CADIZ INC Form 10-K March 18, 2019

united states Securities and Exchange Commission

Washington, D. C. 20549

FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the fiscal year ended December 31, 2018 OR

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the transition period from to

Commission File Number 0-12114

Cadiz Inc.

(Exact name of registrant specified in its charter)

DELAWARE 77-0313235 (State or other jurisdiction of (I.R.S. Employer incorporation or organization) Identification No.)

550 S. Hope Street, Suite 2850 Los Angeles, CA 90071 (Address of principal executive offices) (Zip Code)

(213) 271-1600

(Registrant's telephone number, including area code)

Securities Registered Pursuant to Section 12(b) of the Act:
Common Stock, par value \$0.01 per share The NASDAQ Global Market
(Title of Each Class) (Name of Each Exchange on Which Registered)

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in rule 405 under the Securities Act of 1933. Yes No

Indicate by a check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter

period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§220.405 of this chapter) is not contained herein, and will not be contained to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment of this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act, (Check One):.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller Reporting Company Emerging growth company

If an emerging growth company, indicate by checkmark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Exchange Act Rule 12b-2). Yes No

The aggregate market value of the common stock held by nonaffiliates as of June 30, 2018 was approximately \$273,713,339 based on 20,894,148 shares of common stock outstanding held by nonaffiliates and the closing price on that date. Shares of common stock held by each executive officer and director and by each entity that owns more than 5% of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of March 7, 2019, the Registrant had 25,454,266 shares of common stock outstanding.

Documents Incorporated by Reference

Portions of the Registrant's definitive Proxy Statement to be filed for its 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Report. The Registrant is not incorporating by reference any other documents within this Annual Report on Form 10-K except those footnoted in Part IV under the heading "Item 15. Exhibits, Financial Statement Schedules".

Cadiz Inc.

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PART I

ITEM 1. Business

This Form 10-K contains forward-looking statements with regard to financial projections, proposed transactions such as those concerning the further development of our land and water assets, information or expectations about our business strategies, results of operations, products or markets, or otherwise makes statements about future events. Such forward-looking statements can be identified by the use of words such as "intends", "anticipates", "believes", "estimates", "projects", "forecasts", "expects", "plans" and "proposes". Although we believe that the expectations reflected in these forward-looking statements are based on reasonable assumptions, there are a number of risks and uncertainties that could cause actual results to differ materially from these forward-looking statements. These include, among others, the cautionary statements under the caption "Risk Factors", as well as other cautionary language contained in this Form 10-K. These cautionary statements identify important factors that could cause actual results to differ materially from those described in the forward-looking statements. When considering forward-looking statements in this Form 10-K, you should keep in mind the cautionary statements described above.

Overview

We are a land and water resource development company with over 45,000 acres of land in three areas of eastern San Bernardino County, California. Virtually all of this land is underlain by high-quality, naturally recharging groundwater resources, and is situated in proximity to the Colorado River and the Colorado River Aqueduct ("CRA"), California's primary mode of water transportation for imports from the Colorado River into the State. Our properties are suitable for various uses, including large-scale agricultural development, groundwater storage and water supply projects. Our main objective is to realize the highest and best use of these land and water resources in an environmentally responsible way.

We believe that the long-term highest and best use of our land and water assets will be realized through the development of a combination of water supply and storage projects at our properties. Therefore, we have primarily focused on the development of the Cadiz Valley Water Conservation, Recovery and Storage Project ("Water Project" or "Project"), which will capture and conserve millions of acre-feet of native groundwater currently being lost to evaporation from the aquifer system beneath our 34,500-acre property in the Cadiz and Fenner valleys of eastern San Bernardino County (the "Cadiz/Fenner Property"), and deliver it to water providers throughout Southern California (see "Water Resource Development"). A second phase of the Water Project would offer storage of up to one million acre-feet of imported water in the aquifer system. We believe that the ultimate implementation of this Water Project will provide a significant source of future cash flow.

¹ One acre-foot is equal to approximately 326,000 gallons or the volume of water that will cover an area of one acre to a depth of one-foot. An acre-foot is generally considered to be enough water to meet the annual water needs of one average California household.

The primary factor driving the value of such projects is ongoing pressure on California's traditional water supplies and the resulting demand for new, reliable supply solutions that can meet both immediate and long-term water needs. Available water supply in Southern California is constrained by regulatory restrictions on each of the State's three main water sources: the CRA, the State Water Project, which provides water supplies from Northern California to the central and southern parts of the state, and the Los Angeles Aqueduct, which delivers water from the eastern Sierra Nevada mountains to Los Angeles. Southern California's water providers rely on imports from these systems for a majority of their water supplies, but deliveries from all three into the region are consistently below capacity, even in wet years.

Further, the availability of supplies in California differs greatly from year to year due to natural hydrological variability. For nearly a decade, California struggled through an historic drought featuring record-low winter precipitation. Then, following a series of strong storms that delivered record amounts of rain and snow during the 2016-2017 winter, state officials declared an end to the drought. The 2017-2018 winter was abnormally dry for a majority of the State, yet the 2018 – 2019 winter is on track to be another wet year, with snowpack and rainfall well above average through February 2019. The rapid swings between wet and dry years challenge California's traditional supply system and support the need for reliable storage and local supply.

Given the variety of challenges and limitations faced by the State's existing infrastructure, Southern California water providers are presently pursuing investments in storage, supply and infrastructure to meet long-term demand. The Cadiz Water Project is a local supply option in Southern California that could help address the region's water supply challenges by providing new reliable supply and local groundwater storage opportunities (see "Water Resource Development" below) in both dry and wet years. Following a multi-year California Environmental Quality Act ("CEQA") review and permitting process, the Water Project received permits that allow the capture and conservation of 2.5 million acre-feet of groundwater over 50 years in accordance with the terms of a groundwater management plan approved by San Bernardino County, the public agency responsible for groundwater use at the project area.

In addition to our Water Project proposal, we are engaged in agricultural joint ventures at the Cadiz/Fenner Property that put some of the groundwater currently being lost to evaporation from the underlying aquifer system to immediate beneficial use. We have farmed portions of the Cadiz/Fenner Property since the late 1980s relying on groundwater from the aquifer system for irrigation. The site is well-suited for various permanent and seasonal crops. Presently, the property has 2,100 acres leased for cultivation of citrus.

Our current working capital requirements relate largely to the final development activities associated with the Water Project and those activities consistent with the Water Project related to further development of our land and agricultural assets. While we continue to believe that the ultimate implementation of the Water Project will provide the primary source of our future cash flow, we also believe there is significant additional value in our underlying agricultural assets.

We also continue to explore additional uses of our land and water resource assets, including renewable energy development, the marketing of our approved desert tortoise land conservation bank (which is located on our properties outside the Water Project area) and other long-term legacy uses of our properties, such as habitat conservation and cultural development.

(a) General Development of Business

We are a Delaware corporation formed in 1992. As part of our historical business strategy, we have conducted our land acquisition, water development activities, agricultural operations, and other land development initiatives to maximize the long-term value of our properties and future prospects (see "Narrative Description of Business").

Our initial focus was on the acquisition of land and the assembly of contiguous land holdings through property exchanges to prove the quantity and quality of water resources in this Mojave Desert region of eastern San Bernardino County. We subsequently established agricultural operations on our properties in the Cadiz/Fenner Valley and sought to develop the water resources underlying that site. In 1993, we secured permits to develop up to 9,600 acres of agriculture at the Cadiz/Fenner Property and withdraw more than one million acre-feet of groundwater from the underlying aquifer system. The agricultural operations initially began on 1,900 acres and featured vineyards, citrus orchards and seasonal vegetables.

The agricultural development demonstrated that the geology and hydrology of the property is also uniquely suited and able to support a project that could offer additional water supplies and water storage opportunities in Southern California.

In 1997, we entered into the first of a series of agreements with the Metropolitan Water District of Southern California ("Metropolitan"), the largest water wholesaler in the region and owner of the nearby CRA, to jointly design, permit, and build such a project ("2002 Project"). Between 1997 and 2002, we and Metropolitan received substantially all of the state and federal approvals required to construct and operate the 2002 Project, including a Record of Decision ("ROD") from the U.S. Department of the Interior, which approved the 2002 Project and offered a right-of-way for construction of facilities, including a 35-mile water conveyance pipeline from the Cadiz/Fenner Property to the CRA across federal lands. In October 2002, Metropolitan's Board of Directors considered whether or not to accept the right-of-way permit offered by the federal government. By a very narrow margin, the Metropolitan Board voted not to accept the right-of-way grant nor proceed any further with the 2002 Project.

Following Metropolitan's decision, we began to pursue new partnerships and redesigned the 2002 Project to meet the changing needs of Southern California's water providers. We refocused on the safe and sustainable management of the aquifer system beneath our Cadiz/Fenner Property with the goal of providing a reliable, annual water supply and storage for the region.

In 2009, we commissioned environmental consulting firm CH2M HILL to complete a comprehensive study of the water resources at the Project area. Following more than one year of analysis, CH2M HILL released its study of the aquifer system in February 2010. Utilizing new models produced by the U.S. Geological Survey in 2006 and 2008, the study estimated the total groundwater in storage in the aquifer system to be between 17 and 34 million acre-feet, a quantity on par with Lake Mead, the nation's largest surface reservoir. The study also identified a renewable annual supply of native groundwater in the aquifer system currently being lost to evaporation. CH2M HILL's findings, which were peer reviewed by leading groundwater experts, confirmed that the aquifer system could sustainably support a water supply and storage project that would capture and conserve groundwater lost to evaporation in an initial phase and import and store water in the aquifer system in a second phase (see "Water Project" below).

In September 2008 we entered into a lease agreement with the Arizona & California Railroad Company ("ARZC") to utilize its existing right-of-way between the Cadiz property and the CRA to construct a pipeline able to deliver water from the property into the existing Southern California water transportation system. Although the federal government had approved a right-of-way for the 2002 Project's conveyance pipeline over open federal land, the Water Project proposed co-locating the conveyance pipeline within this existing railroad right-of-way from Cadiz to the CRA near Rice, CA. This route was approximately 10 miles longer than the 2002 route, but it avoided impacts to desert habitats that would have occurred with the 2002 route. In 2009, the United States Department of the Interior evaluated the Water Project's proposed use of an existing railroad right-of-way for a water conveyance pipeline and summarized that the proposed pipeline was within the scope of the right-of-way and required no federal Bureau of Land Management ("BLM") permitting.

Between 2010 and 2011 six Southern California water providers executed option agreements to participate in the new Water Project. Under our lease agreement, the ARZC also reserved water from the Water Project to further a variety of critical railroad purposes.

In 2011, an environmental review and permitting process for the Water Project was commenced in accordance with the California Environmental Quality Act (CEQA) led by Santa Margarita Water District ("SMWD"), one of the Project participants. After an extensive public review process as required by CEQA, the SMWD Board of Directors certified the Final Environmental Impact Report ("FEIR") on July 31, 2012 and became the first participating agency to convert its option agreement to a Water Purchase and Sale Agreement for firm supplies from the Water Project. On October 1, 2012, San Bernardino County ("County"), a Responsible Agency under CEQA, also adopted CEQA findings and approved the Project's Groundwater Monitoring, Management and Mitigation Plan ('GMMMP" or "Plan") and the withdrawal of 50,000 acre-feet (AF) of water per year for 50 years.

Following receipt of these important approvals, we were named as a real-party-in-interest in nine lawsuits brought by parties seeking a reconsideration of the environmental documents and limitation of the Project approvals granted by SMWD and the County. Six lawsuits brought by two petitioners ultimately proceeded to trial in Orange County Superior Court ("Court") before one judge in December 2013. In September 2014, the Court issued final signed judgments ("Judgments") formally denying all claims brought in the six remaining lawsuits. The Judgments upheld the conclusions of the environmental review and the approvals of the Water Project.

During the fourth quarter of 2014, the petitioners in the six original Court cases filed independent appeals of the six Judgments with the California Court of Appeals, Fourth District. In May 2016, a three-justice panel unanimously ruled in favor of the Water Project and sustained the lower court rulings. Thereafter, all litigation was dismissed. As a result, the approvals of the Project by the County and SMWD were deemed final and the Company's permits to capture and conserve 2.5 million acre-feet of groundwater over 50 years under the terms of the groundwater management plan have vested under applicable law.

While defending the Project's CEQA permits, the Company and the Water Project participants also began a dialogue with BLM in response to federal appropriations language that required the Interior Department to certify that the Project's proposed use of the ARZC right-of-way was within the scope of the original right-of-way grant. The dialogue with the BLM occurred over more than two years and culminated in a controversial guidance opinion issued by the BLM California office in October 2015 that did not certify the Project's proposed use. The Company, the ARZC, Water Project participants, Water Project supporters, members of Congress, the railroad industry and third parties that utilize railroad rights-of-way to co-locate infrastructure across the country voiced concern about the guidance opinion via letters, statements and meetings with the BLM. In October 2017, the BLM withdrew its October 2015 letter and concluded that the Project is within the scope of the ARZC ROW and therefore required nothing further from the BLM to construct the conveyance pipeline within the ARZC ROW.

Prior to moving forward to construction of the Project facilities, the Company is focused on finalizing contracts with Project participating agencies, arranging final terms to convey water in California's water transportation infrastructure, and completing final permitting, and implementation, including final design.

See "Narrative Description of Business" below for more detail.

(b) Financial Information about Industry Segments

Our primary business is to acquire and develop land with water resources for various uses, including groundwater supply, groundwater storage and agriculture. As a result, our financial results are reported in a single segment. See Consolidated Financial Statements. See also Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations".

(c) Narrative Description of Business

Our business strategy is to pursue the development of our landholdings for their highest and best uses. At present, our development activities include water resource, land and agricultural development.

Water Resource Development

Our portfolio of land and water resource assets is located in proximity to the Colorado River and the Colorado River Aqueduct ("CRA"), the principal source of imported water for Southern California, and provides us with the opportunity to participate in a variety of water supply, water storage, and conservation programs with public water agencies and other partners.

The Water Project

The Cadiz Valley Water Conservation, Recovery and Storage Project ("Water Project") is designed to capture and conserve renewable native groundwater currently being lost to evaporation from the aquifer system underlying our Cadiz/Fenner Property, and provide a new reliable water supply for approximately 400,000 people in Southern California. In this first phase, Phase I, the total quantity of groundwater to be recovered and conveyed to Water Project participants will not exceed a long-term annual average of 50,000 acre-feet per year for 50 years. The Water Project also offers participants in Phase I the ability to carry-over their annual supply and store it in the groundwater basin from year to year. Up to 150,000 acre-feet can be stored as part of Phase I. A second phase of the Water Project, Phase II, will offer an additional 850,000 acre-feet of capacity that can store imported water supplies at the project area for future dry years.

Water Project facilities required for Phase I primarily include, among other things:

·High-yield wells designed to efficiently recover available native groundwater at the Water Project area;

A water conveyance pipeline to deliver water from the well-field to the CRA for further delivery to Project participants;

· An energy source to provide power to the well-field, pipeline and pumping facilities; and

A water treatment facility at the wellfield to meet anticipated water quality requirements set by the operator of the CRA.

If an imported water storage component of the Project is ultimately implemented in Phase II, the following additional facilities would be required, among other things:

Facilities to pump water through the conveyance pipeline from the CRA to the Water Project well-field and/or through the Company's pipeline from Barstow, CA, to Cadiz; and

Spreading basins, which are shallow settling ponds that will be configured to efficiently percolate water from the ground surface down to the water table using subsurface storage capacity for the storage of water.

Phase I

Phase I has been fully reviewed and permitted in accordance with the California Environmental Quality Act (CEQA). In May 2016, all permits and approvals were sustained in the California Court of Appeal and are no longer subject to further litigation. As a result, the Project presently is permitted to provide an average of 50,000 acre-feet of water for 50 years to meet municipal and industrial (M&I) water needs in Southern California.

In October 2017, the US BLM provided a letter finding that the Project's proposed use of a portion of the ARZC ROW from Cadiz to Freda, California to construct and operate the Water Project's water conveyance pipeline and related railroad improvements is within the scope of the original right-of-way grant and not subject to additional permitting. The buried pipeline would be constructed parallel to the railroad tracks and be used to convey water between our Cadiz Valley property and the CRA.

Construction of Phase I Water Project facilities that would allow for the delivery of up to 75,000 acre-feet in any one year is expected to cost approximately \$310 million and will require capital financing that we expect will be secured by definitive Purchase and Sale Agreements with Project participants and the new facility assets.

In addition to finalizing construction financing terms, prior to construction, the Water Project must (1) finalize contracts with Project participating agencies, (2) secure transportation arrangements to deliver water into each participant's service area, and (3) complete final design, engineering and construction permitting. Below is a discussion of present activities to advance these objectives.

(1) Contracts with Public Water Agencies or Private Water Utilities

The Company has executed Letters of Intent ("LOIs"), option agreements and purchase agreements, or contracts (collectively, "Agreements") with public water agencies and private water utilities in California during the Project's development. These participating agencies serve more than one million customers in cities throughout California's San Bernardino, Riverside, Los Angeles, Orange, Imperial and Ventura Counties. Twenty percent of Water Project supplies have been reserved for San Bernardino County-based agencies.

Santa Margarita Water District ("SMWD"), Orange County's second largest water provider, was the first participant to convert its option agreement and adopt resolutions approving a Water Purchase and Sale Agreement for 5,000 acre-feet of water. The structure of the SMWD purchase agreement calls for an annually adjusted water supply payment, plus a pro rata portion of the capital recovery charge and operating and maintenance costs. The capital recovery charge is calculated by amortizing the total capital investment by the Company over a 30-year term.

