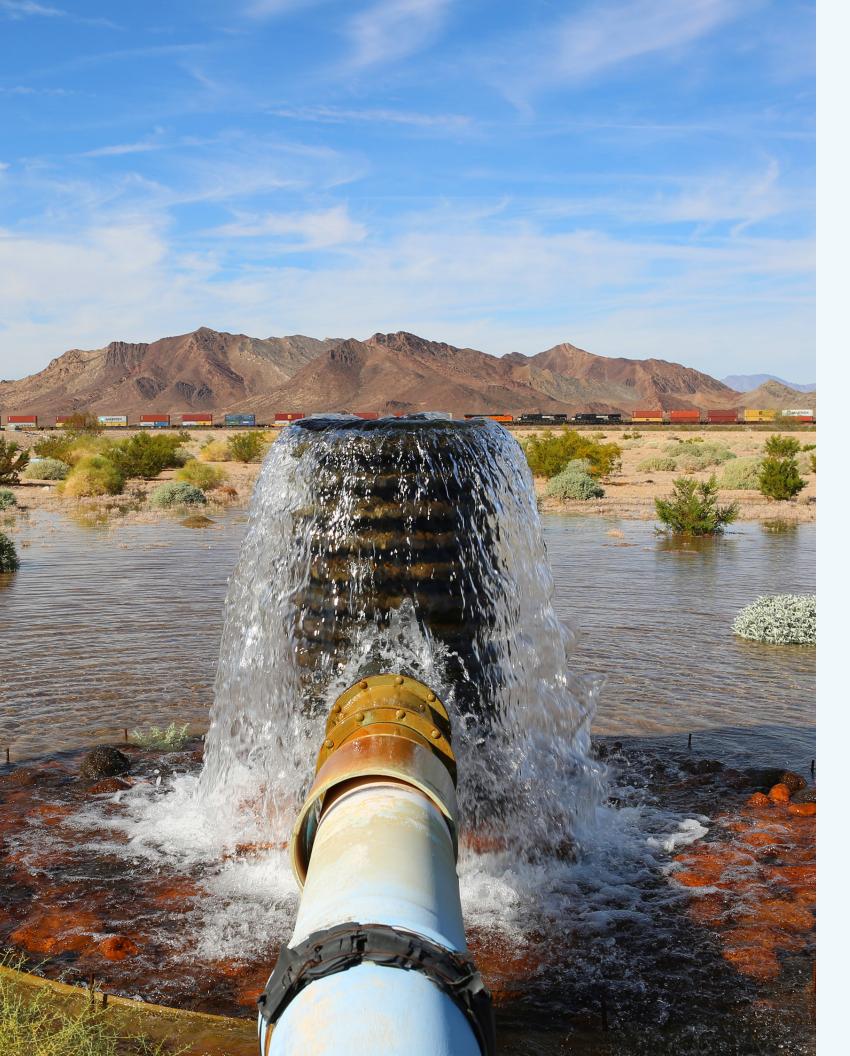
Sincerely,





TABLE OF CONTENTS

LETTER TO SHAREHOLDERS	04
CADIZ WATER PROJECT RECOGNIZED AS A TOP 10 INFRASTRUCTURE PROJECT AT THE NORTH AMERICAN INFRASTRUCTURE FORUM CADIZ ENTERS HEMP BUSINESS	00
CADIZ SUBSIDIARY SOCAL HEMP COMPLETES ITS FIRST HARVEST AT CADIZ VALLEY RANCH	08
FEDS AND CALIFORNIA STATE TAKE STEPS TO CLARIFY HEMP REGS	12
BEST AVAILABLE DATA AND SCIENCE LIGHT PATHWAY FORWARD FOR THE PROJECT	14
BACKGROUND: SCIENTIFIC DEVELOPMENT IN THE CADIZ AND FENNER VALLEY GROUNDWATER BASINS	18
INDUSTRY HEADLINE NEWS	24
DID YOU KNOW - HEMP & CBD.	28
SOCIAL MEDIA UPDATES	30
0	





