

Borrego Water District Board of Directors
SPECIAL MEETING AGENDA
July 19, 2011, 9:00 AM
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. Workshop regarding the Anza Borrego Desert Integrated Regional Water Management (ABD-IRWM) planning process with guest Dale Schafer from Center for Collaborative Policy California State University, Sacramento and Ali Taghavi from RMC/Wrime Consultants.

- introduction of Dale Schafer
- purpose of Department of Water Resources (DWR) IRWM program
- brief history of ABD-IRWM planning process to today
- ABD-IRWM planning work that is yet to be done and why it is important for the region, the Valley, and the District and its ratepayers
- convincing stakeholders to participate in planning process and to be on board of plan implementation
- governance and decision making process
- paying for planning process: applying for planning grant; applying for plan implementation grant
- developing plan as part of public process
- updating the District's 2002 Groundwater Management Plan (GMP) making certain all plans are aligned and have compatible objectives
- need for some technical assistance in order to successfully compete for DWR money
- some planning objectives beginning in September 2011
- some near-term decisions for the BWD Board going forward

- B. Discussion and possible action of Dynamic Engineering proposal for STAG grant tasks A2 & C

III. CLOSING PROCEDURE

Adjournment The next Regular Meeting of the Board of Directors is scheduled for July 27, 2011 at the Borrego Water District.



California State University, Sacramento Center for Collaborative Policy

Dale Schafer, Senior Mediator

Education

Master of Dispute Resolution,
Pepperdine University School of
Law, Strauss Institute for Dispute
Resolution, 1997

J.D., Pepperdine University School
Of Law, 1996

General Secondary Education
Teaching Credential, Spanish and
French, University of California,
Los Angeles,

B.A. with honors, University of
California, Los Angeles,

Honors and Awards

CALI Excellence for the Future
Award, "Social Psychology of
Conflict," Pepperdine University
School Of Law, Strauss Institute For
Dispute Resolution, Spring 1997

CALI Excellence for the Future
Award, "Communication and
Conflict," Pepperdine University
School O/If Law, Strauss Institute
For Dispute Resolution, Fall 1996

Winner, London Moot Court
Competition

Active Registration

- State Bar Certification
- California, No. 189766
- Professional Organizations
- American Bar Association,
Dispute Resolution Section
- California Bar Association,
Environmental Law Section
- Los Angeles County Bar
Association, Environmental Law
Section
- Institute for Environmental
Conflict Resolution
- Association for Conflict
Resolution

Summary of Experience

Dale Schafer has served as a mediator/facilitator since completion of her Juris Doctorate at Pepperdine University School of Law and Master's Degree in Dispute Resolution from the Strauss Institute at Pepperdine University School of Law. She has concentrated on environmental and public policy cases. Examples of her recent projects are provided below. Prior to joining the Center for Collaborative Policy, Ms. Schafer was employed by the Mediation Institute in Los Angeles, CA.

Select Projects

Conjunctive Water Management Program/ Integrated Regional Water Management (IRWMP) Program. Client - California Department of Water Resources. Project manager, 2006 – Present; facilitator, 2001 - Present. Role – Project manager and Facilitator.

As Project Manager, Ms. Schafer coordinates facilitation efforts between CCP and DWR on several conjunctive management/IRWMP programs throughout the State. The goal of the conjunctive water management program is to assist local agencies with improving regional water supply reliability by increasing the coordinated use of surface water and groundwater resources. Through the IRWMP program, DWR assists agencies and local stakeholder with the planning and development of an IRWMP. Ms. Schafer provides day to day strategic consultation and coordination among DWR project managers, CCP facilitators, administrators and staff.

Since 2001, Ms. Schafer has facilitated a cooperative effort in the Hemet/San Jacinto Water Management Area among water districts, cities, private pumpers and the Soboba Band of Lisueno Indians. The Group has completed over 20 agreements including a Water Management Plan, an IRWMP, a settlement agreement with the Soboba Band of Lisueno Indians, and has drafted a Stipulated Judgment. Ms. Schafer has also facilitated cooperative efforts in the Coachella Valley and other in Riverside County. She is currently facilitating an IRWMP effort in the Imperial Valley.

FloodSafe Initiative Project Team. Client - Department of Water Resources. Completion Date - April 2007. Role - Facilitator. Ms. Schafer facilitated workshops throughout California to provide an overview of the FloodSafe Initiative goals, guiding principles, and implementation vision as well as information on near-term bond funding availability

Mitigation and Emergency Levee repairs to Critical Erosion sites. Client - Department of Water Resources. Completion date - February 2008. Facilitator for an assessment about mitigation work related to Emergency Levee Repairs to critical erosion sites conducted under AB 142. Ms. Schafer conducted interviews with environmental stakeholders to gain their opinion and perspective to ensure future efforts would utilize experiences gained. Facilitated meetings related to findings on internal, interagency and stakeholder issues, Interagency meetings including the Department of Fish and Game, U.S. Fish and Wildlife Service, National Oceanic & Atmospheric Administration, U.S. Army Corps of Engineers; Ms. Schafer also facilitated a follow-up workshop with non-governmental organizations.

