

Borrego Water District Board of Directors
Special Meeting
October 18, 2016 @ 9:00 a.m.
806 Palm Canyon Drive
Borrego Springs, CA 92004

I. OPENING PROCEDURES

- A. Call to Order
- B. Pledge of Allegiance
- C. Roll Call
- D. Approval of Agenda
- E. Comments from Directors and Requests for Future Agenda Items
- F. Comments from the Public and Requests for Future Agenda Items (comments will be limited to 3 minutes)

II. CURRENT BUSINESS MATTERS

- A. Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs – T. Driscoll, Dudek and Assoc. (3-57)
- B. Discussion of Conceptual Request for Proposal Items for Borrego GSP – L. Brecht (58–62)
- C. Discussion of Billing Structure for Multifamily, Master-metered Developments – G. Poole (63-65)
- D. Consideration of Proposal from BWD Staff and Jerry Rolwing for his ongoing assistance – G. Poole (66-68)
- E. Consideration of Replacing Joe Tatusko with Harry Ehrlich as the BWD Representative to Association California Water Agencies / Joint Powers Insurance Authority – J. Tatusko (69-70)
- F. Consideration of New Ad-Hoc Committee Structure – L. Brecht (71)
- G. Consideration of joining California Special Districts Association – J, Tatusko (72-74)

III. INFORMATIONAL ITEMS (75-88)

- A. Land Use Under SGMA – L. Brecht
- B. GSP Facilitator Update (CCP) – G. Poole
- C. Geotourism Workforce Development Plan – L. Brecht
- D. California's Water Summary: Public Policy Institute – L. Brecht
- E. SDGE Micro Grid – L. Brecht and G. Poole
- F. Neighborhood Reinvestment Program (NRP) of San Diego County Ideas for a grant application – Director - J. Tatusko
- G. Water Rate Survey – G Poole
- H. Borrego Wastewater Treatment Plant Solar Update – J Tatusko
- I. Borrego Springs Resort and Club Circle Update – B Hart and G Poole
- J. Update on Rams Hill Remaining Water Purchases Requirements – G. Poole
- K. Consideration of Attendance at Fall AQWA Conference, Anaheim CA. – November 2016 – G. Poole

L. Filing of Handouts from August 28th Board Meeting: The following items were distributed at August 28th BWD Board Meeting and will be filed with the 10-18 Agenda Packet:

1. Presentation on GSP MOU – G. Poole (DIGITAL FILES PROVIDED)
2. 2016-17 Capital Improvement Plan – D. Dale (DIGITAL FILES PROVIDED)

IV. CLOSED SESSION

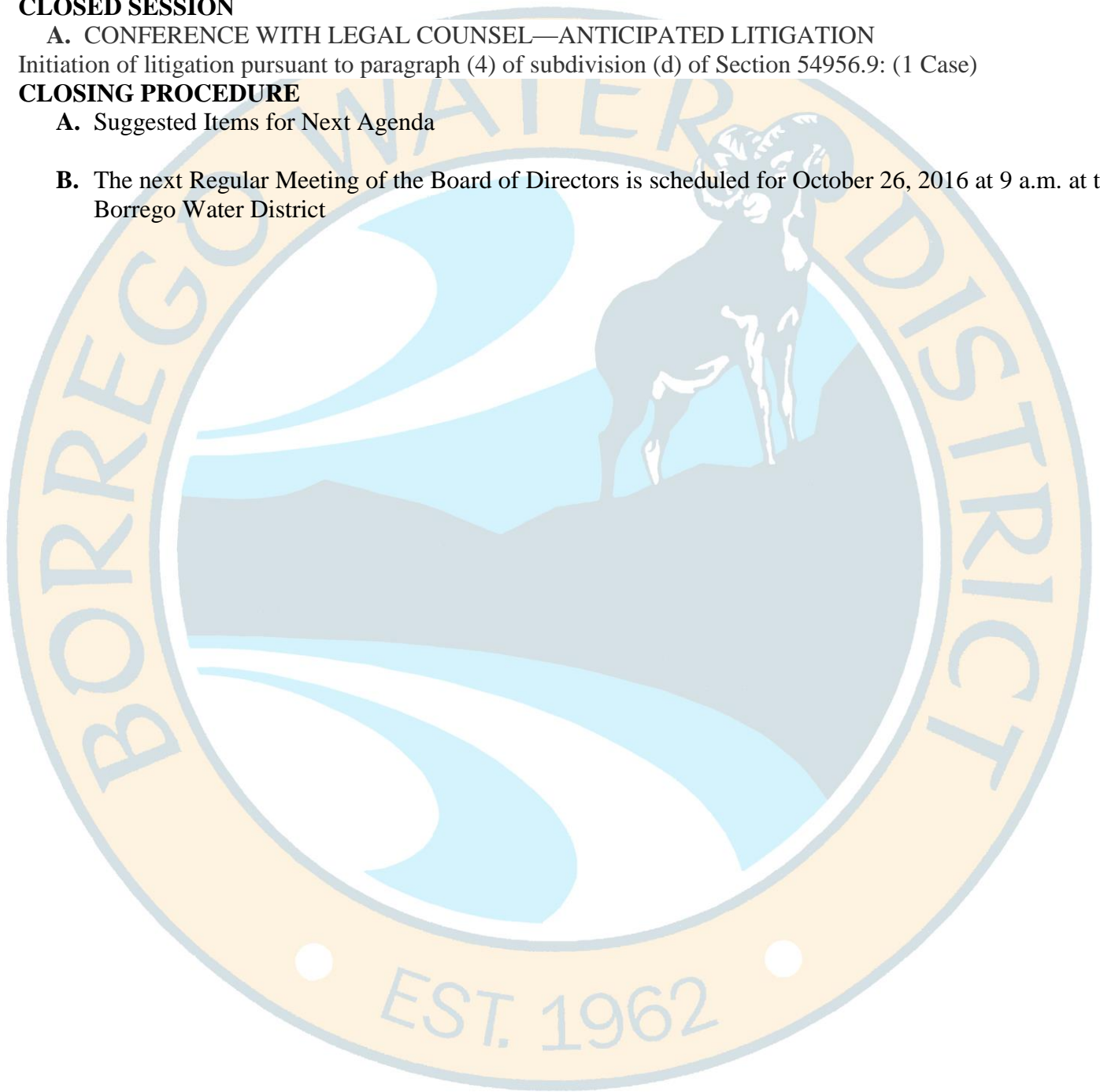
A. CONFERENCE WITH LEGAL COUNSEL—ANTICIPATED LITIGATION

Initiation of litigation pursuant to paragraph (4) of subdivision (d) of Section 54956.9: (1 Case)

V. CLOSING PROCEDURE

A. Suggested Items for Next Agenda

B. The next Regular Meeting of the Board of Directors is scheduled for October 26, 2016 at 9 a.m. at the Borrego Water District



BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.A

October 11, 2016

TO: Board of Directors, Borrego Water District

FROM: Geoff Poole, General Manager

SUBJECT: AGENDA ITEM II.A: Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs – T. Driscoll, Dudek and Assoc.

RECOMMENDED ACTION: Receive and discuss the document created by Trey Driscoll.

ITEM DESCRIPTION: BWD commissioned Dudek to perform an analysis of theoretical build out demand under the current county zoning and the document is attached. Trey Driscoll from Dudek and Associates will be in attendance at the meeting to present the results of his analysis and answer any questions.

FISCAL IMPACT: No direct fiscal impact from this action.

ATTACHMENTS: Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs – T. Driscoll, Dudek and Assoc.

WORKING DRAFT TECHNICAL MEMORANDUM

To: Geoff Poole, General Manger
From: Trey Driscoll, PG, CHG
Subject: Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs
Date: October 4, 2016
cc: Jim Bennett, County of San Diego
Attachment(s): Figures 1–4, Attachments A and B

EXECUTIVE SUMMARY

The Borrego Valley Groundwater Basin (BVGB) has been determined to be in “overdraft” (Figure 1). Recent studies estimate that water users within the Borrego Valley currently withdraw approximately 19,000 acre-feet per year (AFY) and that the “sustainable yield” of the BVGB is approximately 5,700 AFY based on averaging 66 years of historical annual recharge data.¹ Thus, the current estimated “overdraft” is approximately 13,300 AFY. The withdrawal value of 19,000 AFY is the assumed “baseline” on which the state-required Groundwater Sustainability Plan (GSP) will be established, and the “sustainable yield” value of 5,700 AFY is the maximum assumed water use target at the end of the prescribed 20-year water reduction period.²

The theoretical municipal water demand at buildout of present unbuilt lots under the County of San Diego's (County's) current zoning was estimated for comparison to the sustainable yield of the BVGB. The Borrego Water District's (BWD's) 2015 annual groundwater production for domestic supply is 1,645 acre-feet to serve 2,059 connections and a total of 3,103 equivalent dwelling units (EDUs). The current average use per EDU is 0.55 acre-feet per residential unit.

¹ The overdraft of the BVGB was established by the U.S. Geological Survey (USGS) work conducted in 1982 for San Diego County. Since 1982, the overdraft has more than doubled. See http://www.borregowd.org/uploads/BWD_Report_USGS_1982.pdf. See also, USGS Scientific Investigation Report 2015-5150, *Hydrogeology, Hydrologic Effects of Development, and Simulation of Groundwater Flow in the Borrego Valley, San Diego County, California*, available at <https://pubs.er.usgs.gov/publication/sir20155150>.

² This amount does not include any environmental water necessary to maintain the groundwater system, which at present is unknown. The 20-year water reduction period is promulgated in California Water Code Section 10727.2(b)(1).

Under the County's current zoning there are 4,439 vacant and undeveloped parcels that could be converted to residential development and 526 vacant and undeveloped lots that could be converted to commercial, industrial, office space, rural commercial, open space, public agency, or public/semi-public facilities (County of San Diego 2011a). Because an undetermined number of lots do not have legal lot status and because many of the lots are not developable due to environmental and other physical constraints, it was assumed that development of approximately 3,000 residential units would approach maximum buildout of the Borrego Valley. To estimate increased demand for commercial and other user types, it was conservatively assumed that their demand would increase proportionally to their existing percentage of the overall demand as growth occurs in Borrego Springs.

Full General Plan buildout of legal lots given constraints was presumed to add an additional 3,000 residential, 215 commercial, 108 public agency, 207 irrigation, and 179 multiple unit EDUs to the basin for a total of 6,811 EDUs at buildout of the Borrego Valley. A conservative estimate of future water demands was estimated by applying the current residential EDU water demand of 0.55 acre-feet per account. This results in a future estimated municipal water demand of 3,746 acre-feet per year, which is about 66% of the basin sustainable yield of 5,700 acre-feet per year.³

POPULATION

The population and number of homes within the Borrego Springs community are rather stable at the present time with slow growth over the past 20 years. Borrego Springs is an attractive community for holiday retreats, seasonal residents or "snowbirds," and retirement because of the dry desert air, quiet surroundings, and slow pace of life. The Anza-Borrego Desert State Park, including the Ocotillo Wells State Vehicular Recreation Area, attracts approximately 500,000 annual tourist visits per year to the community, which helps support the local economy, adding an estimated \$40 million per year in revenue from these visits (BBC Research & Consulting 2012). The current population of Borrego Springs is 3,429 based on the 2010 census (U.S. Census 2010). It is noted that fluctuation of transient population of snowbirds and tourists is an important factor that is additive to water demand since up to 2,000 additional winter residents and 500,000 tourists visit Borrego Springs annually. Historical and projected population is

³ This estimate of the theoretical municipal water demand at buildout of present unbuilt lots under the County's current zoning in Borrego Springs is based on the current residential water use per EDU of 0.55 acre-feet per year, the existing distribution of user types, and an assumed additional 3,000 residential units at buildout. It is recognized that change in the water use per EDU and change in the distribution of user types will vary the actual municipal water demand.

presented in Table 1. Projected population is estimated based on the calculated historical annual growth rate from 1990 to 2010 of 2.64%.

Table 1
Historical and Projected Population

Year	Population ^a
1990	2,244
2000	2,541
2010	3,429
2020 ^b	4,450
2030 ^b	5,774
2040 ^b	7,493
2050 ^b	9,724
Estimated Annual Growth Rate^c	2.64%

Notes:

- a. Borrego Springs is a census designated place. The population estimates the permanent population. Seasonal population is a large factor in Borrego Springs since the winter population may exceed 10,000.
- b. Population Future = Population Current x (1 + 0.0264)ⁿ. Where Population Current = 2010 Population (3,429), annual growth rate = 0.0264 and n = 10 years between periods.
- c. Annual growth rate = ((Present Value – Past Value)/Past Value) x100 = Growth Rate/Years (N) = Annual Growth Rate, N = 20.

Source: U.S. Census 2010, 2016.

LAND USE

The land uses in Borrego Valley primarily include residential, agricultural, recreational, and commercial uses. Most of the land is owned by private individuals or corporations. The majority of agricultural lands are located in the northern portion of Borrego Valley. The Anza-Borrego Desert State Park and other parkland cover some of the margins of Borrego Valley and the mountain regions above Borrego Valley. Borrego Springs is completely surrounded and encompassed by state park land, which also includes tribal, private, and national forest land (County of San Diego 2011b).

Current Land Use

Current land use for the BWD service area is listed in Table 2 and shown in Figure 2. The parcel count was determined utilizing geographic information systems (GIS) methodologies, as detailed in Attachment A. The total number of parcels within the BWD service area is 5,931, which equates to a total of approximately 9,246 units (SANDAG 2015). A unit is defined in this memorandum as a parcel or a portion of a parcel that is listed within a land use category as determined by the San Diego Area of Governments (SANDAG).

As of 2016, there are roughly 2,999 existing residential units accounting for 32.42% of the total potential units in the Borrego Valley. Residential land use categories include Mobile Home Park, Multi-Family Residential, Residential Under Construction, Single Family Detached, Single Family Multiple-Units, Single Family Residential, Single Family Residential Without Units, and Spaced Rural Residential.

Table 2
Current Land Use

Current Land Use	Land Use Count	Percent of Total Land Use by Unit
Communications and Utilities	30	0.32%
Elementary School	1	0.01%
Field Crops	6	0.06%
Fire/Police Station	2	0.02%
General Aviation Airport	6	0.06%
Golf Course	883	9.55%
Golf Course Clubhouse	863	9.33%
Government Office/Civic Center	1	0.01%
Hospital – General	1	0.01%
Hotel/Motel (Low-Rise)	8	0.09%
Intensive Agriculture	1	0.01%
Landscape Open Space	23	0.25%
Library	1	0.01%
Light Industry – General	2	0.02%
Mobile Home Park	640	6.92%
Multi-Family Residential	64	0.69%
Office (Low-Rise)	1	0.01%
Open Space Park or Preserve	50	0.54%
Orchard or Vineyard	67	0.72%
Other Public Services	2	0.02%
Other Recreation – High	4	0.04%
Other Retail Trade and Strip	37	0.40%
Park – Active	2	0.02%
Parking Lot – Surface	6	0.06%
Post Office	1	0.01%
Religious Facility	9	0.10%
Residential Recreation	17	0.18%
Residential Under Construction	430	4.65%
Resort	6	0.06%
Road Right of Way	181	1.96%
Senior High School	1	0.01%
Service Station	3	0.03%

Table 2
Current Land Use

Current Land Use	Land Use Count	Percent of Total Land Use by Unit
Single Family Detached	1,109	11.99%
Single Family Multiple-Units	318	3.44%
Single Family Residential	1	0.01%
Single Family Residential Without Units	17	0.18%
Spaced Rural Residential	420	4.54%
Vacant and Undeveloped Land	4,030	43.59%
Warehousing	2	0.02%
Total Units	9,246	100.00%

Source: SANDAG 2015

General Plan Land Use Designations

The planned land use designations were created through the San Diego County General Plan, as adopted in August 2011. The General Plan land use designations include Village Residential, Semi-Rural Residential, Rural Lands, Specific Plan Area, Office Professional, Neighborhood Commercial, Rural Commercial, Limited, Medium and High Impact Industrial, Village Core Mixed Use, Public/Semi-Public Facilities and Lands, and Open Space Recreation and conservation (County of San Diego 2011a). Figure 3 shows the General Plan land use designations grouped into overall categories. The General Plan land use count was determined using GIS methodologies, as detailed in Attachment A.

The Specific Plan Areas make up 1,052 units with approximately 11.33% of the total General Plan land use units. The smallest portion of the General Plan land use is the Rural Lands, comprising of 395 units with approximately 4.25% of the total units. Semi-Rural Residential land use totals 1,747 for approximately 18.81% of the total units. The largest General Plan land use is the Village Residential land use group, totaling 3,989 units for approximately 42.95% of the total planned land use units. Table 3 provides a summary of the land use units and percentage of each land use type by area.

Table 3
General Plan Land Use

Designation	Land Use Count	Percentage of Land Use by Unit
Borrego Country Club SPA	225	2.42%
Mesquite Trails SPA	15	0.16%
Rams Hill Country Club SPA	812	8.74%
<i>Total Specific Planning Area</i>	<i>1,052</i>	<i>11.33%</i>

Table 3
General Plan Land Use

Designation	Land Use Count	Percentage of Land Use by Unit
Rural Lands (RL-20)	133	1.43%
Rural Lands (RL-40)	190	2.05%
Rural Lands (RL-80)	72	0.78%
<i>Total Rural Lands</i>	395	4.25%
Semi-Rural Residential (SR-1)	476	5.12%
Semi-Rural Residential (SR-2)	226	2.43%
Semi-Rural Residential (SR-4)	588	6.33%
Semi-Rural Residential (SR-10)	457	4.92%
<i>Total Semi-Rural Lands</i>	1,747	18.81%
Village Residential (VR-2)	1,740	18.73%
Village Residential (VR-2.9)	898	9.67%
Village Residential (VR-4.3)	546	5.88%
Village Residential (VR-7.3)	666	7.17%
Village Residential (VR-10.9)	9	0.10%
Village Residential (VR-15)	127	1.37%
Village Residential (VR-24)	3	0.03%
<i>Total Village Residential</i>	3,989	42.95%
Other Non-Residential Land Uses	2,105	22.66%
Total Units	9,288	100.00%

Source: County of San Diego 2011c

Specific Plan Areas

There are three Specific Plan Areas in Borrego Springs: Borrego Country Club, Mesquite Trails, and Rams Hill Country Club.

Borrego Country Club Specific Plan

Borrego Country Club Specific Plan (SP-82-03) provides for a gross permitted density of 0.77 dwelling units per acre at the 1,075.6-acre project site (Figure 3). Existing development on the site includes 345 lots, approximately 132 residential structures, two golf courses (one closed), a 100-room hotel, and country club. At current approved buildout of Borrego Country Club, there will be an additional 332 residential units (Martin 1992).

Mesquite Trails Specific Plan

The Mesquite Trails Specific Plan covers a 309.51-acre site with 480 recreational vehicle lots and 28 recreation or open space lots. To date, no development has occurred at the site (Figure 3).

Rams Hill Country Club Specific Plan

Rams Hill Country Club Specific Plan (SP 80-01) provides for a gross permitted density of 0.5 dwelling units per acre at the 3,142-acre project site (Figure 3). Included is a proposed total of 780 dwelling units, a hotel (350 suites), a tennis and retail shop complex, an 18-hole championship golf course, a medical clinic, a future fire station, a wastewater treatment plant, a flood control facility, 1,600 acres of open space, and 880 acres of “future planning areas” (PRC Toups Corporation 1980). Rams Hill Country Club Specific Plans Plan Amendment (SPA 86-006) Log #86-11-01 indicates that, to date, four residential subdivisions have been recorded providing a total of 511 dwelling units. More than 400 lots were purchased by individuals, on which 325 homes have been built. At current approved buildout of Rams Hill there will be an additional 455 residential units and a 350-room hotel.

Property-Specific Requests for General Plan Amendments

Currently there are two property-specific requests for General Plan amendments that would up-zone the properties. Property Specific Request (PSR) DS8 consist of 34 acres located on assessor's parcel number (APN) 141-160-47 adjacent to a larger 135-acre study area (APNs 141-160-48 and 141-370-25) (Figure 4). The existing General Plan allows for 337 dwelling units, and the proposed project requests 756 dwelling units or an increase in 389 dwelling units for both the PSR and study area (Attachment B).

PSR DS24 consists of 168 acres on 2 parcels, APNs 198-320-26 and 198-320-01. The existing General Plan allows for 16 dwelling units, and the proposed project requests 169 dwelling units or an increase in 153 dwelling units (Attachment B). Table 4 lists General Plan existing and proposed land use designations and dwelling units for the PSRs.

Table 4
Property-Specific Requests for General Plan Amendments

Category	Existing General Plan (August 2011)	PSR – Proposed Project	Potential Increase
<i>Estimated Potential Dwelling Units</i>			
PSR Area DS8	67 (VR-2)	145 (VR-4.3)	78
Study Area DS8	270 (VR-2)	581 (VR-4.3)	311
PSR Area DS24	16 (SR-10)	169 (SR-1)	153
Total			542

Source: County of San Diego 2016a, 2016b

Present Unbuilt Lots Under County's Current Zoning

Under the County's current zoning, there are 4,439 vacant and undeveloped parcels that could be converted to residential development and 526 vacant and undeveloped lots that potentially could be converted to commercial, industrial, office space, rural commercial, open space, public agency, or public/semi-public facilities (SANDAG 2015; County of San Diego 2011c). The buildout land count was determined using GIS methodologies, as shown in Attachment A. The legal lot status estimate of 85% from the *Evaluation of Groundwater Conditions in Borrego Valley* was used to develop a more realistic number of buildable lots. Additionally, the County of San Diego indicates that "Having a legally created lot which meets Zoning requirements still may not be buildable due to a number of factors such as floodplain issues, having legal access to roadways, having access to sewer or water, etc. Building permits are granted on a case-by-case basis by the County, and it is not possible to accurately estimate the number of legally buildable parcels in Borrego Valley. However, the significant inventory of existing unbuilt lots could possibly provide up to an additional 3,000+ future residential units without any additional subdivision" (County of San Diego 2011b).