CADIZ WATER PROJECT

RECOGNIZED AS A TOP 10 INFRASTRUCTURE PROJECT AT THE NORTH AMERICAN INFRASTRUCTURE FORUM

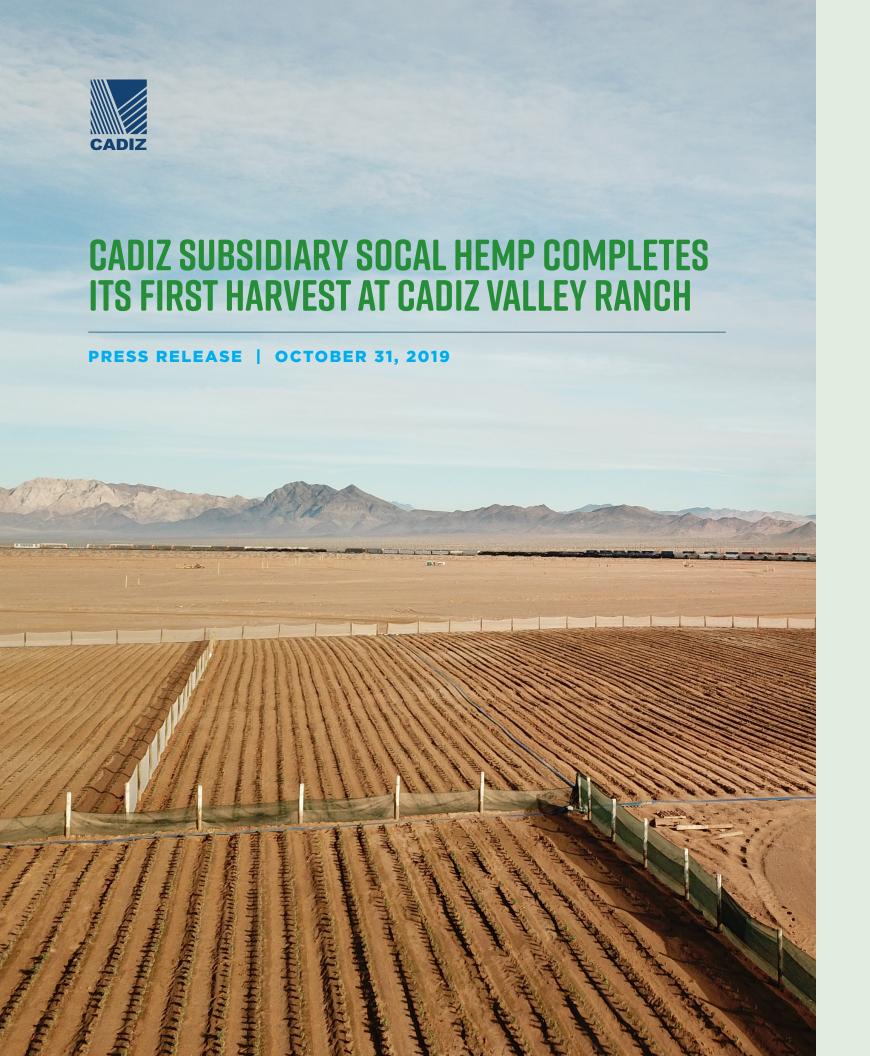
PRESS RELEASE | OCTOBER 21, 2019

Los Angeles — Cadiz Inc. (NASDAQ: CDZI) ("Cadiz", the "Company") is pleased to announce that the Cadiz Water Project, the Company's public-private partnership with California water providers to make available new, sustainable water supplies and groundwater storage for Southern California, was recognized today by Blueprint 2025 as a Top 10 Private Investment in Infrastructure Project at the North American Infrastructure Forum held in Washington D.C. Blueprint 2025 is a bi-partisan coalition of infrastructure leaders dedicated to transforming the domestic infrastructure market by injecting private investment into key, strategic projects. Today's awards were granted to projects that will improve and expand North American infrastructure but require little or no public investment to be built. The Cadiz Water Project was the sole California project to be recognized at today's ceremony presided over by General David H. Petraeus, a member of Blueprint 2025's National Infrastructure Performance Council.

"Private investment in U.S. infrastructure would transform our economy, without adding to the national debt — these projects are key harbingers of that transformation," said Norman Anderson Chairman and CEO of CG/LA Infrastructure, host of the Forum.

Courtney Degener, Cadiz Vice President of Communications and Investor Relations who accepted the award for the Company, stated: "Due to a variety of factors, including climate change, growth and regulatory uncertainty, California has faced significant challenges in securing a safe, reliable water supply for all communities. A lack of reliable water often translates to a lack of housing, transportation, jobs and economic opportunity."

"We must move beyond a boom and bust cycle and invest in innovative infrastructure solutions that can help ensure safe, reliable water is there for all communities every day, every year," Degener continued. "We intend to be part of the solution to California's persistent water supply problem and are grateful to be recognized today for our efforts to contribute as a private partner in the infrastructure space."





Successful first crop demonstrates that hemp is viable & suitable for the Mojave Desert.

