Project Information Submittal Form

Project Submitter/Owner: de Anza Desert Country Club - Non-Profit

Project Name: Water Conservation Plan

Contact Information

Name: Ramien Shalizi Phone: 714-475-8025

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Address: 509 Catarina Dr. #120, Borrego Springs, CA 92004

Overview

de Anza Desert Club is a non-privately owned, 501C (7) non-profit organization established in 1957 in Borrego Springs California. We intend to reduce our annual water consumption to expedite our commitment to reducing pumping from our critically over-drafted basin through a three-pronged approach:

- 1. Turf reduction & conversion to low water consumptive indigenous landscaping Not Yet Funded
- 2. Overhaul of the irrigation system for efficiency and control Not Yet Funded
- 3. Renovation of the irrigation lakes (liners & shores) Funded

The property has 146.76 acres of consumptive turf area which we intend to convert into 93.2 acres of consumptive turf area complimented by 53.56 acres of indigenous low water consumptive landscaping and xeriscaping, thus conserving upwards of 345-acre feet of water annually. The turf reduction aspect will fast forward our conservation efforts by 9.25 years via completion of this portion of the overall conservation project within a 6-month period. The turf reduction would conserve over 3100-acre feet of water being pumped from our critically over drafted basin.

The irrigation overhaul project will allow better control and efficiency of the irrigation system. The lake renovation project will conserve 100-120-acre feet annually via replacement of its liner. This portion of the overall project will be funded by de Anza Desert Club.

All the acreage proposed in this conservation project is zoned in San Diego county's land use map as "Recreation". de Anza Desert Club lies on the historic San Juan Bautista trail and is utilized for wildlife viewing, recreation and outdoor experiences for adults and youth. In review of Proposition 68 Chapter 16 and the Outdoor Access Act of 2018 it is our interpretation that de Anza Desert Club is in alignment with the outlined definitions of "Park, Historical, Recreational" resources

Please refer to: Exhibit 1 San Diego County Land Use Map

Although the property is a golf course it also serves as a habitat for protected indigenous wildlife including Big Horn Sheep, Coyote, reptiles, fish and over 90 species of birds.

Our irrigation lakes are often utilized for emergency fire-fighting efforts by Cal Fire. Our grounds serve as parkland to the local community and visitors alike.

In addition to the aforementioned aspects, de Anza Desert Club is an employer of 40 local residents, and we are focused on enriching the economy of our underrepresented community through not only the creation jobs and advancement opportunities for our employees and their families but also in our commitment in working with vendors and service providers locally in our village first and secondly in neighboring areas in our county and always in our Golden State whenever possible. Additionally, many local organizations such as the Boys & Girls Club depend on de Anza Desert Club for their fund-raising efforts.

de Anza's effort to conserve water via our proposed project can be a shining example of BWD's leadership and commitment in successful and impactful administration of the SGMA.

Project Summary

Please provide a summary of the Project description. Use as much space as you need.

de Anza Desert Club's baseline allocation is 957 Acre Feet Annually. This BPA is based on 148.56 acres comprised of 146.76 turf at 6.45-acre feet per acre annually 1.80 acres of pond at 5.75-acre feet annually. Our combined Groundwater consumptive rate per our 2021 BPA is 6.44-acre feet per acre annually. Our 2021 Assessment was based on 873-acre feet with a carryover credit of 74-acre feet

Please refer to: Exhibit 2 San Diego County SGMA BPA

We propose to reduce our water consumptive turf area to 93.2 acres for recreation. Play area includes 18 holes which include tee boxes, fairway, greens, and primary rough areas. Practice areas include includes our driving range, chipping areas and putting green. This will reduce our water consumptive area to 95 acres when factoring the 1.8 acres of pond as specified in the county's BPA letter. Xeriscaping/Native Hybrid will replace the 53.56 acres of turf at 0.75-acre feet consumptive factor totaling 40-acre feet. Overall, 39.25% reduction. At our current groundwater consumptive use factor of 6.44-acre feet/acre annually we project this endeavor to reduce our annual consumption by 345-acre feet annually which results in a reduction of 39.25% in a time span of 6 months (project duration) vs. 9.25 years based on 5% reduction per annum as currently ordered by the Stipulation of Adjudication judgement.

Please refer to: Exhibit 3 -Turf Reduction Drawings

Describe the project location, current conditions, and the benefitting areas. Please attach, separately, a regional and Project map depicting the site(s) location, current conditions, and benefitting areas.

The location of the project is at de Anza Desert Club, 509 Catarina Dr. Borrego Springs, CA. APN140- 242-62-00, APN 140-261-01-00 and APN 140-264-08-00. The turf reduction is proposed throughout the golf course and will convert 53.56 acres throughout the current 146.76 acres of turf into indigenous desert landscaping. Currently all 146.76 acres are comprised of wall-to-wall turf grass with a county allocated consumptive rate of 6.2-acre feet of water annually. This purpose of this project is to remove turf grass around all 18 holes and any non-playable (out of bounds) areas referred to as the secondary rough. The areas where turf will be removed total 53.56 acres and will be converted to indigenous low water consumptive and xeriscaped areas that pay homage to the natural desert surroundings of Borrego Springs.

Please refer to: Exhibit 4 - Assessor's Parcel Data

What is the nexus of the Project to the Sustainability Goal of the Borrego Springs Subbasin Groundwater Management Plan (GMP)? Is the Project listed in the GMP? How does the Project help achieve the goals of the GMP?

The purpose of this project is to reduce consumption of water and fast track the water reduction mandate set forth by the GMP wherein all pumpers of the Borrego basin are required to reduce water consumption/pumping by 70+% by the year 2040 at a reduction rate of 5% of base line allocation per year per the court ordered adjudication managed by the Borrego Water Master Board.

The reduction of our water consumptive turf area and fast forward our conservation goal by 9+ years via completion of a 6-month turf reduction project. Our consumption would decrease by 345-acre feet annually.

What are the specific goals and needs for the Project, and how will the project achieve the goals and meet the needs?

The goal of this project is to reduce consumption of water and fast track the water reduction mandate set forth by the GMP wherein all pumpers of the Borrego basin are required to reduce water consumption/pumping by 70+% by the year 2040 at a reduction rate of 5% of base line allocation per year per the court ordered adjudication managed by the Borrego Water Master Board.

To achieve our goal, we are asking the committee to approve our request for funding through this SGMA grant program. de Anza is not owned by its membership and cannot impose assessments on its members to fund this project. All funding for de Anza's Desert Club's projects and regular operations are funded through revenue that the club generates and voluntary member contributions.

What are the quantifiable benefits of the Project (e.g., protect or enhance water quality, water conservation, enhanced understanding of the groundwater basin, etc.)? How will those benefits be quantified and evaluated?

The reduction of our water consumptive turf area and fast forward our conservation goal by 9+ years via completion of a 6-month turf reduction project. This would bring our water consumption to 539 acre-feet annually by 2023, which is our pumping allocation goal for the year 2031 under the current adjudication plan of 5% reduction per year. Our consumption would decrease by 345- acre feet annually. The cumulative amount of water conserved over the next 9 years would be equivalent to 3100 acre-feet. The lake lining replacement will conserve 100-120 acre-feet of water annually. This would net a total annual pumping reduction of 345-465 acre ft.