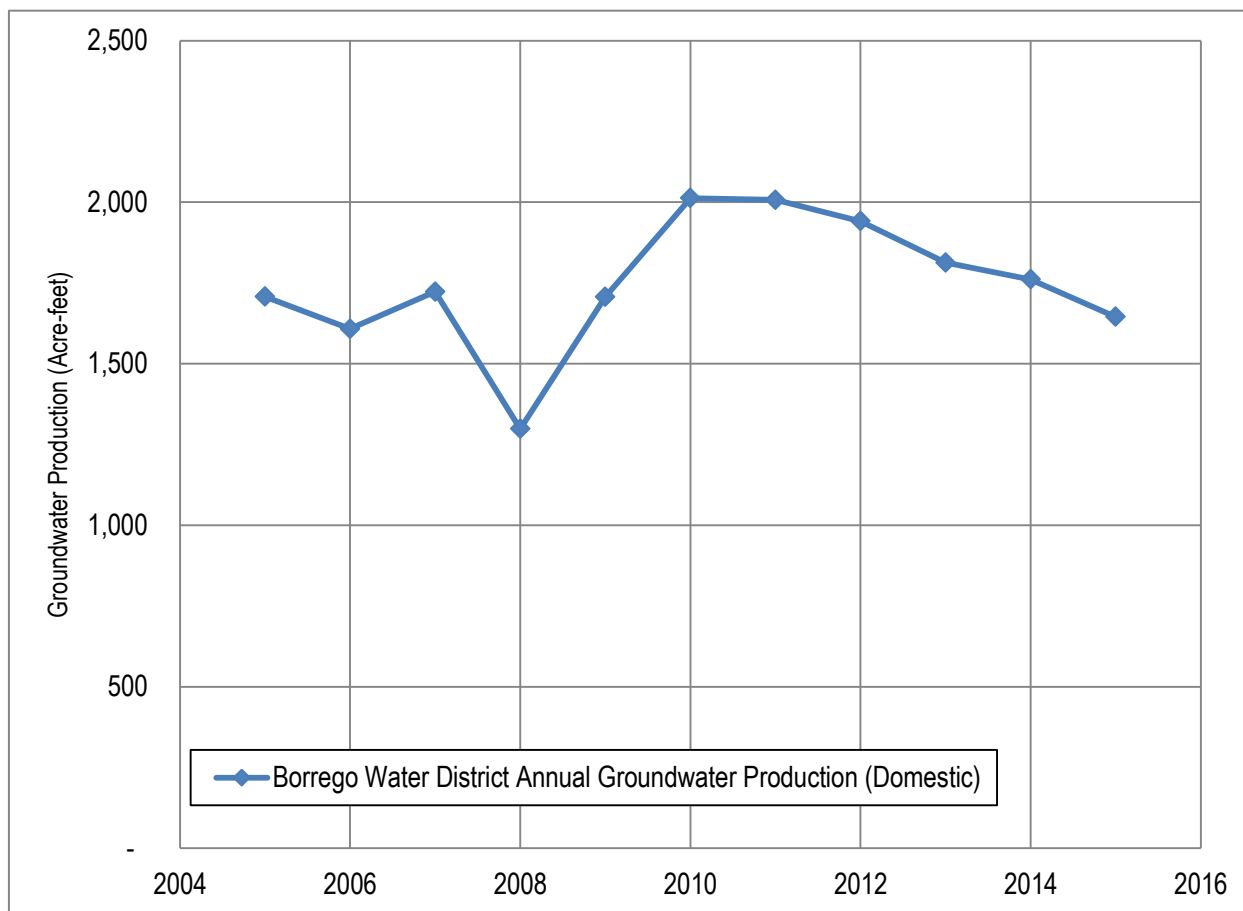
WATER USE

Current and Historical Municipal Water Use

The current annual groundwater production for the BWD is 1,606 acre-feet for the period from May 2015 to May 2016. Annual groundwater production peaked in 2010 at 2,013 acre-feet and has been trending downward over the past 5 years (Exhibit 1). The 2015 annual groundwater production is 1,645 acre-feet, which is an 18% decrease from 2010.⁴ The decrease in water demand is attributed to both an increase in water rates and the Governor's Emergency Regulation for Statewide Urban Water Conservation. Additionally, the BWD has been proactive in publicizing the long-term water supply realities of the BVGB and providing conservation measures such as landscape audits to reduce outdoor water use.

⁴ Annual production excludes groundwater supply for Rams Hill Golf Course.

Exhibit 1
Borrego Water District Annual Groundwater Production 2005–2015



Notes: Municipal production excludes groundwater production and supply for golf courses. In 2009, the BWD began serving the Borrego Springs Park Community Services District (Club Circle and Borrego Springs resorts).

Source: BWD 2016a

Equivalent Dwelling Use Calculations

EDU calculations have been prepared for municipal water use during the 2015 fiscal year. The annual water use per residential account is 0.55 acre-feet with a total of 1,823 residential EDUs. The total EDUs currently served by the BWD, including residential, commercial, public agency, irrigation, and multiple units, is 3,103 (Table 5).

Table 5
Equivalent Dwelling Unit (EDU) Information^a

User Type	Average Monthly Water Usage (gallons)	Annual Water Usage Per Account (acre-feet)	Number of Users (connections)	Average Monthly Usage per Connection (gallons)	Number of EDUs
Residential	27,226,209	0.55	1,823	14,935	1,823
Commercial	5,801,234	1.96	109		388
Public Agency	2,917,724	3.07	35		195
Irrigation	5,565,535	3.66	56		373
Multiple Units	4,828,026	5.08	35		323
Golf Course	0	0	1		0
Total EDUs					3,103^b

Notes:

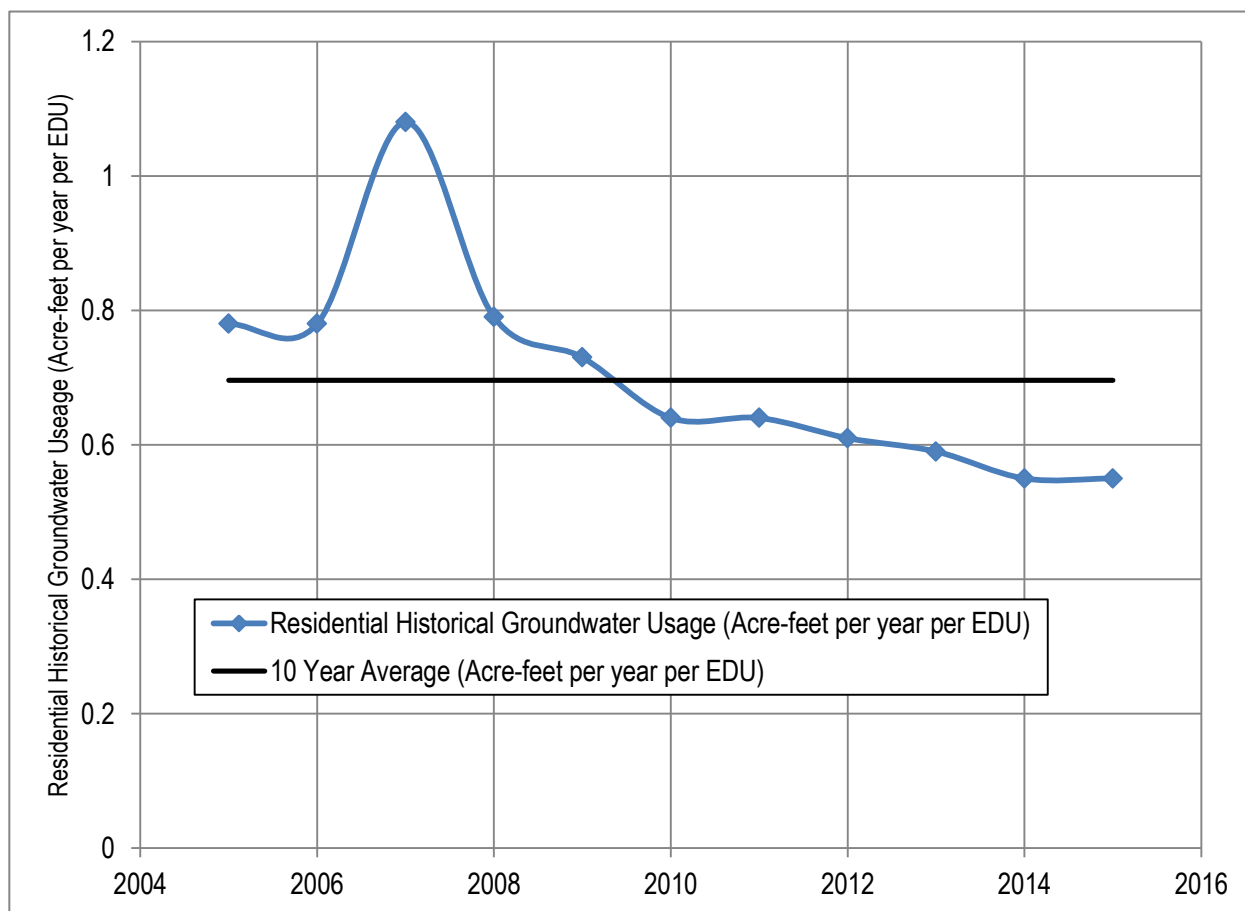
a. Based on customer use by code for fiscal year 2015. BWD did not supply groundwater to Rams Hill Golf Course in fiscal year 2015.

b. Total EDUs rounded to nearest whole number.

Source: BWD 2016b

The historical annual residential water use per EDU has decreased from a high of 1.08 acre-feet in 2007 to 0.55 acre-feet in 2015 (Exhibit 2). The 2015 annual residential water use per EDU is about 21% less than the 10-year average of 0.70 acre-feet per EDU.

Exhibit 2
Historical Annual Residential Groundwater Use per EDU 2005–2015



Source: BWD 2016a

Potential Future Water Demand

Maximum Buildout of Present Unbuilt Lots

The potential future water demand required to serve present unbuilt lots at maximum buildout is calculated to provide a comparison to the sustainable yield value of the BVGB. The current residential water demand of 0.55 acre-feet per EDU was used to conservatively estimate future water demand. Full General Plan buildout of legal lots given constraints was presumed to add an additional 3,000 residential, 215 commercial, 108 public agency, 207 irrigation, and 179 multiple unit EDUs to the basin for a total of 6,811 EDUs based on the existing distribution of land use (Table 6). Applying the current residential water demand of 0.55 acre-feet per account would

result in a future municipal water demand of 3,746 acre-feet per year, which is about 66% of the basin sustainable yield of 5,700 acre-feet per year.

**Table 6
Annual Water Demand at Existing General Plan Buildout**

User Type	Number of Existing EDU	Percentage by User Type	EDU at Buildout	Annual Water Demand at Buildout (Acre-feet)
Residential	1,823	59%	4,823	2,653
Commercial	388	13%	603	332
Public Agency	195	6%	303	167
Irrigation	373	12%	580	319
Multiple Units	323	10%	502	276
Golf Course	0	0%	0	0
Total	3,102	100%	6,812^a	3,747^a

Notes:

^{a.} EDUs rounded to nearest whole number.

SUSTAINABLE GROUNDWATER MANAGEMENT ACT CONSTRAINTS

This analysis does not directly consider existing recreational (i.e., golf course irrigation), agricultural, and other user water demands. For example, agriculture in the Borrego Valley presently uses approximately 70%, on average, of the 19,000 AFY withdrawals, of which a large percentage of this amount are no longer available under Sustainable Groundwater Management Act (SGMA) requirements. Also, there are currently six golf courses in Borrego Springs—Borrego Springs Resort – Golf Club & Spa (18 holes), Club Circle Resort (par 3 course with 18 holes), de Anza Country Club (18 holes), Rams Hill Golf Club (18 holes), the Springs at Borrego RV Resort and Golf Course (9 holes), and Roadrunner Golf and Country Club (par 3 course with 18 holes)—that irrigate approximately 519 acres with an estimated water demand of 2,852 acre-feet per year, which is about 50% of the basin sustainable yield of 5,700 acre-feet per year (Table 7).

**Table 7
Existing Golf Course Water Demand**

Course	Type	Water Use (AFY)	Irrigated Area (Acres)	Source
Borrego Springs Resort – Golf Club & Spa	18 holes	589	110	2015 Groundwater Monitoring Report, Borrego Springs CC Permit #SPA9001
Club Circle Resort	Par 3 course with 18 holes	66	28	2015 Groundwater Monitoring Report, Borrego Springs CC Permit #SPA9001
de Anza Country Club	18 holes	773	137	12 months meter reads; Holloway, pers. comm. 2016

Table 7
Existing Golf Course Water Demand

Course	Type	Water Use (AFY)	Irrigated Area (Acres)	Source
Rams Hill Golf Course	18 holes	998	115	Metered 2015 production records
The Springs at Borrego RV Resort and Golf Course	9 holes	175	84	2014 report to County
Roadrunner Golf and Country Club	Par 3 course with 18 holes	252	45	Assumption: 45 irrigated acres @ est. 5.35 AF per acre
Total		2,853	519	

Source: BWD 2015; Dudek 2016; Holloway, pers. comm. 2016.

The estimated future municipal water demand (3,746 acre-feet per year) combined with the existing golf course water demand (2,853 acre-feet per year) is 6,598 acre-feet per year, or 116% of the BVGB sustainable yield. This indicates that at buildout of Borrego Springs, the municipal water demand, conservatively assuming the current water use per EDU, combined with existing recreational water demand, will consume all available sustainable supply and that there would be limited to no supply available for agriculture.

Study Findings

- Present County zoning for the BWD's service area may be unsupportable under SGMA constraints. Even with drastic reductions in residential EDU, it is uncertain that municipal demand can be met, given current competition with agriculture, recreation, and other water users of the basin, including potential environmental water necessary to maintain the groundwater system.
- Existing County General Plan assumptions need to be reevaluated given physical water constraints under SGMA.
- Any up-zoning in the BWD's service area would necessarily require as preconditions significant down-zoning of existing properties given physical constraints of available groundwater supply to meet municipal demand at buildout of Borrego Springs. Otherwise, an up-zoning without first meeting these preconditions would create a significant contingent liability for the BWD and its ratepayers as well as potentially difficult litigation risk due to the District's cost to purchase water and potential inability to provide potable water to the up-zoned property due to SGMA constraints. In other words, upfront mitigation for new development is required to offset the condition of overdraft in the BVGB.

REFERENCES

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Dudek. 2016. "Groundwater Monitoring Report for Rams Hill Golf Course, Permit # SP-86-006." March 16, 2016.

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Martin, R. 1982. *Borrego Country Club Specific Plan 82-03*. A Large Scale Project. Borrego Springs, California. August 6, 1982.

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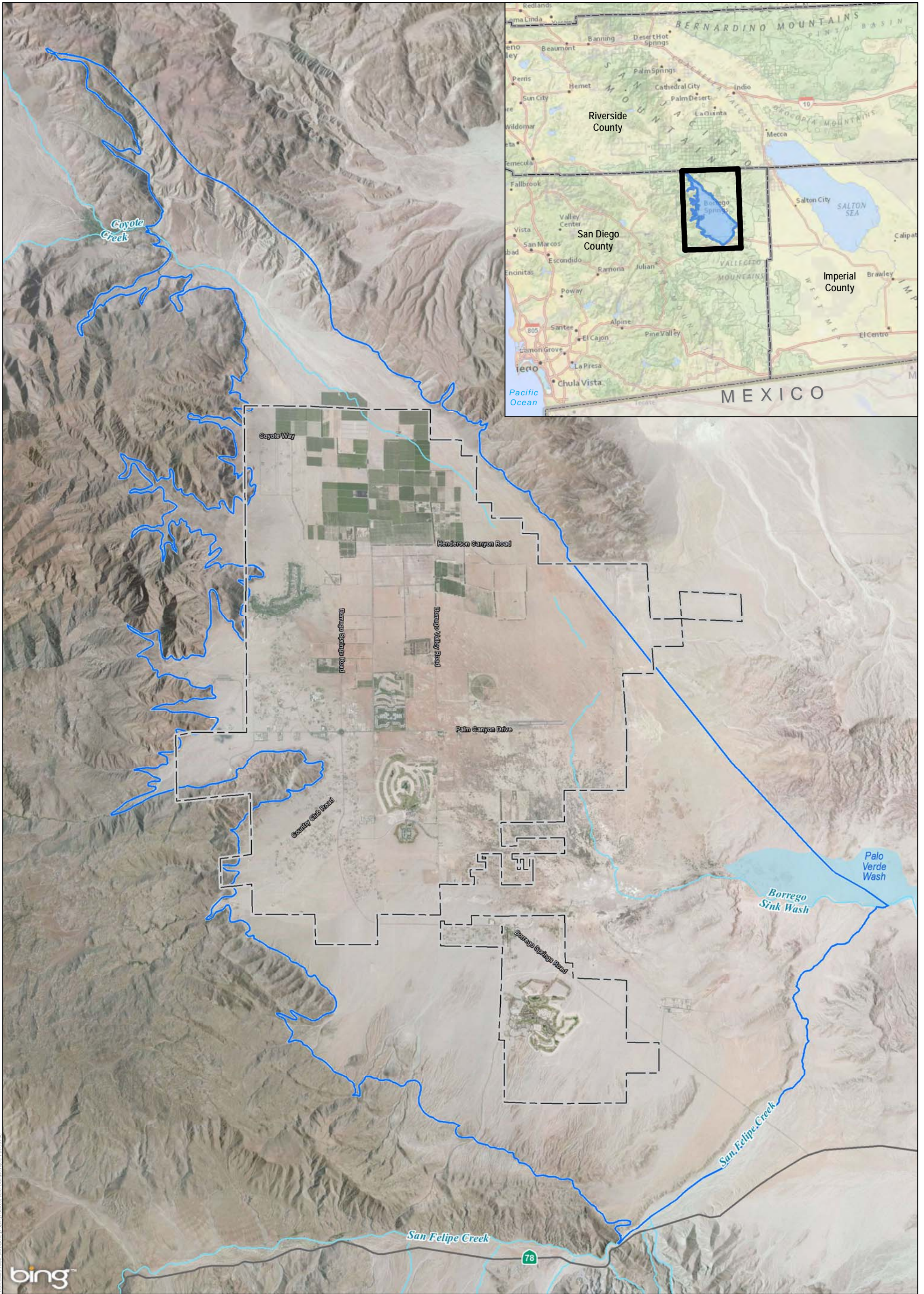
Working Draft Technical Memorandum

*Subject: Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's
Current Zoning in Borrego Springs*

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U.S. Census. 2010. "2010 Census Interactive Population Search." Accessed August 31, 2016.
<http://www.census.gov/2010census/popmap/ipmtext.php?fl=06:0607596>.

U.S. Census. 2016. "Borrego Springs, California Population: Census 2010 and 2000 Interactive Map, Demographics, Statistics, Quick Facts." Census Viewer. Accessed August 31, 2016. <http://censusviewer.com/city/CA/Borrego%20Springs>.