Planned commercial operation bolstered by new federal regulations that support robust hemp industry nationwide

Cadiz Inc. is pleased to announce that SoCal Hemp LLC, its joint venture subsidiary with Glass House Group, has completed its first harvest of industrial hemp at the Cadiz Valley Ranch in California's Mojave Desert as part of a research trial program announced earlier this year. The first hemp trial crop, which was planted during the height of the summer, was successfully grown in the open-air, desert environment demonstrating that commercial hemp production is a viable crop for the Company's agricultural operations. A second phase of the trial is already underway, and preparations have begun to expand to commercial production in 2020 on up to 1,280 acres.

"We are pleased with the results of our research trial this quarter as it served as an important proof of concept for our new hemp-focused venture," said Scott Slater CEO & President of Cadiz Inc. and member of the Board of Managers of SoCal Hemp. "We sought to test whether we could farm a sun-grown, organic hemp product at Cadiz and we now are confident that hemp can be successfully cultivated in this desert environment."

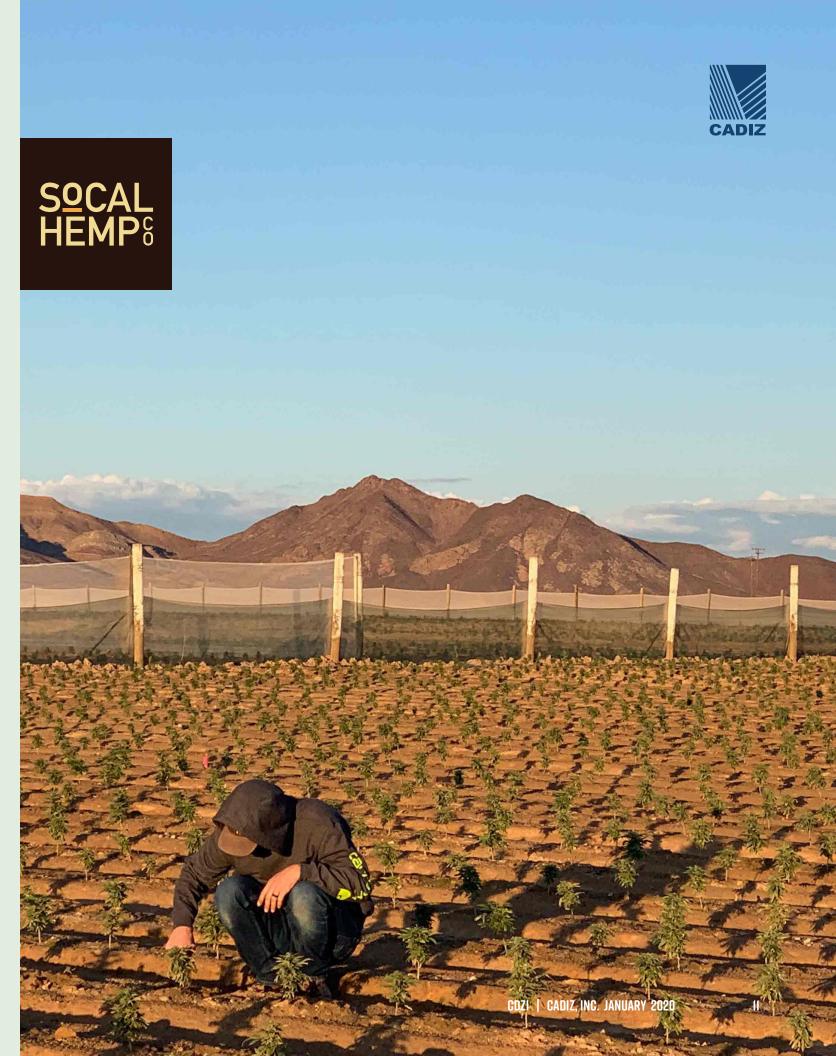
SoCal Hemp's first industrial hemp trial crop was planted in July and harvested in mid-October. During this period, temperatures were sustained above 100 degrees Fahrenheit and the area experienced summer weather events, including monsoonal rains and sustained high winds, yet the hemp was hearty and experienced measured growth. The harvested crop has been dried and cured and will now be studied under our research program for suitability for a variety of hemp-derived products, including cannabidiol ("CBD") based products.

CADIZ SUBSIDIARY SOCAL HEMP COMPLETES ITS FIRST HARVEST AT CADIZ VALLEY RANCH - CONT'D

SoCal Hemp intends to transition its hemp trial research program into a commercial operation in 2020. State and federal laws and regulations have recently been adopted that support the development of a robust national commercial hemp industry by providing clarity and resources to hemp farmers and those industries that support it. This week, United States Department of Agriculture ("USDA") announced the establishment of the U.S. Domestic Hemp Production Program ("U.S. Hemp Program"), creating long-awaited regulations to support hemp farms nationwide. The U.S. Hemp Program is expected to back normalized agricultural and financial sector services for farmers who grow hemp. The new rules, along with legislation and regulations adopted this year by the State of California, encourage a promising hemp industry for operators in the state. To learn more about the USDA guidelines, click here.