Agreements entered into prior to the beginning of the CEQA review process provide to participants the right to acquire an annual supply of 5,000 acre-feet of water at a \$775 per acre-foot (2010 dollars, subject to adjustment), which is competitive with the incremental cost of new water. In addition, these agencies received options to acquire storage rights in the Water Project to allow for the management of their Water Project supplies in complement with their own water resources. Up to 150,000 acre-feet of carry-over storage is available for reservation by the agencies prior to construction commencement. Participants that elect to achieve year-to-year flexibility in their use of Project water by utilizing carry-over storage will reserve storage capacity for \$1,500 per acre-foot prior to construction.

LOIs that have been entered into since completion of the CEQA review process reserve supplies from the Water Project at \$960 per acre-foot (2014 dollars, subject to adjustment). These LOIs also include the option to reserve carry-over storage capacity for \$1,500 per acre-foot prior to construction.

Presently, total reservations of supplies from the Water Project via these Agreements are in excess of Water Project capacity. Prior to construction of the Water Project, we expect to convert existing option agreements and LOIs to purchase agreements. We are working collaboratively with the participating water agencies to account for any oversubscription in the final definitive Purchase and Sale Agreements and allow for inclusive participation across Southern California.

(2) Conveyance Arrangements

Prior to construction of the Water Project, and in coordination with final participation contracts described in (1) above, an agreement and terms for moving water supplies in the CRA must be negotiated with Metropolitan Water District of Southern California ("Metropolitan"), which owns and controls the CRA.

Water supplies conserved by the Project would enter the CRA at the termination of the project's conveyance pipeline near Rice, CA. The CEQA process considered a variety of options to enter the CRA and assumed final entry into the CRA would be determined by MWD in consultation with the Project's participating agencies. Once arrangements are reached, the Metropolitan Board would take action as a responsible agency under CEQA regarding the terms and conditions of the Water Project's use of the CRA to transport water to its participating agencies.

There is no application yet before Metropolitan related to entry and transportation of Project supplies, but we expect such a formal application will be filed by SMWD, the Project's lead agency, when the Project's contractual arrangements with participants are finalized. Any agreement as to the terms and conditions of the Water Project's use of the CRA will be negotiated between and entered into by Metropolitan and the Project participating agencies, not the Company. Discussions with Metropolitan regarding conveyance of Project water in the CRA have been led by SMWD, the Water Project's CEQA lead agency, and are ongoing.

Water Project supplies entering the CRA will comply with Metropolitan's published engineering, design and water quality standards and will be subject to all applicable fees and charges routinely established by Metropolitan for the conveyance of water within its service territory. Total dissolved solids or salts in the Cadiz water supply are substantially lower than the water in the CRA. Other constituents that are already lower than State and Federal standards but potentially higher than the water in the CRA will be lowered via treatment to ambient levels or removed entirely. Extensive pilot testing of treatment options at the Project area in 2018 confirmed the capability of cost-effective treatment technologies to successfully remove such constituents. We believe there are multiple benefits that can be secured by MWD upon making space reasonably available for the Water Project supplies and providing the region the flexibility of relying on the Water Project in both wet and dry years.

Northern Pipeline

We currently own a 96-mile long, 30-inch wide existing idle natural gas pipeline that extends northwest from the Cadiz/Fenner Property terminating in Barstow, California, and have entered into a purchase agreement for a further 124-mile segment connecting this line from Barstow to Wheeler Ridge, California. The pipeline crosses San Bernardino, Los Angeles and Kern counties, including the Barstow and Bakersfield areas, which serve as hubs for water delivered from northern and central California to communities in Southern California.

Initial feasibility studies indicated that, upon conversion, the 30-inch pipeline could transport between 18,000 and 30,000 acre-feet of water per year between the Water Project area and the Central and Northern California water transportation networks. As a result, this pipeline could diversify delivery opportunities for the Water Project and the Company's broader water resource development efforts.

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If this pipeline were to become operational, then the Water Project would link the Colorado River Aqueduct and State Water Project systems - two of Southern California's main water delivery systems - providing flexible opportunities for both supply and storage. The Northern Pipeline could deliver Phase I supplies, either directly or via exchange, to existing and potential customers of Phase I of the Project. Any use of the pipeline would be conducted in conformity with the Water Project's groundwater management plan and is subject to further CEQA evaluation and potentially federal environmental permitting.

In December 2018, the Company entered into an amendment (the "Amendment") to its option agreement ("Option Agreement") with EPNG to purchase the 124-mile segment of the pipeline. The Option Agreement, as amended, allows the Company to purchase the 124-mile pipeline segment with an initial payment of \$2 million and a subsequent payment of \$18 million ("Deferred Payment"). Following entry into the Amendment, the Company exercised the option and entered into a purchase agreement for the 124-mile pipeline, providing to EPNG the initial consideration of \$2 million.

Under our purchase agreement with EPNG, the Deferred Payment is due to EPNG within 30 days of satisfaction of certain conditions precedent by EPNG. We do not currently have the cash resources on hand to satisfy the Deferred Payment. If we do not complete the purchase of the additional 124-mile pipeline, then our Northern Pipeline opportunities will be limited to the 96-mile segment that we own.

(3) Final Design and Permitting

As a component of completing contract terms with participating agencies and related wheeling arrangements with Metropolitan, we must also finalize design of Project facilities and acquire relevant construction permits with state and local agencies. Together with SMWD we have engaged engineering and environmental consultants to complete design plans for the 43-mile pipeline, Project wellfield, any necessary water treatment facilities, and facilities required to connect to the Metropolitan system at and near the CRA. This work is ongoing and expected to proceed in coordination with the negotiation of contracts and wheeling arrangements.

Once facility design and layout near completion, we will need to obtain additional permits and approvals from state or local entities prior to construction. This may include but is not limited to confirmation of existing access rights, easements and rights-of-way, for areas that may be crossed by Project facilities in the Project area subject to final pipeline configuration.

Phase II

In a second phase of the Water Project, we expect to make available up to one million acre-feet of capacity in the aquifer system for storage of surplus water conveyed to the Project area. Under the Imported Water Storage Component, or Phase II, water from the Colorado River or the State Water Project, via some or all of an existing 220-mile pipeline that extends from Wheeler Ridge, California southeast to Barstow and there onwards to our Cadiz/Fenner property (see "Northern Pipeline", above), could be conveyed to spreading basins that would be constructed on our private property to percolate into the aquifer system and held in storage. When needed, previously stored water would be returned to Phase II participating agencies via the Project's 43-mile conveyance pipeline to the CRA, described above, or the Northern Pipeline.

Phase II has already been the subject of programmatic environmental review in accordance with CEQA, but still requires project-level environmental review and permitting once participating agencies are identified. Phase II may also require federal permits subject to the National Environmental Policy Act, or NEPA.

Agricultural Development

Our Cadiz/Fenner Property, consisting of approximately 35,000 acres of desert land, is zoned for agricultural development. In 1993, we secured conditional use permits to develop agriculture on up to 9,600 acres of the property and withdraw groundwater from the underlying aquifer system for irrigation. We have since maintained various levels of crops on the Property as we developed the Water Project. In 2013, we entered into a lease agreement with a third party to develop up to 1,480 acres of lemons at the site, 640 acres of which have been planted to date.

In February 2016, we entered into a lease agreement with Fenner Valley Farms LLC ("FVF"), a subsidiary of Water Asset Management LLC, a related party, pursuant to which FVF leased, for a 99-year term, 2,100 acres at the Cadiz/Fenner property to be used to plant, grow and harvest agricultural crops ("FVF Lease"). As consideration for the lease, FVF paid us a one-time payment of \$12,000,000 in February 2016. The acreage that was historically farmed by us and the acreage that is leased to a third party to develop lemons was included within the leased acreage. Following entry into this lease, we are no longer directly involved in the current agricultural operations at the site and all agricultural revenue is derived pursuant to the FVF Lease.

As part of the agricultural development to be conducted under the lease arrangements, the groundwater production capacity of the property's existing well-field is expected to be enhanced through infrastructure improvements that are complementary to the Water Project. While any additional well-field development for agricultural use would be financed by our agricultural partners as provided under our agricultural lease arrangements, we retained a call feature that allows us, at any time in the initial 20 years, to acquire the well-field and integrate any new agricultural well-field infrastructure developed into the Water Project's facilities.

Additional Eastern Mojave Properties

We also own approximately 11,000 acres outside of the Cadiz/Fenner Valley area in two locations within the Mojave Desert in eastern San Bernardino County.

Our primary landholding outside of the Cadiz area is approximately 9,000 acres in the Piute Valley. This landholding is located approximately 15 miles from the resort community of Laughlin, Nevada, and about 12 miles from the Colorado River town of Needles, California. Extensive hydrological studies, including the drilling and testing of a full-scale production well, have demonstrated that this landholding is underlain by high-quality groundwater. The aquifer system underlying this property is naturally recharged by precipitation (both rain and snow) within a watershed of approximately 975 square miles and could be suitable for a water supply project, agricultural development or solar energy production. These private properties are proximate to or border areas designated by the federal government as National Monument, Critical Desert Tortoise Habitat and/or Desert Wilderness Areas and are suitable candidates for preservation and conservation (see "Land Conservation Bank" below).

Additionally, we own acreage located near Danby Dry Lake in Ward Valley, approximately 30 miles southeast of our Cadiz/Fenner Valley properties. The Danby Dry Lake property is located approximately 10 miles north of the CRA. Initial hydrological studies indicate that the area has excellent potential for a water supply project. Certain of the properties in this area may also be suitable for agricultural development and/or preservation and conservation.

Land Conservation Bank

Approximately 7,500 acres of our properties outside of the Cadiz/Fenner Valley area in the Piute Valley are located within terrain designated by the federal government as Critical Desert Tortoise Habitat and/or Desert Wilderness Areas and offer limited development opportunities. In February 2015, the California Department of Fish and Wildlife approved our establishment of the Fenner Valley Desert Tortoise Conservation Bank ("Fenner Bank"), a land conservation bank that makes available these properties for mitigation of impacts to tortoise and other sensitive species that would be caused by development across the Southern California desert. Under its enabling documents, the Fenner Bank offers credits that can be acquired by entities that must mitigate or offset impacts linked to planned development. For example, this bank can service the mitigation requirements of renewable energy, military, residential and commercial development projects being considered throughout the desert. Credits sold by the Fenner Bank will fund our permanent preservation of the land as well as research by outside entities, including San Diego Zoo Global, into desert tortoise health and species protection.

Northern Pipeline

The Northern Pipeline, described above, also represents new opportunities for the Company independent of the Water Project to offer water transportation to locations along the 220-mile pipeline route that are not presently interconnected by existing water infrastructure. The pipeline crosses California's major water infrastructure as well as urban and agricultural centers and can be utilized to transport water, independent of the Water Project, between users who presently lack direct interconnections along the pipeline route. We are presently engaged in discussions with parties that may be interested in such transportation. The ability to serve points along the 124-mile portion of the pipeline from Barstow to Wheeler Ridge is dependent upon completion of certain conditions precedent under our purchase agreement with EPNG, described above. If the acquisition of the 124-mile segment is not completed, then our Northern Pipeline opportunities will be limited to the 96-mile segment that we own.

Other Opportunities

Other opportunities in the water and agricultural or related infrastructure business complementary to our current objectives could provide new opportunities for our Company.

Over the longer-term, we believe the population of Southern California, Nevada and Arizona will continue to grow, and that, in time, the economics of commercial and residential development at our properties may become attractive.

We remain committed to the sustainable use of our land and water assets, and will continue to explore all opportunities for environmentally responsible development of these assets. We cannot estimate which of these opportunities will ultimately be utilized.

Seasonality

Our water resource development activities are not seasonal in nature.

Our farming operations have been limited to the cultivation of lemons and grapes/raisins and spring and fall plantings of vegetables on the Cadiz Valley properties. These operations have been subject to the general seasonal trends that are characteristic of the agricultural industry.

Competition

We face competition for the acquisition, development and sale of our properties from a number of competitors. We may also face competition in the development of water resources and agriculture associated with our properties. Since California has scarce water resources and an increasing demand for available water, we believe that location, price and reliability of delivery are the principal competitive factors affecting transfers of water in California.

Employees

As of December 31, 2018, we employed 9 full-time employees (i.e. those individuals working more than 1,000 hours per year). We believe that our employee relations are good.

Regulation

Our operations are subject to varying degrees of federal, state and local laws and regulations. As we proceed with the development of our properties, including the Water Project, we will be required to satisfy various regulatory authorities that we are in compliance with the laws, regulations and policies enforced by such authorities. Groundwater development, and the export of conserved groundwater for sale to entities such as public water agencies, is subject to regulation by specific existing statutes, in addition to general environmental statutes applicable to all development projects. Additionally, we must obtain a variety of approvals and permits from state and federal governments with respect to issues that may include environmental issues, issues related to special status species, issues related to the public trust, and others. Because of the discretionary nature of these approvals and concerns, which may be raised by various governmental officials, public interest groups and other interested parties during both the development and the approval process, our ability to develop properties and realize income from our projects, including the Water Project, could be delayed, reduced or eliminated.

Access to Our Information

Our annual, quarterly and current reports, proxy statements and other information are filed with the Securities and Exchange Commission ("SEC") and are available free of charge through our web site, www.cadizinc.com, as soon as reasonably practical after electronic filing of such material with the SEC.

Our SEC filings are also available to the public at the SEC website at www.sec.gov. You may also read and copy any document we file at the SEC's public reference room located at 100 F Street N.E., Washington D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room.

ITEM 1A. Risk Factors

Our business is subject to a number of risks, including those described below.

Our Development Activities Have Not Generated Significant Revenues

At present, our development activities include water resource and agricultural development at our San Bernardino County properties. We have not received significant revenues from our development activities to date and we do not know when, if ever, we will receive operating revenues sufficient to offset the costs of our development activities. As a result, we continue to incur a net loss from operations.

We May Never Generate Significant Revenues or Become Profitable Unless We Are Able to Successfully Implement Programs to Develop Our Land Assets and Related Water Resources

We do not know the terms, if any, upon which we may be able to proceed with our water and other development programs. Regardless of the form of our water development programs, the circumstances under which supplies or storage of water can be developed and the profitability of any supply or storage project are subject to significant uncertainties, including the risk of variable water supplies and changing water allocation priorities. Additional risks include our ability to obtain all necessary regulatory approvals and permits, litigation by environmental or other groups, unforeseen technical difficulties, general market conditions for water supplies, and the time needed to generate significant operating revenues from such programs after operations commence.

The Development of Our Properties Is Heavily Regulated, Requires Governmental Approvals and Permits That Could Be Denied, and May Have Competing Governmental Interests and Objectives

In developing our land assets and related water resources, we are subject to local, state, and federal statutes, ordinances, rules and regulations concerning zoning, resource protection, environmental impacts, infrastructure design, subdivision of land, construction and similar matters. Our development activities are subject to the risk of adverse interpretations or changes to U.S. federal, state and local laws, regulations and policies. Further, our development activities require governmental approvals and permits. If such permits were to be denied or granted subject to unfavorable conditions or restrictions, our ability to successfully implement our development programs would be adversely impacted.

Prior to construction of the Water Project, terms for moving water supplies in the Colorado River Aqueduct must be negotiated with Metropolitan Water District of Southern California ("Metropolitan"), which owns and controls the CRA. Water Project supplies entering the CRA will comply with Metropolitan's published engineering, design and water quality standards and will be subject to all applicable fees and charges routinely established by Metropolitan for the conveyance of water within its service territory. The Metropolitan Board must consider and approve the terms and conditions of the Water Project's use of the CRA to transport water to its participating agencies. The Project has not yet filed an application for access to the CRA at Metropolitan, but we expect such a formal application may be filed in 2019 as the Project's contractual arrangements with participants are finalized.

Beginning in 2017, the Company's activities have also been the target of state legislation and state administrative communications that could ultimately result in additional permitting and review requirements for the Water Project. In the 2017 – 2018 session, the Legislature considered Assembly Bill 1000 ("AB 1000") and Senate Bill 120 ("SB 120"), bills that would have created new review requirements prior to the conveyance of groundwater from groundwater basins in the California desert within California's public water transportation facilities, including the CRA. Both AB 1000 and SB 120 were held on the suspense file by the California Senate Committee on Appropriations, stopping the bills from further consideration by the Legislature in the 2017 – 2018 session. On February 15, 2019, Senate Bill 307 ("SB 307") was introduced in Legislature prior to the close of the bill introduction deadline for the 2019 – 2020 session. The text of SB 307 is identical to 2018's SB 120 and seeks to create new review requirements prior to the conveyance of groundwater from desert groundwater basins within California's public water transportation facilities. We cannot be certain whether SB 307 would ever be adopted and, if so, to what extent SB 307 would affect the permitting requirements for the Project.

In October 2017, we received a letter from the California State Lands Commission ("Commission") advising that the Commission recently determined for the first time that the State of California owns "in fee" a 200-foot-wide, 1-mile long strip of land beneath the existing Arizona and California Railroad ("ARZC") right-of-way within which we plan to construct the Water Project's conveyance pipeline. The Commission letter asserts that if the Company intends to cross the parcel, we would require a lease from the Commission subject to additional environmental review. We cannot predict with certainty at this time whether a lease from the Commission will be required or pursued, as the Company already holds a lease from the ARZC to access its right-of-way over this parcel.

In December 2018, we received a letter from the California Department of Fish and Wildlife ("CDFW") related to permits that the Water Project must secure under CDFW's Land and Streambed Alteration ("LSA") program prior to construction of the Project's 43-mile conveyance pipeline. The letter described ongoing study of springs in the watershed surrounding the project area and asserts that further environmental review under the California Environmental Quality Act ("CEQA") may be required prior to processing of the LSA permit applications. The CDFW review of LSA permits is to be confined to localized plans within ephemeral streambeds along the pipeline route, not springs, which is a matter in the purview of the CEQA Lead Agency and the County of San Bernardino, a CEQA Responsible Agency with an oversight role over groundwater in the Project area. The letter has been provided to the Lead Agency and the County for review. We cannot predict with certainty at this time whether further environmental review will be required or pursued.