Please refer to: Exhibit 5 - Water Reduction Matrix

Please describe the communities served by the Project. Will the Project benefit an Underrepresented Community, a Disadvantaged Community (DAC), and/or a Severely Disadvantaged Community (SDAC)? If so, please provide a map.

de Anza Desert Club is a major driver of Borrego Springs' economy in several ways.

de Anza Desert Club is an employer of 40 local residents, and we are focused on enriching the economy of our underrepresented community through not only the creation jobs and advancement opportunities for our employees and their families but also in our commitment in working with vendors and service providers locally in our village first and secondly in neighboring areas in our county and always in our Golden State whenever possible.

de Anza is involved with almost every charitable organization in Borrego Springs and continues to hold fund-raising events for local organizations such as the Boys & Girls Club who was able to raise upwards of \$90k two years in a row from their annual golf tournament at de Anza Desert Club depend on de Anza. De Anza Desert Club is also where the Borrego Springs youth golf team practice. Golf and other sports activities are critical in promoting mental and psychological health and it is well-known that youth who participate in sports are less likely to drop out of school, and become involved in drugs and alcohol activity, while they also excel in academic performances and sociability.

de Anza Desert Club is surrounded by 385 single family homes and over 50 condominiums. The residents of these homes and condos contribute to the local economy in several ways, including shopping, dining, recreational & social activities, and charitable giving to local organizations that help our disadvantaged community (DAC), and severely disadvantaged community (SDAC).

Additionally, they provide year-round above income opportunities well above minimum wage to service providers who are largely comprised of Hispanic and Native American tribal decent. These income opportunities include housekeeping, landscaping, property management and construction jobs in all trades.

Our property also serves as a habitat for protected indigenous wildlife including Big Horn Sheep, Coyote, reptiles, fish and over 90 species of birds including waterfowl.

Our irrigation lakes are often utilized for emergency fire-fighting efforts by Cal Fire. Our grounds serve as parkland to the local community and visitors alike.

Proposition 68

Borrego Springs Subbasin

Our property also contributes to tourism via the historic reputation of the golf course, the mid-century architecture of the clubhouse and the surrounding community and the indigenous wildlife viewing opportunities.

The land proposed in this conservation project is zoned in the county's planning map as "Recreation". In review of Proposition 68 and the Outdoor Access Act of 2018 is in alignment with the outlined definitions of "Park and Historical" resources.

Please refer to:

Exhibit 1A: Borrego Springs Land Use Map

Exhibit 1B: DUDEK MAP

Exhibit 4: SD Assessor's Parcel Data

Exhibit 7: Proposition 68

Will the Project or Component positively impact issues associated with small water systems or private shallow domestic wells (e.g., groundwater contamination vulnerability, drawdown, etc.)? If so, please provide justification such as water system maps or domestic well census results.

The conservation of water that this project will achieve will help to ensure that the basin is less over-drafted per the reduction guidelines set forth by the GMP and managed by the Borrego Water Master.

Does the Project address the needs of the State Water Board's SAFER Program, designed to ensure Californians who lack safe, adequate, and affordable drinking water receive it as quickly as possible, and that the water systems serving them establish sustainable solutions?

This project is intended for non-potable water which is pumped into our irrigation lakes for the purpose of irrigation only. However, conservation of water that this project will achieve will help to ensure that the basin is less over-drafted per the reduction guidelines set forth by the GMP and managed by the Borrego Water Master.

How does the Project address the Human Right to Water (AB 685 Section 106.3) which states that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes?

Fast-tracking of our pumping ramp down will help ensure that sufficient groundwater is available in the future for all local needs, including the basic needs for the human right to water.

Please describe how the project contributes to addressing the risks in the region to water supply and water infrastructure arising from climate change. If possible, please provide the amount of greenhouse gas emissions reduced and carbon sequestered resulting from the project.

This proposed project conserves water via Turf reduction and addressing leaching of water from our irrigation lakes via replacement of its liner, thus contributing to the expedited replenishment of our critically over-drafted Borrego basin.

The Turf reduction aspect of this project will lower greenhouse gasses as our large gas and diesel machines which are currently utilized for the maintenance of our 146.76 acres of turf will be used less as the area of maintenance will be reduced by 37%. Both the turf reduction and the lake lining projects contribute to reduction of electrical use as our irrigation pumps would run for shorter time spans than they currently do, and our irrigation lake will be replenished in a shorter period of time due to this reduction of consumptive turf areas.

Budget Category (a): Project Administration

Tasks - Project Management

- Manage grant agreement including compliance with grant requirements, and preparation and submission of supporting grant documents and coordination with the Grantee, Borrego Water District.
- Prepare invoices including relevant supporting documentation for submittal to DWR via Borrego Water District.
- This task also includes administrative responsibilities associated with the project such as coordinating with partnering agencies and managing consultants/contractors.

Deliverables: Invoices and necessary documentation

Budget Category (b): Planning/Design/Environmental

Tasks - Planning

- Draft initial renderings for areas to be converted
- Review and approve design
- Finalize budget and approve

Deliverables: Approved plans and budget

Budget Category (c): Construction/Implementation

Tasks - Construction Management

Activities necessary to secure a contractor and award the contract include:

- Develop bid documents, prepare advertisement, and contract documents for construction contract bidding.
- Conduct pre-bid meeting, bid opening and evaluation, selection of the contractor, award of contract, and issuance of notice to proceed.
- Contractors to obtain necessary permits.

Deliverables: Contractor(s) to obtain permits where necessary and commence construction.

Budget Category (d): Monitoring/Assessment

Tasks - Monitoring of work and Progress

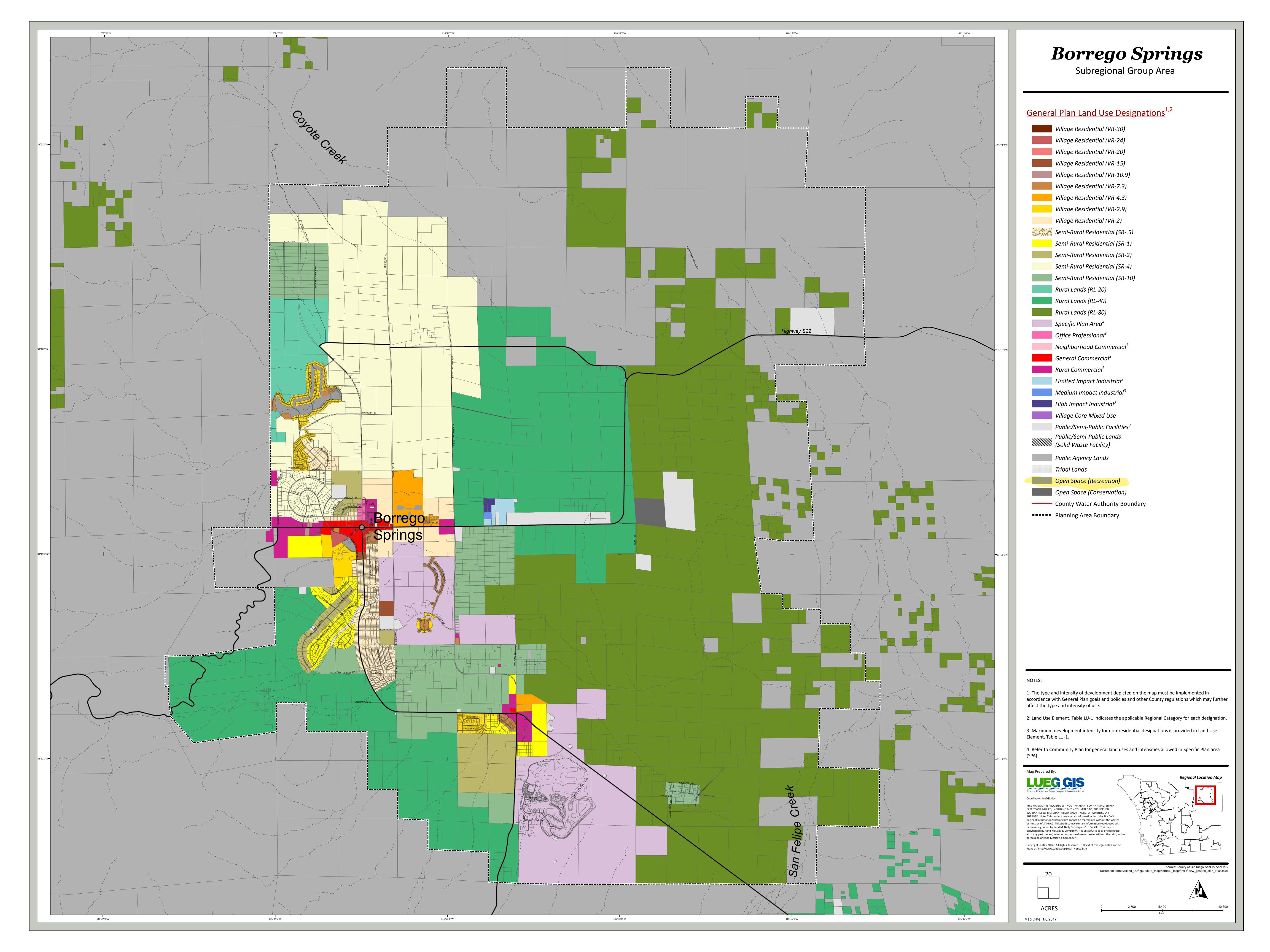
- Monitor work to ensure high standard of work.
- Ensure that environmental concerns if any are addressed.
- Ensure that contractor(s) are adhering to the budget.
- Ensure that project is completed on time.