"Hemp and its many products can support a more sustainable climate and environment, and offer tremendous, undiscovered benefits for humans, plants and animals," Graham Farrar, President of Glass House Group and CEO of SoCal Hemp. "We appreciate the federal, state and local efforts to embrace the opportunities hemp production offers Americans across the country."

According to New Frontier Data, a data and market intelligence firm focused on the cannabis and hemp industries, total U.S. sales for hemp-derived products were approximately \$1.1 billion in 2018, and are projected to more than double by 2022. Another recent report by market intelligence firm Brightfield Farms, estimated that the US CBD market would grow to \$23.7 billion by 2023, up from a \$5 billion market size in 2019





STAFF, JANUARY 1, 2020

TO CLARIFY HEMP REGS

In the final quarter of 2019, the U.S. Government and the State of California adopted new regulations and laws to support the nationwide legalization of industrial hemp cultivation. In October, California Governor Gavin Newsom signed Senate Bill 153 to mandate that a state plan compliant with federal law is submitted to the USDA by May 1, 2020. Then, also in October, the USDA issued regulations clarifying how industrial hemp would be regulated by the federal government. However, the USDA stopped short of regulating hemp-derived products, including CBD, which will be regulated by the FDA.

California Law – SB 153

On October 13, 2019, California Governor Gavin Newsom signed Senate Bill 153 (SB 153) into law. SB 153 requires the state's hemp regulations be in full compliance with federal law legalizing industrial hemp. The new state law, which was widely supported by the California hemp industry, ensures that the state will submit a plan for hemp and hemp-derived products to the US Department of Agriculture by May 1, 2020.

The submission of a state plan is expected to ease regulatory uncertainty for California hemp farmers, processors, and distributors as well as those supporting the hemp industry. The Company's joint venture SoCal Hemp is fully compliant with current laws authorizing the farming of hemp and will also be in full compliance with the SB 153 regulations when they become effective in 2020.

Graham Farrar, the CEO of SoCal Hemp, made the following statement about the signing of SB 153: "California is a leader in the U.S. cannabis industry and has taken another positive step forward by ensuring its laws support California hemp's competitive advantage in the booming worldwide market for this important crop. With regulatory progress continuing, we look forward to transitioning into commercial production of sun-grown, organic, California hemp and hemp-derived products in 2020."



To learn more about SB 153, visit these summaries provided by the bill's sponsors: https://www.votehemp.com/press_releases/gov-newsom-signs-hemp-legislation-sb-153 and https://wilk.cssrc.us/content/wilks-industrial-hemp-measure-becomes-law

Federal Regulations – USDA

In December 2018, President Trump signed the U.S. Farm Bill, which legalized the farming of industrial hemp and untethered the crop from marijuana. While many farmers immediately began cultivating this sought-after crop, regulatory uncertainty remained and on October 31, 2019, the U.S. Department of Agriculture ("USDA") published an interim rule for federal hemp production detailing how hemp would be tested and regulated at the federal level to protect it as a legal crop nationwide. The USDA regs are under a public comment period until January 29, 2020.

Industry publication Hemp Industry Daily has been tracking the public comments, and maintains a summary of industry comment on its website: https://hempindustrydaily.com/hemp-industry-reacts-to-usda-production-rules/.

With both the the federal administration and Congress signaling support for the hemp industry, the industry appears positioned to benefit from continued regulatory clarity. Last week, the USDA introduced a pilot hemp crop insurance program : https://hempindustrydaily.com/usda-issues-new-crop-insurance-program-for-2020- hemp-production-season/ and banking regulations have also been clarified: https://hempindustrydaily.com/ hemp-banking-gets-a-boost-as-four-federal-agencies-remove-red-tape-for-new-crop/. The industry is now also awaiting the Federal Drug Administration's issuance of regulations for hemp-derived cannabidiol (CBD), which is currently the most sought-after hemp-derived product: https://hempindustrydaily.com/fda- says-more-scientific-data-needed-to-move-forward-with-cbd-regulation/. We expect state and federal regulators to continue to clarify hemp related regs in 2020.



CDZI | CADIZ, INC. JANUARY 2020



BEST AVAILABLE DATA AND SCIENCE LIGHT PATHWAY FORWARD FOR THE PROJECT

BY COURTNEY DEGENER | JANUARY 01, 2020





Almost a decade ago, Cadiz announced that we were going to pursue the development of a new, safe and sustainable water project that would provide a reliable water supply for 400,000 people across Southern California. We have followed the law, done things openly and transparently, and earned a stack of comprehensive regulatory approvals as we've worked toward project implementation. In 2020, our journey continues. We have a new state requirement with which to comply – arising from SB 307 – and will continue to finalize the local approval process.