- Borrego Water District Service Area
- Borrego Valley Groundwater Basin
- Major Stream Channels
- Wash/Sink
- State Highway

0 0.5 1 Miles

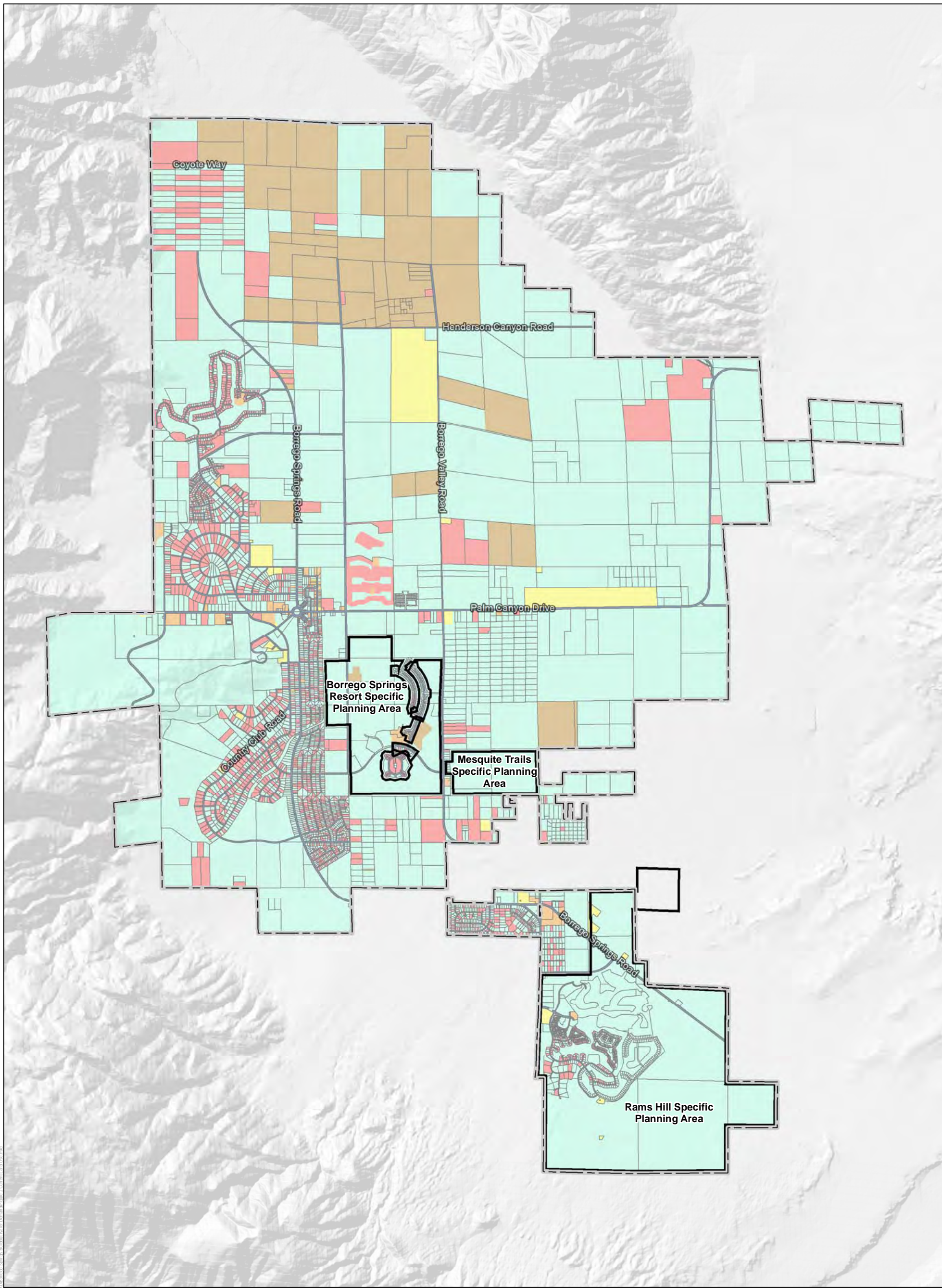
DUDEK

SOURCE: SanGIS

Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs

FIGURE 1
Borrego Valley Groundwater Basin

DRAFT October 4, 2016



- Borrego Water District Service Area
- Specific Planning Areas
- Parcel Boundary

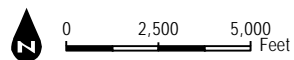
Current Land Use

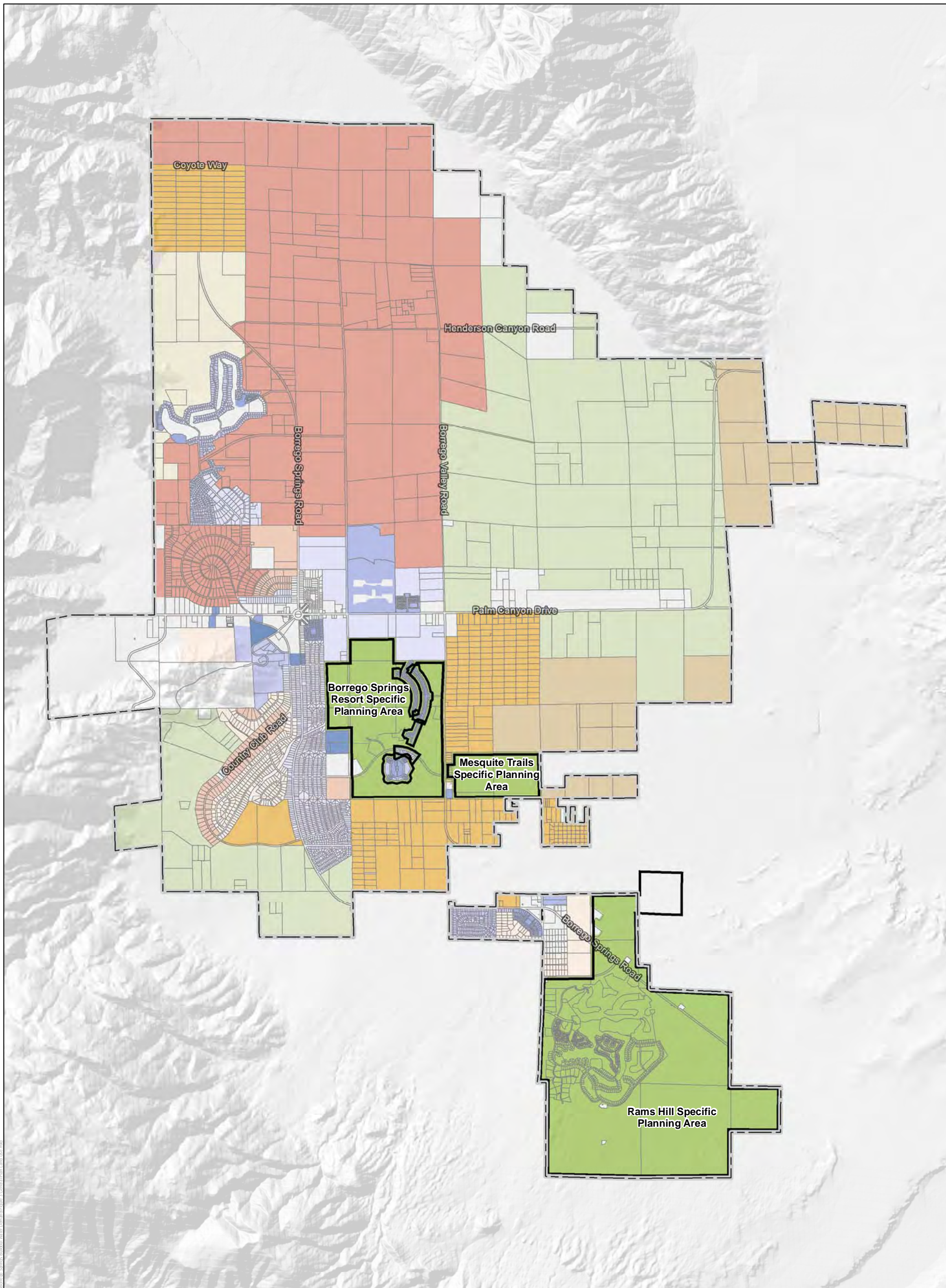
Land Use Groups

- Agriculture
- Commercial or Industrial

- Government or Other Public Institutions

- Park, Open Space or Recreation
- Residential
- Roadway or Parking Lot





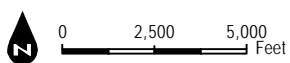
- Borrego Water District Service Area
- Specific Planning Areas
- Parcel Boundary

General Plan Land Use

- Specific Planning Area**
- SPECIFIC PLAN AREA
- Rural Residential**
- RURAL LANDS (RL-20)
- RURAL LANDS (RL-40)
- RURAL LANDS (RL-80)

- Semi-Rural Residential**
- SEMI-RURAL RESIDENTIAL (SR-1)
- SEMI-RURAL RESIDENTIAL (SR-2)
- SEMI-RURAL RESIDENTIAL (SR-4)
- SEMI-RURAL RESIDENTIAL (SR-10)
- Village Residential**
- VILLAGE RESIDENTIAL (VR-2)

- VILLAGE RESIDENTIAL (VR-2.9)
- VILLAGE RESIDENTIAL (VR-4.3)
- VILLAGE RESIDENTIAL (VR-7.3)
- VILLAGE RESIDENTIAL (VR-10.9)
- VILLAGE RESIDENTIAL (VR-15)
- VILLAGE RESIDENTIAL (VR-24)

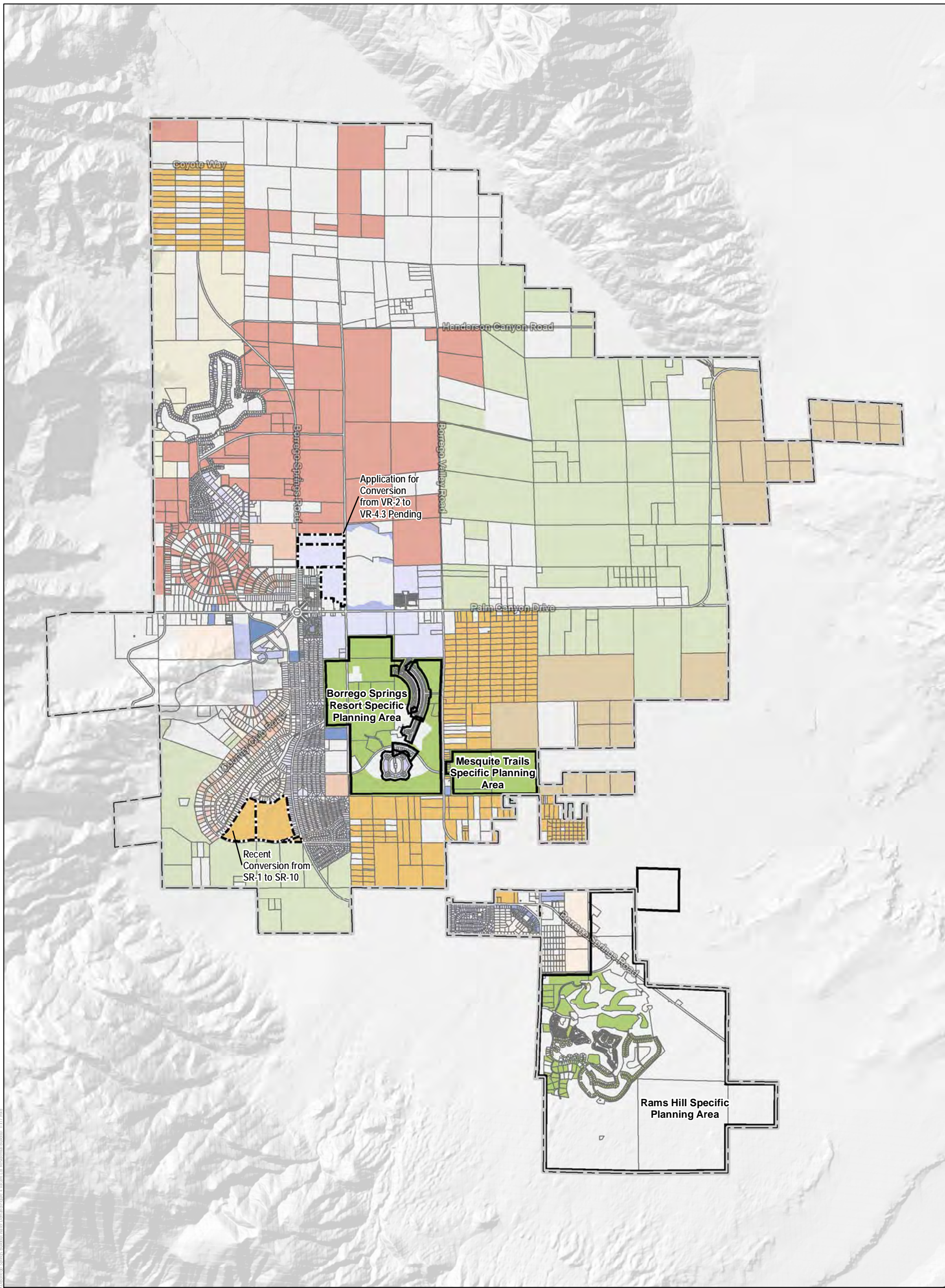


SOURCE: SANDAG; SanGIS

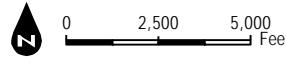


Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs

FIGURE 3
General Plan Land Use



<ul style="list-style-type: none"> Borrego Water District Service Area Specific Planning Areas Up Zoning Applications Parcel Boundary 	<p>General Plan Land Use on Vacant Land</p> <p>Specific Planning Area</p> <ul style="list-style-type: none"> SPECIFIC PLAN AREA <p>Rural Residential</p> <ul style="list-style-type: none"> RURAL LANDS (RL-20) RURAL LANDS (RL-40) RURAL LANDS (RL-80) 	<p>Semi-Rural Residential</p> <ul style="list-style-type: none"> SEMI-RURAL RESIDENTIAL (SR-1) SEMI-RURAL RESIDENTIAL (SR-2) SEMI-RURAL RESIDENTIAL (SR-4) SEMI-RURAL RESIDENTIAL (SR-10) <p>Village Residential</p> <ul style="list-style-type: none"> VILLAGE RESIDENTIAL (VR-2) 	<ul style="list-style-type: none"> VILLAGE RESIDENTIAL (VR-2.9) VILLAGE RESIDENTIAL (VR-4.3) VILLAGE RESIDENTIAL (VR-7.3) VILLAGE RESIDENTIAL (VR-10.9) VILLAGE RESIDENTIAL (VR-15) VILLAGE RESIDENTIAL (VR-24)
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SOURCE: SANDAG; SanGIS



FIGURE 4
General Plan Designations on Vacant and Undeveloped Land

Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs

ATTACHMENT A
GIS Methodologies

ATTACHMENT A

GIS Methodologies

CURRENT LAND USE WITHIN THE BWD GIS WORK FLOW

Current Land Use

Draft – September 2, 2016

1. **Downloaded Current shapefiles from SanGIS.**
 - a. Current Land Use:
Z:\Hydro\Projects\Borrego_Water_District\DATA\DATA_RCVD\SanGIS_20160701\LANDUSE_CURRENT
2. **Clipped downloaded data to the BWD boundary.**
 - a. Example File Name: LU_Current_BWD_clip
3. **Selected parcels from the 2016 SanGIS parcel shapefile within the BWD service area using the Select by Location tool. All parcels were selected using the spatial selection method for the target layer features of “have their centroid in the source layer feature”.**
 - a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Reference_Data.gdb\
Parcels_within_BWD
4. **Used the Union geoprocessing tool to merge the current land use and parcels within the BWD layers.**
 - a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Working.gdb\
LU_Current_BWD_clip_Parcels_union
5. **Created a summary table with the LANDUSE column to generate the table of total number of land use units.**

Four land use units were removed due to no value.

ATTACHMENT A (Continued)

GENERAL PLAN LAND USE WITHIN THE BWD GIS WORK FLOW

General Plan Land Use

Draft – September 15, 2016

1. Downloaded Current shapefiles from SanGIS.

- a. General Plan Land Use:

Z:\Hydro\Projects\Borrego_Water_District\DATA\DATA_RCVD\
SanGIS_GeneralPlan_20160713\General_Plan_Update_Recommended_Project_
(August_2011)\General_Plan_Update_Recommended_Project_(August_2011).shp

2. Clipped downloaded data to the BWD boundary.

- a. Example File Name: LU_Current_BWD_clip

3. Selected parcels from the 2016 SanGIS parcel shapefile within the BWD service area using the Select by Location tool. All parcels were selected using the spatial selection method for the target layer features of “have their centroid in the source layer feature”.

- a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Reference_Data.gdb\
Parcels_within_BWD

4. Used the Union geoprocessing tool to merge the General Plan land use and parcels within the BWD layers.

- a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Working.gdb\
GP_Update_RecommProject_BWD_clip_Parcels_union

5. Created a summary table with the DESCRIPTIO column to generate the table of total number of land use units.

- a. Three land use units were removed due to no value.

ATTACHMENT A (Continued)

VACANT LOT TO RESIDENTIAL BUILDOUT GIS ANALYSIS PROCESS

Current Land Use vs. General Plan Update Recommended Project (August 2011)

Draft – September 2, 2016

- 1. Downloaded Current and General Plan Update Recommended Project (August 2011) shapefiles from SanGIS**
 - a. Current Land Use:
Z:\Hydro\Projects\Borrego_Water_District\DATA\DATA_RCVD\
SanGIS_20160701\LANDUSE_CURRENT
 - b. General Plan Update Recommended Project (August 2011):
Z:\Hydro\Projects\Borrego_Water_District\DATA\DATA_RCVD\
SanGIS_GeneralPlan_20160713\General_Plan_Update_Recommended_Project_
(August_2011)
- 2. Clipped downloaded data to the BWD boundary.**
 - a. Example File Name: LU_Current_BWD_clip
- 3. Intersected the current and General Plan Update Recommended Project (August 2011) clipped layers and the parcels**
 - a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Working.gdb\
GP_Update_LU_Current_Parcels_intersect
- 4. Selected all the features with an attribute of Vacant and Undeveloped Land in the current land use category from the intersected layer.**
- 5. Exported all the selected features to a new layer.**
 - a. Z:\Hydro\Projects\Borrego_Water_District\DATA\GDB\Borrego_Water_District
_MASTER.gdb\BuildOut_Analysis_GP_Update_LU_Current_Parcels
- 6. The following GP attributes were queried out for the Vacant Lot Residential Buildout figure:**
 - a. GENERAL COMMERCIAL
 - b. HIGH IMPACT INDUSTRIAL
 - c. LIMITED IMPACT INDUSTRIAL
 - d. MEDIUM IMPACT INDUSTRIAL
 - e. OFFICE PROFESSIONAL
 - f. OPEN SPACE (RECREATION)

ATTACHMENT A (Continued)

- g. PUBLIC AGENCY LANDS
- h. PUBLIC/SEMI-PUBLIC FACILITIES
- i. RURAL COMMERCIAL

ATTACHMENT B
*Property Specific Plan Requests for
General Plan Amendment*

Context

The DS8 Analysis Area includes one PSR request parcel of approximately 34 acres and two study area parcels totaling approximately 135 acres. The entire Analysis Area is within the Village Regional Category, and the southern end of the study area is less than a half mile from Christmas Circle, which is a focal point of the community and the center of the Village Core. The Analysis Area is bordered on the west and east by two County-maintained Mobility Element roads. On the west, Borrego Springs Road is classified as a 2.2E Light Collector, which is a 2-lane classification. On the east, Di Giorgio Road is a 2.2D Light Collector, which is also a 2-lane classification, but has a wider right-of-way to accommodate improvement options, such as turn lanes. Existing water lines are found under each of these roads, and the northern two parcels have existing meter service, while the southernmost study area parcel does not. There are no sewer lines currently available to the site, but the southernmost study area parcel is within the sewer service area for the Borrego Water District, and the other study area parcel and PSR parcel are within the sewer service sphere of influence.

The eastern half of the PSR parcel contains a palm grove/nursery. The western half of the PSR parcel is vacant, with no apparent land uses and little vegetative cover. The western half of the northern study area parcel has similar characteristics. The eastern half of the northern study area parcel and most of the southern study area parcel contain Desert saltbush scrub vegetation, which is considered a sensitive vegetation community. There are no steep slopes or wetlands on the properties. The properties are completely within the 100-year floodplain and most of the Analysis Area is within a fan terminus alluvial wash, which is defined as the flow path where the bottom of an alluvial fan intersects with the edge of another alluvial fan.

Reflecting the location within the Village Regional Category, a mix of uses can be found in close proximity to the site. Restaurants, retail, and small-scale grocery and convenience stores can be found along the nearby Palm Canyon Drive corridor. Additional commercial uses and public/semi-public uses are found in the area between the site and the Palm Canyon Drive corridor, including the Borrego Springs Fire Protection District (BSFPD) fire station. The Roadrunner Club golf resort and residential community is across Di Giorgio Road to the east. Across Borrego Springs Road to the west are the Boys and Girls Club and Borrego Springs High School. Beyond those properties to the west, the area north of Palm Canyon drive is more sparsely populated, in comparison to the Roadrunner club, with areas of VR-2, SR-2 and SR-4 designations that include many vacant lots.

Comparison of Land Use Maps

Category	Existing General Plan (August 2011)	PSR - Proposed Project (June 2012)	Staff Recommendation
Estimated Potential Dwelling Units			
PSR Area	67 (VR-2)	145 (VR-4.3)	NOT DETERMINED
Study Area	270 (VR-2)	581 (VR-4.3)	NOT DETERMINED

Zoning			
(Note: the zoning under 'PSR – Proposed Project' details zoning that would be necessary for consistency with the PSR proposed Land Use designations and does not necessarily reflect the staff recommendation.)			
Proposed Zoning Use Regulation	RS (Residential Single)/RMH (Residential Mobile Home)	RS/RMH	NOT DETERMINED
Proposed Zoning Minimum Lot Size (acres)	6,000	6,000	NOT DETERMINED

Community Input – PSR Proposed Land Use Map	
Support	NOT DETERMINED
Opposed	NOT DETERMINED

General Plan Conformance

Review of General Plan Policies Applicable to General Plan Amendments/Rezones without an associated development project.