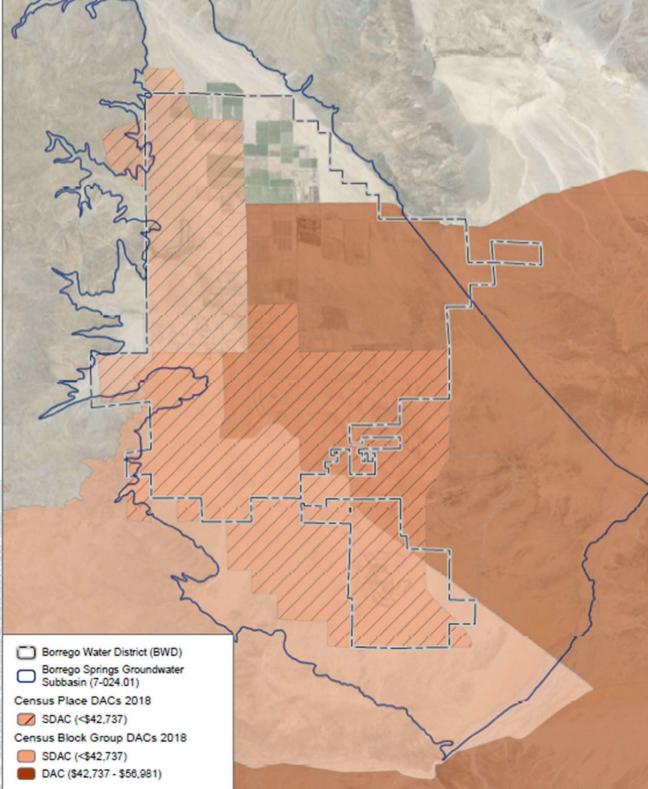
Deliverables: Complete project with a high standard and deliver the intended results and on time.

_		(a)	(b)	(c)	(d)
	Category	Requested Grant Amount	Local Cost Share: Non-State Fund Source*	Total Cost	% Local Cost Share (Col(b))/(Col(c))
(a)	Project Administration	\$115,003.26	de Anza Desert Club	\$128,517.81	10.52%
			\$13,514.55		
(b)	Planning/Design/Environmental	\$204,698.06	de Anza Desert Club	\$248,956.38	17.78%
			\$44,258.32		
(c)	Construction/Implementation	\$2,670,383.34	de Anza Desert Club	\$2,963,988.83	9.91%
			\$293,605.49		
(d)	Monitoring/Assessment				
(e)	Interested Parties Outreach/Public Education				
(f)	Grand Total (Sum rows (a) through (d) for each column)	\$2,990,084.65	\$351,378.36	\$3,341,463,02	10.52%

Please refer to: Exhibit 6 - Preliminary Construction Quotes

	Categories	Start Date (Earliest Start Date)	End Date (Latest End Date)	
(a)	Project Administration	05/16/2022	11/01/2022	
	Project Management			
(b)	Planning/Design/Environmental	05/16/2022	6/15/2022	
	Drawings			
	Review and Approval			
	Permitting where necessary			
(c)	Construction/Implementation	6/15/2022	11/16/2022	
	Commence construction	6/1/2022		
	Conclude Construction		11/01/2022	
(d)	Monitoring/Assessment	6/1/2022	11/1/2022	
	Manage project to ensure high standard of work			
	Ensure timely completion			
	Ensure environmental issues if any are addressed			







County of San Diego

MARK WARDLAW

PLANNING & DEVELOPMENT SERVICES
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KATHLEEN A. FLANNERY
ASSISTANT DIRECTOR

January 18, 2019

DE ANZA DESERT COUNTRY CLUB 509 CATARINA DRIVE P O BOX 120 BORREGO SPRINGS CA, 92004

RE: SUSTAINABLE GROUNDWATER MANAGEMENT ACT - BASELINE PUMPING ALLOCATION FOR BORREGO VALLEY GROUNDWATER BASIN

Dear Owner Representative/Property Manager:

This letter serves as an update to your baseline pumping allocation previously detailed to you in a letter from the County of San Diego (County) dated July 6, 2018. The draft baseline allocation is being provided as part of the groundwater sustainability plan (GSP) being prepared for the Borrego Springs Subbasin of the Borrego Valley Basin. DUDEK, working with the County and Borrego Water District as the Groundwater Sustainability Agency, has updated the baseline pumping allocation methodology based on review of comments received from pumpers within the basin.

Your updated baseline pumping allocation for your property(ies) is summarized as follows:

Assessor Parcel Number	Property Irrigation Name Type		Groundwater Consumptive Use Factor (acre-feet/acre)	Maximum Use Year	¹ Acres	² Baseline Pumping Allocation (acre- feet/year)	
14024262 14018519 14026101 14026408	De Anza Country Club	Turf	6.45	2012	146.76	946.60	
		Ponds	5.75	2012	1.80	10.35	
				Total	148.56	957	

¹Attachment A presents aerial imagery of the farm which depicts the area of irrigation for each of your parcels. ²Attachment B describes the methodology used to develop the baseline pumping allocation.

Request for Comments: The baseline pumping allocations for the Subbasin will be finalized by the GSA on March 1, 2019. As a last opportunity, please provide any comments you may have on your baseline pumping allocation by February 8, 2019.

January 18, 2019 Page 2

Please provide any comments regarding the draft baseline pumping methodology/results and/or groundwater pumping data via e-mail to PDS.Groundwater@sdcounty.ca.gov or via US Mail to:

County of San Diego
Planning & Development Services
Jim Bennett, Water Resources Manager
5510 Overland Avenue, Suite 310
San Diego, CA 92123

If you have any questions, please contact me at 858-694-3820.