SB 307 is an Application Process, not an Arbitrary Review by the State

SB 307, which became law on January 1, 2020, will require that the Cadiz Water Project demonstrate to the California State Lands Commission ("SLC") that it will not cause harm to the environment before we can convey water in a public water conveyance facility. Unbiased professional review has never been a barrier to Water Project implementation and the SB 307 process, executed fairly, should not be an insurmountable barrier either. While project opponents have stated their intention to use the new law to stop the Water Project, SB 307 was not intended to "kill" the Project according to the author and the Legislature, and it doesn't dismiss or replace CEQA or any other local approvals.

SB 307 requires any party that wishes to convey water from "desert lands" in a public water conveyance facility with excess capacity, such as the Colorado River Aqueduct ("CRA"), to first submit an application to the SLC for a review and finding as to whether the transportation of that water will lead to an adverse environmental impact. A similar requirement already exists in Water Code Section 1810(d), but the finding is made by local agencies rather than the state.

The Final Environmental Impact Report for the Cadiz Water Project previously concluded there were no such impacts. SB 307 now requires the SLC to make a similar finding prior to the Project wheeling water in the CRA.

Importantly, SB 307 does not make us start from scratch. It requires that we submit an application, at a date of our choosing, that contains all relevant information, such as the Final Environmental Impact Report, plus the 25,000-page record compiled in the judicial proceedings, multiple professional reports, 12 court opinions, and 25 years of certified reports pertinent to our groundwater use for farming on our property.

More recent work on mountain springs, including two project opponent-funded reports that had concluded a potential interconnection between the Water Project and mountain springs in the surrounding watershed, will also be part of any application. As would subsequent reviews, including those completed by Dr. David Kreamer from the University of Nevada, Las Vegas finding that the opponents' reports are flawed and not credible. The Fenner Valley Water Authority, the public Joint Powers Authority that will operate the Water Project, evaluated the claims made in the reports and, in an Addendum to the FEIR, concluded that the reports offered no new credible information. Any application would not be finalized until we have plans to convey water in the CRA.



CONT'D

SoCal Water Agency Taking New Approach with Open Scientific Process

Meanwhile, perhaps recognizing that SB 307 is not an immediate process, the project's opponents have also been pressuring local Southern California water providers that are considering acquiring supplies from the Project (primarily agencies that hold options to water contracts) to drop their support for the project. The tactic is aimed at suppressing demand for the Project in hopes we abandon it altogether before even filing for SB 307 review.

But, when confronted with the arguments raised by opponents, one local water agency — the Three Valleys Municipal Water District (TVMWD) — leaned into the questions rather than walking away. First, in early 2019, the TVMWD Board of Directors commissioned an independent review to evaluate the strength of the already-existing permits and groundwater management plan. That report found existing protections of desert springs sufficient but recommended some additional steps that could be taken to better assure those concerned about the springs. Based on those recommendations, the Board then commissioned a follow-up study, now ongoing, that is focused on gathering data about natural mountain springs, where debate among experts has continued.

To provide finality to allegations over the interconnectedness of the springs to the project area, which is 11 miles away, TVMWD decided to take a science-based approach and answer the question definitively: Is Bonanza Spring connected to the Cadiz aquifer and, if so, can the project still operate without adversely impacting it through existing approved monitoring and mitigation measures or are new measures required?





TVMWD serves approximately 800,000 people in eastern Los Angeles County and is a member of the Metropolitan Water District of Southern California. The TVMWD Board has stated it will not exercise its option to purchase water from Cadiz until there is scientific clarity. In June 2019, it set a course to develop an independent, transparent study that is being conducted in public, allowing all interested stakeholders to comment on the scope, progress and conclusions.

TVMWD invited over 100 stakeholders to participate in a scoping workshop at its offices in October 2019. The four-hour session provided the study's science team feedback and questions to address as it proceeds with field studies this year.

At TVMWD's request, Cadiz agreed to reimburse TVMWD for the costs incurred to complete the study, but we are not overseeing the results. To assure public confidence in the outcome, all study progress can be tracked by the public via the study website — www.bonanzaspringstudy.org. Data will be made available online and all parties, the State of California, the United States Geological Survey and the U.S. Bureau of Land Management, have been invited to participate.

The data gathered during the study process will be valuable to scientific understanding of the area. It will augment the understanding of local hydrogeology, geology and habitat and its goal is to use that understanding to establish procedure to enhance the Project's operation and management plan as promised from the beginning.