Policy	EIR Proposed Project: Policy Review
<p>LU-1.1</p>	<p>Assigning Land Use Designations. Assign land use designations on the Land Use Map in accordance with the Community Development Model (CDM) and boundaries established by the Regional Categories Map.</p> <p>The proposal associated with the DS8 Analysis Area would involve a change from VR-2 to VR-4.3. As such, no change in the Village Regional Category is necessary; however, an increase in density necessitates consideration of the aspects of the CDM.</p> <p>The Borrego Springs CPA has some unique characteristics, in terms of application of Village designations and high densities. Considering groundwater limitations and the location of the Community Planning Area (CPA), far from job centers, the Land Use Map developed during the General Plan Update reflected pre-existing development patterns for the most part. The application of Village densities in areas without pre-existing density or parcelization was limited to a few areas around the Village Core, including the DS8 area. The VR-4.3 designation is applied to the Roadrunner Club property, which is adjacent to the DS8 Analysis Area, on the east. This designation generally reflects the existing residential density of condos and timeshares on that site. Adjacent to the DS8 area on the west is an area of SR-2 properties, including a group of roughly 1-acre lots near Palm Canyon Drive and an undeveloped area around the high school and Boys and Girls Club sites. Farther west, is an area of SR-4 that is parcelized with roughly 2-4 acre lots. To the north of the DS8 site is a large area of SR-4 properties, which include current and former agricultural lands.</p> <p>The CDM also considers the proximity to job centers, the transportation network, and available infrastructure and services. The closest job centers are in eastern and northern San Diego County, and in Riverside County, however some residents are employed in agriculture and other local businesses. The CPA also includes retirement communities and vacation homes. There is a good network of County-maintained roads in the area of DS8, which is bordered on the west and east by 2-lane Mobility Element roads. The southern portion of the Analysis Area is only approximately 200 feet from the Borrego Springs FPD station on Stirrup Road, and a response time of less than 5 minutes is likely achievable. The County Departments of General Services and Parks and Recreation are currently in the planning process for a new library and community park (estimated construction completion in 2018), both of which will be located a half mile away from the Analysis Area, just southeast of Christmas Circle behind 'The Mall' shopping center.</p> <p>Borrego Water District (BWD) water lines are found under each of the adjacent public roads, and the northern two parcels have existing meter service, while the southernmost study area parcel does not. Sewer lines are not currently available to the Analysis Area parcels, but the southern study area parcel is within the BWD sewer service area and the other two parcels in the Analysis Area are in the BWD sewer service sphere of influence. The use of groundwater in the community will have an impact on review of potential water service in relation to proposed density increases. See analysis information for Policies LU-1.9 and LU-</p>

Policy		EIR Proposed Project: Policy Review
		2.4 for further information.
LU-1.2	Leapfrog Development. Prohibit leapfrog development which is inconsistent with the Community Development Model. Leapfrog Development restrictions do not apply to new villages that are designed to be consistent with the Community Development Model, that provide necessary services and facilities, and that are designed to meet the LEED-Neighborhood Development Certification or an equivalent. For purposes of this policy, leapfrog development is defined as Village densities located away from established Villages or outside established water and sewer service boundaries. <i>[See applicable community plan for possible relevant policies.]</i>	Not Applicable This policy is not applicable because the DS8 Analysis Area is already in a Village Regional Category, with a Village Land Use designation (VR-2).
LU-1.3	Development Patterns. Designate land use designations in patterns to create or enhance communities and preserve surrounding rural lands.	The General Plan Regional Village area includes commercial and residential designations that range from VR-24 to VR-2. The existing mapping pattern generally reflects existing parcelization. The area east of the DS8 analysis area and further removed from the village center is designated as VR-4.3. The VR-4.3 designation is applied to the Roadrunner Club property, which is adjacent to the DS8 Analysis Area, on the east. This designation generally reflects the existing residential density of condos and timeshares on that site. On the east side of the Roadrunner Club property, the VR-4.3 is extended another 30 acres to the east, to reflect existing parcelization. The other residential properties in this area are designated VR-2.
LU-1.4	Village Expansion. Permit new Village Regional Category designated land uses only where contiguous with an existing or planned Village and where all of the following criteria are met: <ul style="list-style-type: none"> ▪ Potential Village development would be compatible with environmental conditions and constraints, such as topography and flooding ▪ Potential Village development would be accommodated by the General Plan road network ▪ Public facilities and services can support the expansion without a reduction of services to other County residents ▪ The expansion is consistent with community character, the scale, and the orderly and contiguous growth of a Village area 	Not Applicable This policy is not applicable because the DS8 Analysis Area is already in a Village Regional Category, with a Village Land Use designation (VR-2).
LU-1.5	Relationship of County Land Use Designations with Adjoining Jurisdictions. Prohibit the use of established or planned land use patterns in nearby or adjacent jurisdictions as the primary precedent or justification for adjusting land use designations of unincorporated County lands. Coordinate with adjacent cities to ensure that land use designations are consistent with existing and planned infrastructure capacities and capabilities.	There are no adjoining jurisdictions. The DS8 Analysis Area is approximately 16 miles from the border with Imperial County, 11 miles from the border with Riverside County, 7 miles from the Los Coyotes Reservation, and the Borrego CPA is mostly surrounded by state park lands.

	Policy	EIR Proposed Project: Policy Review
LU-1.9	<p>Achievement of Planned Densities. Recognizing that the General Plan was created with the concept that subdivisions will be able to achieve densities shown on the Land Use Map, planned densities are intended to be achieved through the subdivision process except in cases where regulations or site specific characteristics render such densities infeasible.</p>	<p>The greatest obstacle for increased residential development in the CPA is reliance on groundwater. Per the requirements of the Sustainable Groundwater Management Act (SGMA), a Groundwater Sustainability Plan will soon be prepared for the Borrego Valley, in order to ensure long term groundwater sustainability. For additional information on how groundwater sustainability regulations impact GPA proposals for density increases, see the review of Policy LU-2.4 in this report.</p> <p>The ability to achieve the potential density of 726 dwelling units is further strained by the difficulties associated with meeting the requirements of the California Building Code for this floodplain area of alluvial flood hazards. New multi-family residential structures (with the exception of one and two family houses and townhomes) would require a comprehensive flood protection solution for the alluvial fan area, prior to grading and construction.</p> <p>The Analysis Area is mostly within a fan terminus alluvial wash. This is defined as the flow path where the bottom of an alluvial fan intersects with the edge of another alluvial fan. These areas can concentrate flows during flash floods. The County's Flood Damage Prevention Ordinance requires that projects in fan terminus alluvial washes be designed so that any obstruction to flow would not cause a cumulative increase in the base flood depth of more than 0.5 feet. A detailed hydraulic model will be required to acceptably demonstrate satisfaction of this requirement.</p> <p>Archaeological/cultural resource survey/study results could limit the area available for development.</p> <p>Sensitive vegetation coverage on the site is found in the eastern portion of the northern study area parcel and much of the southern study area parcel, consisting of Desert saltbush scrub.</p> <p>It is likely that sewer service would be required in order to reach the VR-4.3 density potential in the Analysis Area because the anticipated lot size would be between 6,000 to 10,000 square-feet. These lot areas would be too small to accommodate typical septic systems, and additional septic restrictions in the CPA are possible, with the development of the Groundwater Sustainability Plan. Though sewer lines are not currently available to the Analysis Area, the southern study area parcel is within the designated sewer service area for the BWD and the PSR parcel and northern study area parcel are within the sewer service sphere of influence. Therefore, the extension of sewer service to this area is possible.</p> <p>See the review of Policy LU-6.11 for information on fire protection services in relation to density feasibility.</p>
LU-2.3	<p>Development Densities and Lot Sizes. Assign densities and minimum lot sizes in a manner that is compatible with the character of each</p>	<p>The Borrego Springs CPA has some unique characteristics, in terms of application of Village designations and high densities. Considering groundwater limitations and the location of the CPA,</p>

Policy		EIR Proposed Project: Policy Review
	unincorporated community.	the Land Use Map developed during the General Plan Update reflected pre-existing development patterns for the most part. The application of Village densities in areas without pre-existing density or parcelization was limited to a few areas around the Village Core, including the DS8 area. The DS8 proposal to go from VR-2 to VR-4.3 would allow up to 726 dwelling units within the Analysis Area, so consideration of surrounding development patterns and General Plan designations/densities is important. For additional information on the current mapping pattern in this area, see the review of Policy LU-1.1 in this report.
LU-2.4	Relationship of Land Uses to Community Character. Ensure that the land uses and densities within any Regional Category or land use designation depicted on the Land Use Map reflect the unique issues, character, and development objectives for a community plan area, in addition to the General Plan Guiding Principles.	<p>A unique issue in the CPA is the use of groundwater. Preliminary data indicate that the CPA will have to reduce groundwater use as part of implementation of a Groundwater Sustainability Plan.</p> <p>Though related to the groundwater issue, existing vacant lots are also a unique issue. Based on analysis prepared for the General Plan Update Groundwater Study, estimates show that there were approximately 3,700 existing, private, unbuilt parcels in the Borrego Valley in 2007. Of those, it was estimated that approximately 3,200 had legal lot status. Issue LU-2.2 of the Community Plan calls for consideration of how existing vacant lots impact housing demand and investment in the community.</p> <p>Another issue in the community that affects development in the DS8 Analysis Area is that of current flood control regulations in this area of alluvial floodplains. See the review of Policies LU-1.9 and S-9.2 for further information.</p> <p>Policy LU-1.1.1 of the Community Plan calls for ensuring that remaining undisturbed desert native habitat lands throughout the CPA are conserved to the greatest extent possible. Goal LU-2.1 seeks to focus development on previously disturbed lands. Much of the southern and eastern ends of the study area contain Desert saltbush scrub. This is considered a sensitive vegetation community, which requires mitigation at a 2:1 ratio. However, a multi-family development within the Analysis Area could achieve the VR-4.3 density potential, while preserving much of the native vegetation through clustering. With the current floodplain restrictions associated with multi-family development, the more clustered approach would require a comprehensive alluvial fan-wide flood protection solution. See Policy LU-1.9 and S-9.2 reviews for additional information.</p>
LU-2.5	Greenbelts to Define Communities. Identify and maintain greenbelts between communities to reinforce the identity of individual communities.	The General Plan Glossary defines Greenbelts as a largely undeveloped area surrounding more urbanized areas, consisting of agricultural lands, open space, conservation areas, passive parks, or very low density rural residential lands. The DS8 Analysis Area is within a Village Regional Category and not within a low density buffer area.
LU-3.1	Diversity of Residential Designations and Building Types. Maintain a mixture of residential land use designations and development regulations that accommodate various building types and styles.	The DS8 proposal would not impact variations in building types and styles, as changes to the zoning use regulations or zoning building types are not proposed.
LU-5.1	Reduction of Vehicle Trips within Communities.	The DS8 proposal does not involve changes to the zoning use

Policy		EIR Proposed Project: Policy Review
	Incorporate a mixture of uses within Villages and Rural Villages and plan residential densities at a level that support multi-modal transportation, including walking, bicycling, and the use of public transit, when appropriate.	regulations, so it would not impact a mixture of uses within this Rural Village. Extensive development of vacant and underdeveloped parcels would be necessary within the Village, in order to realize a Village population density conducive to a more vibrant pedestrian and bicycling atmosphere, but development of the Analysis Area at the proposed density would support multi-modal transportation.
LU-6.2	Reducing Development Pressures. Assign lowest-density or lowest-intensity land use designations to areas with sensitive natural resources.	<p>While the PSR parcel contains a palm grove/nursery in the eastern half and almost no vegetative cover in the western half, much of the study area contains native vegetation. The eastern portion of the northern study area parcel and most of the southern study area parcel contain Desert saltbush scrub. This vegetation community is scattered in the northern study area parcel and gets thicker in the southern study area parcel. Desert saltbush scrub is considered a sensitive vegetation community.</p> <p>Policy LU-1.1.1 of the Community Plan seeks to ensure that desert native habitat lands within the CPA are preserved to the greatest extent possible. Policy LU-2.1.1 has a similar purpose (discourages development on native desert habitat lands), but it notes the policy applies outside the Village Core.</p>
LU-6.11	Protection from Wildfires and Unmitigable Hazards. Assign land uses and densities in a manner that minimizes development in extreme, very high and high hazard fire areas or other unmitigable hazardous areas.	<p>The DS8 Analysis Area is within a ‘moderate’ fire hazard severity zone, which would not preclude the proposed VR-4.3 designation. Per the Borrego Springs FPD, any development on the site would require participation in the newly formed Community Facilities District, which covers all of Borrego Springs for improved fire protection facilities and services. The study area parcels are only approximately 200 feet from the Borrego Springs FPD fire station on Stirrup Road, so a subdivision project here could likely meet the 5-minute fire response travel time required for all projects under the Village Land Use designations.</p> <p>As mentioned previously, the site is bordered on the west and east by County-maintained Mobility Element roads (Borrego Springs Road and Di Giorgio Road). Due to the lack of steep slope, rock outcroppings, or other prohibitive landscape features, it’s possible that emergency access could be provided in compliance with the maximum dead end road length standard of 800 feet, for the proposed designation.</p> <p>Archaeological/cultural and biological resource study/survey results could potentially limit the area available for development, depending on whether on-site open space easements are required for these resources.</p>
LU-7.1	Agricultural Land Development. Protect agricultural lands with lower-density land use designations that support continued agricultural operations.	Most of the Analysis Area contains prime agricultural soils and the eastern portion of the PSR parcel contains an existing palm grove/nursery. The area of the palm grove/nursery is classified as prime farmland per the State of California’s Farmland Mapping and Monitoring Program (FMMP). Based on a review of aerial photos, there is no evidence of agricultural operations for the last 20 years in the Analysis Area, beyond the palm grove area. However, it is possible that additional agricultural uses have occurred.

	Policy	EIR Proposed Project: Policy Review
		<p>The existing VR-2 designation does not support agricultural operations. In discussing Village Land Use designations for agricultural areas, the General Plan FEIR notes, "Although agriculture has become increasingly more viable on smaller lot sizes within the unincorporated County, there becomes a point when an individual lot size is considered to be too small for a viable agricultural operation to persist. For the purposes of this analysis, and as a conservative estimate, areas allowing one dwelling unit per acre (du/acre) would be considered too small to support a viable agricultural operation. Therefore, any parcels smaller than one du/acre have been calculated to result in a 100 percent conversion of agricultural resources to non-agricultural uses for the purpose of this analysis." The County's Guidelines for Determining Significance – Agricultural Resources discusses the prevalence of residential uses coinciding with small agricultural operations in a number of unincorporated communities where the lots are typically 2 acres or larger. The Guidelines go on to note, "Occupants of higher density residential uses are more likely to be disturbed by noise, dust, pesticides or other nuisances..."</p> <p>The proposal to change the designation to VR-4.3 would not constitute a change that would be attributable to negatively impacting the protection of agricultural operations, as both the existing and proposed designations would facilitate lot sizes considered too small and densities too high, for continued agricultural operations.</p> <p>Issue LU-2.4 of the Community Plan recognizes that agricultural uses severely constrain future growth due to the overdraft problem, and the corresponding Goal (LU-2.4) calls for some conversion of agricultural uses to less consumptive uses.</p>
LU-8.1	<p>Density Relationship to Groundwater Sustainability. Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.</p>	<p>Not Applicable</p> <p>Though sustainable groundwater use and implications of the SGMA are noted in other policy reviews as important issues facing the community, the current language of this policy makes it not applicable to Borrego Springs.</p>
LU-9.2	<p>Density Relationship to Environmental Setting. Assign Village land use designations in a manner consistent with community character, and environmental constraints. In general, areas that contain more steep slopes or other environmental constraints should receive lower density designations. <i>[See applicable community plan for possible relevant policies.]</i></p>	<p>This policy requires careful consideration of proposed changes from a non-Village Land Use designation to a Village Land Use designation. The Analysis Area is already within the Village Regional Category, with a Village Land Use designation of VR-2. See the review of Policies LU-2.3 and LU-2.4 for potential community character issues and Community Plan references, associated with the proposed change from VR-2 to VR-4.3.</p>
LU-9.5	<p>Village Uses. Encourage development of distinct areas within communities offering residents places to live, work, and shop, and neighborhoods that integrate a mix of uses and housing types.</p>	<p>The DS8 proposal would not impact allowed uses or variations in building types and styles, as changes to the zoning use regulations or zoning building types are not proposed.</p>
LU-9.6	<p>Town Center Uses. Locate commercial, office, civic, and higher-density residential land uses in the Town Centers of Villages or Rural Villages at transportation nodes. Exceptions to this pattern may be allowed for established industrial districts</p>	<p>As noted in the General Plan, a transportation node is intended to be the intersection of two high volume Mobility Element roadways, along with a transit stop. Transit service is very limited in Borrego Springs due to its remote location and lack of sufficient demand. There is a bus stop at nearby Christmas</p>

Policy		EIR Proposed Project: Policy Review
	and secondary commercial districts or corridors.	Circle and Palm Canyon drive, but routes between Borrego Springs and El Cajon only run on Thursdays and Fridays. The southern portion of the Analysis Area is within a half mile of the Christmas Circle and Palm Canyon Drive area, which serves as the Town Center of the Village. This area includes most of the commercial, office, civic and higher-density land uses.
LU-9.9	Residential Development Pattern. Plan and support an efficient residential development pattern that enhances established neighborhoods or creates new neighborhoods in identified growth areas.	An increase in density within the DS8 analysis area would result in higher density residential development within the Village Regional Category of the General Plan. Estimates show that there are approximately 3,700 vacant undeveloped private lots in the CPA. Many of these vacant lots can be found in the vicinity of the DS8 Analysis Area. Just west of the Analysis Area, between the high school and the Palm Canyon Drive commercial corridor, there is a large area of existing parcelization (approximately ¾-acre to 4-acre lots) with a large number of the lots currently vacant. For the most part, the VR-2, SR-2 and SR-4 designations in this area are reflective of existing parcelization. There is a similar situation just south of the Analysis Area, in the VR-2, SR-1, and SR-2 areas just south of the Town Center. These areas have an existing system of County-maintained roads for fire access and water line infrastructure that would support the build-out of these vacant lots. New water and sewer infrastructure improvements, in addition to fire access roads would be required to reach the proposed VR-4.3 density potential in the Analysis Area.
LU-10.3	Village Boundaries. Use Semi-Rural and Rural land use designations to define the boundaries of Villages and Rural Land Use designations to serve as buffers between communities.	The DS8 proposal would not require changing the existing Village Regional Category. The Analysis Area is on the northern edge of the Village Regional Category in the CPA.
LU-10.4	Commercial and Industrial Development. Limit the establishment of commercial and industrial uses in Semi-Rural and Rural areas that are outside of Villages (including Rural Villages) to minimize vehicle trips and environmental impacts.	Not Applicable This policy is not applicable because the DS8 proposal would not involve changes to the zoning use regulations and the Analysis Area is within the Village.
LU-11.1	Location and Connectivity. Locate commercial, office, and industrial development in Village areas with high connectivity and accessibility from surrounding residential neighborhoods, whenever feasible.	Not Applicable This policy is not applicable because the DS8 proposal would not involve changes to the zoning use regulations and the Analysis Area is within the Village.
LU-11.10	Integrity of Medium and High Impact Industrial Uses. Protect designated Medium and High Impact Industrial areas from encroachment of incompatible land uses, such as residences, schools, or other uses that are sensitive to industrial impacts. The intent of this policy is to retain the ability to utilize industrially designated locations by reducing future development conflicts.	Not Applicable This policy is not applicable because there are no properties designated for Medium or High Impact Industrial use within 1.5 miles of the Analysis Area.
COS-10.2	Protection of State-Classified or Designated Lands. Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the	The DS8 Analysis Area does not contain any MRZ-2 or MRZ-3 areas.

Policy		EIR Proposed Project: Policy Review
	State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.	
COS-12.1	Hillside and Ridgeline Development Density. Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.	The DS8 Analysis Area does not contain any ridgelines or steep hillsides.
COS-14.1	Land Use Development Form. Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.	Considering the DS8 Analysis Area is less than a half mile from the Town Center and the variety of commercial and civic services available along (and in the vicinity of) the Palm Canyon Drive corridor, development of the site at the proposed VR-4.3 density could be considered in line with a relatively compact community-level development pattern. As discussed in detail in the review of Policies LU-2.3, LU-2.4 and LU-9.9, there are many vacant lots within the same proximity to the Village Core/Town Center. These include the areas of VR-2, SR-1, SR-2 and SR-4 designations just north and south of the Palm Canyon Drive corridor, which already have the public road network and network of water lines to support the build out of those areas.
S-1.1	Minimize Exposure to Hazards. Minimize the population exposed to hazards by assigning land use designations and density allowances that reflect site-specific constraints and hazards.	As noted in the analysis for Policy LU-6.11 (Protection from Wildfires and Unmitigable Hazards), the DS8 Analysis Area is within a 'moderate' fire hazard severity zone. Village designations are appropriate in this zone, particularly in Rural Villages. The study area parcels are only approximately 200 feet from the Borrego Springs FPD fire station on Stirrup Road, so a subdivision project here could likely meet the 5-minute fire response travel time required for all projects under the Village Land Use designations. Current California Building Code requirements will impact future development at the site. New multi-family residential structures (with the exception of one and two family houses and townhomes) would require a comprehensive flood protection solution for the whole alluvial fan area, prior to grading and construction. See the review of Policies LU-1.9 and S-9.2 for further information on flood hazards and regulations.
S-6.4	Fire Protection Services for Development. Require that development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards).	The Analysis Area would likely be able to meet the 5-minute emergency response travel time required for development at the VR-4.3 density. The southern portion of the study area is only approximately 200 feet from the Borrego Springs FPD fire station on Stirrup Road

Policy		EIR Proposed Project: Policy Review
S-9.2	Development in Floodplains. Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood proofing standards and siting criteria to prevent flow obstruction.	<p>The entire Analysis Area is within the 100-year floodplain, which is the case for much of the Village and the northern portion of the CPA. The large floodplain with no associated floodway is the result of the alluvial fan pattern of drainage from the nearby mountains. New multi-family residential structures (with the exception of one and two family houses and townhomes) would require a comprehensive flood protection solution for the whole alluvial fan area, prior to grading and construction.</p> <p>The Analysis Area is mostly within a fan terminus alluvial wash. This is defined as the flow path where the bottom of an alluvial fan intersects with the edge of another alluvial fan. These areas can concentrate flows and become particularly hazardous during flash floods. The County's Flood Damage Prevention Ordinance requires that projects in fan terminus alluvial washes be designed so that any obstruction to flow would not cause a cumulative increase in the base flood depth of more than 0.5 feet. A detailed hydraulic model would be required to acceptably demonstrate satisfaction of this requirement.</p>
S-9.4	Development in Villages within the Floodplain Fringe. Allow new uses and development within the floodplain fringe (land within the floodplain outside of the floodway) only when environmental impacts and hazards are mitigated. This policy does not apply to floodplains with unmapped floodways. Require land available outside the floodplain to be fully utilized before locating development within a floodplain. Development within a floodplain may be denied if it will cause significant adverse environmental impacts or is prohibited in the community plan. Channelization of floodplains is allowed within villages only when specifically addressed in community plans.	<p>Not Applicable This policy is not applicable because, as it notes, the policy does not apply to floodplains with unmapped floodways (which is the case on this site).</p>
S-9.5	Development in Semi-Rural and Rural Lands within the Floodplain Fringe. Prohibit development in the floodplain fringe when located on Semi-Rural and Rural Lands to maintain the capacity of the floodplain, unless specifically allowed in a community plan. For parcels located entirely within a floodplain or without sufficient space for a building pad outside the floodplain, development is limited to a single family home on an existing lot or those uses that do not compromise the environmental attributes of the floodplain or require further channelization.	<p>Not Applicable This policy is not applicable because, as it notes, the policy only applies to Semi-Rural and Rural Lands areas (Regional Categories). The DS8 Analysis Area is entirely within the Village Regional Category, and that is not proposed to change.</p>
S-9.6	Development in Dam Inundation Areas. Prohibit development in dam inundation areas that may interfere with the County's emergency response and evacuation plans.	<p>Not Applicable This policy is not applicable because the DS8 Analysis Area is not within a dam inundation area.</p>
S-10.1	Land Uses within Floodways. Limit new or expanded uses in floodways to agricultural, recreational, and other such low-intensity uses and those that do not result in any increase in flood	<p>Not Applicable This policy is not applicable because the DS8 Analysis Area is not within a floodway.</p>