Finally, the statutes, regulations and ordinances governing the approval processes provide third parties the opportunity to challenge proposed plans and approvals. Opposition from third parties will cause delays and increase the costs of our development efforts or preclude such development entirely. While we have worked with representatives of various environmental and third-party interests and agencies to minimize and mitigate the impacts of our planned projects, certain groups may remain opposed to our development plans and pursue legal action. In 2018, the Center for Biological Diversity ("CBD") and National Parks Conservation Association ("NPCA") filed lawsuits against the U.S. Bureau of Land Management ("BLM") and others challenging BLM's determination that the Company's use of the ARZC right-of-way from the ARZC for a pipeline and related facilities may proceed without additional permitting from the BLM. In 2018, we intervened in the two consolidated federal court matters in order to protect our interests. Both matters are being heard jointly in U.S. Federal Court this summer. CBD and NPCA have filed previous unsuccessful actions against the Company and the Water Project; however, we cannot predict what impact, if any, this current lawsuit may have on the Company or Water Project.

Our Failure to Make Timely Payments of Principal and Interest on Our Indebtedness or To Obtain Additional Financing Will Impact our Ability to Implement Our Asset Development Programs

As of December 31, 2018, we had total indebtedness outstanding to our lenders of approximately \$139.3 million. Approximately \$66.1 million of our indebtedness is secured by our assets and is due in May 2021 (see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources"). To the extent that we do not make principal and interest payments on the indebtedness when due, or if we otherwise fail to comply with the terms of agreements governing our indebtedness, we may default on our obligations. Additionally, the Company has principal and interest payments aggregating to approximately \$79.6 million coming due in March 2020 related to its 7.00% Convertible Senior Notes ("Convertible Senior Notes") to the extent the noteholders, who have the right to convert at any time into the Company's common stock at a conversion rate of \$6.75 per share, do not convert prior to March 2020 or if we do not exercise the options we have with parties holding 95% of our Convertible Senior Notes that allow us, at our sole option, at any time prior to December 5, 2019, to extend the maturity of the Convertible Senior Notes to September 5, 2021 (see Note 13 to the Consolidated Financial Statements, "Subsequent Events"). The Company's Senior Secured Debt of approximately \$66.1 million as of December 31, 2018, could also become due as early as December 2019, if we have not exercised the option agreements or the Convertible Senior Notes have not been converted by that time and the Company's stock price is less than 120% of the conversion rate and according to terms of the debt agreement (see Note 6 to the Consolidated Financial Statements, "Long-Term Debt and Lease Obligation"). Additionally, the completion of the acquisition of the 124-mile extension of our Northern Pipeline will require an \$18 million payment within thirty days of satisfaction of certain conditions precedent under our purchase agreement with EPNG. We do not currently have the cash resources on hand to make this payment in full.

We will continue to require additional working capital to meet our cash resource needs until such time as our asset development programs, including the Water Project, produce revenues sufficient to fund operations. If we cannot raise funds if and when needed, we might be forced to make substantial reductions in our operating expenses, which could adversely affect our ability to implement our current business plan and ultimately our viability as a company. We cannot assure you that our current lenders, or any other lenders, will give us additional credit should we seek it. If we are unable to obtain additional credit, we may engage in further financings. Our ability to obtain financing will depend, among other things, on the status of our asset development programs and general conditions in the capital markets at the time funding is sought. Any further equity or convertible debt financings would result in the dilution of ownership interests of our current stockholders.

The Conversion of Our Outstanding Convertible Notes into Common Stock Would Dilute the Percentage of Our Common Stock Held by Current Stockholders

In connection with our March 2013 debt refinance (see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations – Liquidity and Capital Resources"), we issued approximately \$53.5 million in convertible notes, under which principal and accrued interest were convertible into common stock at \$8.05 per share at the election of our noteholders prior to maturity in March 2018 (the "2018 Convertible Notes"). In December 2015, certain of the noteholders exchanged their 2018 Convertible Notes for Convertible Senior Notes under which principal and accrued interest can be converted into common stock at \$6.75 per share at the election of the noteholders prior to a maturity date in March 2020. In April 2016, we issued an additional \$8.0 million in original principal amount of the Convertible Senior Notes. In March 2019, the Company entered into option agreements with parties holding 95% of our Convertible Senior Notes that allow us, at our sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021. As of the date of filing of this annual report, our lenders have converted \$12.857 million in original principal amount of the notes, leaving a balance of \$48.613 million in original principal amount of these notes. An election by our lenders to convert all or a portion of principal and accrued interest under the Convertible Senior Notes into common stock will dilute the percentage of our common stock held by current stockholders up to 11.0 million shares as of the date of filing of this annual report, and up to an additional 0.8 million shares if held to maturity.

The Issuance of Equity Securities Under At Market Issuance Sales Agreements and Management Equity Incentive Plans Will Cause Dilution

We have and may continue to issue equity securities pursuant to at market issuance sales agreements. Further, our compensation programs for management emphasize long-term incentives, primarily through the issuance of equity securities and options to purchase equity securities. It is expected that plans involving the issuance of shares, options, or both will be submitted from time to time to our stockholders for approval. In the event that any such plans are approved and implemented, the issuance of shares and options under such plans may result in the dilution of the ownership interest of other stockholders and will, under currently applicable accounting rules, result in a charge to earnings based on the value of our common stock at the time of issue and the fair value of options at the time of their award. The expense would be recorded over the vesting period of each stock and option grant.

The Volatility of Our Stock Price Could Adversely Affect Current and Future Stockholders

The market price of our common stock is volatile and fluctuates in response to various factors which are beyond our control. Such fluctuations are particularly common in companies such as ours, which have not generated significant revenues. The following factors, in addition to other risk factors described in this section, could cause the market price of our common stock to fluctuate substantially:

- ·developments involving the execution of our business plan;
- ·disclosure of any adverse results in litigation;
- ·regulatory developments affecting our ability to develop our properties;
- ·the dilutive effect or perceived dilutive effect of additional debt or equity financings;

- perceptions in the marketplace of our company and the industry in which we operate; and
- •general economic, political and market conditions.

In addition, the stock markets, from time to time, experience extreme price and volume fluctuations that may be unrelated or disproportionate to the operating performance of companies. These broad fluctuations may adversely affect the market price of our common stock. Price volatility could be worse if the trading volume of our common stock is low.

ITEM 1B. Unresolved Staff Comments

Not applicable at this time.

ITEM 2. Properties

Following is a description of our significant properties.

The Cadiz/Fenner Valley Property

We own approximately 35,000 acres of largely contiguous land in the Cadiz and Fenner valleys of eastern San Bernardino County, California (the "Cadiz/Fenner Property"). This area is located approximately 30 miles north of the Colorado River Aqueduct ("CRA"). We first began acquiring this land in 1983 and shortly thereafter conducted investigations into the feasibility of agricultural development at these lands and overall access to groundwater. These investigations confirmed the availability of high-quality groundwater in quantities appropriate for agricultural development.

Additional independent geotechnical and engineering studies conducted since 1985 have confirmed that the Cadiz/Fenner Property overlies a significant aquifer system that would not only support agricultural development, but also is ideally suited for the conservation and recovery of indigenous groundwater, as well as the storage of conserved or imported water, as contemplated by the Water Project. See Item 1, "Business – Narrative Description of Business – Water Resource Development".

Additional Eastern Mojave Properties

In addition to the Cadiz/Fenner Valley property, we also own approximately 11,000 additional acres in the eastern Mojave Desert portion of San Bernardino County, California at two separate properties.

The first property consists of approximately 9,000 acres in the Piute Valley. This landholding is located approximately 15 miles from the resort community of Laughlin, Nevada, and about 12 miles from the Colorado River town of Needles, California. Extensive hydrological studies, including the drilling and testing of a full-scale production well, have demonstrated that this landholding is underlain by high-quality groundwater. The aquifer system underlying this property is naturally recharged by precipitation (both rain and snow) within a watershed of approximately 975 square miles and could be suitable for a water supply project, agricultural development or solar energy production.

Certain of these properties are proximate to or border areas designated by the federal government as Critical Desert Tortoise Habitat and/or Desert Wilderness Areas and are suitable candidates for preservation and conservation. In February 2015, the California Department of Fish and Wildlife approved our establishment of the Fenner Valley Desert Tortoise Conservation Bank on approximately 7,500 acres of our Piute Valley properties. The Fenner Bank, which is the largest land bank in California dedicated to protecting the desert tortoise, offers credits that can be acquired by public and private entities required to mitigate or offset impacts to the desert tortoise linked to planned development. We are presently marketing these credits to a variety of planned developments in the region.

Additionally, we own nearly 2,000 acres near Danby Dry Lake in Ward Valley, approximately 30 miles southeast of our Cadiz/Fenner landholdings. Our Danby Dry Lake property is located approximately 10 miles north of the Colorado River Aqueduct. Initial hydrological studies indicate that it has excellent potential for a water supply project. Certain of the properties in this area may also be suitable for agricultural development and/or preservation and conservation.

Executive Offices

We lease approximately 7,200 square feet of office space in Los Angeles, California for our executive offices. The lease terminates in April 2019. Current base rent under the lease is approximately \$16,000 per month.

Cadiz Real Estate

In December 2003, we transferred substantially all of our assets (with the exception of our office sublease, and certain office furniture and equipment) to Cadiz Real Estate LLC, a Delaware limited liability company ("Cadiz Real Estate"). We hold 100% of the equity interests of Cadiz Real Estate and, therefore, we continue to hold 100% beneficial ownership of the properties that we transferred to Cadiz Real Estate. The Board of Managers of Cadiz Real Estate currently consists of two managers appointed by us.

Cadiz Real Estate is a co-obligor under our senior secured term loan, for which assets of Cadiz Real Estate have been pledged as security.

Because the transfer of our properties to Cadiz Real Estate has no effect on our ultimate beneficial ownership of these properties, we refer throughout this Report to properties owned of record either by Cadiz Real Estate or by us as "our" properties.

Debt Secured by Properties

Our assets have been pledged as collateral for \$66.1 million of senior secured debt outstanding as of December 31, 2018. Information regarding interest rates and principal maturities is provided in Note 6 to the Consolidated Financial Statements, "Long-Term Debt and Lease Obligations".

ITEM 3. Legal Proceedings

There are no material legal proceedings pending to which we are a party or of which any of our property is the subject.

ITEM 4. Mine Safety Disclosures

Not Applicable.

PART II

ITEM 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchase of Equity Securities

Our common stock is currently traded on The NASDAQ Global Market ("NASDAQ") under the symbol "CDZI." The following table reflects actual sales transactions for the dates that we were trading on NASDAQ, as reported by NASDAQ.

	High	Low
	Sales	Sales
Quarter Ended	Price	Price
2017:		
March 31	\$15.30	\$14.35
June 30	\$13.79	\$13.25
September 30	\$12.80	\$12.50
December 31	\$14.35	\$14.00
2018:		
March 31	\$13.70	\$13.05
June 30	\$13.25	\$12.95
September 30	\$11.15	\$10.50
December 31	\$10.45	\$10.11

On March 7, 2019, the high, low and last sales prices for the shares were \$9.98, \$9.49, and \$9.74, respectively.

As of March 7, 2019, the number of stockholders of record of our common stock was 71.

To date, we have not paid a cash dividend on our common stock and do not anticipate paying any cash dividends in the foreseeable future. Our senior secured term loan has covenants that prohibit the payment of dividends.

All securities sold by us during the three years ended December 31, 2018, which were not registered under the Securities Act of 1933, as amended, have been previously reported in accordance with the requirements of Rule 12b-2 of the Securities Exchange Act of 1934, as amended.

ITEM 6. Selected Financial Data

We are a smaller reporting company as defined by Reg. 240.12b-2 of the Securities and Exchange Act of 1934 and are not required to provide the information under this item. 20

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, the following discussion contains trend analysis and other forward-looking statements. Forward-looking statements can be identified by the use of words such as "intends", "anticipates", "believes", "estimates", "projects", "forecasts", "expects", "plans" and "proposes". Although we believe that the expectations reflected in these forward-looking statements are based on reasonable assumptions, there are a number of risks and uncertainties that could cause actual results to differ materially from these forward-looking statements. These include, among others, our ability to maximize value from our land and water resources and our ability to obtain new financings as needed to meet our ongoing working capital needs. See additional discussion under the heading "Risk Factors" above.

Overview

We are a land and water resource development company with over 45,000 acres of land in three areas of eastern San Bernardino County, California. Virtually all of this land is underlain by high-quality, naturally recharging groundwater resources, and is situated in proximity to the Colorado River and the Colorado River Aqueduct ("CRA"), California's primary mode of water transportation for imports from the Colorado River into the State. Our properties are suitable for various uses, including large-scale agricultural development, groundwater storage and water supply projects. Our main objective is to realize the highest and best use of these land and water resources in an environmentally responsible way.

We believe that the long-term highest and best use of our land and water assets will be realized through the development of a combination of water supply and storage projects at our properties. Therefore, we have primarily focused on the development of the Cadiz Valley Water Conservation, Recovery and Storage Project ("Water Project" or "Project"), which will capture and conserve millions of acre-feet of native groundwater currently being lost to evaporation from the aquifer system beneath our 34,500-acre property in the Cadiz and Fenner valleys of eastern San Bernardino County (the "Cadiz/Fenner Property"), and deliver it to water providers throughout Southern California (see "Water Resource Development"). A second phase of the Water Project would offer storage of up to one million acre-feet of imported water in the aquifer system. We believe that the ultimate implementation of this Water Project will provide a significant source of future cash flow.

The primary factor driving the value of such projects is ongoing pressure on California's traditional water supplies and the resulting demand for new, reliable supply solutions that can meet both immediate and long-term water needs. Available water supply in Southern California is constrained by regulatory restrictions on each of the State's three main water sources: the CRA, the State Water Project, which provides water supplies from Northern California to the central and southern parts of the state, and the Los Angeles Aqueduct, which delivers water from the eastern Sierra Nevada mountains to Los Angeles. Southern California's water providers rely on imports from these systems for a majority of their water supplies, but deliveries from these systems for a majority of their water supplies, but deliveries from these systems for a majority of their water supplies, but deliveries from all three into the region are consistently below capacity, even in wet years.

¹ One acre-foot is equal to approximately 326,000 gallons or the volume of water that will cover an area of one acre to a depth of one-foot. An acre-foot is generally considered to be enough water to meet the annual water needs of one average California household.

Further, the availability of supplies in California differs greatly from year to year due to natural hydrological variability. For nearly a decade, California struggled through an historic drought featuring record-low winter precipitation. Then, following a series of strong storms that delivered record amounts of rain and snow during the 2016-2017 winter, state officials declared an end to the drought. The 2017-2018 winter was abnormally dry for a majority of the State, yet the 2018-2019 winter is on track to be another wet year, with snowpack and rainfall well above average through February 2019. The rapid swings between wet and dry years challenge California's traditional supply system and support the need for reliable storage and local supply.

Given the variety of challenges and limitations faced by the State's existing infrastructure, Southern California water providers are presently pursuing investments in storage, supply and infrastructure to meet long-term demand. The Cadiz Water Project is a local supply option in Southern California that would help address the region's water supply challenges by providing new reliable supply and local groundwater storage opportunities (see "Water Resource Development", below) in both dry and wet years. Following a multi-year California Environmental Quality Act ("CEQA") review and permitting process, the Water Project received permits that allow the capture and conservation of 2.5 million acre-feet of groundwater over 50 years in accordance with the terms of a groundwater management plan approved by San Bernardino County, the public agency responsible for groundwater use at the project area.

In addition to our Water Project proposal, we are engaged in agricultural joint ventures at the Cadiz/Fenner Property that put some of the groundwater currently being lost to evaporation from the underlying aquifer system to immediate beneficial use. We have farmed portions of the Cadiz/Fenner Property since the late 1980s relying on groundwater from the aquifer system for irrigation and the site is well-suited for various permanent and seasonal crops. Presently, the property has 2,100 acres leased for cultivation of citrus.

Our current working capital requirements relate largely to the final development activities associated with the Water Project and those activities consistent with the Water Project related to further development of our land and agricultural assets. While we continue to believe that the ultimate implementation of the Water Project will provide the primary source of our future cash flow, we also believe there is significant additional value in our underlying agricultural assets.

We also continue to explore additional uses of our land and water resource assets, including renewable energy development, the marketing of our approved desert tortoise land conservation bank (which is located on our properties outside the Water Project area) and other long-term legacy uses of our properties, such as habitat conservation and cultural development.

Water Resource Development

The Water Project is designed to capture and conserve renewable native groundwater currently being lost to evaporation from the aquifer system underlying our Cadiz/Fenner Property, and provide a new reliable water supply for approximately 400,000 people in Southern California. In this first phase, Phase I, the total quantity of groundwater to be recovered and conveyed to Water Project participants will not exceed a long-term annual average of 50,000 acre-feet per year for 50 years.

The Water Project also offers participants in Phase I the ability to carry-over their annual supply and store it in the groundwater basin from year to year. Up to 150,000 acre-feet can be stored as part of Phase I. A second phase of the Water Project, Phase II, will offer up to one million acre-feet of storage capacity that can be used to hold water supplies imported to the project area.

Water Project facilities required for Phase I primarily include, among other things:

·High-yield wells designed to efficiently recover available native groundwater at the Water Project area;

A water conveyance pipeline to deliver water from the well-field to the CRA for further delivery to Project participants;

· An energy source to provide power to the well-field, pipeline and pumping facilities; and

A water treatment facility at the wellfield to meet anticipated water quality requirements set by the operator of the CRA.