Continuing Commitment to Water for People, Farming and the Environment

Ongoing scientific study and engagement has been critical to our longevity as a business, and to ensuring our sustainability. We've farmed for over 25 years as good custodians of desert resources, guided by a commitment to water conservation, constant monitoring and scientific engagement.

Since we started farming, over 30 years ago, California's persistent water problem has not abated. Simply put, Californians do not presently have access to enough clean, reliable water to meet their needs over the long-term. While public policy has been implemented to address this challenge, including demand management programs, the state's water providers are nearly universal in the belief that supply-side solutions must be in the portfolio as well. Excessively delaying or blocking projects is not going to solve California's persistent water problem. But, working together to improve projects and ensure their sustainability could and it is a principal to which we are committed.

While we progress the science for the Water Project, we will continue to make beneficial use of our land and water through the successful cultivation of lemons and sun-grown, organic hemp. Securing water for people, farming and the environment is compatible, and we will continue to be part of that conversation.



BACKGROUND - SCIENTIFIC DEVELOPMENT IN THE CADIZ AND FENNER VALLEY GROUNDWATER BASINS

BLOG BY COURTNEY DEGENER | JANUARY 01, 2020



Home to the Cadiz Water Project, the Fenner Valley is located near California's primary water transportation infrastructure - the Colorado River, the Colorado River Aqueduct and the State Water Project. Cadiz is the cog in the middle that could link these systems together for the first time via a managed groundwater basin storing and supplying water to supplement Southern California's water supplies. When Cadiz Inc. first conceived of playing a role in California's water supply portfolio over 20 years ago, we asked a key question: Can this be done sustainably and in concert with the environment? Unfortunately, the science about the area was limited and scientific unknowns played a role in keeping the first version of our water project from moving forward.

Over the years, volumes of science have been produced to measure and assess hydrological, geological, biological, cultural and engineering questions about the area. The passage of time has led to important technological advances too that have improved our understanding of the area and allowed the measurement of physical data, as well as the creation of new models, instrumentation, and laboratory procedures that can confirm and answer questions previously not answered.

When we first envisioned the Project, fax machines were still screeching, and the iPhone was years away. Today, what seems like light years later, we know many things about Cadiz because of scientific improvements and technological advancements:

- ▶ Fresh water extends over 1,000 feet below ground surface benath Cadiz.
- ► The aquifer system beneath Cadiz allows water to easily flow.
- ▶ Groundwater is naturally recharged from precipitation that fell long ago in the mountains surrounding the Valley.
- Over 10 billion gallons of groundwater per year (approximately 30,000 acre-feet) is evaporating and leaving the system at the saline dry lakes that lie at the lowest point of the watershed.
- Agricultural use of groundwater at Cadiz has not resulted in any significant, sustained drawdown of groundwater levels in the Valley.
- The dry lake playas at the base of the watershed are comprised of calcium chloride, and the surface was never permanently wet, so it binds when dewatered and doesn't create fugitive dust
- ► The root zones of plants and the reach of animals in the area do not extend to the groundwater table, which is more than 150 feet below ground surface.