Sincerely,

JIM BENNETT, Water Resources Manager

County of San Diego Planning & Development Services

Attachment A: Aerial Imagery, Irrigated Acres

Attachment B: Baseline Pumping Allocation Methodology



SOURCE: NAIP 2012; SANGIS 2018



Attachment A Recreation Sector Proposed Baseline Pumping Allocation

The Groundwater Sustainability Plan (GSP) will include a baseline pumping allocation for each identified non-de minimis groundwater user in the Borrego Springs Subbasin (Subbasin). The "baseline pumping allocation" is defined as the amount of groundwater each pumper in the Subbasin is allocated prior to SGMA-mandated reductions. It is further defined as the verified maximum annual production, in acre-feet per year (AFY), for each well owner over the baseline pumping period. The baseline pumping period is the 5-year period from January 1, 2010 through December 31, 2014.

The County of San Diego (County) sent letters via U.S. Mail to each non-de minimis pumper in January 2018 and July 2018 with a request to provide the Groundwater Sustainability Agency (GSA) any historical groundwater production data or other information to help the GSA develop the baseline pumping allocation. Any data provided by pumpers was agreed to be kept confidential by the GSA to the maximum extent allowed by law including but not limited to Government Code 6254. Identified non-de minimis pumpers included one municipal pumper (Borrego Water District), 30 agricultural pumpers, 6 golf course pumpers, and 4 other pumpers (Anza-Borrego Desert State Park, Borrego Air Ranch Water Company, Borrego Springs Elementary School, and La Casa Del Zoro Resort and Spa [Figure 1]. In cases where the GSA could validate submitted historical groundwater data, the GSA used the data to develop the baseline pumping allocation.

After the GSA reviewed data submitted from pumpers, baseline pumping allocations utilizing validated historical production data were determined for Borrego Water District, Anza-Borrego Desert State Park (Palm Canyon), and one agricultural pumper. The GSA further determined for the Borrego Air Ranch Water Company (provides water to individual residences) that the baseline pumping allocation would be estimated based on a demand of 0.5 acre-feet per year for each residential unit. For all other pumpers, the GSA developed a water-use estimate approach (Evapotranspiration Method) discussed below. The County sent letters via U.S. Mail to each non-de minimis pumper in January 2019 to provide individual baseline pumping allocations. The baseline pumping allocations are summarized by water use sector categories as follows:

Table 1: Baseline Pumping Allocation by Sector

Water Use Sector	Baseline Pumping Altocation (acre-feet/year)
Agriculture	15,680
Recreation (Golf Courses)	4,050
Municipal (Borrego Water District)	2,122
Other Pumpers (Borrego Air Ranch, Anza-Borrego	63
State Park, Casa Del Zoro Resort, and Borrego	
Elementary School)	
Total	21,915

Existing Issued Water Credits: The Borrego Water District has a Demand Offset and Mitigation Water Credits Policy in which actively irrigated agricultural land can be permanently fallowed in exchange for water credits. The water credits issued through the

Borrego Water District policy are under review by the GSA and may be converted to a Baseline Pumping Allocation at a later date.

EVAPOTRANSPIRATION METHOD

This approach includes the use of available aerial imagery to determine irrigated areas on each parcel, which is multiplied by a water use factor for each crop type. The following outlines the methodology for measuring total irrigated area and calculating the water use factor.

Area Irrigated: The area of irrigation was determined using ArcGIS (GIS), a computer based mapping and data analysis software. A 1:2,000 scale was used to create polygons of irrigated area over available aerial imagery from the National Agriculture Imagery Program (NAIP). Available years of aerial imagery included 2010, 2012, and 2014. The total area of each polygon was calculated using coordinate system NAD 1983, State Plane California VI, feet. One exception to this approach was for Rams Hill Golf Course, which was in not in full production during the baseline period of 2010 through 2014. Aerial imagery from 2017 was selected to capture full golf course irrigation.

Water Use Factor: The water use factor estimates the total applied groundwater lost through the evaporation from soil and transpiration from plants (evapotranspiration). These factors are specific to each vegetation type. Turf, ponds, palms, citrus, nursery, and potatoes were identified and considered for all sectors. Table 2 provides the water use factors for each irrigation use type.

Table 2: Water Use Factors

Use Type	Water Use Factor (Feet per Year)
Citrus	6.29
Date Palms ^a	7.74
Landscape (Decorative)	3.63
Landscape (Native)	2.76
Nursery	4.84
Palms (Ornamental)	4.03
Ponds ^b	5.75
Potatoesc	2.50
Turf	6.45

Source: Water Use Classification Landscape Species IV (WUCOLS IV), DWR 2018, Borrego Water District and County of San Diego 2013. Notes:

- a. Includes additional water required for a 30% cover crop (turf) that is irrigated in the understory of the date palms.
- Applied to golf courses only. Surface water evaporation based on pan evaporation data from the Imperial Valley (Salton Sea Salinity Control Research Project U.S. Department of Interior 2004).
- Approximately 2.5 acre-feet per acre are applied to potato fields per information obtained from the potato farmer in the Subbasin.

The water use factor is calculated using local station specific evapotranspiration (ETo), documented plant factors, and irrigation efficiency by irrigation type (Equation A). The

water use factor for citrus and date palms also includes a factor for leaching (Equation B).

The equations below present the calculations used to determine the water use factor.

Equation A

$$Annual\ Water\ Use\ Factor = \frac{ETo*PF*1\ Acre}{IE}$$

Equation B

$$Annual\ Water\ Use\ Factor = \left(\frac{ETo*PF*1\ Acre}{IE}*CLF\right) + \left(\frac{ETo*PF*1\ Acre}{IE}\right)$$

Where:

ETo = Reference Evapotranspiration (feet/year)

PF = Plant Factor

IE = Irrigation Efficiency

CLF = Citrus and Date Palms Leaching Factor

The following section describes the factors, which contribute to calculating the water use factors.

Reference Evapotranspiration: Reference evapotranspiration (ETo) is based on potential evapotranspiration (ET) from turf grass/alfalfa crop, which assumes a continuous source of moisture and does not consider summer plant dormancy. Therefore, ETo is an overestimation of actual ET, which varies with the vegetation type since some plants consume significantly more water than others. The ETo was determined from the California Irrigation Management Information System (CIMIS) station #207 located in Borrego Springs (DWR 2018). ETo was selected as 6.45 feet from 2010, which was the highest year during the 2010-2014 baseline period.

Table 3: 2010-2014 Reference Evapotranspiration (ETo) for Borrego Springs

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total (Inches)	Annual Total (Feet)
2010	2.41	3.21	8.81	9.84	8.58	9.22	9.51	9.11	7.44	4.36	2.88	1.98	77.35	6.45
2011	2.68	3.35	5.55	7.12	8.77	8.23	7.98	8.47	6.43	4.92	2.72	2.11	68.33	5.69
2012	2.85	3.56	5.33	6.77	7.66	9.47	8.77	8.04	7.09	5.04	3.2	2.23	70.01	5.83
2013	2.54	3.57	5.75	7.56	8.64	9.02	8.01	7.57	6.46	5.05	3	2.27	69.44	5.79
2014	2.67	3.66	5.94	7.23	8.66	9.13	8.83	8	6.97	4.55	3.14	1.58	70.36	5.86

Source: Borrego Springs CIMIS Station #207 (DWR 2018).