If an imported water storage component of the Project is ultimately implemented in Phase II, the following additional facilities would be required, among other things:

Facilities to pump water through the conveyance pipeline from the CRA to the Water Project well-field and/or through the Company's pipeline from Barstow, CA, to Cadiz; and

Spreading basins, which are shallow settling ponds that will be configured to efficiently percolate water from the ground surface down to the water table using subsurface storage capacity for the storage of water.

Phase I

Phase I has been fully reviewed and permitted in accordance with the California Environmental Quality Act (CEQA). In May 2016, all permits and approvals were sustained in the California Court of Appeal and are no longer subject to further litigation. As a result, the Project presently is permitted to provide an average of 50,000 acre-feet of water for 50 years to meet municipal and industrial (M&I) water needs in Southern California.

In October 2017, the US Bureau of Land Management ("BLM") provided a letter finding that the Project's proposed use of a portion of the Arizona & California Railroad Company ("ARZC") right-of-way from Cadiz to the CRA in Freda, California to construct and operate the Water Project's water conveyance pipeline and related railroad improvements is within the scope of the original right-of-way grant and not subject to additional permitting. The buried pipeline would be constructed parallel to the railroad tracks and be used to convey water between our Cadiz Valley property and the CRA.

Construction of Water Project facilities that would allow for the delivery of up to 75,000 acre-feet in any one year is expected to cost approximately \$310 million and will require capital financing that we expect will be secured by definitive Purchase and Sale Agreements with Project participants and the new facility assets.

In addition to finalizing construction financing terms, prior to construction, the Water Project must (1) finalize contracts with Project participating agencies, (2) secure transportation arrangements to deliver water into each participant's service area, and (3) complete final design, engineering and construction permitting. Below is a discussion of present activities to advance these objectives.

(1) Contracts with Public Water Agencies or Private Water Utilities

The Company has executed Letters of Intent ("LOIs"), option agreements and purchase agreements, or contracts (collectively, "Agreements") with public water agencies and private water utilities in California during the Project's development. These participating agencies serve more than one million customers in cities throughout California's San Bernardino, Riverside, Los Angeles, Orange, Imperial and Ventura Counties. Twenty percent of Water Project supplies have been reserved for San Bernardino County-based agencies.

Santa Margarita Water District ("SMWD"), Orange County's second largest water provider, was the first participant to convert its option agreement and adopt resolutions approving a Water Purchase and Sale Agreement for 5,000 acre-feet of water. The structure of the SMWD purchase agreement calls for an annually adjusted water supply payment, plus a pro rata portion of the capital recovery charge and operating and maintenance costs. The capital recovery charge is calculated by amortizing the total capital investment by the Company over a 30-year term. Agreements entered into prior to the beginning of the CEQA review process provide to participants the right to acquire an annual supply of 5,000 acre-feet of water at \$775 per acre-foot (2010 dollars, subject to adjustment), which is competitive with the incremental cost of new water. In addition, these agencies received options to acquire storage rights in the Water Project to allow for the management of their Water Project supplies in complement with their own water resources. Up to 150,000 acre-feet of carry-over storage is available for reservation by the agencies prior to construction commencement. Participants that elect to achieve year-to-year flexibility in their use of Project water by utilizing carry-over storage will reserve storage capacity for \$1,500 per acre-foot prior to construction.

LOIs that have been entered into since completion of the CEQA review process reserve supplies from the Water Project at \$960 per acre-foot (2014 dollars, subject to adjustment). These LOIs also include the option to reserve carry-over storage capacity for \$1,500 per acre-foot prior to construction.

Presently, total reservations of supplies from the Water Project via these Agreements are in excess of Water Project capacity. Prior to construction of the Water Project, we expect to convert existing option agreements and LOIs to purchase agreements. We are working collaboratively with the participating water agencies to account for any oversubscription in the final definitive Purchase and Sale Agreements and allow for inclusive participation across Southern California.

(2) Conveyance Arrangements

Prior to construction of the Water Project, and in coordination with final participation contracts described in (1) above, an agreement and terms for moving water supplies in the CRA must be negotiated with Metropolitan Water District of Southern California ("Metropolitan"), which owns and controls the CRA.

Water supplies conserved by the Project would enter the CRA at the termination of the project's conveyance pipeline near Rice, CA. The CEQA process considered a variety of options to enter the CRA and assumed final entry into the CRA would be determined by MWD in consultation with the Project's participating agencies. Once arrangements are reached, the Metropolitan Board would take action as a responsible agency under CEQA regarding the terms and conditions of the Water Project's use of the CRA to transport water to its participating agencies.

There is no application yet before Metropolitan related to entry and transportation of Project supplies, but we expect such a formal application will be filed by SMWD, the Project's lead agency, when the Project's contractual arrangements with participants are finalized. Any agreement as to the terms and conditions of the Water Project's use of the CRA will be negotiated between and entered into by Metropolitan and the Project participating agencies, not the Company. Discussions with Metropolitan regarding conveyance of Project water in the CRA have been led by SMWD, the Water Project's CEQA lead agency, and are ongoing.

Water Project supplies entering the CRA will comply with Metropolitan's published engineering, design and water quality standards and will be subject to all applicable fees and charges routinely established by Metropolitan for the conveyance of water within its service territory. Total dissolved solids or salts in the Cadiz water supply are substantially lower than the water in the CRA. Other constituents that are already lower than State and Federal standards but potentially higher than the water in the CRA will be lowered via treatment to ambient levels or removed entirely. Extensive pilot testing of treatment options at the Project area in 2018 confirmed the capability of cost-effective treatment technologies to successfully remove such constituents. We believe there are multiple benefits that can be secured by MWD upon making space reasonably available for the Water Project supplies and providing the region the flexibility of relying on the Water Project in both wet and dry years.

Northern Pipeline

We currently own a 96-mile long, 30-inch wide existing idle natural gas pipeline that extends northwest from the Cadiz/Fenner Property terminating in Barstow, California, and have entered into a purchase agreement to a further 124-mile segment connecting this line from Barstow to Wheeler Ridge, California. The pipeline crosses San Bernardino, Los Angeles and Kern counties, including the Barstow and Bakersfield areas, which serve as a hubs for water delivered from northern and central California to communities in Southern California.

Initial feasibility studies indicated that, upon conversion, the 30-inch pipeline could transport between 18,000 and 30,000 acre-feet of water per year between the Water Project area and the Central and Northern California water transportation network. As a result, this pipeline could diversify delivery opportunities for the Water Project and the Company's broader water resource development efforts.

If this pipeline were to become operational, then the Water Project would link the Colorado River Aqueduct and State Water Project systems – two of Southern California's main water delivery systems – providing flexible opportunities for both supply and storage. The Northern Pipeline could deliver Phase I supplies, either directly or via exchange, to existing and potential customers of Phase I of the Project. Any use of the pipeline would be conducted in conformity with the Water Project's groundwater management plan and is subject to further CEQA evaluation and potentially federal environmental permitting.

In December 2018, the Company entered into an amendment (the "Amendment") to its option agreement ("Option Agreement") with EPNG to purchase the 124-mile segment of the pipeline. The Option Agreement, as amended, allows the Company to purchase the 124-mile pipeline segment with an initial payment of \$2 million and a subsequent payment of \$18 million ("Deferred Payment"). Following entry into the Amendment, the Company exercised the option and entered into a purchase agreement for the 124-mile pipeline, providing to EPNG the initial consideration of \$2 million.

Under our purchase agreement with EPNG, the Deferred Payment is due to EPNG within 30 days of satisfaction of certain conditions precedent by EPNG. If we do not complete the purchase of the additional 124-mile pipeline then our Northern Pipeline opportunities will be limited to the 96-mile segment that we own.

(3) Final Design and Permitting

As a component of completing contract terms with participating agencies and related wheeling arrangements with Metropolitan, we must also finalize design of Project facilities and acquire relevant construction permits with state and local agencies. Together with SMWD we have engaged engineering and environmental consultants to complete design plans for the 43-mile pipeline, Project wellfield, any necessary water treatment facilities, and facilities required to connect to the Metropolitan system at and near the CRA. This work is ongoing and expected to proceed in coordination with the negotiation of contracts and wheeling arrangements.

Once facility design and layout near completion, we will need to obtain additional permits and approvals from state or local entities prior to construction. This may include but is not limited to confirmation of existing access rights, easements and rights-of-way, for areas that may be crossed by Project facilities in the Project area subject to final pipeline configuration.

Phase II

In a second phase of the Water Project, we expect to make available up to one million acre-feet of capacity in the aquifer system for storage of surplus water conveyed to the Project area. Under the Imported Water Storage Component, or Phase II, water from the Colorado River or the State Water Project, via some or all of an existing 220-mile pipeline that extends from Wheeler Ridge, California southeast to Barstow and there onwards to our Cadiz/Fenner property (See "Northern Pipeline", above), could be conveyed to spreading basins that would be constructed on our private property to percolate into the aquifer system and held in storage. When needed, previously stored water would be returned to Phase II participating agencies via the Project's 43-mile conveyance pipeline to the CRA, described above, or the Northern Pipeline.

Phase II has already been the subject of programmatic environmental review in accordance with CEQA, but still requires project-level environmental review and permitting once participating agencies are identified. Phase II may also require federal permits subject to the National Environmental Policy Act, or NEPA.

Agricultural Development

Our Cadiz/Fenner Property, consisting of approximately 35,000 acres of desert land, is zoned for agricultural development. In 1993, we secured conditional use permits to develop agriculture on up to 9,600 acres of the property and withdraw groundwater from the underlying aquifer system for irrigation. We have since maintained various levels of crops on the Property as we developed the Water Project. In 2013, we entered into a lease agreement with a third party to develop up to 1,480 acres of lemons at the site, 640 acres of which have been planted to date.

In February 2016, we entered into a lease agreement with Fenner Valley Farms LLC ("FVF"), a subsidiary of Water Asset Management LLC, a related party, pursuant to which FVF leased, for a 99-year term, 2,100 acres at the Cadiz/Fenner property to be used to plant, grow and harvest agricultural crops ("FVF Lease"). As consideration for the lease, FVF paid us a one-time payment of \$12,000,000 in February 2016. The acreage that was historically farmed by us and the acreage that is leased to a third party to develop lemons was included within the leased acreage. Following entry into this lease, we are no longer directly involved in the current agricultural operations at the site and all agricultural revenue is derived pursuant to the FVF Lease.

As part of the agricultural development to be conducted under the lease arrangements, the groundwater production capacity of the property's existing well-field is expected to be enhanced through infrastructure improvements that are complementary to the Water Project. While any additional well-field development for agricultural use would be financed by our agricultural partners as provided under our agricultural lease arrangements, we retained a call feature that allows us, at any time in the initial 20 years, to acquire the well-field and integrate any new agricultural well-field infrastructure developed into the Water Project's facilities.

Additional Eastern Mojave Properties

We also own approximately 11,000 acres outside of the Cadiz/Fenner Valley area in two locations within the Mojave Desert in eastern San Bernardino County.

Our primary landholding outside of the Cadiz area is approximately 9,000 acres in the Piute Valley. This landholding is located approximately 15 miles from the resort community of Laughlin, Nevada, and about 12 miles from the Colorado River town of Needles, California. Extensive hydrological studies, including the drilling and testing of a full-scale production well, have demonstrated that this landholding is underlain by high-quality groundwater. The aquifer system underlying this property is naturally recharged by precipitation (both rain and snow) within a watershed of approximately 975 square miles and could be suitable for a water supply project, agricultural development or solar energy production. These private properties are proximate to or border areas designated by the federal government as National Monument, Critical Desert Tortoise Habitat and/or Desert Wilderness Areas and are suitable candidates for preservation and conservation (see "Land Conservation Bank" below).

Additionally, we own acreage located near Danby Dry Lake in Ward Valley, approximately 30 miles southeast of our Cadiz/Fenner Valley properties. The Danby Dry Lake property is located approximately 10 miles north of the CRA. Initial hydrological studies indicate that the area has excellent potential for a water supply project. Certain of the properties in this area may also be suitable for agricultural development and/or preservation and conservation.

Land Conservation Bank

Approximately 7,500 acres of our properties outside of the Cadiz/Fenner Valley area in the Piute Valley are located within terrain designated by the federal government as Critical Desert Tortoise Habitat and/or Desert Wilderness Areas and offer limited development opportunities. In February 2015, the California Department of Fish and Wildlife approved our establishment of the Fenner Valley Desert Tortoise Conservation Bank ("Fenner Bank"), a land conservation bank that makes available these properties for mitigation of impacts to tortoise and other sensitive species that would be caused by development across the Southern California desert. Under its enabling documents, the Fenner Bank offers credits that can be acquired by entities that must mitigate or offset impacts linked to planned development. For example, this bank can service the mitigation requirements of renewable energy, military, residential and commercial development projects being considered throughout the desert. Credits sold by the Fenner Bank will fund our permanent preservation of the land as well as research by outside entities, including San Diego Zoo Global, into desert tortoise health and species protection.

Northern Pipeline

The Northern Pipeline, described above, also represents new opportunities for the Company independent of the Water Project to offer water transportation to locations along the 220-mile pipeline route that are not presently interconnected by existing water infrastructure. The pipeline crosses California's major water infrastructure as well as urban and agricultural centers and can be utilized to transport water, independent of the Water Project, between users who presently lack direct interconnections along the pipeline route. We are presently engaged in discussions with parties that may be interested in such transportation. The ability to serve points along the 124-mile portion of the pipeline from Barstow to Wheeler Ridge is dependent upon completion of certain conditions precedent under our purchase agreement with EPNG, described above. If the acquisition of the 124-mile segment is not completed, then our Northern Pipeline opportunities will be limited to the 96-mile segment that we own.

Other Opportunities

Other opportunities in the water and agricultural or related infrastructure business complementary to our current objectives could provide new opportunities for our Company.

Over the longer-term, we believe the population of Southern California, Nevada and Arizona will continue to grow, and that, in time, the economics of commercial and residential development at our properties may become attractive.

We remain committed to the sustainable use of our land and water assets, and will continue to explore all opportunities for environmentally responsible development of these assets. We cannot estimate which of these opportunities will ultimately be utilized.

Results of Operations

Year Ended December 31, 2018 Compared to Year Ended December 31, 2017

We have not received significant revenues from our water resource and real estate development activities to date. Our revenues have been limited to rental income from the FVF Lease (see "Agricultural Development", above). As a result, we have historically incurred a net loss from operations. We had revenues of \$440 thousand for the year ended December 31, 2018, and \$437 thousand for the year ended December 31, 2017. The net loss totaled \$26.3 million for the year ended December 31, 2018, compared with a net loss of \$33.9 million for the year ended December 31, 2017. The higher loss in 2017 was primarily related to a \$3.5 million loss on extinguishment of debt and \$2.6 million in unrealized losses recorded for warrant liabilities combined with \$1.5 million in unrealized gains recorded for warrant liabilities in 2018. The higher 2017 loss was also related to higher stock compensation resulting from the vesting of milestone shares earned by employees.

Our primary expenses are our ongoing overhead costs associated with the development of the Water Project (i.e., general and administrative expense) and our interest expense. We will continue to incur non-cash expense in connection with our management and director equity incentive compensation plans.

<u>Revenues.</u> Revenue totaled \$440 thousand during the year ended December 31, 2018, compared to \$437 thousand during the year ended December 31, 2017. The revenue is primarily related to rental income from the FVF Lease (see "Agricultural Development", above).

General and Administrative Expenses. General and administrative expenses during the year ended December 31, 2018, totaled \$11.4 million compared with \$12.8 million for the year ended December 31, 2017. Non-cash compensation costs related to stock and option awards are included in general and administrative expenses.

Compensation costs from stock and option awards for the year ended December 31, 2018, totaled \$0.5 million compared with \$2.3 million for the year ended December 31, 2017. The higher 2017 expense primarily reflects the vesting of milestone shares earned by employees and consultants of the Company.

General and administrative expenses, exclusive of stock-based compensation costs, totaled \$10.9 million for the year ended December 31, 2018, compared with \$10.5 million for the year ended December 31, 2017.

<u>Depreciation.</u> Depreciation expense totaled \$258 thousand for the year ended December 31, 2018, and \$274 thousand for the year ended December 31, 2017.

<u>Interest Expense</u>. Interest expense totaled \$15.3 million during the year ended December 31, 2018, compared to \$17.8 million during the year ended December 31, 2017. The following table summarizes the components of net interest expense for the two periods (in thousands):

	Year Ended December 31,	
	2018	2017
Interest on outstanding debt Unrealized (gains) losses on warrants Amortization of debt discount Amortization of deferred loan costs	\$12,594 (1,522) 4,095 103	, ,
	\$15,270	\$17,770

The interest on outstanding debt increased from \$11.3 million to \$12.6 million due to compounded interest on a larger credit facility associated with our May 2017 debt refinancing. Additionally, during the year ended December 31, 2017, the Company recorded net unrealized losses on warrants of \$2.6 million, which included \$3.1 million in unrealized losses related to the issuance of shares to former lenders (see Note 8 to the Consolidated Financial Statements, "Common Stock") and \$508 thousand in unrealized gains related to our May 2017 debt refinancing. During the year ended December 31, 2018, the Company recorded net unrealized gains on warrants of \$1.5 million. (See Note 6 to the Consolidated Financial Statements, "Long-Term Debt and Lease Obligation").

<u>Interest Income.</u> Interest income totaled \$223 thousand during the year ended December 31, 2018, and \$51 thousand for the year ended December 31, 2017.