BACKGROUND - SCIENTIFIC DEVELOPMENT IN THE CADIZ AND FENNER VALLEY GROUNDWATER BASINS — CONT'D

Mountain springs

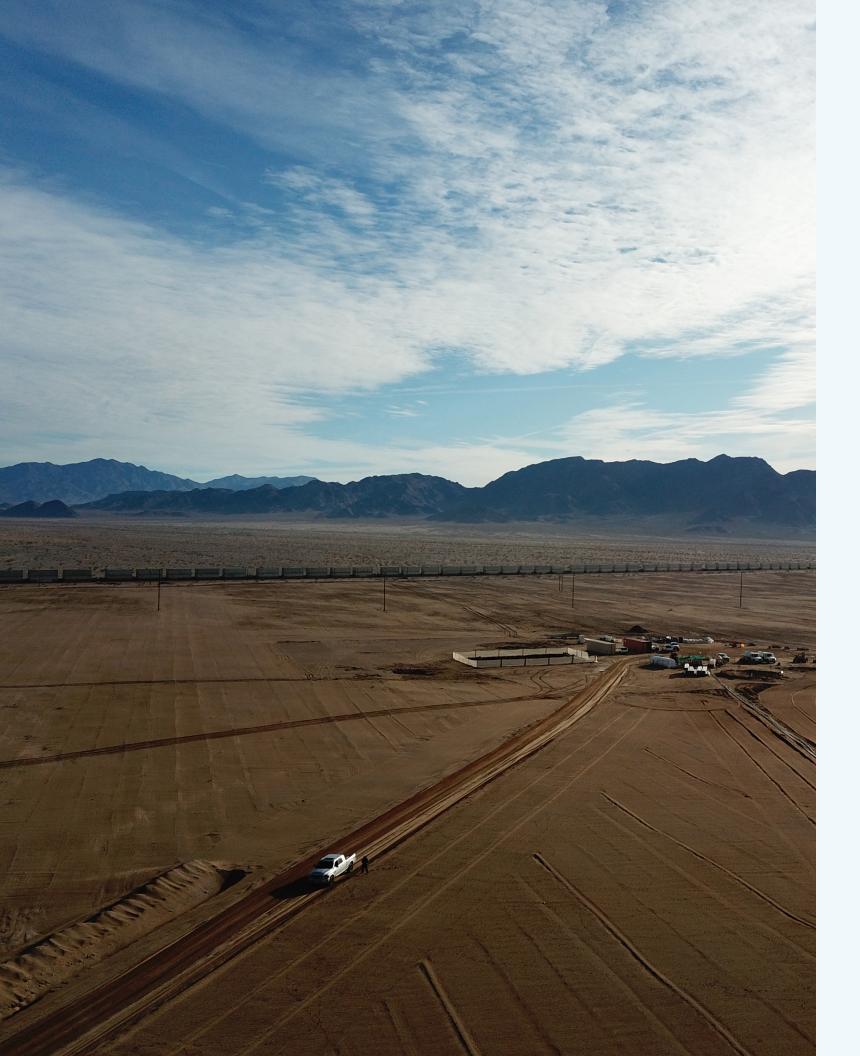
One topic of scientific and hydrological questioning that has persisted throughout the permitting process relates to natural mountain springs in the upper elevations of the watershed. Natural springs and man-made springs occur in the Mojave Desert in the upper elevations of the Fenner Valley watershed and other watersheds where groundwater has found an outlet to the surface. The National Parks Service <u>has described their occurrence</u> in the area where the Project is located:

"Most springs and seeps in the Mojave National Preserve are located along the southwest—northeast trending spine of mountains that includes the Granite, Providence, New York, and Castle mountains. They discharge from aptly named perched aquifers, which occur above the regional water table often on a valley wall or hillside, and are primarily "filled" or recharged by rain and snow melt. Because recharge comes from local precipitation, the number of springs and seeps might vary throughout the year, as well as from year to year... While unlikely to be affected by groundwater pumping from local basin aquifers, Mojave's springs and seeps are sensitive to variable precipitation and can go dry in a multiyear drought."

The closest natural spring to the Cadiz Water Project's wellfield is Bonanza Spring, which occurs in the Clipper Mountains. It is 11 miles away from the wellfield and about 1,400 feet higher in elevation than the water table at Cadiz. It provides habitat and a water source to desert wildlife, including bighorn sheep.

During the Project's extensive government review and approval process, scientists concluded that any groundwater use in the Fenner Valley was too distant from Bonanza Spring to have any significant adverse impact. Provisions of San Bernardino County's groundwater management plan were enhanced to ensure any potential for impact was addressed and mitigated.







BACKGROUND - SCIENTIFIC DEVELOPMENT IN THE CADIZ AND FENNER VALLEY GROUNDWATER BASINS — CONT'D

But in 2018, three conflicting bodies of work were released from different sources providing opportunity for further speculation and uncertainty:

- 1. Cadiz-sponsored structural geology expert Miles Kenney, Ph.D. conducted a months-long study of Bonanza Spring, including extensive field mapping. He identified two convergent fault zones that intersect at Bonanza Spring and are blocking, or damming, upstream groundwater flowing in fractured bedrock above the spring. Based on the physical data points observed, he concluded that the long-term source of water to Bonanza Spring comes from above the spring and is independent of, and not influenced by, conditions in the alluvial aquifer at the Cadiz area miles below. Dr. Kenney's work was peer-reviewed by 11 experts, and this group of experts summarized it would be "impossible" for project operations to adversely affect Bonanza Spring.
- 2. Scientists funded by project opponents environmental NGOs that have litigated against the Project since 2012 published two studies that allege the chemical composition of the water at Bonanza Spring indicates a connection between groundwater at Cadiz and groundwater in the spring. Citing this chemical marker, an opponent-sponsored scientist raised concerns that pumping at Cadiz could lead to adverse impacts on flows in the Spring, and ultimately on area wildlife. However, the study suggested continued monitoring and did not articulate how or why the Project's already approved monitoring and mitigation measures were insufficient.
- **3.** The Project's CEQA lead agency, the Santa Margarita Water District, sponsored University of Nevada, Las Vegas hydrology professor David Kreamer Ph.D., a desert springs expert often relied upon by the Bureau of Land Management, to review the various studies. Dr. Kreamer cited irregularities in the chemistry data published in the project opponents' studies, discrediting the conclusions of their studies. The Project's permitting agencies concluded the groundwater management plan remained the best method for addressing this issue, publishing an Addendum to the Final Environmental Impact Report in 2019. https://www.fvwa.org/wp-content/uploads/2019/06/Final-EIR-Addendum.pdf.