	Policy	EIR Proposed Project: Policy Review
	<p>levels during the occurrence of the base flood discharge, do not include habitable structures, and do not substantially harm, and fully offset, the environmental values of the floodway area. This policy does not apply to minor renovation projects, improvements required to remedy an existing flooding problem, legal sand or gravel mining activities, or public infrastructure.</p>	

Desert (Borrego Springs) DS24

Property Specific Request (PSR)

SR-10 to SR-1

Requested by: Chris Brown

STAFF RECOMMENDATION: NOT DETERMINED

PSR Description

Property Owner:

Borrego Country Club Estates LLC

Size:

169 acres; 2 parcels

Location/Description:

Approximately 2 miles south of Palm Canyon Drive, at the intersection of Borrego Springs Road and Country Club Road; outside the County Water Authority boundary

Estimated total increase in potential dwelling units (based on proposed map): 153

Fire Service Travel Time (GP Policy S-6.4):

5 to 10 minutes

Prevalence of Constraints (See following page):

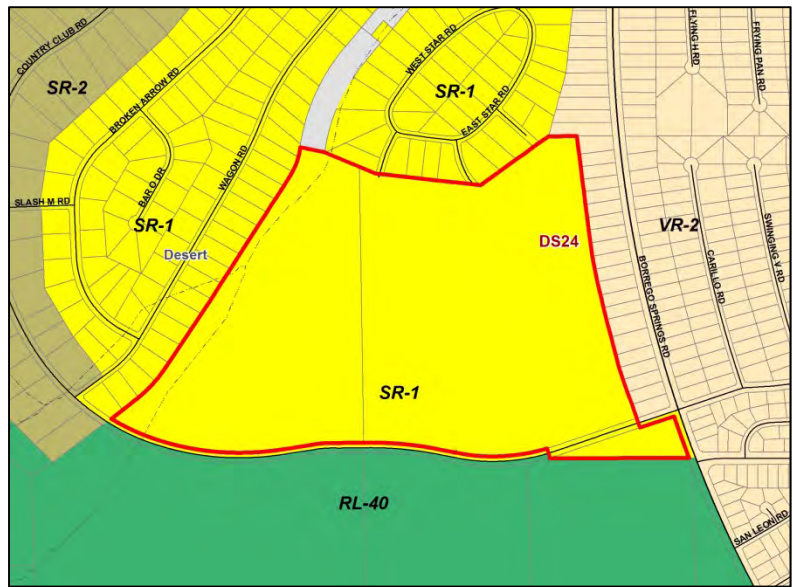
● - high; ◐ - partially; ○ - none

- Steep Slope (Greater than 25%) *almost none*
- Floodplain
- Wetlands
- Sensitive Habitat
- Agricultural Lands
- ◐ Fire Hazard Severity Zones

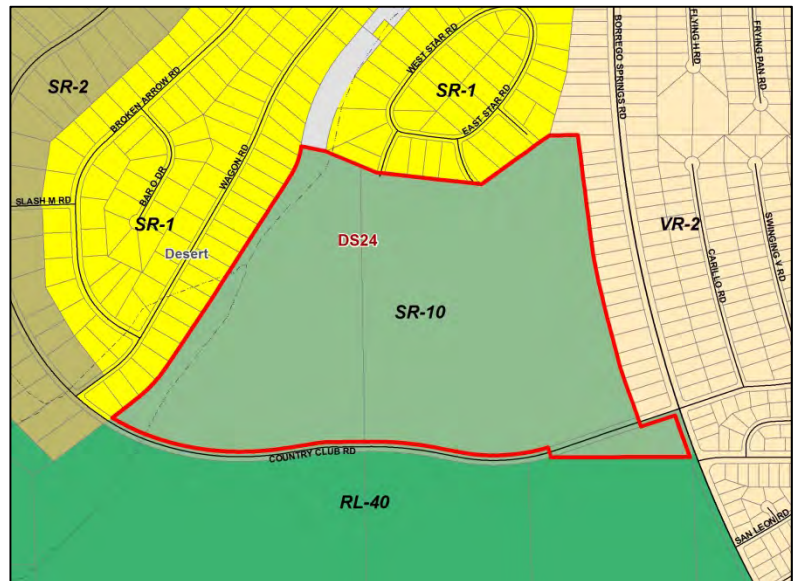
Staff Recommendation and Summary Rationale

See General Plan Conformance Findings starting on page 5 for additional discussion of the rationale.

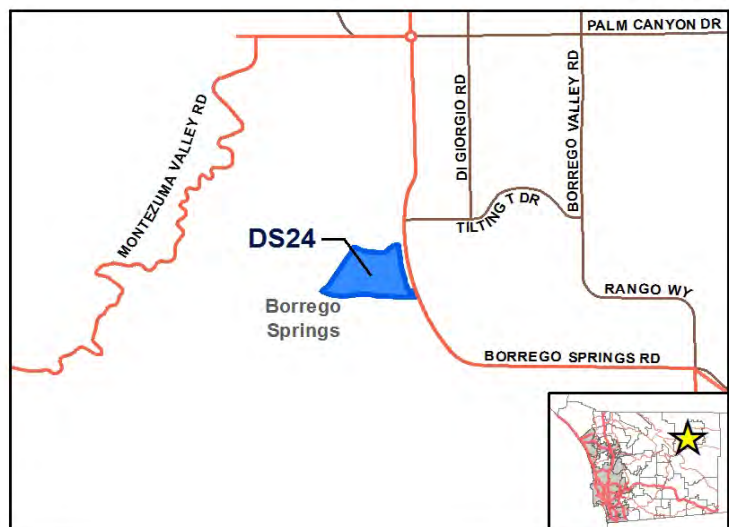
NOT DETERMINED



Proposed General Plan Designations



Existing General Plan Designations



Vicinity Map

Aerial and Site Photos



Aerial



Facing south from the central portion of the property



Facing northwest from the central portion of property



Facing northeast at site, from Montezuma Valley Road (southern border of DS24 is the curving dirt road in the upper right corner of the picture)



From the northwestern portion of the property, facing north along drainage that runs along the western portion



From the northern portion of the property, facing south

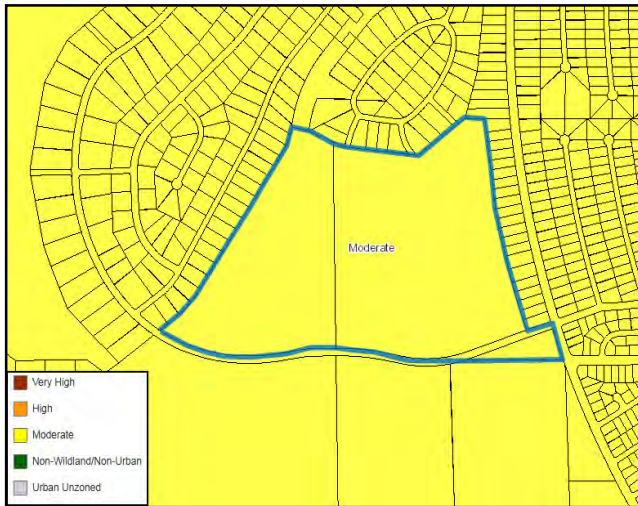
Constraints



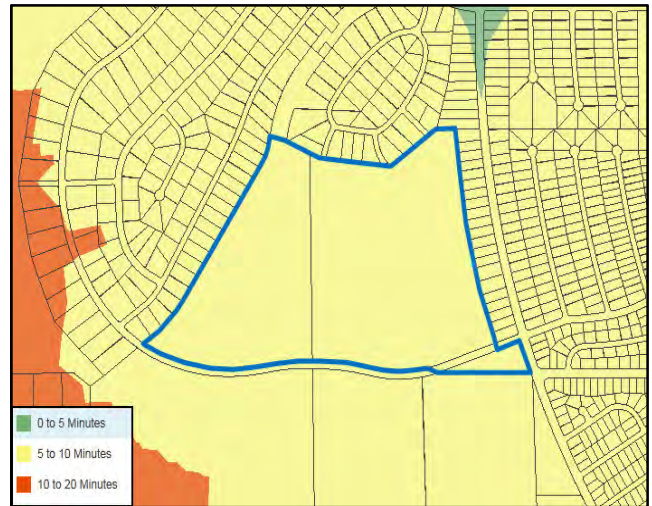
Vegetation (Sonoran Creosote bush scrub; including extensive Ocotillos)



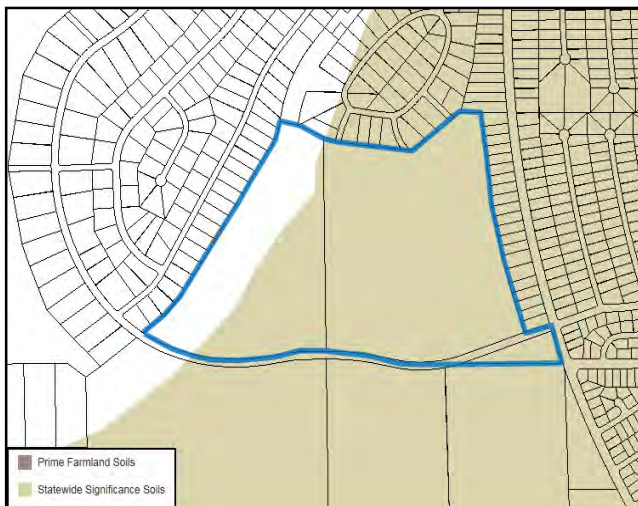
Floodplain



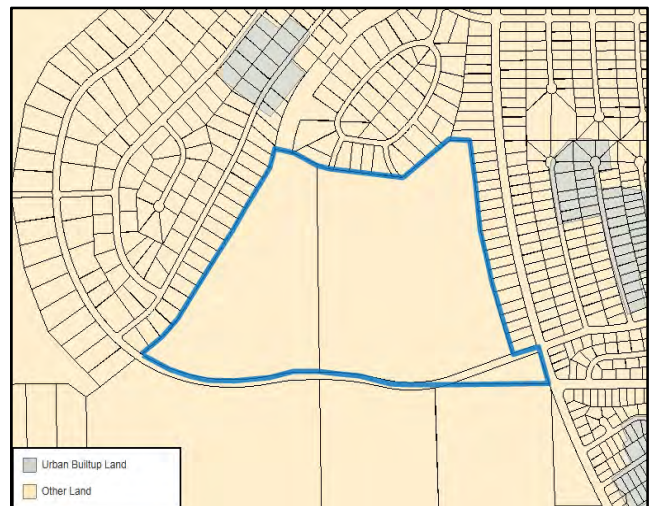
Fire Hazard Severity Zones



Emergency Response Travel Time



Prime Agricultural Soils



Farmland Mapping and Monitoring Program

Context

The subject site includes two parcels totaling approximately 169 acres, located in the western portion of the Borrego Springs Community Planning Area (CPA). The western parcel is approximately 65 acres and the eastern parcel is approximately 104 acres. The subject site is approximately two miles south of Palm Canyon Drive and 1.5 miles east of Montezuma Valley Road (S22), which is a County Scenic Highway. The eastern parcel extends to the intersection of Borrego Springs Road (S3) and Country Club Road. The site is visible from Borrego Springs Road, a primary route into the village core of Borrego Springs from SR-78 to the south.

The subject site is situated on the edge of alluvial fans, formed from the drainages of nearby Loki Canyon, Tubb Canyon, Culp Canyon, and Dry Canyon, all to the west. The Culp Canyon ephemeral drainage is found in the low lying area along the western perimeter of the site (picture on page 2). The entire site is within the FEMA floodplain, with the exception of a slightly higher elevation area running diagonally across the site, which has been categorized as a sand dune, stabilized by native vegetation. The vegetation of the site is categorized as Sonoran Creosote bush scrub. This classification includes Ocotillos (*Fouquieria splendens*) and the site contains concentrations of Ocotillos.

There are mapped subdivisions to the north, east and west of the subject site. The subdivisions include lot sizes that range from half acre to one acre, for the most part. Approximately 80% of the adjacent subdivided lots to the north, east and west are vacant. Areas to the south are mostly undeveloped and located in the General Plan Rural Lands Regional Category.

Comparison of Land Use Maps

Category	Existing General Plan (August 2011)	PSR - Proposed Project (June 2012)	Staff Recommendation
Estimated Potential Dwelling Units			
PSR Area	16 (SR-10)	169 (SR-1)	NOT DETERMINED

Zoning			
<small>(Note: the zoning under 'PSR - Proposed Project' details zoning that would be necessary for consistency with the PSR proposed Land Use designations and does not necessarily reflect the staff recommendation.)</small>			
Proposed Zoning Use Regulation	S92	RS	NOT DETERMINED
Proposed Zoning Minimum Lot Size (acres)	1	1	NOT DETERMINED

Community Input - PSR Proposed Land Use Map	
Support	NOT DETERMINED
Opposed	NOT DETERMINED

General Plan Conformance

Review of General Plan Policies Applicable to General Plan Amendments/Rezones without an associated development project.

Policy	EIR Proposed Project: Policy Review
<p>LU-1.1</p>	<p>Assigning Land Use Designations. Assign land use designations on the Land Use Map in accordance with the Community Development Model (CDM) and boundaries established by the Regional Categories Map.</p> <p>The CDM as referenced in the General Plan uses the model of a central core (referred to as a 'Village' or 'Rural Village') surrounded a Semi-Rural area of lower density residential, small-scale agriculture, and other lower intensity uses. The outer mapping layer is the Rural Lands; typically comprised of very low density residential, open space, agriculture, and other uses associated with rural areas. A key component of the CDM is to focus growth near existing and planned infrastructure, services and jobs.</p> <p>There are areas of SR-1 (1 unit per acre, slope dependent), SR-2 (1 unit per 2 acres, slope dependent), and VR-2 (2 units per acre) to the north, east and west, extending from the DS24 site north to the village core. The designations of these areas coincide with the typical parcel sizes, with many (roughly) half acre lots in the VR-2 area, 1-acre lots in the SR-1 area and 2-acre lots in the SR-2 area. While these designations are reflective of parcelization, many of the existing lots remain vacant. A larger area to the south and west is designated RL-40, with mostly large lots and preserved desert habitat. This RL-40 area serves as a low density/greenbelt buffer between the Semi-Rural residential area and the undeveloped areas of Anza Borrego Desert State Park (ABDSP) to the south and west of this area.</p> <p>Changing the Semi-Rural Regional Category would not be required for the proposed Land Use designation change to SR-10.</p> <p>Available services and infrastructure are also considered in the CDM. The infrastructure currently available to the DS24 site is fairly typical of the lower densities in the Semi-Rural category, outside of the County Water Authority. The properties do not currently have water or sewer service, nor do they have access to water or sewer lines. The site is not within the sewer service area for the Borrego Water District, though it is within their sewer service sphere of influence. The closest sewer line is approximately three miles east of the site, along Yaqui Pass Road. The Borrego Water District has noted that connection to sewer will likely be necessary for a subdivision at the site.</p> <p>The southeastern portion of the site is adjacent to Borrego Springs Road, which is a General Plan Mobility Element road with a 2.2D Light Collector classification. Based on Average Daily Trip (ADT) estimates prepared for the General Plan Update, the proposed density increase would not be anticipated to push this road into a failing level of service upon build out.</p> <p>While it would be feasible to provide the necessary fire access, the Borrego Springs Fire Protection District (in comments on this GPA) anticipates that a new fire station could be required in order for a subdivision in the PSR area to meet the emergency</p>

Policy		EIR Proposed Project: Policy Review
		response travel time required for the SR-1 designation (see Policy S-6.4 review). However, based on the previous review of the Tentative Map 5487 application (now in 'idle' status) on the project site, it's possible that the provision of wider access roads could lead to a conclusion of an approximate 5-minute travel time, which would be required for development at the SR-1 density. See additional discussion of fire protection considerations in the review of applicable policies LU-6.11, S-1.1, and S-6.4.
LU-1.2	Leapfrog Development. Prohibit leapfrog development which is inconsistent with the Community Development Model. Leapfrog Development restrictions do not apply to new villages that are designed to be consistent with the Community Development Model, that provide necessary services and facilities, and that are designed to meet the LEED-Neighborhood Development Certification or an equivalent. For purposes of this policy, leapfrog development is defined as Village densities located away from established Villages or outside established water and sewer service boundaries. [See applicable community plan for possible relevant policies.]	Not Applicable This policy is not applicable because there are no Village designations proposed with DS24.
LU-1.3	Development Patterns. Designate land use designations in patterns to create or enhance communities and preserve surrounding rural lands.	The proposed SR-1 designation could be viewed as an extension of the current land use mapping pattern based on the adjacent SR-1 properties to the west and the VR-2 properties to the east; however, the DS24 site is not currently parcelized like these areas of mostly ½ acre to 2 acre lots, and there is a prevalence of vacant lots in these adjacent areas. Issue LU-2.2 of the Community Plan calls for GPAs to consider the number of existing vacant lots in the community. Goal LU-2.3 and Policy LU-2.3.1 seek to preserve uses and densities in older residential neighborhoods by prohibiting (unless required for health and safety) alteration of uses or increases in densities existing at the time of the General Plan Update adoption in a number of neighborhoods, including the area of DS24, referred to as Country Club Estates. The areas of SR-2, SR-1, and VR-2 that are near the DS24 site (between the site and the village core) are not close to reaching the build out density, based on the current Land Use Map. As such, it could be determined that increasing density at the site will not enhance the community.
LU-1.4	Village Expansion. Permit new Village Regional Category designated land uses only where contiguous with an existing or planned Village and where all of the following criteria are met: <ul style="list-style-type: none"> ▪ Potential Village development would be compatible with environmental conditions and constraints, such as topography and flooding ▪ Potential Village development would be accommodated by the General Plan road network ▪ Public facilities and services can support the expansion without a reduction of services to 	Not Applicable This policy is not applicable because there are no Village designations proposed with DS24.

Policy		EIR Proposed Project: Policy Review
	<p>other County residents</p> <ul style="list-style-type: none"> ▪ The expansion is consistent with community character, the scale, and the orderly and contiguous growth of a Village area 	
LU-1.5	<p>Relationship of County Land Use Designations with Adjoining Jurisdictions. Prohibit the use of established or planned land use patterns in nearby or adjacent jurisdictions as the primary precedent or justification for adjusting land use designations of unincorporated County lands. Coordinate with adjacent cities to ensure that land use designations are consistent with existing and planned infrastructure capacities and capabilities.</p>	<p>There are no adjoining jurisdictions. The DS24 area is approximately 16 miles from the border with Imperial County, 14 miles from the border with Riverside County, 7 miles from the Los Coyotes Reservation, and the Borrego CPA is mostly surrounded by state park lands.</p>
LU-1.9	<p>Achievement of Planned Densities. Recognizing that the General Plan was created with the concept that subdivisions will be able to achieve densities shown on the Land Use Map, planned densities are intended to be achieved through the subdivision process except in cases where regulations or site specific characteristics render such densities infeasible.</p>	<p>The specific site characteristics that would have the greatest impact on the achievement of the proposed Land Use Map density at this site are the floodplain, California Species of Special Concern and groundwater.</p> <p>The site is mostly within the 100-year floodplain and the potential for particularly hazardous flooding is apparent, due to the confluence of west to east drainage flows associated with the alluvial fans of Dry Canyon, Tubb Canyon, Culp Canyon, and Loki Canyon. The Hydrology/Drainage Study for the Tentative Map 5487 application on the site called for improvements to an existing off-site diversion dike and additional diversion structures (to deal with the confluence of drainages from Tubb, Culp, and Loki Canyons), with these existing and proposed features located on private property with no existing flood control easements. The project proposed the formation of a 'Geological Hazard Abatement District' in order to construct regional flood control facilities. County staff noted that such a district must be formed prior to the approval of a Tentative Map.</p> <p>The project plans noted a boundary adjustment was required in order to obtain necessary land from the nearby property to the south (APN 198-320-35) for the connection of Country Club Road and other improvements.</p> <p>Focused surveys were to be completed for two California Species of Special Concern, the Burrowing owl and the Flat-tailed horned lizard. If surveys were to detect evidence of the presence of these species, additional requirements would be placed on the project that could limit the available area that would be required to reach the density potential.</p> <p>The greatest obstacle for increased residential development in the CPA is the reliance on groundwater. Per the requirements of the Sustainable Groundwater Management Act (SGMA), a Groundwater Sustainability Plan will soon be prepared for the Borrego Valley, in order to ensure long term groundwater sustainability. For additional information on how groundwater sustainability regulations impact GPA proposals for density increases, see the review of Policy LU-2.4 in this report.</p>