Plant Factor: The plant factor is the percentage of evapotranspiration needed to maintain acceptable health, appearance, and growth of a specific plant type. Plant factors were

obtained from the Water Use Classification of Landscape Species (WUCOLS) database. Additionally, the County has relied on documented plant factors used for assigning water credits, which are outlined in the Memorandum of Agreement between the Borrego Water District and the County of San Diego Regarding Water Credits (MOA). The plant factor used in this report either was based on an average of recent WUCOLS data or documented County plant factors, whichever was higher. For Date Palms, the highest plant factor range was selected.

Table 4: Plant Factors

Туре	Plant Factor (MOA)	Plant Factor Range (WUCOLS VI)	Proposed Plant Factor		
Citrus	0.65a	0.4 - 0.6	0.65		
Date Palms	N/A	0.4 - 0.6	0.6		
Landscape (Decorative)	N/A	0.30 - 0.6	0.45		
Landscape (Native)	N/A	>0.1 – 0.6	0.3		
Nursery	0.6	0.4 - 0.6	0.6		
Palms (Ornamental)	0.5	0.4 - 0.6	0.5		
Potatoes	N/A	N/Ab	N/A		
Turf	0.63¢	0.6 - 0.8	0.7		

Source: BWD and County 2013, WUCOLS 2014, UCCE CDWR 2000 N/A = not available

An average of warm and cool season.

Irrigation Efficiency: Irrigation efficiency is the amount of water supplied to a plant type compared to the amount consumed. Two common irrigation methods in the Subbasin are rotor and drip. The irrigation efficiency was determined from the Turf and Landscape Irrigation Best Management Practices prepared by the Water Management Committee of the Irrigation Association (Water Management Committee of the Irrigation Association 2004). Table 5 presents the irrigation efficiencies used by irrigation method.

Table 5: Irrigation Efficiency

Irrigation Method	Irrigation Efficiency				
Rotora	0.7				
Drip ^b	0.8				

Source: BWD and County 2013, Water Management Committee of the Irrigation Association 2004.

Rotor used for turf and decorative landscaping

b. Drip used for citrus, nursery, palms, and native landscaping

Salt Leaching: Leaching for salts is the overwatering of an area to flush excessive salts below the root zone. Leaching typically occurs in arid environments with high evapotranspiration rates. Because leaching is necessary for the health of citrus and date

Source: UC Cooperative Extension and Department of Water Resources, A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California, 2000

There is no plant factor for potatoes in WUCOLS VI. Approximately 2.5 acre-feet per acre are applied to potato fields per information obtained from the potato farmer in the Subbasin.

palms in the Subbasin, a leaching requirement of 20% of the water use factor is assumed based on optimal crop yield and source water with total dissolved solids (TDS) concentration of less than 1,000 mg/L.1 The leaching requirement is provided in Equation C (Rhoades 1974, and Rhoades and Merrill 1976):

Equation C

LR = ECw/5(ECe) - ECw

where:

LR = the minimum leaching requirement needed to control salts within the tolerance (ECe) of the crop with ordinary surface methods of irrigation ECw =salinity of the applied irrigation water in deciSiemens per meter² (dS/m) ECe = average soil salinity tolerated by the crop as measured on a soil saturation

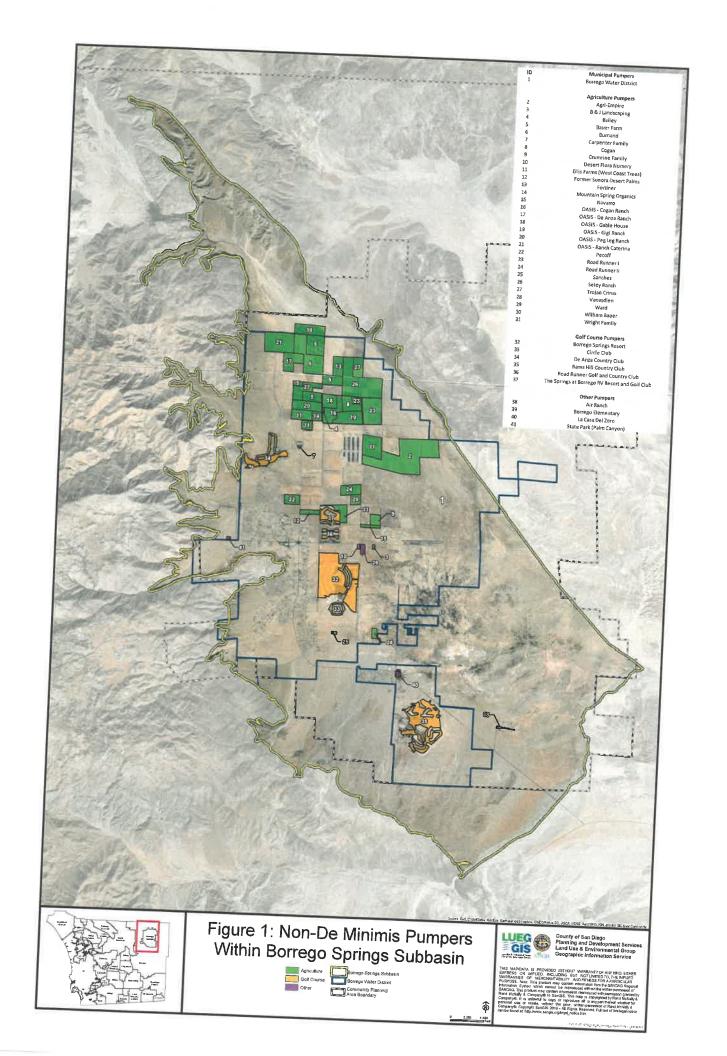
¹ A 20% leaching requirement for citrus and date palms is assumed taking into account typical Subbasin water quality (i.e. <1,000 mg/L TDS and average soil salinity tolerated by grapefruit of 1.8 dS/m for optimal yield (Ayers and

² Soil and water salinity is often measured by electrical conductivity (EC). A commonly used EC unit is deciSiemens per metre (dS/m). The ratio of total dissolved solids (TDS) to EC of various salt solutions ranges from 550 to 700 ppm per dS/m, depending on the compositions of the solutes in the water. Simple relationships are used to convert EC to

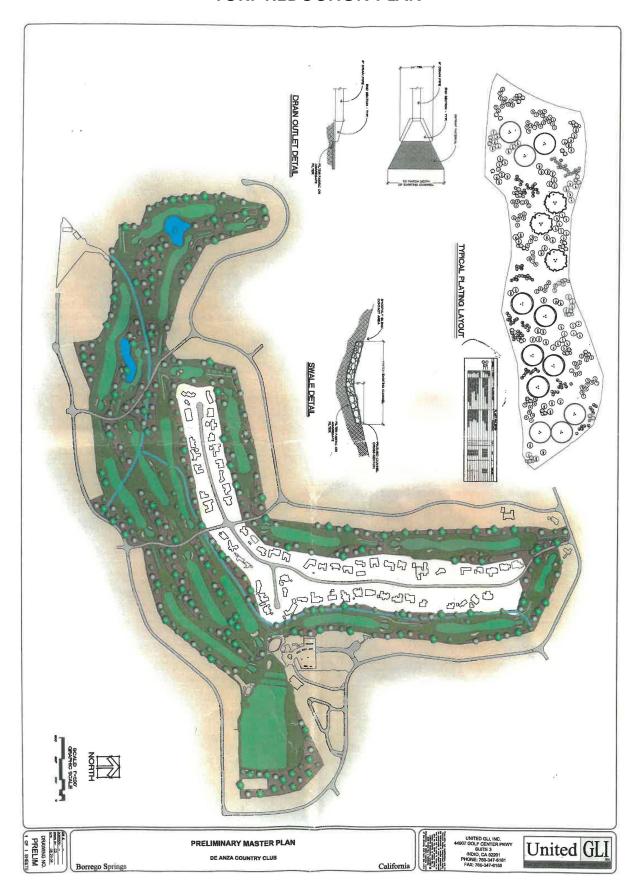
TDS $(mg/L \text{ or ppm}) = EC (dS/m) \times 640 (EC \text{ from } 0.1 \text{ to } 5 \text{ dS/m})$