<u>Debt Refinancings.</u> In May 2017, we entered into a new \$60 million credit agreement ("Credit Agreement") with funds affiliated with Apollo Global Management, LLC ("Apollo") that replaced and refinanced our then existing \$45 million senior secured mortgage debt and provided \$15 million of new senior debt to fund immediate construction related expenditures ("Senior Secured Debt"). The Senior Secured Debt will mature on the earlier of (a) March 5, 2021, or (b) the "Springing Maturity Date" that is 91 days prior to the maturity date of the 7.00% Convertible Senior Notes of Cadiz due 2020 (the "Convertible Senior Notes"), which is March 5, 2020. However, we have entered into option agreements with parties holding 95% of the Convertible Senior Notes that allow us, at our sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021 (see Note 13 to the Consolidated Financial Statements, "Subsequent Events"). The Springing Maturity Date is only applicable if at that time (a) there is at least \$10.0 million of original, outstanding principal related to the Convertible Senior Notes, and (b) the 5-day VWAP, as defined in the Credit Agreement, is less than 120% of the then applicable conversion rate ((a) or (b), as applicable, the "Maturity Date"). Interest on the Senior Secured Debt is due quarterly on each March 31, June 30, September 30 and December 31 (each an "Interest Date") beginning on June 30, 2017. Interest on the Senior Secured Debt will (i) accrete to the outstanding principal amount at a rate per annum equal to 6% (the "PIK Rate") compounded quarterly on each Interest Date and (ii) accrue on the outstanding principal amount at a rate per annum equal to 2% (the "Cash Rate"). The Accreted Loan Value plus the Applicable Prepayment Premium will be due and payable on the Maturity Date. "Accreted Loan Value" means, as of the date of determination, the outstanding principal amount of the applicable loan, plus all accreted interest as of the calendar day immediately prior to such date of determination. "Applicable Prepayment Premium" means with respect to any repayment of the loans (a) the Accreted Loan Value of the loans being prepaid or repaid, as applicable, multiplied by (b) 3.00%.

We, in our discretion, may make any quarterly interest payment in cash on the applicable Interest Date at the PIK Rate, in lieu of accretion of such interest to the principal amount at the PIK Rate. The proceeds from the Credit Agreement were used to repay the then existing senior secured mortgage debt resulting in a loss on extinguishment of \$3.5 million which consisted of the write-off of unamortized debt discount, unamortized debt issuance costs and fees paid to the former lenders. In addition, we incurred \$1.5 million in legal and finders' fees which was recorded as additional debt discount and is being amortized through December 2019, which is the Springing Maturity Date as discussed above.

In conjunction with the closing of the Senior Secured Debt, we issued to Apollo a warrant to purchase an aggregate of 362,500 shares of our common stock ("2017 Warrant"). The Company recorded a debt discount at the time of the closing of the Senior Secured Debt in the amount of \$2.9 million which was the fair value of the 2017 Warrant issued. The debt discount is being amortized through December 2019, which is the Springing Maturity Date as discussed above. The fair value of the 2017 Warrant derivative liability is remeasured each reporting period, and the change in fair value is recorded as an adjustment to the derivative liability with unrealized gains or losses reflected in interest expense. The warrant has a five-year term and an exercise price of \$14.94 per share, subject to adjustment for corporate actions including, but not limited to, stock dividends, stock splits, reverse stock splits, corporate reorganizations and mergers.

Liquidity and Capital Resources

(a) Current Financing Arrangements

As we have not received significant revenues from our development activities to date, we have been required to obtain financing to bridge the gap between the time water resource and other development expenses are incurred and the time that revenue will commence. Historically, we have addressed these needs primarily through secured debt financing arrangements and private equity placements.

In November 2018, we entered into an At Market Issuance Sales Agreement under which the Company could issue and sell shares of its common stock having an aggregate offering price of up to \$25 million from time to time in an "at-the-market" offering (the "November 2018 ATM Offering"). As of December 31, 2018, the Company issued 97,106 shares of common stock in the November 2018 ATM Offering for gross proceeds of \$1.05 million and aggregate net proceeds of approximately \$0.9 million. We have and may continue to issue equity securities pursuant to the November 2018 ATM Offering (see Note 13 to the Consolidated Financial Statements, "Subsequent Events").

In March 2018, we entered into an At Market Issuance Sales Agreement under which the Company could issue and sell shares of its common stock having an aggregate offering price of up to \$15 million from time to time in an "at the market" offering (the "March 2018 ATM Offering"). We completed the offering during May 2018 having issued 1,159,718 shares of common stock in the March 2018 ATM Offering for gross proceeds of \$15 million and aggregate net proceeds of approximately \$14.6 million.

In May 2017, we entered into a new \$60 million credit agreement with funds affiliated with Apollo that replaced and refinanced our then existing \$45 million senior secured mortgage debt and provided \$15 million of new senior debt to fund immediate construction related expenditures.

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The Senior Secured Debt and the Convertible Senior Notes contain representations, warranties and covenants that are typical for agreements of this type, including restrictions that would limit our ability to incur additional indebtedness, incur liens, pay dividends or make restricted payments, dispose of assets, make investments and merge or consolidate with another person. However, while there are affirmative covenants, there are no financial maintenance covenants and no restrictions on our ability to issue additional common stock to fund future working capital needs. The debt covenants associated with the Senior Secured Debt were negotiated by the parties with a view towards our operating and financial condition as it existed at the time the agreements were executed. At December 31, 2018, we were in compliance with our debt covenants.

Limitations on our liquidity and ability to raise capital may adversely affect us. Sufficient liquidity is critical to meet our resource development activities. As discussed further in "Outlook" below, we do not have adequate resources on hand to meet the obligations related to the (1) Senior Secured Debt which could come due as early as December 2019 or (2) the Convertible Senior Notes coming due in March 2020 to the extent these notes are not converted. However, we have entered into option agreements with parties holding 95% of the Convertible Senior Notes that allow us, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021 (see Note 13 to the Consolidated Financial Statements, "Subsequent Events"). Additionally, the completion of the acquisition of the 124-mile extension of our Northern Pipeline will require an \$18 million payment within thirty days of satisfaction of certain conditions precedent under our purchase agreement with EPNG. We do not currently have the cash resources on hand to make this payment in full. To the extent additional capital is required, we may increase liquidity through a variety of means, including equity or debt placements, through the lease, sale or other disposition of assets or reductions in operating costs. If additional capital is required, no assurances can be given as to the availability and terms of any new financing.

As we continue to actively pursue our business strategy, additional financing will continue to be required. See "Outlook" below. The covenants in the term debt do not prohibit our use of additional equity financing and allow us to retain 100% of the proceeds of any equity financing. We do not expect the loan covenants to materially limit our ability to finance our water development activities.

At December 31, 2018, we had no outstanding credit facilities other than the Senior Secured Debt and the Convertible Senior Notes.

<u>Cash Used for Operating Activities</u>. Cash used for operating activities totaled \$12.2 million for the year ended December 31, 2018, and \$10.5 million for the year ended December 31, 2017. The cash was primarily used to fund general and administrative expenses related to our water development efforts.

<u>Cash Used For Investing Activities</u>. Cash used for investing activities in the year ended December 31, 2018, was \$3.7 million, compared with \$1.0 million for the year ended December 31, 2017. The costs consisted of engineering and design related to the development of the Water Project. In addition, the 2018 period included investments in the Northern Pipeline (see "Water Resource Development", above).

<u>Cash Provided by Financing Activities</u>. Cash provided by financing activities totaled \$15.4 million for the year ended December 31, 2018, compared with cash provided by financing activities of \$12.3 million for the year ended December 31, 2017. The 2018 results included \$15.5 million of net proceeds from the issuance of shares under at-the-market offerings. The 2017 results include \$12.3 million of net proceeds from the issuance of long-term debt.

(b) Outlook

Short-Term Outlook. We have principal and interest payments aggregating approximately \$79.6 million coming due in March 2020 relating to our Convertible Senior Notes to the extent the noteholders, who have the right to convert at any time into our common stock at a conversion rate of \$6.75 per share, do not convert prior to March 2020 or we do not exercise the option agreements we currently have with parties holding 95% of our Convertible Senior Notes that allow us, at our sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021, as further discussed in Note 13 to the Consolidated Financial Statements, "Subsequent Events". Our Senior Secured Debt of approximately \$67.4 million as of December 31, 2018 could also become due as early as December 2019 if we have not exercised the option agreements or the Convertible Senior Notes have not been converted by that time and the Company's stock price is less than 120% of the conversion rate and according to additional terms of the debt agreement as further discussed in Note 6 to the Consolidated Financial Statements, "Long-Term Debt and Lease Obligation". We do not currently have adequate resources on hand to meet these obligations should they come due. Additionally, to complete our acquisition of an additional 124-mile extension of our Northern Pipeline, we will require a further \$18 million payment upon completion of certain conditions precedent under our purchase agreement with EPNG (see "Water Resource Development", above). If the acquisition of the 124-mile segment is not completed, then our Northern Pipeline opportunities will be limited to the 96-mile segment we already own. As we require additional working capital to fund operations, we expect to continue our historical practice of structuring our financing arrangements to match the anticipated needs of our development activities. See "Long-Term Outlook" below. No assurances can be given, however, as to the availability or terms of any new financing.

Long-Term Outlook. In the longer term, we will need to raise additional capital to finance working capital needs, capital expenditures and any payments due under our Senior Secured Debt or our Convertible Senior Notes at maturity (see "Current Financing Arrangements" above). Our future working capital needs will depend upon the specific measures we pursue in the entitlement and development of our water resources and other developments. Future capital expenditures will depend primarily on the progress of the Water Project.

We are evaluating the amount of cash needed, and the manner in which such cash will be raised, on an ongoing basis. We may meet any future cash requirements through a variety of means, including equity or debt placements, or through the sale or other disposition of assets. Equity placements would be undertaken only to the extent necessary, so as to minimize the dilution effect of any such placements upon our existing stockholders. No assurances can be given, however, as to the availability or terms of any new financing. Limitations on our liquidity and ability to raise capital may adversely affect us. Sufficient liquidity is critical to meet our resource development activities.

(c) Critical Accounting Policies

As discussed in Note 2 to our Consolidated Financial Statements, "Summary of Significant Accounting Policies", the preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect amounts reported in the accompanying consolidated financial statements and related footnotes. In preparing these financial statements, management has made its best estimates and judgments of certain amounts included in the financial statements based on all relevant information available at the time and giving due consideration to materiality. However, application of these policies involves the exercise of judgment and use of assumptions as to future uncertainties and, as a result, actual results could differ from these estimates. Management has concluded that the following critical accounting policies described below affect the most significant judgments and estimates used in the preparation of the consolidated financial statements.

- (1) Intangible and Other Long-Lived Assets. Property, plant and equipment, intangible and certain other long-lived assets are depreciated or amortized over their useful lives. Useful lives are based on management's estimates of the period over which the assets will generate revenue.
- (2) Goodwill. As a result of a merger in May 1988 between two companies, which eventually became known as Cadiz Inc., goodwill in the amount of \$7,006,000 was recorded. Approximately \$3,193,000 of this amount was amortized until the adoption of Accounting Standards Codification 350, "Intangibles Goodwill and Other" on January 1, 2002.
- (3) Valuation of Goodwill and Long-Lived Assets. The Company assesses long-lived assets, excluding goodwill, for recoverability whenever events or changes in circumstances indicate that their carrying value may not be recoverable through the estimated undiscounted future cash flows resulting from the use of the assets. If it is determined that the carrying value of long-lived assets may not be recoverable, the impairment is measured by using the projected discounted cash-flow method.

The Company uses a one-step impairment test to identify potential goodwill impairment and measure the amount of a goodwill impairment loss to be recognized (if any) for the Company. This quantitative assessment is performed at least annually and compares a reporting unit's fair value to its carrying amount to determine if there is a potential impairment. An impairment loss will be recognized for the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill in that reporting unit.

(4) Deferred Tax Assets and Valuation Allowances. To date, the Company has not generated significant revenue from its water development programs, and it has a history of net operating losses. As such, the Company has generated significant deferred tax assets, including large net operating loss carryforwards for federal and state income taxes for which it has recorded a full valuation allowance. Management is currently working on water storage, water supply, and agricultural projects, including the Water Project, that are designed to generate future taxable income, although there can be no guarantee that this will occur. If taxable income is generated in future years, some portion or all of the valuation allowance will be reversed, and an increase in net income would consequently be reported.

(5) Stock-Based Compensation. The Company applies the Black-Scholes valuation model in determining the fair value of options granted to employees and consultants. For employees, the fair value is then charged to expense on the straight-line basis over the requisite service period. For consultants, the fair value is remeasured at each reporting period and recorded as a liability until the award is settled.

As of December 31, 2018, all options outstanding are fully vested; therefore, there is no potential impact of forfeitures.

(6) Valuation of Warrants. In May 2017, the Company issued to its senior lenders warrants to purchase an aggregate 362,500 shares of the Company's common stock ("2017 Warrants"). The 2017 Warrants have a five-year term and an exercise price of \$14.94 per share, subject to adjustment. The 2017 Warrants are valued using a lattice model that uses unobservable inputs such as volatility and future probability of issuing new shares. The fair value of the 2017 Warrants derivative liability is remeasured each reporting period, and the change in fair value is recorded as an adjustment to the derivative liability with unrealized gains or losses reflected in interest expense.

(d) New Accounting Pronouncements

See Note 2 to the Consolidated Financial Statements, "Summary of Significant Accounting Policies".

(e) Off Balance Sheet Arrangements

The Company does not have any off balance sheet arrangements at this time.

ITEM 7A. Quantitative and Qualitative Disclosures about Market Risk

We are a smaller reporting company as defined by Reg. 240.12b-2 of the Securities and Exchange Act of 1934 and are not required to provide the information under this item.

ITEM 8. Financial Statements and Supplementary Data

The information required by this item is submitted in response to Part IV below. See the Index to Consolidated Financial Statements.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

Not applicable.

ITEM 9A. Controls and Procedures

Disclosure Controls and Procedures

We have established disclosure controls and procedures to ensure that material information related to the Company, including its consolidated entities, is accumulated and communicated to senior management, including Chief Executive Officer (the "Principal Executive Officer") and Chief Financial Officer (the "Principal Financial Officer") and to our Board of Directors. Based on their evaluation as of December 31, 2018, our Principal Executive Officer and Principal Financial Officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) are effective to ensure that the information required to be disclosed by the Company in the reports that it files or submits under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and such information is accumulated and communicated to management, including the principal executive and principal financial officers as appropriate, to allow timely decisions regarding required disclosures.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our Principal Executive Officer and Principal Financial Officer, we evaluated the effectiveness of our internal control over financial reporting based on the criteria in the Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under that framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2018. The effectiveness of our internal control over financial reporting as of December 31, 2018, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included herein.

Changes in Internal Control Over Financial Reporting

In connection with the evaluation required by paragraph (d) of Rule 13a-15 under the Exchange Act, there was no change identified in the Company's internal control over financial reporting that occurred during the last fiscal quarter ended December 31, 2018, that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. Other Information Not applicable. 36

PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information called for by this item is incorporated herein by reference to the definitive proxy statement involving the election of directors which we intend to file with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934 not later than 120 days after December 31, 2018.

ITEM 11. Executive Compensation

The information called for by this item is incorporated herein by reference to the definitive proxy statement involving the election of directors which we intend to file with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934 not later than 120 days after December 31, 2018.

ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information called for by this item is incorporated herein by reference to the definitive proxy statement involving the election of directors which we intend to file with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934 not later than 120 days after December 31, 2018.

ITEM 13. Certain Relationships and Related Transactions, and Director Independence

The information called for by this item is incorporated herein by reference to the definitive proxy statement involving the election of directors which we intend to file with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934 not later than 120 days after December 31, 2018.

ITEM 14. Principal Accounting Fees and Services

The information called for by this item is incorporated herein by reference to the definitive proxy statement involving the election of directors which we intend to file with the SEC pursuant to Regulation 14A under the Securities and Exchange Act of 1934 not later than 120 days after December 31, 2018.

PART IV

- ITEM 15. Exhibits, Financial Statement Schedules
- 1. Financial Statements. See Index to Consolidated Financial Statements.
- 2. Financial Statement Schedule. See Index to Consolidated Financial Statements.
- 3. Exhibits.

The following exhibits are filed or incorporated by reference as part of this Form 10-K.