Policy		EIR Proposed Project: Policy Review
LU-2.3	Development Densities and Lot Sizes. Assign densities and minimum lot sizes in a manner that is compatible with the character of each unincorporated community.	<p>The densities surrounding the DS24 site were developed with consideration of existing parcelization. There are only a few parcels in the VR-2, SR-1, and SR-2 areas near the DS24 site that have any additional subdivision potential. Issue LU-2.2 of the Community Plan calls for GPAs to consider the number of existing vacant lots in the community. The areas of SR-2, SR-1, and VR-2 that are near the DS24 site (between the site and the village core) include a large number of vacant lots.</p> <p>The Borrego Springs Community Plan also includes issue and policy references to the community character impacts of increased development on undisturbed desert vegetation, as opposed to fallowed agricultural lands and other previously cleared parcels. Page 8 of the Community Plan under <i>d. Existing Land Uses and Community Character</i> notes, "There is significant development pressure for housing and commercial development projects that are not consistent with our community character. Of special concern are those proposed plans that do not take the fragile ecosystem into account, or are sited on botanically-rich, native desert vegetation and which would significantly impact dark skies, scenic and vegetative elements of the community character." For additional Community Plan references related to this issue, see the review of Policies LU-2.4 and LU-6.2 in this report.</p>
LU-2.4	Relationship of Land Uses to Community Character. Ensure that the land uses and densities within any Regional Category or Land Use Designation depicted on the Land Use Map reflect the unique issues, character, and development objectives for a Community Plan area, in addition to the General Plan Guiding Principles.	<p>An issue facing the CPA is the use of groundwater and new regulations based on the SGMA. Preliminary estimates indicate that the CPA may have to function within a groundwater use limit of roughly 5,600 acre-feet per year. The current use of groundwater is estimated to be approximately 19,000 acre feet per year within the CPA.</p> <p>Preservation of undisturbed desert habitat (like the subject site) in the CPA is a top priority of the Community Plan. Policy LU-1.1.1 calls for ensuring that remaining undisturbed desert native habitat lands throughout the CPA are conserved to the greatest extent possible. Goal LU-2.1 seeks to focus development on previously disturbed lands. Following recommendations of the community during the General Plan Update, areas that were not extensively parcelized were assigned lower densities.</p> <p>The preservation of native desert vegetation sites also addresses air quality and erosion issues. High winds in the valley are fairly common, and air quality and erosion issues are exacerbated in areas with little vegetation cover to keep the sands in place.</p>
LU-2.5	Greenbelts to Define Communities. Identify and maintain greenbelts between communities to reinforce the identity of individual communities.	<p>The General Plan Glossary defines Greenbelts as a largely undeveloped area surrounding more urbanized areas, consisting of agricultural lands, open space, conservation areas, passive parks, or very low density rural residential lands. The DS24 site is located in a transition area from the Semi-Rural neighborhood south of the Village Core, to the Rural Lands properties that serve as the buffer from the state park lands to the west and south in this area. The current SR-10 designation requires a Conservation Subdivision which necessitates 75% avoidance of sensitive resources. With the current 1-acre zoning minimum lot</p>

Policy		EIR Proposed Project: Policy Review
		size, development associated with achieving the SR-10 density potential could be achieved while avoiding disturbance on the majority of the site and consolidating the footprint in the area near the existing homes to the north. The proposed SR-1 designation would not require a Conservation Subdivision.
LU-3.1	Diversity of Residential Designations and Building Types. Maintain a mixture of residential land use designations and development regulations that accommodate various building types and styles.	The proposal would not have a substantial impact on the current mixture of residential Land Use designations and building types in the CPA. With the proposal to change the designation to SR-1, a zoning change to RS (Residential Single) is proposed for consistency. The RS zoning and zoning development designators would match the area of SR-1 adjacent to the DS24 site. The site is currently zoned S92. The Building Type (C) would not require a change for consistency.
LU-5.1	Reduction of Vehicle Trips within Communities. Incorporate a mixture of uses within Villages and Rural Villages and plan residential densities at a level that support multi-modal transportation, including walking, bicycling, and the use of public transit, when appropriate.	Not Applicable This policy is not applicable because the PSR area is not within a Village, and the proposal does not include a change to Village designations or the Village Regional Category.
LU-6.2	Reducing Development Pressures. Assign lowest-density or lowest-intensity land use designations to areas with sensitive natural resources.	<p>The vegetation of the site is categorized as Sonoran Creosote bush scrub. This classification includes Ocotillos (<i>Fouquieria splendens</i>) and the site contains a concentration of Ocotillos. Policy LU-1.1.1 calls for ensuring that remaining undisturbed desert native habitat lands throughout the CPA are conserved to the greatest extent possible. Goal LU-2.1 seeks to focus development on previously disturbed lands.</p> <p>The DS24 site provides potential habitat for some sensitive species. During the County's review of the TM5487 application, the site was identified as having the potential to host two California Species of Special Concern: the Flat-tailed horned lizard and the Burrowing owl. The site is also near Recovery Region 7 (South San Ysidro Mountains) for the Peninsular Bighorn Sheep, as noted in the Recovery Plan, prepared by the U.S. Fish & Wildlife Service in 2000. This species can be found on east-facing, lower-elevation slopes (typically below 4,600 feet), so there is a good possibility this species could visit the site from the nearby east-facing slopes for foraging and for a seasonal water source.</p> <p>The site is situated on the edge of alluvial fans, formed from the drainages of nearby Loki Canyon, Tubb Canyon, Culp Canyon, and Dry Canyon, all to the west. Additional flood flow diversion structures could impact the biodiversity of this area, which is dependent on seasonal flows from these alluvial fans.</p> <p>The current SR-10 designation on the site requires a Conservation Subdivision approach. This process requires 75% avoidance of sensitive resources, and allows for a clustered approach. Community Plan Policy LU-1.2.1 requires maximizing the use of clustering to preserve natural habitats and Policy COS-1.2.5 calls for preserving existing wildlife and vegetation corridors throughout neighborhoods.</p>

Policy		EIR Proposed Project: Policy Review
LU-6.11	Protection from Wildfires and Unmitigable Hazards. Assign land uses and densities in a manner that minimizes development in extreme, very high and high hazard fire areas or other unmitigable hazardous areas.	The DS24 site is within a 'moderate' fire hazard severity zone, which would not preclude the proposed SR-1 designation. Per the Borrego Springs FPD, any development on the site could require participation in the newly formed Community Facilities District, which covers all of Borrego Springs for improved fire protection facilities and services. Potential access points could be provided via adjacent County-maintained roads, including Borrego Springs Road (a General Plan Mobility Element Road), Country Club Road (though the portion adjacent to the DS24 site on the south is not County-maintained), Lightning Road, and Lapped Circle Drive. Per GIS data, the emergency response travel time for the site is 5-10 minutes. That is a longer response time than what would be required on a development project under the proposed SR-1 designation (see GP Policy S-6.4). However, during a review of the TM5487 application at the site, the Borrego Springs FPD noted an estimated response time of 7 minutes, but if the applicant were to adhere to the FPD request of 32' wide internal access roads, they noted an approximate 5-minute response time could be confirmed.
LU-7.1	Agricultural Land Development. Protect agricultural lands with lower-density land use designations that support continued agricultural operations.	Though prime agricultural soils are found on a portion of the DS24 site, the site does not contain Prime Farmland, Unique Farmland, or Farmland of Statewide/Local Importance. Review of aerial photos shows that no farming has occurred on the project site for the last 20 years.
LU-8.1	Density Relationship to Groundwater Sustainability. Require land use densities in groundwater dependent areas to be consistent with the long-term sustainability of groundwater supplies, except in the Borrego Valley.	Not Applicable Though sustainable groundwater use and implications of the SGMA are noted in other policy reviews as important issues facing the community, the current language of this policy makes it not applicable to Borrego Springs. See the review of Policies LU-1.9 and LU-2.4 in this report for discussion of the groundwater sustainability issue in Borrego Springs, as it relates to achieving the proposed density potential and issues facing the community.
LU-9.2	Density Relationship to Environmental Setting. Assign Village land use designations in a manner consistent with community character, and environmental constraints. In general, areas that contain more steep slopes or other environmental constraints should receive lower density designations. [See applicable community plan for possible relevant policies.]	Not Applicable This policy is not applicable because there are no Village designations proposed with DS24.
LU-9.5	Village Uses. Encourage development of distinct areas within communities offering residents places to live, work, and shop, and neighborhoods that integrate a mix of uses and housing types.	Not Applicable This policy is not applicable because there are no Village designations proposed with DS24.
LU-9.6	Town Center Uses. Locate commercial, office, civic, and higher-density residential land uses in the Town Centers of Villages or Rural Villages at transportation nodes. Exceptions to this pattern may be allowed for established industrial districts and secondary commercial districts or corridors.	Not Applicable This policy is not applicable because there are no Village designations proposed with DS24.
LU-9.9	Residential Development Pattern. Plan and support an efficient residential development pattern	The proposed SR-1 designation could establish a new neighborhood within the CPA; however, the new neighborhood

	Policy	EIR Proposed Project: Policy Review
	that enhances established neighborhoods or creates new neighborhoods in identified growth areas.	<p>could detract from the existing neighborhoods surrounding the site due to the number of nearby vacant lots. Estimates show that there are approximately 3,700 vacant undeveloped private lots in the CPA.</p> <p>The SR-2, SR-1 and VR-2 areas to the north, west and east of the DS24 site have a system of County-maintained roads resembling that of a built-out residential neighborhood. In addition to the road network, most of the lots in these areas have access to existing BWD water lines (not the case with the DS24 site).</p> <p>A number of issues, goals, and policies presented in the Community Plan seek to direct any growth to areas that have already been cleared of native desert vegetation, particularly fallowed agricultural lands. For additional discussion of land use mapping patterns, see the review of Policies LU-1.1, LU-1.3, and LU-2.4.</p>
LU-10.3	Village Boundaries. Use Semi-Rural and Rural land use designations to define the boundaries of Villages and Rural Land Use designations to serve as buffers between communities.	The DS24 proposal is consistent with this policy because a Semi-Rural Land Use designation is proposed, which would not require changing the existing Regional Category of Semi-Rural.
LU-10.4	Commercial and Industrial Development. Limit the establishment of commercial and industrial uses in Semi-Rural and Rural areas that are outside of Villages (including Rural Villages) to minimize vehicle trips and environmental impacts.	The proposed changes associated with DS24 would not involve new allowances for by-right commercial and industrial uses.
LU-11.1	Location and Connectivity. Locate commercial, office, and industrial development in Village areas with high connectivity and accessibility from surrounding residential neighborhoods, whenever feasible.	The proposed changes associated with DS24 would not involve new allowances for by-right commercial and industrial uses.
LU-11.10	Integrity of Medium and High Impact Industrial Uses. Protect designated Medium and High Impact Industrial areas from encroachment of incompatible land uses, such as residences, schools, or other uses that are sensitive to industrial impacts. The intent of this policy is to retain the ability to utilize industrially designated locations by reducing future development conflicts.	<p>Not Applicable</p> <p>This policy is not applicable because there are no properties designated for Medium or High Impact Industrial use within 3 miles of the DS24 area.</p>
COS-10.2	Protection of State-Classified or Designated Lands. Discourage development or the establishment of other incompatible land uses on or adjacent to areas classified or designated by the State of California as having important mineral resources (MRZ-2), as well as potential mineral lands identified by other government agencies. The potential for the extraction of substantial mineral resources from lands classified by the State of California as areas that contain mineral resources (MRZ-3) shall be considered by the County in making land use decisions.	The DS24 site does not contain MRZ-2 or MRZ-3 areas.

Policy		EIR Proposed Project: Policy Review
COS-12.1	Hillside and Ridgeline Development Density. Protect undeveloped ridgelines and steep hillsides by maintaining semi-rural or rural designations on these areas.	A Semi-Rural designation is proposed for DS24, and according to a slope analysis prepared for a recent project at the site, less than ¼ acre of the site contains slopes greater than 25%.
COS-14.1	Land Use Development Form. Require that development be located and designed to reduce vehicular trips (and associated air pollution) by utilizing compact regional and community-level development patterns while maintaining community character.	Considering the DS24 site is just approximately 1.5 miles from the Village Core, development of the site at an SR-1 density could be considered in line with a relatively compact community-level development pattern, though additional roads and road connections would be required to develop at that density. As discussed in detail in the conformance analysis for Policies LU-2.3, LU-2.4 and LU-9.9, the CPA has many undeveloped vacant parcels between the DS24 site and the Village Core. For the most part, the vacant parcels in these areas of SR-2, SR-1, and VR-2 already have the necessary road network and water lines to facilitate development of these parcels. Following a compact pattern of development, these parcels would be built out, prior to adding additional density.
S-1.1	Minimize Exposure to Hazards. Minimize the population exposed to hazards by assigning land use designations and density allowances that reflect site specific constraints and hazards.	The DS24 site is within a ‘moderate’ fire hazard severity zone. Additional information about fire protection can be found in the discussion for Policy LU-6.11. The site is mostly within the 100-year floodplain and the potential for particularly hazardous flooding is apparent, due to the confluence of west to east drainage flows associated with the alluvial fans of Dry Canyon, Tubb Canyon, Culp Canyon, and Loki Canyon. For additional information about floodplain issues, please see the discussions for Policies LU-1.9 and S-9.2.
S-6.4	Fire Protection Services for Development. Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards).	According to County GIS data, new development associated with the proposed SR-1 designation would not be able to meet the 5-minute fire protection response travel time standard required for development at the SR-1 density, per Table S-1 associated with this policy. As the policy places this requirement on new development (i.e. Subdivision stage and not stand-alone GPA stage), this current travel time information does not preclude approval of an SR-1 density for the DS24 site when evaluated in combination with other available fire protection service information. See the review of Policies LU-1.9, LU-6.11, and S-1.1 in this report for additional discussion of fire protection.
S-9.2	Development in Floodplains. Limit development in designated floodplains to decrease the potential for property damage and loss of life from flooding and to avoid the need for engineered channels, channel improvements, and other flood control facilities. Require development to conform to federal flood proofing standards and siting criteria to prevent flow obstruction.	As noted previously, most of the DS24 site is within the 100-year floodplain. The potential for particularly hazardous flooding is apparent, due to the confluence of west to east drainage flows associated with the alluvial fans of Dry Canyon, Tubb Canyon, Culp Canyon, and Loki Canyon. A Hydrology/Drainage Study for the TM5487 application on the site called for improvements to an existing off-site diversion dike and additional diversion structures (to deal with the confluence of drainages from Tubb, Culp, and Loki Canyons), with these existing and proposed features located on private property with no existing flood control easements. The project proposed the formation of a ‘Geological Hazard Abatement District’ in order to construct regional flood control facilities. County staff noted that such a district must be formed prior to the approval of a Tentative Map.

Policy		EIR Proposed Project: Policy Review
S-9.4	Development in Villages within the Floodplain Fringe. Allow new uses and development within the floodplain fringe (land within the floodplain outside of the floodway) only when environmental impacts and hazards are mitigated. This policy does not apply to floodplains with unmapped floodways. Require land available outside the floodplain to be fully utilized before locating development within a floodplain. Development within a floodplain may be denied if it will cause significant adverse environmental impacts or is prohibited in the community plan. Channelization of floodplains is allowed within villages only when specifically addressed in community plans.	Not Applicable This policy is not applicable because, as it notes, the policy does not apply to floodplains with unmapped floodways (which is the case on this site).
S-9.5	Development in Semi-Rural and Rural Lands within the Floodplain Fringe. Prohibit development in the floodplain fringe when located on Semi-Rural and Rural Lands to maintain the capacity of the floodplain, unless specifically allowed in a community plan. For parcels located entirely within a floodplain or without sufficient space for a building pad outside the floodplain, development is limited to a single family home on an existing lot or those uses that do not compromise the environmental attributes of the floodplain or require further channelization.	Not Applicable The floodplain fringe is defined (including in the General Plan Glossary) as the portion of the floodplain outside the limits of the floodway. Policy S-9.4 associated with the floodplain fringe notes that the policy does not apply to floodplains with unmapped floodways. That is the case on this site and there is no floodway throughout the alluvial floodplain covering a large portion of the Borrego Valley.
S-9.6	Development in Dam Inundation Areas. Prohibit development in dam inundation areas that may interfere with the County's emergency response and evacuation plans.	Not Applicable This policy is not applicable because the subject area is not within a dam inundation area.
S-10.1	Land Uses within Floodways. Limit new or expanded uses in floodways to agricultural, recreational, and other such low-intensity uses and those that do not result in any increase in flood levels during the occurrence of the base flood discharge, do not include habitable structures, and do not substantially harm, and fully offset, the environmental values of the floodway area. This policy does not apply to minor renovation projects, improvements required to remedy an existing flooding problem, legal sand or gravel mining activities, or public infrastructure.	Not Applicable This policy is not applicable because the subject area is not within a floodway.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.B

October 11, 2016

TO: Board of Directors, Borrego Water District

FROM: Geoff Poole, General Manager

SUBJECT: AGENDA ITEM II.B: Discussion of Conceptual Request for Proposal Items for Borrego Groundwater Sustainability Plan – Director L. Brecht

RECOMMENDED ACTION: Receive and discuss the document created by Director Brecht

ITEM DESCRIPTION: Immediately following approval of the GSP MOU with the County of San Diego on October 19th, the Draft Request for Proposal (RFP) will be reviewed by the BWD Core Team (Hart, Brecht and Poole). Due to confidentiality requirements only the Core Team will be allowed to review the document, so Director Brecht wanted to take this opportunity to discuss the conceptual components of the RFP and Scope of Work and make sure the Core Team has a clear understanding of the issues that need to be evaluated. A similar discussion took place on the document at the October 6th Borrego Water Coalition Meeting and the group felt the Lyle's written framework and the face to face conversations that have taken place on the RFP show the Core Team fully understands the issues that need to be evaluated as part of the GSP.

FISCAL IMPACT: No direct fiscal impact from this action.

ATTACHMENTS: Director Brecht Conceptual RFP for GSP

**REQUEST for PROPOSAL to DEVELOP a GROUNDWATER SUSTAINABILITY PLAN
for the BORREGO VALLEY GROUNDWATER BASIN**

Note: This is a conceptual discussion document only for the purposes of illuminating the business requirements of a Groundwater Sustainability Plan (GSP) for the Borrego Valley Groundwater Basin (Borrego Basin) regarding the Borrego Water District's (District) ability to serve its municipal customers while satisfying the regulatory requirements of the Sustainable Groundwater Management Act (SGMA).

The Challenge:

We are seeking a consultant with the ability to listen to local concerns, the willingness to learn, and the expertise to address the specific special and unique planning and business aspects of the Borrego Basin so as to develop a GSP that has a high probability of success for meeting SGMA mandated goals no later than 2040.

In order to accomplish this mission, the consultant shall be able to demonstrate the capability to develop analytically-based approaches that:

- enable efficient, fair, and moral trades among less than 20 participants;
- facilitate reductions in extractions in a timely manner so as to not require advanced treatment that could render water too expensive for municipal customers, agricultural users and/or recreational users to purchase or use;
- facilitate difficult land use zoning issues where present zoning and land use decisions may prevent or hinder the ability for the Borrego Basin to be managed for sustainability in perpetuity by no later than 2040;
- to develop a regulatory and enforcement approach to Plan implementation that discourages free riders and penalizes game playing that would be detrimental to achieving a fair outcome for all stakeholders.

Background: The County of San Diego (the County) and the Borrego Water District (the District), as co-Groundwater Sustainability Agencies (GSAs) for the Borrego Valley Groundwater Basin (Borrego Basin) are looking to retain a consultant for the purposes of developing a Sustainable Groundwater Management Act (SGMA) compliant Groundwater Sustainability Plan (GSP) for the Borrego Basin.

The objectives of the GSP are to develop an appropriate mechanism to reduce present average annual groundwater withdrawals from the Borrego Basin of approximately 19,000 acre-feet per

**REQUEST for PROPOSAL to DEVELOP a GROUNDWATER SUSTAINABILITY PLAN
for the BORREGO VALLEY GROUNDWATER BASIN**

year (AFY) to the average annual recharge rate of approximately 5,700 AFY determined by the US Geological Survey (2015 study; <https://pubs.er.usgs.gov/publication/sir20155150>). It is the desire of the GSAs for the Borrego Basin that this reduction occurs within a timeframe to avoid *undesirable results* as defined under SGMA, but in any case, no longer than 2040, as mandated by SGMA for a critically overdrafted basin, the California Department of Water Resources (DWR) designation for the Borrego Basin.

Some of the foundational documents for the GSP that specify the characteristics of the Borrego Basin; the economics that prohibit imported water to augment existing groundwater supply to address the overdraft; lack of economically available water from nearby aquifers; and some of the business requirements for the provision of future municipal supply are located at: http://www.borregowd.org/Historical_Reports.php.

Policy recommendations that meet SGMA requirements agreed to by the Borrego Water Coalition members representing pumpers who withdraw approximately eighty percent (80%) of the groundwater extracted annually from the Borrego Basin are located at: <http://www.borregospringschamber.com/bwc/documents/2014/BWC%20Policy%20Recs%20FINAL%202011-06-14.pdf>.

GSP Request for Proposal (RFP) Conceptual Components:

- (1) Reduction Plan to meet SGMA basin sustainability requirements in no more than 20-years:
1. what is the appropriate benchmarking protocol for establishing and managing basin annual withdrawal reductions to reach sustainability under SGMA?
 2. what are the necessary means and standards to establish and managing an ongoing well metering program?
 3. what are the necessary means and standards for establishing and managing an ongoing quantity and water quality data collection program?
 4. how best to establish a baseline starting point for reduction program?
 5. on what analytic basis should the reduction schedule be based to avoid *undesirable results*?

**REQUEST for PROPOSAL to DEVELOP a GROUNDWATER SUSTAINABILITY PLAN
for the BORREGO VALLEY GROUNDWATER BASIN**

6. on what analytic basis should penalties for not abiding by metering reporting standards and water supply and/or water quality data collection standards be based?
7. what is the standardized accounting reporting framework for measuring and managing results?

(2) Water Market Rules for trades:

1. what are the necessary rules for fair and efficient trades?
2. what is necessary for market trades to be moral?
3. what is the analytical basis for penalties for pumpers missing reduction targets?
4. what regulations are required so that market trades result in an optimal economic outcome by 2040?

(3) Negotiated and Signed Agreements with stakeholders to abide by the Reduction Plan?

1. do stakeholders agree on the Reduction Plan?
2. do stakeholders agree on the market rules for trades?
3. do stakeholders agree on the penalties that will be imposed under SGMA?
4. do stakeholders agree on the language in the GSP?

(4) Financing Plan to effectuate the implementation of the Reduction Plan:

1. what are the credit requirements for rating and achieving any necessary financing for implementation of the Plan?
2. does the GSP meet these financing credit requirements?
3. what is the financing amount and sources for meeting the Reduction Plan implementation schedule?
4. does the GSP meet State, foundation, and bond market due diligence requirements?