TDS (mg/L or ppm) = EC (dS/m) x 800 (EC > 5 dS/m)

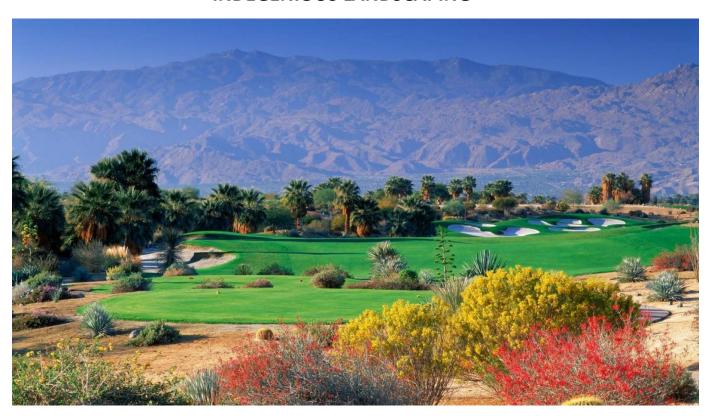
University California http://ucanr.edu/sites/Salinity/Salinity_Management/Salinity_Basics/Salinity_measurement_and_unit_conversions/ management:



TURF REDUCTION PLAN



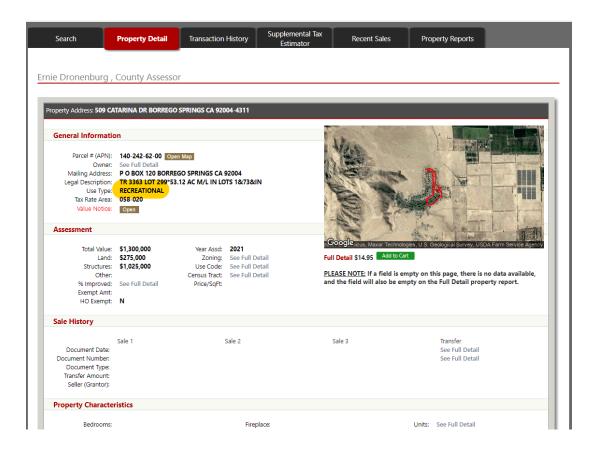
INDEGENIOUS LANDSCAPING





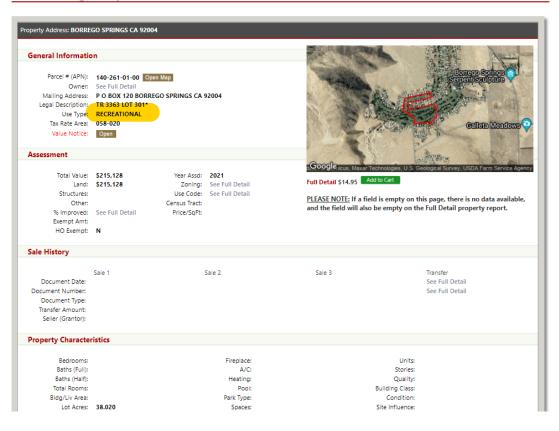
IRRIGATION DESIGN



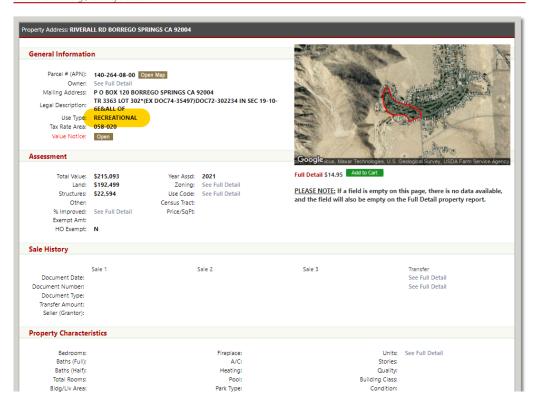


Search Property Detail Transaction History Supplemental Tax Recent Sales Property Reports

Ernie Dronenburg, County Assessor



Ernie Dronenburg, County Assessor



Stipulation of Adjudication

2021 Base Line Allocation 957 Acre-Feet

Annual Ordered Reduction 5%

Reduction Schedule	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Annual Allocated Consumption	909	864	821	779	741	703	668	635	603	573
Actual	884									

Turf Removal Plan Forecasted Results

Proposed Annual Decrease	345 Ac	re-Feet								
		2023	2024	2025	2026	2027	2028	2029	2030	2031
Annual Consumption	Acre-Feet	564	564	564	564	564	564	564	564	564
Decrease from BPA	Acre-Feet	300	256	215	176	139	104	71	39	9
Cumilative Conservation from BPA	Acre-Feet	300	556	771	948	1087	1191	1262	1301	1310
Overall Conservation from Basin	Acre-Feet	345	690	1035	1380	1725	2070	2415	2760	3105





De Anza Desert Country Club

509 Catarina Drive PO Box 120

Borrego Springs CA 92004.-

January 05, 2022.

Turf Reduction Program Presentation.

Introduction.-

Derived from the need to reduce water use in the State of California, irrigation systems are being implemented to improve the use of water used in the golf course.

For this reason "De Anza Desert Country Club" is launching a program to reduce irrigable grass areas in the Golf Course.

Description & Scope of works.

The program to reduce irrigable grass areas includes:

Reduce from 146.76 Acres of grass in the golf course to 93.8 acres of grass.

The use of Tiff Tuff Grass on the Golf Course is contemplated.

Create new native areas with desert theme landscape.

Installation of a new irrigation system that is more efficient in the use of water.

Water storage lake upgrade, which includes new liner.

Lake Linning to eliminate water leaks.- New liner 30 PVC will be installed, slopes on lake should be no less than 3 to 1. Lake slopes and bottom floor will be compacted and smooth rolled prior to lake liner installation. Shoreline trenching perimeter of lake will be 3 feet above water level with a depth 12" and a width of 12". Lake liner earth cover will be a minimum 12" depth screened debris free cover. Lake liner will be tested prior to earth cover Lake liner will have an 8" overlap when connecting panels.





De Anza Desert Country Club Renderings (by Jon Garner Golf Design), Note.- only conceptual proposal.

Hole 10









De Anza Desert Country Club Renderings (by Jon Garner Golf Design), Note.- only conceptual proposal.

Hole 14.







De Anza Desert Country Club Renderings (by Jon Garner Golf Design), Note.- only conceptual proposal.

Hole 15.





DIAMOND GOLF



De Anza Desert Country Club Renderings (by Jon Garner Golf Design), Note.- only conceptual proposal.

Hole 16.







De Anza Desert Country Club Renderings (by Jon Garner Golf Design), Note.- only conceptual proposal.

Hole 18.





New Irrigation System, by Bryant Taylor Gordon (Note.- only conceptual proposal.)