The study sponsored by Three Valleys MWD, which is now underway, is expected to definitively answer any remaining questions about springs in the watersheds surrounding Cadiz by including extensive field work and data capture, which is available for public review. To follow the process or participate, bookmark: — www.bonanzaspringstudy.org.

HEADLINE NEWS



Potential for Using Hemp as Animal Feed

Work is being done to engage the U.S. Food and Drug Administration (FDA) about the potential that hemp provides as a food source for animals. The Hemp Feed Coalition (HFC) is working with the FDA's Center for Veterinary Medicine and the Association of American Feed Control Officials in an effort to bring hemp-based ingredients through the feed approval process. <u>To read more, click here.</u>

http://agnetwest.com/potential-using-hemp-animal-feed/

AGINFO.net

U.S. Hemp Survey: Poised to Become 4th Major Crop

A top line finding, based on the data from the survey and on research of the overall market, once fully realized, the hemp industry is poised to become the fourth major crop and a foundation to agriculture in the United States.

To read more, click here.

https://www.aginfo.net/report/44449/Land-Livestock-Report/U-S-Hemp-Survey-Poised-to-Become-4th-Major-Crop





HEADLINE NEWS



INKSTAIN.NET

California's 2019 use of Colorado River water lowest since 1950

While Colorado River water management eyes were focused elsewhere this year — on the big snowpack up north, or the success of the Drought Contingency Plan — California has quietly achieved a remarkable milestone.

To read more, click here.

http://www.inkstain.net/fleck/2019/12/californias-2019-use-of-colorado-river-water-lowest-since-1950/

VC Star.com

California shakes off 'abnormally dry' conditions, flipping the drought state's drought map

A rainy few weeks may not guarantee a wet winter, but they helped California shake off an "abnormally dry" designation from the U.S. Drought Monitor.

To read more, click here.

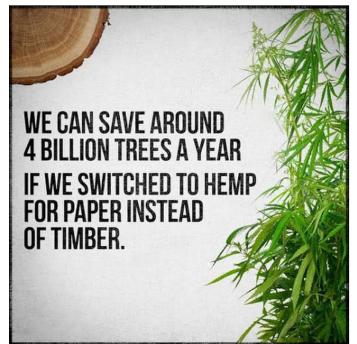
https://www.vcstar.com/story/news/special-reports/outdoors/2019/12/13/california-drought-map-dry-weather-conditions-rain-snow/4414825002/

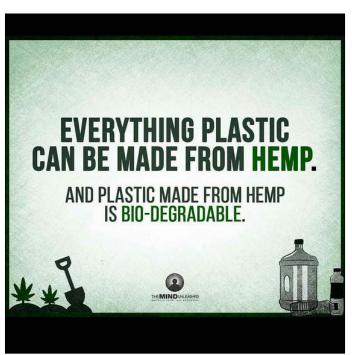
DID YOU KNOW?



Just a few things you didn't know about Hemp & CBD.

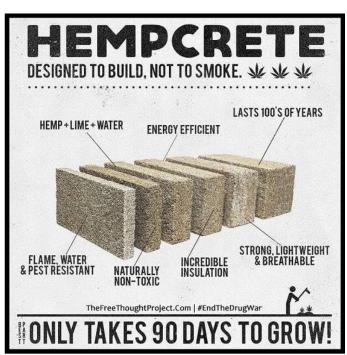


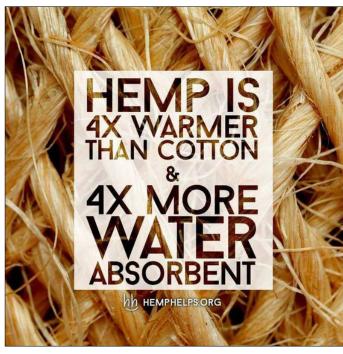


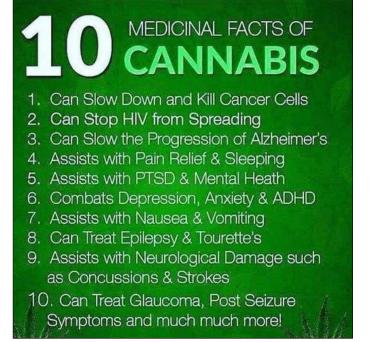












SOCIAL MEDIA 2019



What we shared on instagram, facebook and twitter.

