(5) Legal Plan to reduce the ongoing possibility for litigation that could forestall the implementation of the Reduction Plan:

1. is the Plan defensible from disputes?

**REQUEST for PROPOSAL to DEVELOP a GROUNDWATER SUSTAINABILITY PLAN
for the BORREGO VALLEY GROUNDWATER BASIN**

2. has the Plan been inoculated from future disputes during the implementation period that would preclude financing opportunities and/or slow implementation?

(6) Technical requirements to assess *undesirable results* issues:

1. what are the necessary water quality data required for a SGMA-compliant Plan?
2. what ongoing water quality monitoring program is necessary?
3. what air quality monitoring and following standards are necessary to avoid community health impacts from the Reduction Plan?
4. what Enforcement Plan is necessary to successfully achieve the Plan?

(7) Land Use Planning, Permitting, and Enforcement Measures

1. what are the changes in the County's land use planning necessary to support the Reduction Plan;
2. what are the changes in the County's well permitting necessary to support the Reduction Plan;
3. what are the necessary changes to the County's Enforcement Measures to effectuate an efficient and fair implementation of the Reduction Plan and to avoid ongoing environmental and public health issues?

(8) Plan Implementation Management, Accountability, Legitimacy, Enforcement, Data Management, Ongoing Funding & Update Process

1. what are the Plan management, accountability, legitimacy in decision-making, enforcement responsibilities, and administrative funding processes for implementing the Plan?
2. who will manage the data collected during implementation to assure its reliability and validity?
3. what is the process for making changes in the GSP based on new information during the Plan implementation?

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.C

October 11, 2016

TO: Board of Directors, Borrego Water District
FROM: Geoff Poole, General Manager
SUBJECT: AGENDA ITEM II.C: Discussion of Billing Structure for Multi-Family, Master Metered Developments

RECOMMENDED ACTION: Discuss the issue and direct staff accordingly

ITEM DESCRIPTION: The new BWD billing structure classifies multi-family, master metered developments as Non-Residential and charges a rate of \$3.35/unit for all water consumed. Road Runner/The Springs has approached BWD about changing their classification from Non Residential to Residential to allow them to be billed with the 2-tier system that is used in all other Residential developments.

Dan Wright from Road Runner/The Springs agrees with the BWD 2-tiered structure and feels that such a rate system promotes water conservation and he would like to incorporate that concept into the rate structure he charges his residents. In theory, Dan could use any water rate structure he wanted in his development as long as his total revenue was not more than what he is charged by BWD. Just to make it as easy to understand for everyone and to ensure Dan is not “overcharging” for water, he would like his billing structures to match the water bills he receives from BWD exactly by changing his classification to residential. Each unit in development is individually metered (privately-owned).

Dan is requesting that the Board allow Road Runner Club/The Springs to be reclassified and considered a Residential customer in the BWD billing system and billed at the Tier 1 rate of \$3.16 for 2,338 units (334 dwellings X 7 units per dwelling) and the remainder of his bill at the Tier 2 rate of \$3.48.

FISCAL IMPACT: The water rates under the current non-residential and the proposed residential structures are shown below:

Customer Data

A. Road Runner/The Springs = 334 dwellings

B. Typical Summer Water Use = 3,000 hcf/mo.

Water Bills:

1. Non Residential Customer = 3,000 X \$3.35 - \$10,050.00
2. Residential Customer = (2,338 Tier 1 Units X \$3.16) + (662 Tier 2 Units X \$3.48) = \$9,961.84

The difference in the Bills between the current non-residential and the residential system is \$91. If the Board approves the request, Staff recommends the new billing methodology for Road Runner start in November following transition to the new Computer System. Staff is also requesting direction from the Board on how to administer future inquiries from other customers to be reclassified as Residential if and when they occur. Specifically, would the Board prefer to see each request or let Staff make the determination and reclassifications in the future?

ATTACHMENTS: Letter from Dan Wright





October 3, 2016

Borrego Water District
PO Box 1870
Borrego Springs, CA 92004

Attention: Geoff Poole, General Manager

Dear Geoff,

I am writing today in my capacity as General Manager of the RoadRunner Club, at 1010 Palm Canyon Drive, in Borrego Springs. The RoadRunner Club is a multifamily housing development, with approximately 350 single family homes.

We want to request that the water district re-think the implementation of the tiered water rates that recently went into effect.

As you may know, many of our residents are elderly and on limited and/or fixed income. Under your new rate structure, our homeowners and residents are denied the opportunity to enjoy the benefits of the lower water rates offered in the first tier which we don't believe is fair to them.

In addition to that, our homeowners and residents are denied the incentive to keep water use below the seven units allowed in the first tier, as they pay the higher rate for all units used.

We ask the board to revisit the way the tiered rates are applied to multifamily housing developments. One possible solution is to bill the projects at the first-tier rates for the number of approved units times seven. That would allow us to pass along the savings they deserve to each resident/homeowner, and also would incentivize them to keep water use below seven units if at all possible.

Thank you and the Board for considering this request.

Dan Wright
General Manager

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.D

October 11, 2016

TO: Board of Directors, Borrego Water District
FROM: Geoff Poole, General Manager
SUBJECT: AGENDA ITEM II.D Consideration of Proposal from BWD Staff and Jerry Rolwing for his ongoing assistance – G. Poole

RECOMMENDED ACTION: Discuss Proposal and Direct Staff Accordingly

ITEM EXPLANATION: From time to time during my first 3 months, I have relied upon Jerry to help with understanding the history about a specific issue, find documents and related activities. Jerry has been very accommodating to my multiple request and I see a need to use Jerry’s knowledge, skills and experience in various ways in the future. Furthermore, prior to his departure, Jerry expressed an interest in doing some work with BWD in the future and we have put our thoughts down on paper. The current Scope of Work consists of many of the groundwater measuring activities as well as a line item for other projects on an as needed basis.

FISCAL IMPACT: Staff is requesting authorization to proceed with the items included in Jerry’s attached Scope of Work. The estimated cost of these items are \$19,000/year.

ATTACHMENTS: Rolwing Proposal and Scope of Work

**One-Eleven Water Services
P.O. Box 1552
Borrego Springs, CA 92004
*bsh2o@yahoo.com***

October 7, 2016

Mr. Geoff Poole, General Manager
Borrego Water District
806 Palm Canyon Drive
Borrego Springs, CA 92004

Dear Mr. Poole:

The Borrego Water District is responsible for a variety of tasks that can be overwhelming for its small support staff. Many of these tasks were performed by me when I held the position of general manager, operations manager and engineering technician over the past 18 years. Since my retirement, I have been available to respond to several questions and situations that have been presented to me. This proposal is being offered to continue this support and follow through with annual technical details as requested as we move forward with the difficult tasks that confront the District staff.

I will be happy to discuss this proposal in more detail at your earliest convenience.

Thank you.

Sincerely,

Jerry Rolwing
Technical Director

Attached Scope of Work Detail

Possible Tasks for 111 Water Services (Jerry Rolwing Consulting):		
October 12, 2016		
	Estimated Hours	Total Amount
Turnkey Projects (@\$135/hr.)		
Semi-annual monitoring of CASGEM wells	8	\$ 1,080.00
Report on CASGEM monitoring	4	\$ 540.00
Ensure compliance with CASGEM	6	\$ 810.00
On-line submittal of CASGEM monitoring with Dept. of Water Resources	4	\$ 540.00
Semi-annual inspection of Water Credit Following compliance	8	\$ 1,080.00
Report on Water Credit Compliance	4	\$ 540.00
Sub-Total	34	\$4,590
Details:		
On-site work would take place twice a year, Oct./Nov. and Mar./Apr.		
Hourly rate calculated at \$135/hour		
Possible Assistance Projects (@\$95/hr.)		
Provide support to General Manager for additional projects as needed (est. 8 hours/mo.)	96	\$ 9,120.00
Basin-wide water quality monitoring program	60	\$ 5,700.00
Assist District staff with production well water level monitoring program	20	\$ 1,900.00
Assist District staff with UCI air quality monitoring program	20	\$ 1,900.00
Presentation of water level/water quality on-going programs at Annual Town Hall Meeting	8	\$ 760.00
Sub-Total	204	\$19,380
Details:		
On-site meetings/field work subject to availability		
Hourly rate for support at \$95/hour		
Expenses incurred will be itemized and submitted on a monthly basis		
Approved mileage will be calculated at the present IRS rate		

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.E

October 11, 2016

TO: Board of Directors, Borrego Water District

FROM: Geoff Poole, General Manager

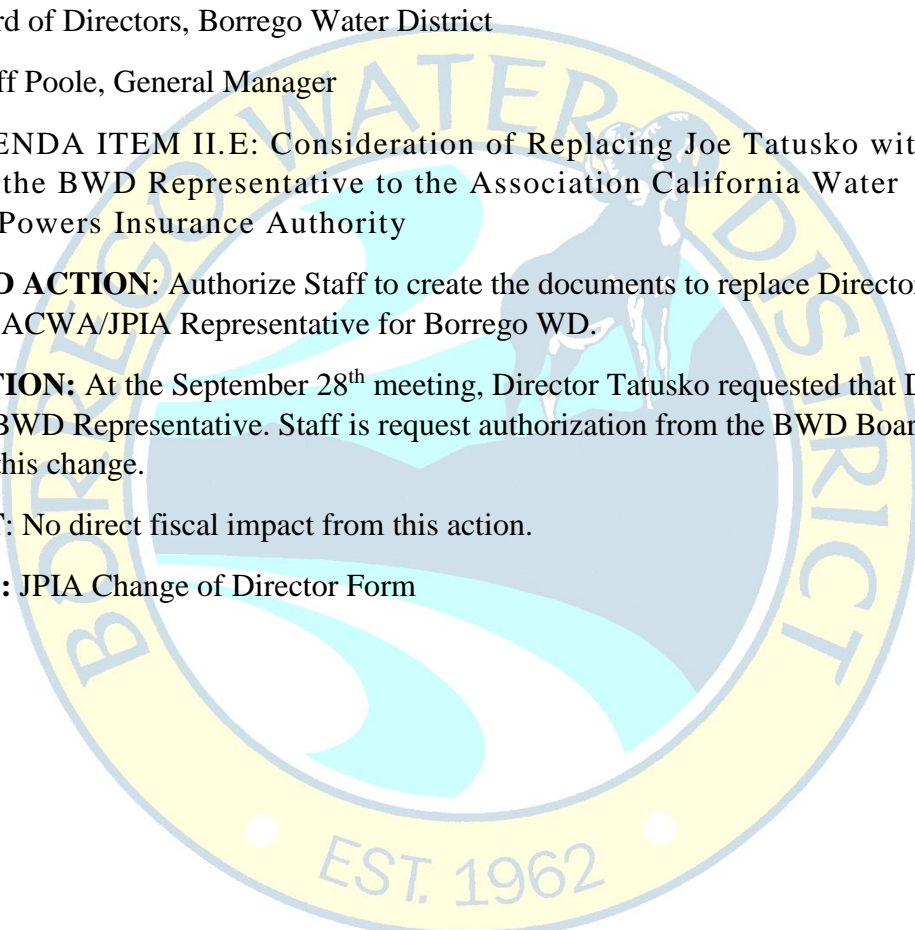
SUBJECT: AGENDA ITEM II.E: Consideration of Replacing Joe Tatusko with Harry Ehrlich as the BWD Representative to the Association California Water Agencies / Joint Powers Insurance Authority

RECOMMENDED ACTION: Authorize Staff to create the documents to replace Director Tatusko with Director Ehrlich as ACWA/JPIA Representative for Borrego WD.

ITEM DESCRIPTION: At the September 28th meeting, Director Tatusko requested that Director Ehrlich replace him as the BWD Representative. Staff is request authorization from the BWD Board to begin the process of making this change.

FISCAL IMPACT: No direct fiscal impact from this action.

ATTACHMENTS: JPIA Change of Director Form



**JPIA DIRECTOR or ALTERNATE DIRECTOR
CHANGE NOTIFICATION**

Member Name: _____

Date Change Effective: _____

New JPIA Director: _____

Address: _____

Phone: _____

Previous JPIA Director: _____

Please remember to have the new JPIA Director file an Assuming Office Statement and the previous Director file a Leaving Office Statement using the FPPC Form 700. Please contact Chimene Italia at (800) 535-7899, Ext. 3168 or (916) 786-5742, Ext. 3168 if you need the Form 700 or have any questions.

New JPIA Alternate Director: _____

Address: _____

Phone: _____

Is the new Alternate Director also the General Manager? _____

Does the new Alternate replace an existing Alternate? _____

Name of Alternate replaced or deleted: _____

Signed: _____

Name

Dated: _____

Title

Please fax the completed change notification to Chimene Italia at (916) 774-7040 or mail to the JPIA at P.O. Box 619082, Roseville, CA 95661.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.F

October 11, 2016

TO: Board of Directors, Borrego Water District
FROM: Geoff Poole, General Manager
SUBJECT: AGENDA ITEM II.F: Consideration of New Ad-Hoc Committee Structure – L. Brecht

RECOMMENDED ACTION: Approve New Committee Structure

ITEM DESCRIPTION: At the September 28th Board Meeting, Director Brecht shared his ideas regarding a new BWD Board Committee Structure

Old Structure

1. Audit (Brecht/Tatusko)
2. Due-Diligence (Brecht/Tatusko)
3. Strategic Planning (Hart/Brecht)
4. Executive (Hart/Ehrlich)
5. Operations and Maintenance (Delahay/Tatusko)
6. Parks (Hart/Tatusko)
7. CFD (Ehrlich/Delahay)
8. Conservation
9. Personnel (Hart/Tatusko)
10. GSP - BWD Representative (Delahay/Ehrlich)

New Structure

1. **Finance:** (Brecht/Tatusko) – Responsible for Financial Planning, Due Diligence, Audit Review, Refinancing CFD Bonds
2. **Executive:** (Hart/Brecht) – SGMA, Strategic Planning, Executive Issues
3. **Operations and Infrastructure:** (Delahay/Tatusko) – CIP, Operations Planning, Grant Applications, and Related Budget Issues
4. **Personnel:** Hart/Ehrlich – Personnel/Employee related issues
5. **Public Outreach:** (Delahay/Ehrlich) – GSP BWD Representative Nomination, liaison with community parks, public education etc...

Fiscal Impact: No direct Fiscal Impact from this action.

Attachments: None

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - II.G

October 11, 2016

TO: Board of Directors, Borrego Water District

FROM: Geoff Poole, General Manager

SUBJECT: AGENDA ITEM II.G: Consideration of joining California Special Districts Association – J, Tatusko

RECOMMENDED ACTION: Receive Report from Director Tatusko and Approve Membership in CSDA

ITEM DESCRIPTION: At the September 28th Board Meeting, Director Tatusko mentioned an article he found on the Helix Water District and their recent recognition by CSDA as a “Transparent Agency” with full public participation and access to information. Director Tatusko mentioned interest in BWD incorporating the Transparent Agency principles into its activities. In doing his research on the topic, Director Tatusko did some research into CSDA and would like to discuss joining the organization with the full BWD Board. The Borrego Fire Department is already a member

FISCAL IMPACT: Membership Fees, TBD

ATTACHMENTS: CSDA Related Information

San Diego Chapter of the CSDA

Home (<http://www.csda.net/>) » About CSDA (<http://www.csda.net/about-csda/>) » Chapters (<http://www.csda.net/about-csda/csda-chapters/>) » **San Diego Chapter of the CSDA**

We provide the most relevant government information crucial to all California districts. We strive to make districts stronger together.



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Treasurer

EAST COUNTY

8/27/16

Helix Water Dist. noted for good governance

The Helix Water District has been recognized for its efforts to promote openness and good governance.

Helix earned a regional "District Transparency Certificate of Excellence" earlier this month from the San Diego Chapter of California Special Districts Association, which represents more than 40 special districts in the county.

Special districts are independent public agencies that deliver to communities services such as water, fire and health care.

To be eligible for the award, a special district must engage the public and meet eight transparency requirements. Those include ethics training for board members, conducting open public meetings, and filing timely financial transactions and compensation reports to the state controller.

Helix also fulfilled 15 website requirements, including providing easily accessible board agendas, minutes, district budget and its most recent financial audit.

Helix provides water for La Mesa, El Cajon, Lemon Grove, Spring Valley and parts of Santee, Lakeside and other East County areas. Helix serves more than 270,000 people through more than 56,000 metered accounts.

Programs



Promoting good governance.

The Special District Leadership Foundation (SDLF) is an independent, non-profit organization formed to promote good governance and best practices among California's special districts through certification, accreditation and other recognition programs. The SDLF and its activities are supported by the California Special Districts Association and the Special District Risk Management Authority.



Special District Administrator Certification

This is a voluntary designation sought by individuals who strive to be the best. Administrators with various academic and professional backgrounds, as well as from all sizes of special districts, can be candidates for the program. Guided by the SDLF Board, Certification Advisory Committee, and under direction by a professional examination development firm, this certification will give successful candidates recognition unmatched by any other program. This certification helps document and recognize a candidate's knowledge, skills and capabilities as a special district administrator.



Recognition in Special District Governance

Designed to honor special district board members and trustees, and is comprised of two distinct parts: the completion of the Special District Leadership Academy and 10 hours of continuing education.

The Special District Leadership Academy is comprised of four courses unique in that the curriculum has been created by special districts and agreed upon as what governing officials of special districts should know. SDLF has endorsed the Academy as the core special district governance training in California.



District Transparency Certificate of Excellence

This program was created in an effort to promote transparency in the operations and governance of special districts to the public and to provide special districts with an opportunity to showcase their efforts in transparency. There are no fees for this certificate and recognition is two years.

Three main subject areas: Basic Transparency Requirements; Website Requirements; and Outreach Requirements - These are only a sampling of all the requirements needed to complete the transparency certificate.



Districts of Distinction Accreditation

In a time where proper fiscal management and responsibility in public agencies is paramount and the task of governing these agencies has become even more complex, regulated and costly, it has become increasingly important to demonstrate to constituents that districts have sound fiscal management policies and practices in place among other areas of importance in district operations.

This accreditation is designed as a way for districts to highlight their prudent fiscal practices along with other areas important to effectively operate and govern a special district.

BORREGO WATER DISTRICT
BOARD OF DIRECTORS MEETING –OCTOBER 18, 2016
AGENDA BILL - III

October 11, 2016

TO: Board of Directors, Borrego Water District
FROM: Geoff Poole, General Manager
SUBJECT: AGENDA ITEM III: Informational Items Summary

Following is a brief description of the Informational Items listed on the Agenda:

A. Land Use Under SGMA – L. Brecht:

Director Brecht wanted to share this information with the Board. Attachment (**pg. 77**)

B. GSP Facilitator Update – G. Poole

BWD GSP Core Team (Hart, Brecht and Poole) met with the Facilitator assigned to Borrego by California Department of Water Resources thru Center for Collaborative Policy (CCP), Marina Piscolish immediately after the Board Meeting on Sept 28th. After a one hour meeting, it was clear to th Core Team that Marina has the skills, experience and interest to perform the function of Facilitator during the upcoming GSP Process for Borrego. Marina is working on a new Scope of Work (SOW) for their services and it will be shared with the Board as soon as possible, hopefully the October 26th meeting. BWD has a previously approved DWR grant of \$56,500 for Facilitation services and additional funds are available and can be requested if needed once the new SOW is done and agreed upon by BWD. Attachment - None

C. Geotourism Workforce Development Plan – L. Brecht

Director Brecht wanted to share this information with the Board. Attachment (**pg. 78-80**)

D. California’s Water Summary: Public Policy Institute – L. Brecht

Director Brecht wanted to share this information with the Board. Attachment (**pg. 81-83**)

E. SDGE Micro Grid – L. Brecht and G. Poole

Director Brecht has requested BWD Staff to return at a future Board Meeting with an update and schedule a visit from a SDG&E Representative. Staff intends to do so in November based on SDG&E availability.
Attachment - None

F. Neighborhood Reinvestment Program (NRP) of San Diego County Ideas for a grant application – Director - J. Tatusko

Director Tatusko wanted to discuss this item with the Board. Attachment **(pg. 84)**

G. Water Rate Survey – G Poole

Director Delahay created the attached Water Rate Survey he wanted to share with the Board. Attachment **(pg. 85)**

H. Borrego Wastewater Treatment Plant Solar Update – J Tatusko

Director Tatusko wanted to share information on this item with the Board. Attachment **(pg. 86-88)**

I. Borrego Springs Resort and Club Circle Update – B Hart and G Poole

Director Hart and GM Poole met with the new owners of Borrego Springs Resort and discussed the history around the Club Circle Golf Course and the timeline for developing a long term resolution for the future. Staff will continue the discussions with BSR and return in October or November with an update and recommended actions. Attachment - None

J. Update on Rams Hill Remaining Water Purchases Requirements – G. Poole

Rams Hill is required to purchase 1,000 acre feet of water from BWD and the remaining balance is currently 408.58 acre feet. Attachment - None

K. Attendance at Fall AQWA Conference, Anaheim CA. – November 2016 – G. Poole

GM Poole intends to attend the Fall ACWA Conference in Anaheim and is wondering if any of the Directors wish to attend too. Attachment - None

L. Filing of Handouts from September 28th Board Meeting:

As requested by Director Brecht, copies of the documents distributed at September 28th BWD Board Meeting are shown below:

1. Presentation on GSP MOU – G. Poole *Electronic copy available*
2. 2016-17 Capital Improvement Plan – D. Dale *Electronic copy available*

**LAND USE PLANNING & THE PURPOSE OF ZONING
UNDER THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT**

A requirement of the Sustainable Groundwater Management Act (SGMA) is that land use planning and zoning must now support the objectives of SGMA for the sustainable management of the critically overdrafted¹ Borrego Valley Groundwater Basin (Borrego Basin) by 2040.