Lake Lining Process

Lake preparation.-



Liner installation







Lake Lining Process

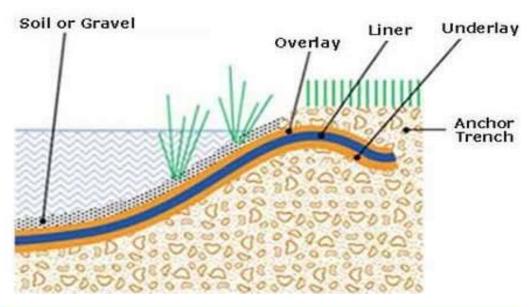
Back Filling

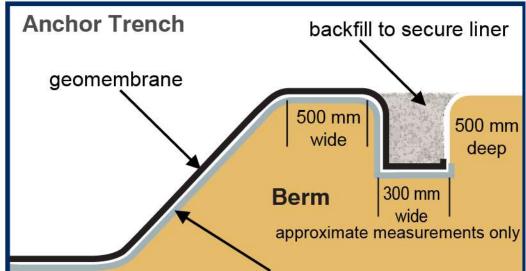






Esquematic lake liner installation





DIAMOND GOLF



Lake concrete shore line







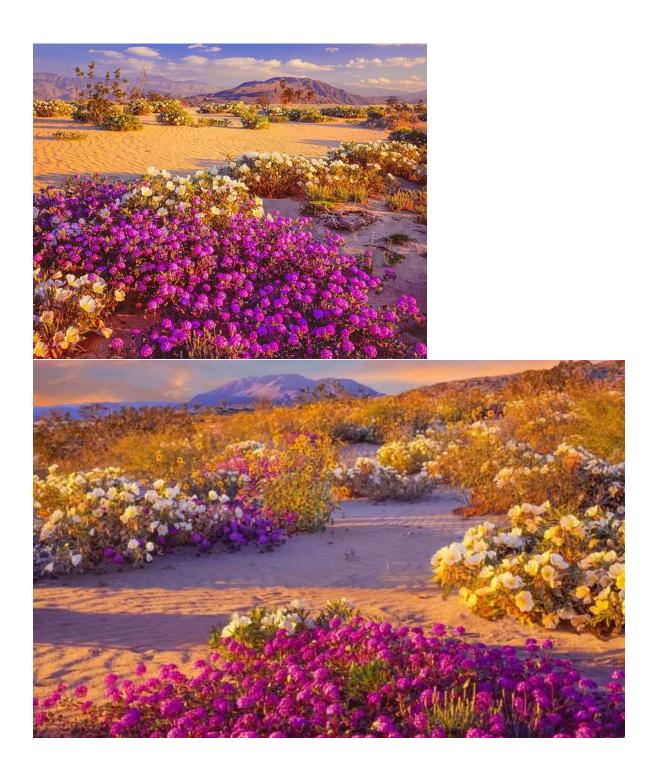
Landscape Signature Level







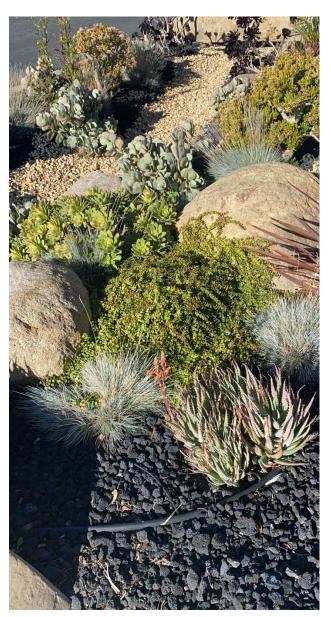
Desert Seasonal Accent Landscape





Landscape Desert Native







Formal Bunkers





DIAMOND GOLF



Waste Bunkers







General Contractor

DIAMOND GOLF INTERNATIONA INC.

23753 Sonata Dr.

Murrieta CA. 92563

Tel. 001 (951) 696-04-26.

diamondgolf@hotmail.com.

Contractor Estate Registration Number .- 1023224.



TURF REDUCTION & LANDSCAPE

Planning/Design/Environmental			_		
Concept	Unit	Quantity		Unit Price	Total
Mobilization	LS	1	\$	9,940.00	\$ 9,940.00
General Conditions, housing, transportation, administrative	Months	4	\$	6,480.00	\$ 25,920.00
Golf Design	LS	1	\$	42,500.00	\$ 42,500.00
Survey & Layout	LS	1	\$	2,240.00	\$ 2,240.00
			Su	b-total	\$ 80,600.00

Construction/Implementation Fairway Turf Reduction

	Unit	Quantity		Unit Price	Total
Survey & Layout	LS	1	\$	4,800.00	\$ 4,800.00
Drain sump with catch basins 12" Pipe	Each	24	\$	1,800.00	\$ 43,200.00
Turf Removal / Spray Out	Acre	80	\$	3,250.00	\$ 260,000.00
Grading	Acre	80	\$	1,150.00	\$ 92,000.00
Finishing	Acre	80	\$	925.00	\$ 74,000.00
Soil Ammendments	LS	1	\$	48,000.00	\$ 48,000.00
	-	-	Sub	-total	\$ 522,000.00

Construction/Implementation Indegenious Landscape

Concept	Unit	Quantity	Unit Price	Total
Signature Level Desert theme Landscape few boulders, native gravel as mulch, succulents plants, agaves, cactus and few specimen trees with drip irrigation	Acre	6.0	\$ 33,190.00	\$ 199,140.00
Seasonal Accent Landscape Rock, mulch, few boulder and Native Seasonal flowers with Quick coupler for grow-in irrigation.	Acre	8.5	\$ 20,090.00	\$ 170,765.00
Natural Level Desert theme Landscape with out trees, few boulders and native plant materials that require no irrigation, quick couplers for establishment	Acre	39.1	\$ 9,990.00	\$ 390,609.00
			Sub-total	\$ 760,514.00
			Total Amount	\$ 1,363,114.00
Project Administration	4%	Man	agement Fee	\$ 54,524.56
			Sub-total	\$ 1,417,638.56
	7.75%	9	State Tax	\$ 109,866.99
			Total	\$ 1,527,505.55

IRRIGATION RENOVATION

Planning/Design/Environmental				
		Unit Price		Total
Mobilization	\$	7,455.00	\$	7,455.00
General Conditions, housing,				
transportation, administrative, food &	\$	4,860.00	\$	19,440.00
beberage				
Golf Design	\$	-	\$	-
Irrigation Design	\$	32,800.00	\$	32,800.00
Lake Design	\$	-	\$	-
Survey & Layout	\$	1,680.00	\$	1,680.00
Irrigation Demolition	\$	48,000.00	\$	48,000.00
	Sub	-total	\$	109,375.00

Construction/Implementation

	Unit Price	Total		
New irrigation system	\$ 1,195,800.00	\$ 1,195,800.00		
Project Administration	Sub-total	\$ 1,195,800.00		
	Total Amount	\$ 1,305,175.00		
	Management Fee	\$ 52,207.00		
	Sub-total	\$ 1,357,382.00		
	State Tax	\$ 105,197.11		
	Total	\$ 1,462,579.11		

LAKE RENOVATION

Planning/Design/Environmental				
	Unit Price			Total
Mobilization	\$	7,455.00	\$	7,455.00
General Conditions, housing, transportation, administrative	\$	4,860.00	\$	19,440.00
Golf Design	\$	-	\$	-
Irrigation Design	\$	-	\$	-
Lake Design	\$	12,500.00	\$	12,500.00
Survey & Layout	\$	1,680.00	\$	1,680.00
	Sub-tota		\$	41,075.00