- 3.1 Cadiz Certificate of Incorporation, as amended (1)
- 3.2 Amendment to Cadiz Certificate of Incorporation dated November 8, 1996⁽²⁾
- 3.3 Amendment to Cadiz Certificate of Incorporation dated September 1, 1998⁽³⁾
- 3.4 Amendment to Cadiz Certificate of Incorporation dated December 15, 2003⁽⁴⁾
- 3.5 Certificate of Amendment to the Certificate of Incorporation of Cadiz Inc. effective June 10, 2016⁽³³⁾
- 3.6 Certificate of Elimination of Series D Preferred Stock, Series E-1 Preferred Stock and Series E-2 Preferred Stock of Cadiz Inc. dated December 15, 2003⁽⁴⁾
- 3.7 Certificate of Elimination of Series A Junior Participating Preferred Stock of Cadiz Inc., dated March 25, 2004⁽⁴⁾
 - 3.8 Amended and Restated Certificate of Designations of Series F Preferred Stock of Cadiz Inc.⁽⁵⁾
- 3.9 Cadiz Bylaws, as amended⁽⁶⁾
- 3.10 Amendment to the Bylaws of Cadiz Inc. effective June 10, 2016⁽³³⁾
- 3.11 Second Amended and Restated Certificate of Designations of Series F Preferred Stock of Cadiz Inc. dated June 30, 2006, as corrected by Certificate of Correction dated March 14, 2007⁽⁸⁾
- 3.12 Certificate of Elimination of Series F Preferred Stock of Cadiz Inc. (as filed August 3, 2007)⁽⁹⁾
- 4.1 Indenture, dated as of December 10, 2015 between Cadiz Inc. and U.S. Bank National Association⁽²⁸⁾ 38

- 4.2 First Supplemental Indenture, dated as of April 28, 2016, by and between Cadiz Inc. and U.S. Bank National Association⁽³²⁾
- 4.3 Form of Senior Indenture between Cadiz Inc. and U.S. Bank National Association⁽³⁴⁾
- 4.4 Form of Subordinated Indenture between Cadiz Inc. and U.S. Bank National Association⁽³⁴⁾
- 4.5 Warrant dated May 25, 2017 issued to Apollo Special Situations Fund, L.P.⁽³⁵⁾
- 4.6 Form of Senior Indenture⁽⁴¹⁾
- 4.7 Form of Subordinated Indenture⁽⁴¹⁾
- 10.1 Limited Liability Company Agreement of Cadiz Real Estate LLC dated December 11, 2003⁽⁴⁾
- Amendment No. 1, dated October 29, 2004, to Limited Liability Company Agreement of Cadiz Real Estate LLC⁽⁷⁾
- 10.3 Amendment No. 2 dated March 5, 2013, to Limited Liability Company Agreement of Cadiz Real Estate LLC(22)
- Longitudinal Lease Agreement dated September 17, 2008 between Arizona & California Railroad Company and Cadiz Real Estate, LLC⁽¹⁰⁾
- 10.52009 Equity Incentive Plan⁽¹¹⁾
- $10.6\frac{\text{Services}}{\text{amendments}}$ dated January 4, 2010, January 27, $2010^{(12)}$
- 10.7 Form of Option Agreement with Santa Margarita Water District⁽¹³⁾
- 10.8 Form of Environmental Processing and Cost Sharing Agreement with Santa Margarita Water District⁽¹³⁾
- 10.9 Form of Environmental Processing and Cost Sharing Agreement with Three Valleys Municipal Water District⁽¹³⁾
- 10.10 Option Agreement with Golden State Water Company dated June 25, 2010⁽¹⁴⁾
- 10.11 Option Agreement with Suburban Water Systems dated October 4, 2010⁽¹⁵⁾ 39

- Amendment No. 3 to the Services and Exclusivity Agreement with Layne Christensen Company dated April 8, $2010^{(16)}$
- 10.13 Letter agreement with Scott S. Slater dated April 12, 2011⁽¹⁷⁾
- 10.14 Option Agreement with California Water Service Company dated December 1, 2011⁽¹⁸⁾
- 10.15 Form of Memorandum of Understanding by and among Cadiz Inc., County of San Bernardino and Santa Margarita Water District⁽¹⁹⁾
- $10.16 \\ Water Purchase and Sale Agreement among Cadiz Inc., Cadiz Real Estate LLC, Fenner Valley Mutual Water Company and Santa Margarita Water District dated July 31, 2012^{(20)}$
- Groundwater Management, Monitoring, and Mitigation Plan for the Cadiz Valley Groundwater Conservation, 10.17 Recovery and Storage Project approved by the Santa Margarita Water District and the County of San Bernardino Board of Supervisors effective October 1, 2012⁽²⁰⁾
- 10.18 Second Amended Option Agreement with El Paso Natural Gas Company dated December 7, 2012⁽²¹⁾
- 10.19 Revised Terms of Engagement with Brownstein Hyatt Farber and Schreck dated January 9, 2013⁽²²⁾
- 10.20 Letter agreement with Scott Slater dated January 10, 2013⁽²²⁾
- 10.21 Lease Agreement, dated as of July 1, 2013, by and between Cadiz Inc. and Limoneira Company⁽²³⁾
- 10.22 Form of Note Exchange Agreement, by and between Cadiz Inc. and the convertible note holder party thereto⁽²⁷⁾
- $10.23 {\color{red}{\text{Track Utilization Agreement dated September 16, 2013, between Arizona \& California Railroad Company and Cadiz Real Estate LLC}^{(24)}$
- $10.24\frac{\text{Amended}}{2014^{(25)}}$ and Restated Employment Agreement between Keith Brackpool and Cadiz Inc. dated June 13,
- $10.25 \frac{\text{Amended}}{2014^{(25)}}$ and Restated Employment Agreement between Timothy J. Shaheen and Cadiz Inc. dated June 13,
- Form of Water Purchase and Sale Agreement, dated as of December 29, 2014, by and between Cadiz Inc. and San Luis Water District⁽²⁶⁾
- 10.27 Lease Agreement, dated as of December 23, 2015, by and among Cadiz Real Estate LLC, Cadiz Inc. and Water Asset Management LLC⁽²⁸⁾

- Amended and Restated Lease Agreement, dated as of February 8, 2016, by and among Cadiz Real Estate LLC, Cadiz Inc. and Fenner Valley Farm, LLC⁽²⁹⁾
- Waiver Agreement under Amended and Restated Credit Agreement, dated as of March 9, 2016, by and among Cadiz Inc., Cadiz Real Estate LLC and the Required Lenders⁽³⁰⁾
- 10.30 Private Placement Purchase Agreement, dated as of April 26, 2016, by and among Cadiz Inc. and the purchasers party thereto⁽³¹⁾
- $10.31 \frac{\text{Registration Rights Agreement, dated as of April 28, 2016, by and among Cadiz Inc. and the holders party thereto}{(32)}$
- \$60,000,000 Credit Agreement, dated as of May 1, 2017, by and among Cadiz Inc. and Cadiz Real Estate LLC 10.32 as borrowers, Apollo Special Situations Fund, L.P. and the other lenders from time to time party thereto, and Wells Fargo Bank, National Association, as administrative agent⁽³⁶⁾
- Amended and Restated Payoff Agreement and Stipulation dated as of May 24, 2017, by Cadiz Inc., Cadiz Real 10.33 Estate LLC, MSD Credit Opportunity Master Fund, L.P., Milfam II L.P., WPI-Cadiz Farm CA, LLC and Wells Fargo Bank, National Association, as administrative agent⁽³⁵⁾
- 10.34 Security Agreement made by Cadiz Inc. and Cadiz Real Estate LLC, as loan parties, in favor of Wells Fargo Bank, National Association, as Agent, dated as of May 25, 2017⁽³⁵⁾
- Deed of Trust, Assignment of Leases and Rents, Security Agreement, Financing Statement and Fixture Filing dated as of May 25, 2017 from Cadiz Inc., Cadiz Real Estate LLC, and Octagon Partners, LLC, collectively, as Trustor to Chicago Title Company, as Trustee and Wells Fargo Bank, National Association, as Agent for the Lenders from time to time under the Credit Agreement, as Beneficiary⁽³⁵⁾
- 10.36 Settlement Agreement and Release, dated as of October 2, 2017, by and among Cadiz Inc., Cadiz Real Estate LLC, MSD Master Credit Opportunity Fund, L.P., Milfam II L.P. and WPI-Cadiz Farm CA, LLC⁽³⁷⁾
- 10.37 Letter Agreement, dated November 8, 2017, by and among Cadiz Inc., and Apollo Special Situations Fund. L.P. $^{(38)}$
- $_{10.38}$ At Market Issuance Sales Agreement, dated March 27, 2018, by and between Cadiz Inc., and B. Riley FBR, $_{\rm Inc.^{(39)}}$
- 10.39 Cooperation Agreement, dated as of May 1, 2018, between WAM Asset Management, LLC and Cadiz Inc. (40) 41

- At Market Issuance Sales Agreement, by and between Cadiz Inc. and B. Riley FBR, Inc. dated November 16, $2018^{(41)}$
- 10.41 Purchase and Sale Agreement between El Paso Natural Gas Company, LLC, and Cadiz Inc. dated December 31, 2018
- 21.1 Subsidiaries of the Registrant
- 23.1 Consent of Independent Registered Public Accounting Firm
- 31.1 Certification of Scott Slater, Chief Executive Officer of Cadiz Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 31.2 Certification of Timothy J. Shaheen, Chief Financial Officer and Secretary of Cadiz Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32.1 Certification of Scott Slater, Chief Executive Officer of Cadiz Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 32.2 Certification of Timothy J. Shaheen, Chief Financial Officer and Secretary of Cadiz Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

- Previously filed as an Exhibit to our Registration Statement on Form S-1 (Registration No. 33-75642) declared effective May 16, 1994 filed on February 23, 1994
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended September 30, 1996 filed on November 14, 1996
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended September 30, 1998 filed on November 13, 1998
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the year ended December 31, 2003 filed on November 2, 2004
- Previously filed as an Exhibit to our Current Report on Form 8-K dated November 30, 2004 filed on December 2, 2004
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended June 30, 1999 filed on August 13, 1999
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2004 filed on March 31, 2005
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2006 filed on March 16, 2007
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended June 30, 2007 filed on August 6, 2007
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2008 filed on November 10, 2008
- (11)Previously filed as Appendix A to our definitive proxy dated November 3, 2009, and filed on November 5, 2009 42

- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2009 filed on March 15, 2010
- (13) Previously filed as an Exhibit to our Current Report on Form 8-K dated June 23, 2010 and filed on June 24, 2010
- (14) Previously filed as an Exhibit to our Current Report on Form 8-K dated June 25, 2010 and filed on June 30, 2010
- Previously filed as an Exhibit to our Current Report on Form 8-K dated October 4, 2010 and filed on October 7, 2010
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2011, filed on March 16, 2011
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, filed on May 9, 2011
- Previously filed as an Exhibit to our Current Report on Form 8-K dated December 1, 2011, and filed on December 7, 2011
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended March 31, 2012, filed on May 9, 2012
- Previously filed as an Exhibit to our Quarterly Report on Form 10-O for the quarter ended September 30, 2012, filed on November 8, 2012
- Previously filed as an Exhibit to our Current Report on Form 8-K dated December 7, 2012, and filed on December 12, 2012
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2012, filed on March 15, 2013
- (23) Previously filed as an Exhibit to our Current Report on Form 8-K dated July 1, 2013 and filed on July 2, 2013
- Previously filed as an Exhibit to our Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, filed on November 8, 2013
- (25) Previously filed as an Exhibit to our Current Report on Form 8-K dated June 10, 2014 and filed on June 13, 2014
- Previously filed as an Exhibit to our Current Report on Form 8-K dated December 19, 2014 and filed on December 22, 2014
- Previously filed as an Exhibit to our Current Report on Form 8-K dated November 23, 2015 and filed on November 30, 2015
- Previously filed as an Exhibit to our Current Report on Form 8-K dated December 10, 2015 and filed on December 16, 2015
- Previously filed as an Exhibit to our Current Report on Form 8-K dated December 23, 2015 and filed on December
- Previously filed as an Exhibit to our Current Report on Form 8-K dated February 8, 2016 and filed on February 12, 2016
- Previously filed as an Exhibit to our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed on March 14, 2016
- (32) Previously filed as an Exhibit to our Current Report on Form 8-K dated April 26, 2016 and filed on April 29, 2016
- (33) Previously filed as an Exhibit to our Current Report on Form 8-K dated June 9, 2016 and filed on June 14, 2016
- Previously filed as an Exhibit to our Registration Statement on Form S-3 (Registration No. 333-214318) filed on October 28, 2016

- (35) Previously filed as an Exhibit to our Current Report on form 8-K dated May 24, 2017 and filed on May 26, 2017
- (36) Previously filed as an Exhibit to our Current Report on Form 8-K dated May 1, 2017 and filed on May 2, 2017
- Previously filed as an Exhibit to our Current Report on Form 8-K dated October 2, 2017 and filed on October 3, 2017
- Previously filed as an Exhibit to our Quarter Report on Form 10-Q for the quarter ended September 30, 2017, filed on November 8, 2017
- Previously filed as an Exhibit to our Current Report on Form 8-K dated March 27, 2018 and filed on March 27, 2018
- (40) Previously filed as an Exhibit to our Current Report on Form 8-K dated May 1, 2018 and filed on May 3, 2018
- Previously filed as an Exhibit to our registration statement on Form S-3 (Registration No. 333-228433) filed on November 16, 2018

ITEM 16. Form 10-K Summary

None.

CADIZ INC. CONSOLIDATED FINANCIAL STATEMENTS

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Cadiz Inc.:

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Cadiz Inc. and its subsidiaries (the "Company") as of December 31, 2018 and 2017, and the related consolidated statements of operations and comprehensive loss, stockholders' deficit and cash flows for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP Los Angeles, California March 18, 2019

We have served as the Company's auditor since at least 1995. We have not been able to determine the specific year we began serving as auditor of the Company.

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Consolidated Statements of Operations and Comprehensive Loss

	December 31,	
(In thousands, except per share data)	2018	2017
Total revenues (rental income)	\$440	\$437
Costs and expenses: General and administrative Depreciation	11,402 258	12,803 274
Total costs and expenses	11,660	13,077
Operating loss	(11,220)	(12,640)
Interest expense Interest income Loss on extinguishment of debt and debt refinancing	(15,270) 223	(17,770) 51 (3,501)
Loss before income taxes	(26,267)	(33,860)
Income tax expense	6	4
Net loss and comprehensive loss	\$(26,273)	\$(33,864)
Basic and diluted net loss per share	\$(1.09)	\$(1.50)
Weighted-average shares outstanding	23,998	22,535

See accompanying notes to the consolidated financial statements. 48

Consolidated Balance Sheets		
	December 3	1,
(\$ in thousands, except per share data)	2018	2017
ASSETS		
Current assets:		
Cash and cash equivalents	\$12,558	\$13,030
Accounts receivable	38 408	36 411
Prepaid expenses and other Total current assets	13,004	13,477
Total Current assets	13,004	13,477
Property, plant, equipment and water programs, net	46,619	45,269
Long-term deposit/prepaid expenses	2,000	-
Goodwill	3,813	3,813
Other assets	3,873	3,946
Total assets	\$69,309	\$66,505
LIABILITIES AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Accounts payable	\$225	\$411
Accrued liabilities	2,070	2,281
Current portion of long-term debt	59	1,408
Warrant liabilities	865	2,387
Other liabilities	923	-
Total current liabilities	4,142	6,487
Long-term debt	136,246	123,768
Long-term lease obligations with related party, net	14,411	13,276
Deferred revenue	750	750
Other long-term liabilities	-	923
Total liabilities	155,549	145,204
Commitments and contingencies (Note 11)		
Stockholders' deficit:		
Common stock - \$0.01 par value; 70,000,000 shares		
authorized; shares issued and outstanding: 24,654,911 at December 31, 2018, and 22,987,434		
at December 31, 2017	247	230
Additional paid-in capital	383,521	364,806
Accumulated deficit	(470,008)	
Total stockholders' deficit	(86,240)	(78,699)

Total liabilities and stockholders' deficit

\$69,309 \$66,505

See accompanying notes to the consolidated financial statements. 49

Consolidated Statements of Cash Flows		
	Year Ended	
	December 3	-
(\$ in thousands)	2018	2017
Cook flows from an autimic activities.		
Cash flows from operating activities: Net loss	\$ (26, 272)	\$ (22 964)
	\$(26,273)	\$(33,604)
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation	258	274
Unrealized (gain) loss on warrant derivative liabilities	(1,522)	2,608
Amortization of deferred loan costs	103	193
Amortization of debt discount		
	3,920	3,644
Interest expense added to loan principal	9,767	9,269
Interest expense added to lease liability	1,111	964
Loss on debt conversions	175	58
Loss on early extinguishment of debt and debt refinancing	-	3,501
Compensation charge for stock awards and share options	473	2,304
Changes in operating assets and liabilities:		
Accounts receivable	(2)	3
Prepaid expenses and other current assets	3	2,980
Other assets	73	(444)
Accounts payable	(98)	(79)
Accrued liabilities	(181)	(1,877)
Net cash used for operating activities	(12,193)	(10,466)
Cash flows from investing activities:		
Additions to long-term deposit	(2,000)	-
Additions to property, plant and equipment	(1,726)	(1,006)
Net cash used for investing activities	(3,726)	(1,006)
Cook flows from financing activities		
Cash flows from financing activities:	15.502	
Net proceeds from issuance of common stock	15,503	-
Net proceeds from issuance of long-term debt	-	57,253
Principal payments on long-term debt	(56)	(44,923)
Net cash provided by financing activities	15,447	12,330
Net (decrease) increase in cash and cash equivalents and restricted cash	(472)	858
Cash and cash equivalents and restricted cash, beginning of period	13,163	12,305
Cash and cash equivalents and restricted cash, end of period	\$12,691	\$13,163
See accompanying notes to the consolidated financial statements. 50		

Consolidated Statements of Stockholders' Deficit

			Additional		Total
	Common Sto	ck	Paid-in	Accumulated	Stockholders'
(\$ in thousands)	Shares	Amount	Capital	Deficit	Deficit
Balance as of December 31, 2016	21,768,864	\$ 218	\$355,336	\$ (409,871) \$ (54,317)
Issuance of shares to lenders	293,802	3	3,731	-	3,734
Issuance of shares pursuant to bond conversions	413,335	4	2,821	-	2,825
Stock compensation expense	511,433	5	2,918	-	2,923
Net Loss	-	-	-	(33,864	(33,864)
Balance as of December 31, 2017	22,987,434	230	364,806	(443,735	(78,699)
Issuance of shares pursuant to ATM offerings	1,256,824	13	15,490	_	15,503
Issuance of shares pursuant to bond conversions	376,463	4	2,752	-	2,756
Stock compensation expense	34,190	-	473	-	473
Net loss	-	-	-	(26,273) (26,273)
Balance as of December 31, 2018	24,654,911	\$ 247	\$383,521	\$ (470,008	\$ (86,240)

See accompanying notes to the consolidated financial statements.

Notes To The Consolidated Financial Statements

NOTE 1 – DESCRIPTION OF BUSINESS

Cadiz Inc. ("Cadiz" or "the Company") is a land and water resource development company with over 45,000 acres of land in three areas of eastern San Bernardino County, California. Virtually all of this land is underlain by high-quality, naturally recharging groundwater resources, and is situated in proximity to the Colorado River and the Colorado River Aqueduct ("CRA"), California's primary mode of water transportation for imports from the Colorado River into the State. The Company's properties are suitable for various uses, including large-scale agricultural development, groundwater storage and water supply projects. The Company's main objective is to realize the highest and best use of its land and water resources in an environmentally responsible way.