Land Use Planning. Federal, state, and local governments, to varying degrees, regulate growth and development through statutory law. Land-use controls have been a part of Western civilization since the Roman Empire in 450 BCE promulgated regulations concerning setback lines of buildings from boundaries and for distances between trees and boundaries. Regulations on the use of land existed in colonial America. New York City adopted the first comprehensive zoning ordinance in 1916. By the 1930s, the development of master plans and zoning regulations became an accepted part of life in the US.

The current San Diego County Master Plan for Borrego Valley's future growth is not consistent with SGMA objectives for the Borrego Basin.

Q: What are the physical constraints under SGMA that the Master Plan must now address for future growth in the Borrego Valley?

Zoning. Zoning is the regulation and restriction of real property by a local government. It is the most common form of land-use regulation, as municipalities rely on it to control and direct the development of property within their borders, according to present and potential uses of the property. A municipality's power to enact zoning regulations is derived from the state in an exercise of its police power. Police power is the inherent power of the government to act for the welfare of those within its jurisdiction.

Zoning laws are intended to promote the health, safety, welfare, convenience, morals, and prosperity of the community at large, and are meant to enhance the General Welfare rather than to improve the economic interests of any particular property owner. They are designed to preserve the character of the community by guiding its future growth.²

Current zoning for the Borrego Valley by San Diego County may not be consistent with SGMA objectives for the Borrego Basin.

Q: What changes in present zoning must be adopted for the Borrego Basin to be compliant with SGMA objective by no later than 2040? How can this be accomplished?

¹ California Department of Water Resources (DWR) designation for the Borrego Basin (2016).

² Basin descriptions of land use planning and zoning from <http://legal-dictionary.thefreedictionary.com/Land-Use+Control>.



USAID
FROM THE AMERICAN PEOPLE



Guides and Toolkits Series

Guide to Assessing and Designing Tourism Workforce Development Programs

With a special focus on job and career opportunities for youth



Educational Quality
Improvement Program 3

Engaging and Preparing
Youth for Work, Civil Society,
and Family Life

Overview of Workforce Development in the Tourism Sector

Despite the recent global economic downturn, the long-term outlook for tourism remains promising, with tourism arrivals expected to grow from 924 million in 2008 to 1.6 billion by 2020 (see chart below). In response to the global economic crisis, the World Tourism Organization (UNWTO), a specialized agency of the United Nations, has been placing more stress on the potential for tourism to be a primary vehicle for job creation and economic regeneration as well as the transformation to a green economy “as a sector that can deliver on smart growth, intelligent infrastructure and clean energy jobs” (UNWTO, 2009, p. 16). UNWTO (2009) gave world leaders the following suggestion:

“Actions are needed to boost trade promotion, simplify regulation, build infrastructure and rationalize taxes, which in turn incite companies to invest, innovate and stimulate demand. This kind of public-private sector collaboration should be strongly advanced within and between all states – it will help build resilience and recovery across economies” (p. 16).

Figure 1: Projected Tourism Growth



Source: World Tourism Organization, 2009.

Tourism is an important industry for developing countries. Emerging economies are forecast to be engines of growth, increasing both international and domestic travel. In addition, according to Biederman et al. (2008), revenues generated from tourism can help to offset declining revenues from other domestic sectors. For instance, in Belize, foreign exchange earnings generated by tourism cushioned dropping export prices of bananas and sugar cane in 2004 and a per capita GDP of the country was rated above the average for the rest of Latin America and Central America (Biederman et al., 2008).

Without tourism in many countries, the innumerable suppliers of goods and services to the industry would not be able to sustain their businesses. Tourism is a labor-intensive industry supporting a wide variety of jobs in many different sectors. Baum and Szivas (2008) argue that this ability to create employment opportunities and hence contribute to the overall economic and social development of a nation is a key motive behind government support for tourism in any country, regardless of whether the country runs a fully diversified developed economy or is a less developed country.

What is worthy of special mention in terms of employment creation is the tourism industry’s ability to respond to vulnerable populations in developing countries. While the quality of some of the jobs may come into question, tourism provides opportunities for youth, women, and the less advantaged groups in society (Cooper & Hall, 2008). For such people, tourism is a fast entry vehicle into the workforce, both in urban and rural communities, directly, or through its strong multiplier effect on related services, manufacturing, or agriculture (UNWTO, 2009).

Water supply management must adapt to a warmer, more variable climate

California's mountain snowpack has historically provided critical seasonal storage for meeting summer irrigation needs. A smaller spring snowpack—along with possible increases in California's already high climate variability—will stress supply. Meanwhile, rising temperatures are likely to raise demand for irrigation water and to increase the volume of water natural landscapes use.

- **There are no easy substitutes for lost snowpack.**
New surface storage can increase flexibility, but it is costly and unlikely to provide abundant new supplies. Given its high costs, seawater desalinization is also unlikely to yield large new supplies, though it could be a useful part of some urban water portfolios.
- **Adaptation will require changes in storage management.**
To address snowpack loss and high climate variability, managers will need to improve coordination of water storage in surface reservoirs and groundwater basins. “Conjunctive use”—the movement of some water from reservoirs into groundwater basins for use during dry periods—will be especially valuable. Making conveyance across the Delta more reliable will allow more storage for drought in the southern half of the state.
- **Urban water managers can adapt in many ways.**
Options include expanding connections between urban systems with different supply sources, trading water with other cities and farmers, and using more treated wastewater and captured stormwater. Urban areas can also reduce water demand through pricing and other incentives, such as rebates for adopting water-saving technology or replacing lawns with less-thirsty landscaping.
- **California's agricultural sector can also adapt ...**
Farmers will continue shifting to higher revenue crops and will rely increasingly on water markets to meet irrigation demands. Some land will probably have to come out of production—particularly if average precipitation falls. Even with these changes, farm revenues can continue to rise.
- **... but adaptation will be more difficult without better groundwater management.**
Farms—particularly in the Central Valley—will become increasingly reliant on groundwater to manage droughts. Excessive groundwater pumping today will make it harder to manage aquifers in the future. Rapid implementation of the 2014 Sustainable Groundwater Management Act (SGMA), the first statewide effort to manage groundwater, can reduce the impacts of climate change on farms.

Managing water to preserve ecosystems will become more difficult

Rising temperatures and changing runoff patterns are likely to stress many native riverine and wetland species whose populations are already depleted by habitat loss, water operations, and other factors.

- **Approaches based on entire ecosystems will be needed.**
Past approaches to managing environmental water have focused on improving habitats for one species at a time, typically once a species gets listed under state or federal endangered species acts. These efforts will need to give way to more flexible approaches that focus on ecosystem health.
- **Competition for water will probably increase.**
Difficult trade-offs are likely, for instance, when keeping cold water in reservoirs to protect downstream salmon habitat means less water for farms and cities. Reusing treated wastewater—a growing strategy for stretching supplies—can have the unintended consequence of reducing water available to the environment.
- **State and federal policies will need to address trade-offs.**
State policy—along with federal and state environmental laws—may need to be modified to manage difficult trade-offs both *between* human and environmental water uses and *among* environmental uses. For example, in warm, dry years there are trade-offs between maintaining cold water in reservoirs for salmon late in summer and increasing outflows earlier in the year for native fish in the Delta.

PPIC WATER POLICY CENTER

CALIFORNIA'S WATER

- CLIMATE CHANGE AND WATER
- THE COLORADO RIVER
- ENERGY AND WATER
- MANAGING DROUGHTS
- PAYING FOR WATER
- PREPARING FOR FLOODS
- PROTECTING HEADWATERS
- THE SACRAMENTO–SAN JOAQUIN DELTA
- STORING WATER
- WATER FOR CITIES
- WATER FOR THE ENVIRONMENT
- WATER FOR FARMS



PPIC

PUBLIC POLICY
INSTITUTE OF CALIFORNIA

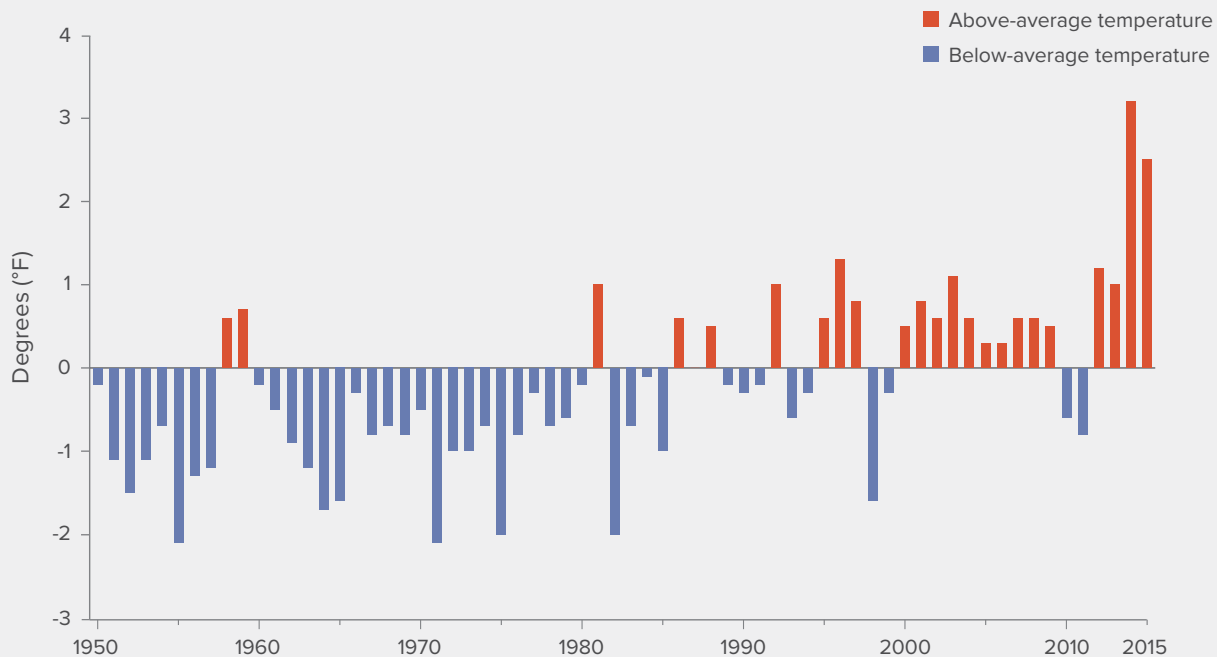
Climate change will affect California water management in many ways

California’s climate is highly variable, with frequent droughts and floods. Climate models predict significant changes: warmer temperatures and more variable precipitation, with short, concentrated wet periods and more frequent and intense droughts.

Warming is already a reality for California. Since the early 1980s, average temperatures have been significantly higher than they were during the previous 50 years. The year 2014 was the warmest on record, and 2015 was the second warmest. Warming has complex and interrelated effects: it reduces the share of precipitation that falls as snow, causes earlier snowpack melting with higher winter runoff and winter floods, raises water temperatures, and amplifies the severity of droughts. Meanwhile, the sea level has been rising, which increases pressure on coastal flood defenses. Sea level rise and larger freshwater floods threaten fragile levees in the Sacramento–San Joaquin Delta, an important hub of the state’s water supply.

California has been a national leader in addressing greenhouse gas emissions that contribute to climate change. However, the state is only in the early stages of developing water policies that help it adapt to a changing climate in areas such as supply, flooding, and ecosystem management. California’s water management systems were designed for the conditions of the past century. Reconfiguring them to respond to climate change—against the background of growing population and rising demand for healthy ecosystems—is a major challenge. Meeting this challenge will require a concerted public- and private-sector effort that involves all levels of government.

CALIFORNIA IS GETTING WARMER



SOURCE: National Oceanic and Atmospheric Administration.

NOTE: The figure reports degrees above or below the average statewide temperature for 1981–2000 (58.3° F).

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- **State and federal policies will need to address trade-offs.**
State policy—along with federal and state environmental laws—may need to be modified to manage difficult trade-offs both *between* human and environmental water uses and *among* environmental uses. For example, in warm, dry years there are trade-offs between maintaining cold water in reservoirs for salmon late in summer and increasing outflows earlier in the year for native fish in the Delta.

THE BORREGO WATER DISTRICT (BWD) IS LOOKING FOR A PROJECT TO SUBMIT TO THE SAN DIEGO COUNTY FOR A GRANT. PLEASE NOTIFY THE BWD OFFICE WITH YOUR CONTACT INFORMATION AND PROJECT DESCRIPTION.



Auditor and Controller

Neighborhood Reinvestment Program

The Neighborhood Reinvestment Program provides grant funds to County departments, public agencies, and to non-profit community organizations for one-time community, social, environmental, educational, cultural or recreational needs.

To be eligible, non-profit entities must provide services in one or more of the following areas; educational/recreational projects for children and/or adults; local business and tourism promotional activities; arts and cultural programs; environmental awareness programs or projects, including maintaining and increasing open space holdings; public safety programs including fire protection projects; or health and social service initiatives and programs. Public agencies may apply to fund programs and projects that benefit the community and enhance the region's quality of life.

Grant funds shall not be used for any purposes prohibited by laws governing the use of public funds, including but not limited to, religious, political campaigning, or purely private purposes or activities.

Grant awards are made throughout the fiscal year and there is no deadline for submitting an application.

A higher priority shall be given to requests for capital projects and/or one time expenses.

To apply for Neighborhood Reinvestment Program funding from the County, an applicant must submit a completed application form and cover letter to one or more of the five Supervisors.

PLEASE NOTE: Due to recent redistricting, your County Board of Supervisors elected official may have changed. Follow the instructions at the following link http://www2.sdcountry.ca.gov/rov/Eng/Edistrict_query.asp to ensure that you are submitting your application to the correct Supervisorial District office

Read Board Policy B-72, Neighborhood Reinvestment Program, for more details.

 **Subscribe online to receive information on Neighborhood Reinvestment Program via email.**



Make sure you have the latest version of Adobe Reader installed by going to <http://get.adobe.com/reader/>.

Neighborhood Reinvestment Program

Neighborhood Reinvestment Program Application

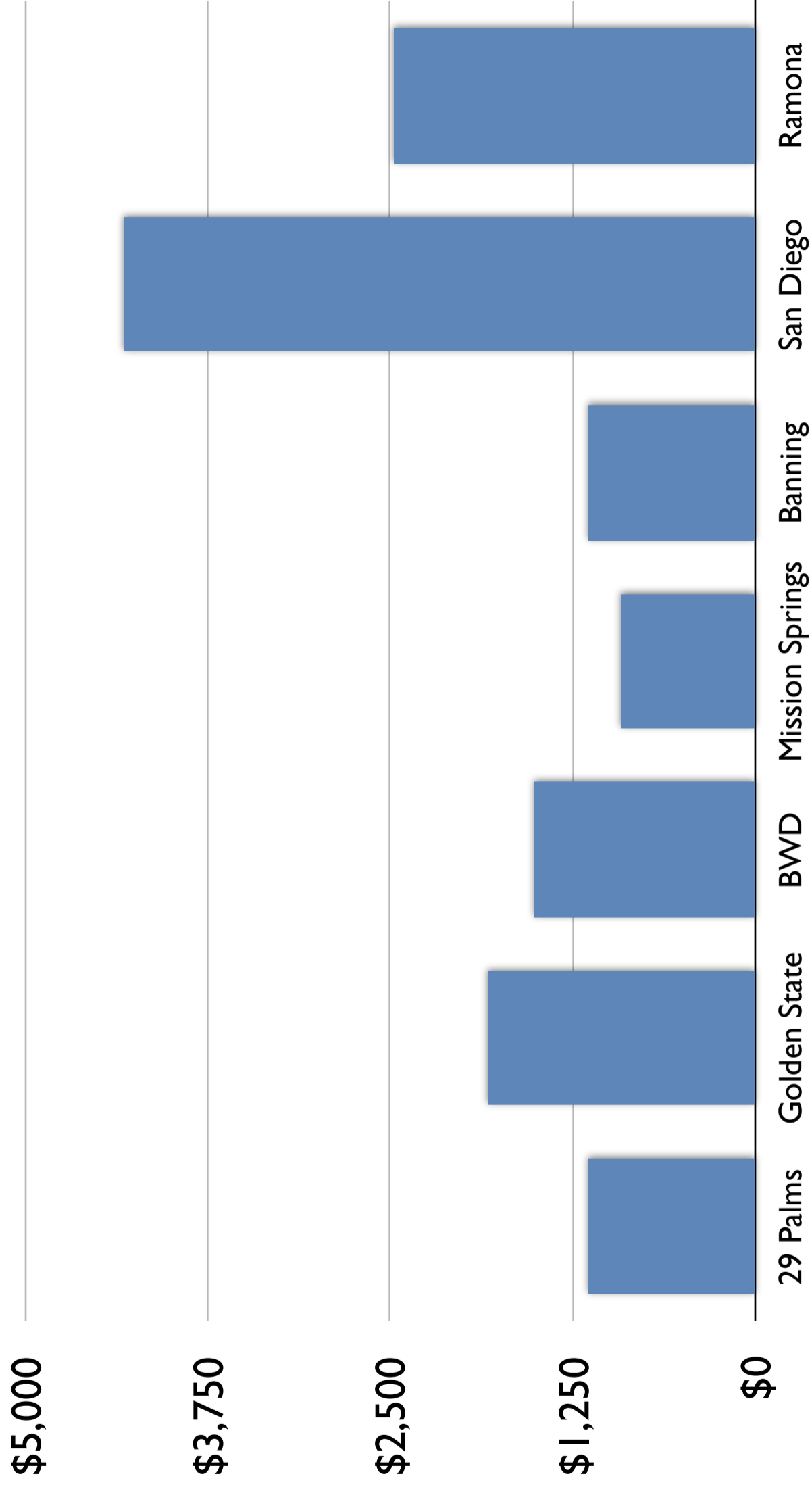
Neighborhood Reinvestment Program Application Instructions

Documentation of Grant Expenditures

- **Neighborhood Reinvestment Program Documentation of Grant Expenditures Instructions**
- **Grant Expenditure Documentation Instructional Guide**
- **Neighborhood Reinvestment Program Post Award Guide**

Neighborhood Reinvestment Program Awards:

■ Cost for 1 AF of water purchased (3/4" meter)



BORREGO WATER DISTRICT (BWD) WWTP 9 MONTH PERFORMANCE REVIEW

(MINUS MONTHS 5 & 6 TO BE UPDATED)

ON MARCH 25, 2015 THE DISTRICT'S BOARD OF DIRECTORS approved the purchase of a turnkey 100 kWdc PV solar power system for the Waste Water Treatment Plant (WWTP) at a cost of \$256,630.00. The system went live in January of 2016. To date in 2016 dollars there is a monthly savings of \$1786.45 or a projected annual savings of \$21,437.40. BWD did submit an application for a California Solar Initiative (CSI) rebate. The estimated award value would be about \$55,000. In June we were first in line for the rebate. BWD has the action to follow up on the rebate status. Using the purchase amount of \$256,630 minus rebate of \$55,000 the payback period would be 9.4 years not including annual SDG&E rate increases. The Contractors that bid on the project estimated the pay back to be 6 years using a SDG&E annual rate increase. SDG&E rates were .068 for summer and .083 for winter months. In 2016 the rates not only included summer and winter rates but also included on peak, semi-peak and off peak at .082. In general BWD does not have on peak or semi-peak charges.

Prepared by Joe Tatusko

Statement Date	Due Date	Bill Days	Charges	Total Amount Due
9/19/2016	10/4/2016	30	\$131.47	\$131.47
8/18/2016	9/2/2016	29	\$96.91	\$96.91
7/22/2016	8/6/2016	28	\$186.76	\$186.76
4/21/2016	5/6/2016	32	\$21.87	\$21.87
3/22/2016	4/6/2016	29	\$21.87	\$21.87
2/22/2016	3/8/2016	30	\$21.87	\$21.87
1/26/2016	2/10/2016	33	\$263.60	\$263.60
12/21/2015	1/5/2016	30	\$1,842.38	\$1,842.38
11/19/2015	12/4/2015	32	\$1,943.86	\$1,943.86
10/20/2015	11/4/2015	29	\$1,954.01	\$1,954.01
9/21/2015	10/6/2015	30	\$2,208.61	\$2,208.61
8/20/2015	9/4/2015	29	\$1,954.01	\$1,954.01
7/22/2015	8/6/2015	32	\$2,208.61	\$2,208.61
6/22/2015	7/7/2015	30	\$1,909.06	\$387.78
5/21/2015	6/5/2015	32	\$1,830.82	\$3,352.10
4/21/2015	5/6/2015	29	\$1,521.28	\$1,521.28
3/23/2015	4/7/2015	29	\$1,854.50	\$1,854.50
2/20/2015	3/7/2015	30	\$1,689.58	\$1,689.58
1/21/2015	2/5/2015	33	\$1,928.30	\$1,928.30
12/19/2014	1/3/2015	30	\$1,761.51	\$1,761.51
11/19/2014	12/4/2014	32	\$2,149.89	\$2,149.89
10/20/2014	11/4/2014	29	\$2,117.60	\$2,117.60
9/19/2014	10/4/2014	33	\$2,837.98	\$2,837.98

\$744.35
7 MONTHS = \$106.36

\$24,606.53
13 MONTHS = \$1,892.81

$\frac{\$1892.81}{\$106.36} = \$1786.45$ SAVINGS PER MONTH

\$21,437.40 SAVINGS PER YEAR

\$256,630.00 PV SOLAR COST
NOTE: AN APPLICATION WAS SUBMITTED FOR A CALIFORNIA SOLAR INITIATIVE REBATE OF APPROX. \$50,000 TO \$60,000. CSI STATEWIDE TRIGGER TRACKER

REDUCE BY \$55,000 REBATE (TBD)
 $\frac{\$261,630.00}{\$21,437.40} = 9.4$ YEARS PAY BACK PERIOD W/O SDG&E RATE INCREASES

* ALL BIDDERS ESTIMATED 6 YEAR PAY BACK PERIOD USING SDG&E RATE INCREASES EACH YEAR

Yield History