Construction/Implementation

West Lake

		Unit Price	Total
Demo Lake Liner and haul off-site.	\$	22,800.00	\$ 22,800.00
Bury concrete inside lake cavaty	\$	18,500.00	\$ 18,500.00
Earth cover 12", local soil	\$	6.20	\$ 10,354.00
Anchor Trench 8' ft aprox	\$	15.60	\$ 23,400.00
2' Concrete Verneer washed finish		18.5	\$ 19,147.50
30 mil RPE Liner with earth cover 12"	\$	1.22	\$ 51,142.40
	Sub-	total	\$ 145,343.90

East Lake

	Unit Price			Total
Demo Lake Liner and haul off-site.	\$	18,700.00	\$	18,700.00
Bury concrete inside lake cavaty	\$	15,232.00	\$	15,232.00
Earth cover 12", local soil	\$	6.20	\$	8,556.00
Anchor Trench 8' ft aprox	\$	15.60	\$	23,400.00
2' Concrete Verneer washed finish	\$	18.50	\$	19,147.50
30 mil RPE Liner with earth cover 12"	\$	1.22	\$	42,108.30
Project Administration		Sub-total		127,143.80
		Total Amount		313,562.70
		Management Fee		12,542.51
		Sub-total		326,105.21
		State Tax	\$	25,273.15
	Tota	Total		351,378.36

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landscapes, Californians value the rich diversity of outdoor experiences afforded to this state and its citizens.

- (2) Demand for local parks has exceeded available funding by a factor of 8 to 1, with particularly high demand in urban, disadvantaged communities.
- (3) Many Californians across the state lack access to safe parks, wildlife, trails, and recreation areas, which limits their ability to experience the outdoors, improve their physical and emotional health, exercise, and connect with their communities.
- (4) Investments to create and improve parks and recreation areas, and to create trail networks that provide access from neighborhoods to parks, wildlife, and recreational opportunities, will help ensure all Californians have access to safe places to exercise and enjoy recreational activities.
- (5) The California Center for Public Health Advocacy estimates that inactivity and obesity cost California over forty billion dollars (\$40,000,000,000) annually, through increased health care costs and lost productivity due to obesity-related illnesses, and that even modest increases in physical activity would result in significant savings. Investments in infrastructure improvements such as biking and walking trails and pathways, whether in urban or natural areas, are cost-effective ways to promote physical activity.
- (6) Continued investments in the state's parks, wildlife and ecological areas, trails, and natural resources, and greening urban areas will help mitigate the effects of climate change, making cities more livable, and will protect California's natural resources for future generations.
- (7) California's outdoor recreation economy represents an eighty-seven-billion-dollar (\$87,000,000,000) industry, providing over 700,000 jobs and billions of dollars in local and state revenues.
- (8) California's state, local, and regional park system infrastructure and national park system infrastructure are aging, and a significant infusion of capital is required to protect this investment.
- (9) There has been a historic underinvestment in parks, trails, and outdoor infrastructure in disadvantaged areas and many communities throughout California.
- (10) Tourism is a growing industry in California and remains an economic driver for the more rural parts of the state.
- (11) California's highly variable hydrology puts at risk the state's supply of clean and safe water. In recent years, California has experienced both the state's worst drought and also the wettest winter in recorded history.
- (12) Extreme weather changes such as prolonged drought, intense heat events, and a changing snowpack are real climate impacts happening right now in California, and these changes increase the need to safeguard water supply for the quality of life for all Californians.
- (13) Every Californian should have access to clean, safe, and reliable drinking water.
 - (14) California's water infrastructure continues to age and deteriorate.

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- (15) Encouraging water conservation and recycling are commonsense actions to improve California's water future.
- (16) Successfully implementing the Sustainable Groundwater Management Act in collaboration with local government and communities is a key state priority.
 - (17) Flooding can devastate communities and infrastructure.
- (18) Protecting and restoring lakes, rivers, streams, and the state's diverse ecosystems is a critical part of the state's water future and ensures the quality of life for all Californians.
- (19) This division provides funding to implement the California Water Action Plan.
- (20) Periodic investments are needed to protect, restore, and enhance our natural resources and parks to ensure all Californians have safe, clean, and reliable drinking water, prevent pollution and disruption of our water supplies, prepare for future droughts and floods, and protect and restore our natural resources for the benefit and enjoyment of our children and future generations.
- (b) It is the intent of the people of California that all of the following shall occur in the implementation of this division:
- (1) The investment of public funds pursuant to this division will result in public benefits that address the most critical statewide needs and priorities for public funding.
- (2) In the appropriation and expenditure of funding authorized by this division, priority will be given to projects that leverage private, federal, or local funding or produce the greatest public benefit.
- (3) To the extent practicable, a project that receives moneys pursuant to this division will include signage informing the public that the project received funds from the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018.
- (4) To the extent practicable, when developing program guidelines for urban recreation projects and habitat protection or restoration projects, administering entities are encouraged to give favorable consideration to projects that provide urban recreation and protect or restore natural resources. Additionally, the entities may pool funding for these projects.
- (5) To the extent practicable, a project that receives moneys pursuant to this division will provide workforce education and training, contractor, and job opportunities for disadvantaged communities.
- (6) To the extent practicable, priority for funding pursuant to this division will be given to local parks projects that have obtained all required permits and entitlements and a commitment of matching funds, if required.
- (7) To the extent practicable, administering entities should measure or require measurement of greenhouse gas emissions reductions and carbon sequestrations associated with projects that receive moneys pursuant to this division.
- (8) To the extent practicable, as identified in the "Presidential Memorandum--Promoting Diversity and Inclusion in Our National Parks, National Forests, and Other Public Lands and Waters," dated January 12,

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2017, the public agencies that receive funds pursuant to this division will consider a range of actions that include, but are not limited to, the following:

- (A) Conducting active outreach to diverse populations, particularly minority, low-income, and disabled populations and tribal communities, to increase awareness within those communities and the public generally about specific programs and opportunities.
- (B) Mentoring new environmental, outdoor recreation, and conservation leaders to increase diverse representation across these areas.
- (C) Creating new partnerships with state, local, tribal, private, and nonprofit organizations to expand access for diverse populations.
- (D) Identifying and implementing improvements to existing programs to increase visitation and access by diverse populations, particularly minority, low-income, and disabled populations and tribal communities.
- (E) Expanding the use of multilingual and culturally appropriate materials in public communications and educational strategies, including through social media strategies, as appropriate, that target diverse populations.
- (F) Developing or expanding coordinated efforts to promote youth engagement and empowerment, including fostering new partnerships with diversity-serving and youth-serving organizations, urban areas, and programs.
 - (G) Identifying possible staff liaisons to diverse populations.
- (9) To the extent practicable, priority for grant funding under this division will be given to a project that advances solutions to prevent displacement if a potential unintended consequence associated with park creation pursuant to the project is an increase in the cost of housing.
- 80002. As used in this division, the following terms have the following meanings:
- (a) "Committee" means the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Finance Committee created by Section 80162.
- (b) "Community access" means engagement programs, technical assistance, or facilities that maximize safe and equitable physical admittance, especially for low-income communities, to natural or cultural resources, community education, or recreational amenities.
- (c) "Conservation actions on private lands" means projects with willing landowners that involve the adaptive flexible management or protection of natural resources in response to changing conditions and threats to habitat and wildlife. The actions may include the acquisition of conservation interests or fee interests in the land. These projects result in habitat conditions on private lands that, when managed dynamically over time, contribute to the long-term health and resiliency of vital ecosystems and enhance wildlife populations.
 - (d) "Department" means the Department of Parks and Recreation.
- (e) "Disadvantaged community" means a community with a median household income less than 80 percent of the statewide average.
- (f) "Fund" means the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Fund, created by Section 80032.