The Company has been primarily focused on the development of the Cadiz Valley Water Conservation, Recovery and Storage Project ("Water Project" or "Project"), which will capture and conserve millions of acre-feet of native groundwater currently being lost to evaporation from the aquifer system beneath the Company's 34,500-acre property in the Cadiz and Fenner valleys of eastern San Bernardino County (the "Cadiz/Fenner Property"), and deliver it to water providers throughout Southern California.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation

The Consolidated Financial Statements of the Company have been prepared on a going concern basis, which contemplates the continuity of operations, the realization of assets and the satisfaction of liabilities in the normal course of business.

The Company incurred losses of \$26.3 million and \$33.9 million for the years ended December 31, 2018 and 2017, respectively. The Company had working capital of \$8.9 million at December 31, 2018, and used cash in operations of \$12.2 million for the year ended December 31, 2018. Cash requirements during the year ended December 31, 2018 primarily reflect certain administrative costs related to the Company's water project development efforts. Currently, the Company's sole focus is the development of its land and water assets.

In November 2018, the Company entered into an At Market Issuance Sales Agreement under which the Company could issue and sell shares of its common stock having an aggregate offering price of up to \$25 million from time to time in an "at-the-market" offering (the "November 2018 ATM Offering"). As of December 31, 2018, the Company issued 97,106 shares of common stock in the November 2018 ATM Offering for gross proceeds of \$1.05 million and aggregate net proceeds of approximately \$0.9 million. The Company has and may continue to issue equity securities pursuant to the November 2018 ATM Offering (see Note 13, "Subsequent Events").

In March 2018, the Company entered into an At Market Issuance Sales Agreement under which the Company could issue and sell shares of its common stock having an aggregate offering price of up to \$15 million from time to time in an "at the market" offering (the "March 2018 ATM Offering"). The Company completed the offering during May 2018, having issued 1,159,718 shares of common stock in the March 2018 ATM Offering for gross proceeds of \$15 million and aggregate net proceeds of approximately \$14.6 million.

In May 2017, the Company entered into a new \$60 million credit agreement ("Credit Agreement") with funds affiliated with Apollo Global Management, LLC ("Apollo") that replaced and refinanced its then existing \$45 million senior secured mortgage debt ("Prior Senior Secured Debt") and provided \$15 million of new senior debt to fund immediate construction related expenditures ("Senior Secured Debt"). The Company's Senior Secured Debt and its convertible notes contain representations, warranties and covenants that are typical for agreements of this type, including restrictions that would limit the Company's ability to incur additional indebtedness, incur liens, pay dividends or make restricted payments, dispose of assets, make investments and merge or consolidate with another person. However, while there are affirmative covenants, there are no financial maintenance covenants and no restrictions on the Company's ability to issue additional common stock to fund future working capital needs. The debt covenants associated with the Senior Secured Debt were negotiated by the parties with a view towards the Company's operating and financial condition as it existed at the time the agreements were executed. At December 31, 2018, the Company was in compliance with its debt covenants.

The Company has principal and interest payments aggregating approximately \$79.6 million coming due in March 2020 related to its 7.00% Convertible Senior Notes ("Convertible Senior Notes") to the extent the noteholders, who have the right to convert at any time into the Company's common stock at a conversion rate of \$6.75 per share, do not convert prior to March 2020 or the Company does not exercise the option agreements it currently has with parties holding 95% of its Convertible Senior Notes that allow the Company, at its sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021, as further discussed in Note 13, "Subsequent Events". Additionally, the Company's Senior Secured Debt of approximately \$66.1 million as of December 31, 2018, could also become due as early as December 2019, if the Company has not exercised the option agreements or the Convertible Senior Notes have not been converted by that time and the Company's stock price is less than 120% of the conversion rate and according to additional terms of the debt agreement. Specifically, the Springing Maturity Date is not applicable if less than \$10 million of original, outstanding principal related to the Convertible Senior Notes is outstanding at that time (see Note 6, "Long-Term Debt and Lease Obligation"). Further, the Company's option to acquire an additional 124-mile extension of its' Northern Pipeline will require an \$18 million payment upon completion of certain conditions precedent under the purchase agreement with EPNG. If the acquisition of the 124-mile segment is not completed, then the Company's Northern Pipeline opportunities will be limited to the 96-mile segment it already owns. The Company may meet its debt and working capital requirements through a variety of means, including extension, refinancing, equity placements, the sale or other disposition of assets, or reductions in operating costs.

Limitations on the Company's liquidity and ability to raise capital may adversely affect it. Sufficient liquidity is critical to meet the Company's resource development activities. Although the Company currently expects its sources of capital to be sufficient to meet its near-term liquidity needs, there can be no assurance that its liquidity requirements will continue to be satisfied. If the Company cannot raise needed funds, it might be forces to make substantial reductions in its operating expenses, which could adversely affect its ability to implement its current business plan and ultimately impact its viability as a company.

Principles of Consolidation

The consolidated financial statements include the accounts of Cadiz Inc. and all subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation.

Use of Estimates in Preparation of Financial Statements

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. In preparing these financial statements, management has made estimates with regard to goodwill and other long-lived assets, stock compensation and deferred tax assets. Actual results could differ from those estimates.

Revenue Recognition

The Company recognizes rental income through its lease with Fenner Valley Farms LLC.

Stock-Based Compensation

General and administrative expenses include \$0.5 million and \$2.3 million of stock-based compensation expenses in the years ended December 31, 2018 and 2017, respectively.

The Company applies the Black-Scholes valuation model in determining the fair value of options granted to employees and consultants. For employees, the fair value is then charged to expense on the straight-line basis over the requisite service period. For consultants, the fair value is remeasured at each reporting period and recorded as a liability until the award is settled.

As of December 31, 2018, all options outstanding are fully vested; therefore, there is no potential impact of forfeitures. The Company is in a tax loss carryforward position and is not expected to realize a benefit from any additional compensation expense recognized under Topic 718. See Note 7, "Income Taxes".

Net Loss Per Common Share

Basic net loss per share is computed by dividing the net loss by the weighted-average common shares outstanding. Options, deferred stock units, warrants, and the zero coupon term loan convertible into or exercisable for certain shares of the Company's common stock were not considered in the computation of net loss per share because their inclusion would have been antidilutive. Had these instruments been included, the fully diluted weighted average shares outstanding would have increased by approximately 11,398,000 shares and 10,894,000 shares for the years ended December 31, 2018 and 2017, respectively.

Property, Plant, Equipment and Water Programs

Property, plant, equipment and water programs are stated at cost. Depreciation is provided using the straight-line method over the estimated useful lives of the assets, generally ten to forty-five years for land improvements and buildings, and five to fifteen years for machinery and equipment. Leasehold improvements are amortized over the shorter of the term of the relevant lease agreement or the estimated useful life of the asset.

Water rights, storage and supply programs are stated at cost. Certain costs directly attributable to the development of such programs have been capitalized by the Company. These costs, which are expected to be recovered through future revenues, consist of direct labor, drilling costs, consulting fees for various engineering, hydrological, environmental and additional feasibility studies, and other professional and legal fees. While interest on borrowed funds is currently expensed, interest costs related to the construction of project facilities will be capitalized at the time construction of these facilities commences.

Goodwill and Other Assets

As a result of a merger in May 1988 between two companies which eventually became known as Cadiz Inc., goodwill in the amount of \$7,006,000 was recorded. Approximately \$3,193,000 of this amount was amortized prior to the adoption of Accounting Standards Codification 350, "Intangibles – Goodwill and Other" ("ASC 350") on January 1, 2002. Since the adoption of ASC 350, there have been no goodwill impairments recorded. The Cadiz reporting unit to which \$3.8 million of goodwill is allocated had a negative carrying amount on December 31, 2018 and 2017.

Deferred loan costs represent costs incurred to obtain debt financing. Such costs are amortized over the life of the related loan using the interest method. At December 31, 2018, the deferred loan fees relate to the Senior Secured Debt, as described in Note 6, "Long-Term Debt and Lease Obligation".

Impairment of Goodwill and Long-Lived Assets

The Company assesses long-lived assets, excluding goodwill, for recoverability whenever events or changes in circumstances indicate that their carrying value may not be recoverable through the estimated undiscounted future cash flows resulting from the use of the assets. If it is determined that the carrying value of long-lived assets may not be recoverable, the potential impairment charge is measured by using the projected discounted cash-flow method.

The Company uses a one-step impairment test to identify potential goodwill impairment and measure the amount of a goodwill impairment loss to be recognized (if any). This quantitative assessment is performed at least annually in the fourth quarter and compares a reporting unit's fair value to its carrying amount to determine if there is a potential impairment. An impairment loss will be recognized for the amount by which the reporting unit's carrying amount exceeds its fair value, not to exceed the carrying amount of goodwill in that reporting unit.

Income Taxes

Income taxes are provided for using an asset and liability approach which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the financial statement and tax bases of assets and liabilities at the applicable enacted tax rates. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized.

Fair Value of Financial Instruments

Financial assets with carrying values approximating fair value include cash and cash equivalents and accounts receivable. Financial liabilities with carrying values approximating fair value include accounts payable and accrued liabilities due to their short-term nature. The carrying value of the Company's secured debt approximates fair value, based on interest rates available to the Company for debt with similar terms. The fair value of the Company's convertible debt exceeds its carrying value due to the increased value of its conversion feature, which is determined using the Black-Scholes model. See Note 6, "Long-Term Debt and Lease Obligation", for discussion of fair value of debt.

Supplemental Cash Flow Information

Under the terms of the Senior Secured Debt, the Company is required to pay 25% of all future quarterly interest payments in cash. During the year ended December 31, 2018, approximately \$1.29 million in interest payments on the Senior Secured Debt was paid in cash. No other payments are due on the Senior Secured Debt or the Company's Convertible Senior Notes prior to their maturities.

During the year ended December 31, 2018, approximately \$2.8 million in convertible notes were converted by certain of the Company's lenders. As a result, 376,463 shares of common stock were issued to the lenders.

Cash payments for income taxes were \$6,000 and \$4,000 for each of the years ended December 31, 2018 and 2017.

Recent Accounting Pronouncements

Accounting Guidance Not Yet Adopted

In August 2018, the Financial Accounting Standards Board ("FASB") issued an accounting standards update which modifies the disclosure requirements for fair value measurements. This update is effective for fiscal years beginning after December 15, 2019, and for interim periods within those fiscal years, with early adoption permitted. The Company is currently assessing the impact this guidance will have on its consolidated financial statements.

In June 2018, the FASB issued an accounting standards update which simplifies the accounting for share-based payments granted to nonemployees for goods and services. This update is effective for fiscal years beginning after December 15, 2018, and for interim periods within those fiscal years. The Company is currently assessing this new guidance, and expects this new standard will not have a material impact on the consolidated financial statements.

In July 2017, the FASB issued an accounting standards update to provide new guidance for the classification analysis of certain equity-linked financial instruments, or embedded features, with down round features, as well as clarify existing disclosure requirements for equity-classified instruments. When determining whether certain financial instruments should be classified as liabilities or equity instruments, a down round feature no longer precludes equity classification when assessing whether the instrument is indexed to an entity's own stock. The guidance is effective for fiscal years beginning after December 15, 2019, and interim periods within fiscal years beginning after December 15, 2020, with early adoption permitted. The Company is currently assessing this new guidance and cannot determine the impact of this standard at this time.

In February 2016, the Financial Accounting Standards Board ("FASB") issued an accounting standards update related to lease accounting including enhanced disclosures. The new standard requires lessees to recognize leases on their balance sheets, and leaves lessor accounting largely unchanged. This guidance is effective for annual periods beginning after December 15, 2018, and interim periods within those fiscal years. The Company adopted this guidance on January 1, 2019, using an optional transition method with a cumulative effect adjustment to the beginning balance or retained earnings in the period of adoption without restating the 2018 and 2017 financial statement for comparable amounts.

The Company will elect to utilize the transition package of practical expedients permitted within the new standard, which among other things, allows the Company to carryforward the historical lease classification. The Company will make an accounting policy election that will keep leases with an initial term of 12 months or less off the Company's Consolidated Statements of Financial Position which will result in recognizing those lease payments in the Consolidated Statements of Operations on a straight-line basis over the lease term.

The Company expects adoption of the new standard will result in the recording of additional net lease assets and lease liabilities of approximately \$151 thousand and \$100 thousand, respectively, as of January 1, 2019. Adoption of the standard will not materially impact the Company's Consolidated Statements of Operations nor the Consolidated Statements of Cash Flows.

The Company does not believe the new standard will have a material impact on its liquidity and will have no impact on the Company's debt-covenant compliance under its current agreements.

The Company is in the process of evaluating changes to its business processes, systems and controls needed to support recognition and disclosure under the new standard. Further, the Company is continuing to assess any incremental disclosures that will be required in the Company's consolidated financial statements.

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Accounting Guidance Adopted

In May 2014, the FASB issued an accounting standards update on revenue recognition including enhanced disclosures. Under the new standard, revenue is recognized when (or as) a good or service is transferred to the customer and the customer obtains control of the good or service. The Company adopted this guidance on January 1, 2018, and the new standard did not have a material impact on the Company's condensed consolidated financial statements or financial statement disclosures.

In August 2016, the FASB issued an accounting standards update which eliminates the diversity in practice related to the classification of certain cash receipts and payments in the statement of cash flows, by adding or clarifying guidance on eight specific cash flow issues. The Company adopted this guidance on January 1, 2018, and the new standard had no impact on the Company's condensed consolidated financial statements.

In November 2016, the FASB issued an accounting standards update which requires amounts generally described as restricted cash and restricted cash equivalents to be included with cash and cash equivalents when reconciling the total beginning and ending amounts for the periods shown on the statement of cash flows. The Company adopted this guidance in the first quarter of 2018. The balance of cash, cash equivalents, and restricted cash as shown in the condensed consolidated statements of cash flows is comprised of the following:

Cash, Cash Equivalents and Restricted Cash (in thousands)	December 31, 2018	December 31, 2017
Cash and Cash Equivalents	\$ 12,558	\$ 13,030
Restricted Cash included in Other Assets	133	133
Cash, Cash Equivalents and Restricted Cash in the Consolidated Statement of Cash Flows	\$ 12,691	\$ 13,163

The restricted cash amounts included in Other Assets primarily represent a deposit from a water project participant related to a cost-sharing agreement.

In May 2017, the FASB issued an accounting standards update which clarifies which changes to terms or conditions of a share-based payment award require an entity to apply modification accounting, in accordance with Topic 218. This guidance is effective for annual periods beginning after December 15, 2017, and interim periods within those fiscal years. The Company adopted this guidance on January 1, 2018, and the new standard had no impact on the Company's condensed consolidated financial statements.

NOTE 3 – PROPERTY, PLANT, EQUIPMENT AND WATER PROGRAMS

Property, plant, equipment and water programs consist of the following (dollars in thousands):

	December 31,		
	2018	2017	
Land and land improvements	\$25,064	\$24,781	
Water programs	23,812	22,595	
Buildings	1,572	1,572	
Leasehold improvements	570	570	
Furniture and fixtures	461	461	
Machinery and equipment	1,422	1,337	
Construction in progress	146	123	
	53,047	51,439	
Less accumulated depreciation	(6,428)	(6,170)	
	\$46,619	\$45,269	

NOTE 4 – OTHER ASSETS

Other assets consist of the following (dollars in thousands):

	December 31,		
	2018 2017		
Prepaid rent	\$3,740	\$3,554	
Security deposits	133	392	
	\$3.873	\$3 946	

Prepaid rent primarily consists of fees incurred to obtain the right-of-way for the Water Project. Amortization of prepaid rent was approximately \$115,000 for each of the years ended December 31, 2018 and 2017.

NOTE 5 - ACCRUED LIABILITIES

At December 31, 2018 and 2017, accrued liabilities consist of the following (dollars in thousands):

	December 31,		
	2018	2017	
Payroll, bonus, and benefits	\$1,163	\$1,204	
Legal and consulting	405	550	
Stock-based compensation	71	71	
Other accrued expenses	431	456	
-	\$2,070	\$2,281	

NOTE 6 – LONG-TERM DEBT AND LEASE OBLIGATION

At December 31, 2018 and 2017, the carrying amount of the Company's outstanding debt is summarized as follows (dollars in thousands):

	December 31,	
	2018	2017
Senior secured debt due May 25, 2021		
Interest accrues at 8% per annum	\$67,401	\$62,701
Convertible note instrument due March 5, 2018		
Interest accrues at 7% per annum	-	1,371
Convertible note instrument due March 5, 2020		
Interest accrues at 7% per annum	73,158	69,488
Lease Obligation	14,831	13,720
Other loans	104	160
Debt discount and debt issuance costs, net of accumulated accretion	(4,778)	(8,988)
	150,716	138,452
Less current portion	59	1,408
	\$150,657	\$137,044

The carrying value of the Company's Senior Secured Debt approximates fair value. The fair value of the Company's Senior Secured Debt (Level 2) is determined based on an estimation of discounted future cash flows of the debt at rates currently quoted or offered to the Company by its lenders for similar debt instruments of comparable maturities by its lenders.

The fair value of the Company's convertible debt exceeds its carrying value of approximately \$71.0 million, which includes accreted interest, by approximately \$42.2 million due to the increased value of its conversion feature. The conversion feature's fair value increases as the Company's common stock price increases. The fair value of the conversion feature (Level 3) is determined using the Black-Scholes model. Significant inputs to the model were the conversion price (\$6.75), the number of shares of common stock that could be acquired upon conversion as of December 31, 2018, the Company's stock price as of December 31, 2018 of \$10.30 and stock volatility of 40%, which was determined using our publicly-traded stock price over the last 1.2 years.

Pursuant to the Company's loan agreements, annual maturities of long-term debt outstanding on December 31, 2018, are as follows:

Year Ending	(\$ in
December 31	thousands)
2019	\$ 59
2020	73,189
2021	67,416
2022	-
2023+	14,830
Total	\$ 155,494

Credit Agreement

On May 25, 2017 ("Closing Date"), the Company entered into a new \$60 million credit agreement with funds affiliated with Apollo that replaced and refinanced the Company's then existing \$45 million senior secured mortgage debt and provided \$15 million of new senior debt to fund immediate construction related expenditures. The Senior Secured Debt will mature on the earlier of (a) March 5, 2021, or (b) the "Springing Maturity Date" that is 91 days prior to the maturity date of the 7.00% Convertible Senior Notes of Cadiz due 2020 (the "Convertible Senior Notes"), which is March 5, 2020. However, the Company has entered into option agreements with parties holding 95% of the Convertible Senior Notes that allow the Company, at its sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021 (see Note 13, "Subsequent Event"). The Springing Maturity Date is only applicable if at that time (a) there is at least \$10.0 million of original, outstanding principal related to the Convertible Senior Notes, and (b) the 5-Day VWAP, as defined in the Credit Agreement, is less than 120% of the \$6.75 per share conversion rate ((a) or (b), as applicable, the "Maturity Date").

The proceeds from the Credit Agreement were used to repay the then existing senior secured mortgage debt resulting in a loss on extinguishment of \$3.5 million which consisted of the write-off of unamortized debt discount, unamortized debt issuance costs and fees paid to the former lenders. In addition, the Company incurred \$1.5 million in legal and finders' fees which was recorded as additional debt discount and is being amortized through December 2019, which is the Springing Maturity Date as discussed above.

Interest on the Senior Secured Debt is due quarterly on each March 31, June 30, September 30 and December 31 (each an "Interest Date") beginning on June 30, 2017. Interest on the Senior Secured Debt will (i) accrete to the outstanding principal amount at a rate per annum equal to 6% (the "PIK Rate") compounded quarterly on each Interest Date and (ii) accrue on the outstanding principal amount at a rate per annum equal to 2% (the "Cash Rate"). The Company, in its discretion, may make any quarterly interest payment in cash on the applicable Interest Date at the PIK Rate, in lieu of accretion of such interest to the principal amount at the PIK Rate.

The Accreted Loan Value plus the Applicable Prepayment Premium will be due and payable on the Maturity Date. "Accreted Loan Value" means, as of the date of determination, the outstanding principal amount of the applicable Loan, plus all accreted interest as of the calendar day immediately prior to such date of determination. "Applicable Prepayment Premium" means with respect to any repayment of the Senior Secured Debt (a) the Accreted Loan Value of the Senior Secured Debt being prepaid or repaid, as applicable, multiplied by (b) 3.00%.

The Company may prepay the Senior Secured Debt, in whole or in part, for an amount equal to the Accreted Loan Value plus the Applicable Prepayment Premium; provided that if the Springing Maturity Date has not occurred, the Company may not prepay the Senior Secured Debt, without the prior written consent of the holders of more than 50% of the aggregate unpaid principal amount of the Senior Secured Debt, during the period commencing on the date that is 91 days prior to the maturity date of the Convertible Senior Notes and ending on the maturity date of the Convertible Senior Notes.

The Company paid Apollo an upfront fee of 2.00% of the aggregate principal amount of the Senior Secured Debt funded on the Closing Date. This amount was recorded as additional debt discount and is being amortized over the remaining term of the loan.

In conjunction with the closing of the Senior Secured Debt, the Company issued to Apollo a warrant to purchase an aggregate 362,500 shares of its common stock ("2017 Warrant"). The Company recorded a debt discount at the time of the closing of the Senior Secured Debt in the amount of \$2.9 million which was the fair value of the 2017 Warrant issued. The debt discount is being amortized through December 2019, which is the Springing Maturity Date as discussed above. The fair value of the 2017 Warrant derivative liability is remeasured each reporting period, and the change in fair value is recorded as an adjustment to the derivative liability with unrealized gains or losses reflected in interest expense. The warrant has a five-year term and an exercise price of \$14.94 per share, subject to adjustment for corporate actions including, but not limited to, stock dividends, stock splits, reverse stock splits, corporate reorganizations and mergers.

Total unrealized gains of \$1.5 million for warrant liabilities accounted for as derivatives have been recorded in interest expense in the year ended December 31, 2018.

Convertible Notes

On April 26, 2016, the Company entered into a note purchase agreement with new and existing investors (the "Investors"), pursuant to which the Company issued approximately \$10.0 million of its 7.00% Convertible Senior Notes due 2020 ("Convertible Senior Notes") in aggregate principal and accrued interest. The proceeds from this issuance of the Convertible Senior Notes to the Investors (such Convertible Senior Notes, the "New Notes"), approximately \$8.0 million before fees and expenses, were used for general working capital purposes.

The Convertible Senior Notes accrue interest at 7.00% per year, with no principal or interest payments due prior to maturity on March 5, 2020. However, the Company entered into option agreements with parties holding 95% of its Convertible Senior Notes that allow the Company, at its sole option, at any time prior to December 5, 2019, to extend the maturity date of the Convertible Senior Notes to September 5, 2021 (see Note 13, "Subsequent Event"). The Convertible Senior Notes, including original principal and accrued interest, are convertible at any time into the Company's common stock at a price of \$6.75 per share, pursuant to the terms of the Indenture dated as of December 10, 2015, by and between the Company and U.S. Bank National Association (the "Indenture"), under which the New Notes were issued. As a result of this transaction, the Company recorded a debt discount in the amount of \$2.0 million which was the difference between the proceeds from this transaction and the principal and accrued interest of New Notes on the day of the issuance. In addition, based on the conversion rate of \$6.75 per share, the fair value of the shares receivable on conversion exceed the \$8.0 million in net proceeds; therefore, a beneficial conversion feature was recorded in the amount of \$1.48 million. This amount was recorded as additional debt discount with a corresponding amount recorded as additional paid-in capital. Such debt discount is accreted to the redemption value of the instrument over the remaining term of the loan. Furthermore, the Company incurred \$400 thousand in placement agent fees which was recorded as additional debt discount and is being amortized over the remaining term of the loan.

In connection with issuing the New Notes, the Company entered into a First Supplemental Indenture to the Indenture, dated as of April 28, 2016, by and between the Company and U.S. Bank National Association.

The Company's Senior Secured Debt and its Convertible Senior Notes contain representations, warranties and covenants that are typical for agreements of this type, including restrictions that would limit the Company's ability to incur additional indebtedness, incur liens, pay dividends or make restricted payments, dispose of assets, make investments and merge or consolidate with another person. However, while there are affirmative covenants, there are no financial maintenance covenants and no restrictions on the Company's ability to issue additional common stock to fund future working capital needs. The debt covenants associated with the Senior Secured Debt were negotiated by the parties with a view towards the Company's operating and financial condition as it existed at the time the agreements were executed. At December 31, 2018, the Company was in compliance with its debt covenants.

Lease Obligation

In February 2016, the Company entered into a lease agreement with Fenner Valley Farms LLC ("FVF") (the "lessee"), a subsidiary of Water Asset Management LLC, a related party, pursuant to which FVF is leasing, for a 99-year term, 2,100 acres owned by Cadiz in San Bernardino County, California, to be used to plant, grow and harvest agricultural crops ("FVF Lease Agreement"). As consideration for the lease, FVF paid the Company a one-time payment of \$12.0 million upon closing.

Under the FVF Lease Agreement, the Company has a repurchase option to terminate the lease at any time during the twenty (20) year period following the effective date of the lease ("Termination Option Period") upon (1) repayment of the one-time \$12 million lease payment plus a ten percent (10%) compounded annual return (provided that the amount of such payment shall be not less than \$14,400,000), (2) reimbursement of water-related infrastructure on the leased property plus 8% per annum as well as the actual costs of any farming-related infrastructure installed on the leased property and (3) reimbursement of certain pipeline-related development expenses, working in coordination with Cadiz, not to exceed \$3,000,000 (such payments, the "Termination Payments").

If (x) Cadiz does not exercise its termination right within such 20-year period or (y) the Agent under Cadiz's credit agreement declares an event of default under Cadiz's Senior Secured Debt and accelerates the indebtedness due and owing thereunder by Cadiz (or such indebtedness automatically accelerates under the terms of Cadiz's Senior Secured Debt), then the lessee may purchase the leased property for \$1.00. The Company has recorded the one-time payment of \$12 million, before legal fees, paid by FVF as a long-term lease liability. The Company's consolidated statement of operations reflects a net charge equal to a 10% finance charge compounding annually over the 20-year Termination Option Period. The net charge to the consolidated statement of operations reflects (1) rental income associated with the use of the land by FVF over the 20-year termination option period and (2) interest expense at a market rate reflective of a 20-year secured loan transaction. As a result of this transaction, the Company incurred approximately \$490 thousand of legal fees which was recorded as a debt discount and is being amortized over the 20-year Termination Option Period.

NOTE 7 – INCOME TAXES

Deferred taxes are recorded based upon differences between the financial statement and tax bases of assets and liabilities and available carryforwards. Temporary differences and carryforwards which gave rise to a significant portion of deferred tax assets and liabilities as of December 31, 2018 and 2017 are as follows (dollars in thousands):

	December 31,	
	2018	2017
Deferred tax assets:		
	\$65,852	\$59,551
Net operating losses		
Fixed asset basis difference	4,551	4,559
Contributions carryover	32	4
Deferred compensation	1,073	1,352
Accrued liabilities	492	971
Total deferred tax assets	72,000	66,437
Valuation allowance for deferred tax assets	(72,000)	(66,437)
Net deferred tax asset	\$-	\$-

The valuation allowance increased \$5,563,000 and decreased \$21,189,000 in 2018 and 2017, respectively. The change in deferred tax assets resulted from current year net operating losses and changes to future tax deductions resulting from terms of stock compensation plans, fixed assets, and accrued liabilities. The 2017 change in deferred tax assets was impacted significantly by the passage of the 2017 Tax Act Reform. One of the law changes in the tax act was to reduce the effective federal corporate tax rate to 21%, effective January 1, 2018.

As of December 31, 2018, the Company had net operating loss (NOL) carryforwards of approximately \$308.8 million for federal income tax purposes and \$188.8 million for California income tax purposes. Such carryforwards expire in varying amounts through the year 2038. For federal losses arising in tax years ending after December 31, 2017, the NOL carryforwards are allowed indefinitely. Use of the carryforward amounts is subject to an annual limitation as a result of a previous ownership change.

As of December 31, 2018, the Company possessed unrecognized tax benefits totaling approximately \$1.8 million. None of these, if recognized, would affect the Company's effective tax rate because the Company has recorded a full valuation allowance against these tax assets.

The Company's tax years 2015 through 2018 remain subject to examination by the Internal Revenue Service, and tax years 2014 through 2018 remain subject to examination by California tax jurisdictions. In addition, the Company's loss carryforward amounts are generally subject to examination and adjustment for a period of three years for federal tax purposes and four years for California purposes, beginning when such carryovers are utilized to reduce taxes in a future tax year.

A reconciliation of the income tax benefit to the statutory federal income tax rate is as follows (dollars in thousands):

r ear Ended		
December 31,		
2018	2017	
\$(5,516)	\$(11,477)	
4,175	8,156	
	December 2018 \$(5,516)	

Voor Endad

State income tax 6 4
Non-deductible expenses and other 1,341 3,321

Income tax expense \$6 \$4

Because it is more likely than not that the Company will not realize its net deferred tax assets, it has recorded a full valuation allowance against these assets. Accordingly, no deferred tax asset has been recorded in the accompanying balance sheet.

NOTE 8 - COMMON STOCK

In January 2013, the Company revised its then existing agreement with the law firm of Brownstein Hyatt Farber Schreck LLP ("Brownstein"), a related party. Under this agreement, the Company is to issue up to a total of 400,000 shares of the Company's common stock, with 100,000 shares earned upon the achievement of each of four enumerated milestones as follows:

i. 100,000 shares earned upon the execution of the revised agreement; 65

- .. 100,000 shares earned upon receipt by the Company of a final judicial order dismissing all legal challenges to the ¹¹. Final Environmental Impact Report for the Project;
- iii. 100,000 shares earned upon the signing of binding agreements for more than 51% of the Project's annual capacity; and
- 100,000 shares earned upon the commencement of construction of all of the major facilities contemplated in the iv. Final Environmental Impact Report necessary for the completion and delivery of the Project.

All shares earned upon achievement of any of the four milestones will be payable three years from the date earned.

The first of the four milestones was satisfied in January 2013, and at that time, the Company recorded a stock compensation expense for the first 100,000 shares earned. In May 2016, the second milestone was earned when a three-judge Appellate judge panel unanimously sustained the six trial court decisions and validated the Project's environmental review and approvals. As a result, the Company accrued and recognized stock compensation in 2016 in the amount of \$520,000 for the second of the four milestones. Because the shares were payable three years from the date earned, the fair value of these shares was measured by applying a discount which was determined by using the Finnerty model for discounts for lack of marketability. In December 2017, the Company eliminated the holding period for these shares which required the Company to re-measure the award at the time the shares were issued. The Company recognized additional stock compensation during the fourth quarter of 2017 in the amount of \$171,000 to reflect the issuance of these shares. Additionally, the Company incurred direct expenses to Brownstein associated with the Water Project of approximately \$1.9 million and \$1.8 million in 2018 and 2017, respectively.

On October 2, 2017, the Company agreed to issue an aggregate of 264,096 shares (the "Shares") of the Company's common stock with an aggregate value of \$3.3 million in connection with a Payoff Agreement the Company entered into with prior lenders on May 24, 2017. Effective upon the delivery of the Shares, outstanding warrants registered in the name of the prior lenders (the "2016 Warrants"), pursuant to which the prior lenders had a right to purchase up to 357,500 shares of the Company's common stock, were cancelled. The Company recorded a \$3.1 million expense in 2017 for the issuance of these shares and cancellation of the warrants. The expense is included in interest expense.

NOTE 9 – STOCK-BASED COMPENSATION PLANS AND WARRANTS

The Company has issued options and has granted stock awards pursuant to its 2009 Equity Incentive Plan and 2014 Equity Incentive Plan, as described below.

2009 Equity Incentive Plan

The 2009 Equity Incentive Plan was approved by stockholders at the 2009 Annual Meeting. The plan provides for the grant and issuance of up to 850,000 shares and options to the Company's employees and consultants. The plan became effective when the Company filed a registration statement on Form S-8 on December 18, 2009. All options issued under the 2009 Equity Incentive Plan have a ten-year term with vesting periods ranging from issuance date to 24 months.

2014 Equity Incentive Plan

The 2014 Equity Incentive Plan was approved by stockholders at the June 10, 2014 Annual Meeting. The plan provides for the grant and issuance of up to 675,000 shares and options to the Company's employees, directors and consultants. Upon approval of the 2014 Equity Incentive Plan, all shares of common stock that remained available for award under the 2009 Equity Incentive Plan were cancelled. Following registration of the 2014 Plan on Form S-8, the Company entered into revised employment agreements with certain senior management that provided for the issuance of up to 162,500 Restricted Stock Units ("RSU's") during the period July 1, 2014 through December 31, 2016, and the issuance of up to 200,000 RSU's in connection with obtaining construction financing for the Water Project ("Milestone RSUs"). The Milestone RSUs vested in June 2017, and the Company recorded stock compensation expense of \$1.7 million during the year ended December 31, 2017, to reflect the issuance of these shares.

Under the 2014 Equity Incentive Plan, each outside director receives \$30,000 of cash compensation and receives a deferred stock award consisting of shares of the Company's common stock with a value equal to \$20,000 on June 30 of each year. The award accrues on a quarterly basis, with \$7,500 of cash compensation and \$5,000 of stock earned for each fiscal quarter in which a director serves. The deferred stock award vests automatically on January 31 in the year following the award date.

All options that have been issued under the above plans have been issued to officers, employees and consultants of the Company. In December 2018, unexercised options to purchase 15,000 shares were forfeited under the 2009 Equity Incentive Plan. As of December 31, 2018, options to purchase 492,500 shares were unexercised and outstanding on December 31, 2018, under the 2009 and 2014 equity incentive plans.

For consultants of the Company, the fair value of each option granted under the 2009 Equity Incentive Plan is estimated at each reporting period using the Black-Scholes option pricing model and recorded as a liability until the award is settled.

For officers and employees of the Company, the fair value of each option granted under the plans was estimated on the date of grant using the Black-Scholes option pricing model.

The risk-free interest rate is assumed to be equal to the yield of a U.S. Treasury bond of comparable maturity, as published in the Federal Reserve Statistical Release for the relevant date. The expected life estimate is based on an analysis of the employees receiving option grants and the expected behavior of each employee. The expected volatility is derived from an analysis of the historical volatility of the trading price per share of the Company's common stock on the NASDAQ Global Market. The Company does not anticipate that it will pay dividends to common stockholders in the future.

The Company recognized no stock-option-related compensation costs for the years ended December 31, 2018 and 2017 relating to these options. No stock options were exercised during 2018.

No options were granted in 2018 and 2017. A summary of option activity under the plans as of December 31, 2018, and changes during the year ended December 31, 2017 are presented below:

		Weighted- Average Exercise	Average Remaining Contractual	Aggregate Intrinsic Value
Shares	-	Price	Term	(\$000's)
Outstanding at January 1, 2017 Granted	507,500	\$11.66 \$-	3.3	\$ 3,934
Forfeited, Expired or canceled Exercised	-	\$ - \$ -		\$ -
Outstanding at December 31, 2017 Granted	507,500	\$11.66 \$-	2.3	\$ 3,934
Forfeited, Expired or canceled Exercised	15,000 -	\$11.75 \$-		\$ 100
Outstanding at December 31, 2018	492,500	(a) \$11.66	1.3	\$ 3,834
Options exercisable at December 31, 2018	492,500	\$11.66	1.3	\$ 3,834