Pathway 2007. Clients - Tahoe Regional Planning Agency, U.S. Forest Service, and environmental regulators from California and Nevada. Completion - 2006. Facilitated the Pathway 2007 Forum, which consisted of 43 stakeholder groups including government agencies, businesses, recreationists, and environmentalists. The goal of the project was to collaboratively coordinate and resolve resource management issues and update long-range management plans.

Desert Tortoise Recovery Planning Effort. Client: US Fish & Wildlife Service | Location: Mojave Desert, including Nevada, Utah, California. Completion – 2006.

With the objective of developing a scientifically credible recovery plan for the desert tortoise with realistic prospects for implementation and success, Ms. Schafer participated in an extensive stakeholder assessment process to determine the feasibility of a collaborative approach to recovery planning using the structure of regional working groups. The assessment process, which included over 100 interviews with key stakeholders, helped identify the challenges that needed to be addressed in designing and conducting an appropriate collaborative planning process.

Harbor Porpoise Take Reduction Teams. Mid Atlantic and Gulf of Maine. 2000. Facilitator. The goal of the Harbor Porpoise Take Reduction Teams was to reduce mortality and serious injury to harbor porpoises to a near-zero rate within 5 years. The National Marine Fisheries Service (NMFS) held a 3-day meeting of each Harbor Porpoise Take Reduction Team in November and December 2000. Team members included government agencies (NMFS, US Fish and Wildlife Service), environmental representatives (Humane Society), state agencies, fishermen, and marine biologists and scientists. Ms. Schafer and Alana Knaster, President, Mediation Institute facilitated the meetings and compiled the meeting notes and team recommendations.

EPA Consultative Process on Federal Source Pollution Reduction. U.S. Environmental Protection Agency (EPA). A process convened by the EPA to develop strategies for further reduction of air emissions in the South Coast Air Basin. Ms. Schafer facilitated meetings concerning harbor related emissions. Parties included: EPA, U.S. Navy, Ports of Long Beach and Los Angeles, Southern CA Shipping Association, and CA Air Resources Board.

1P080035

TASK ORDER NO: 7- 11 Borrego IRWMP
Request for Services under DWR CONTRACT NO: 4600007671
DATE: April 12, 2011

DESCRIPTION OF TASK:

The California State University, Sacramento, Center for Collaborative Policy (CCP) will conduct an assessment to determine the feasibility of providing facilitation services in support of the development of a Borrego IRWMP. If it is determined that facilitation services to support the development of the Borrego IRWMP are merited, CCP will recommend up to 6 facilitated stakeholder meetings and stakeholder outreach as necessary. All CCP work activities funded under this Task Order No. 7-11 shall be completed by **June 30, 2011**, unless amended.

Through the Department of Water Resources (DWR), Division of Integrated Regional Water Management, Regional Planning Branch, DWR will fund **\$14,222.50** for Phase 1 and, if recommended, **\$34,005.00** for Phase 2 for the attached budget and Scope of Work. The total value of this Task Order is **\$48,227.50**.

The date when this Task Order is fully executed represents the start date for work.

I.SCOPE OF WORK:

Phase 1

A. Description of Services

1) CCP shall draft interview questions; conduct an assessment to determine the feasibility of providing facilitation services in support of the development of a Borrego IRWMP; and compile the assessment results. CCP will conduct in person interviews of key stakeholders in the Borrego IRWMP process (up to 5 persons) which will require 3 days including travel and interviews.

B. Project Deliverables

- 1) CCP will provide assessment results to DWR and Borrego IRWMP stakeholders and plan next steps contingent upon the outcome of the assessment.
- 2) CCP will provide a written recommendation confirming the feasibility and merit of facilitation support if the results of the assessment are that facilitation services are feasible to support the development of a Borrego IRWMP. If the assessment results indicate that facilitation services are not feasible or appropriate for the group, CCP will provide conclusion in a written recommendation.
- 3) Progress reports will be provided monthly to the Regional Planning Branch of DWR.

Phase 2

A. Description of Services

- 1) CCP will provide facilitation services for up to 6 monthly stakeholder meetings.
- 2) CCP will conduct limited stakeholder outreach as necessary.

B. Project Deliverables

- 1) Development and adoption of a Memorandum of Understanding or some other formal agreement (for example, a charter and ground rules) that will enable the group to work together towards Integrated Regional Water Management.
- 2) Progress reports will be provided monthly to the Regional Planning Branch of DWR.

II. SCHEDULE:

All work under this Task Order shall be completed by ~~June 30, 2011~~, unless amended.

Amended

III. CONTRACTOR STAFFING:

All CCP staff shall be assigned to this program Task Order in accordance with the job classifications specified in Exhibit B Attachment 1 of the Master Contract 4600007671.

Senior Mediator / Facilitator – Dale Schafer

CCP facilitation and support staff: If Phase 2 is recommended, CCP will provide facilitation services with an appropriate lead or senior facilitator. (Senior facilitator rates are provided in the budget). Additional CCP staff support may be used to help complete specified services and deliverables identified in this contract.

IV. DETAILED COSTS:

Assumptions

Phase 1

Borrego Water District will provide meeting facilities for stakeholder interviews and any documents that may aid the facilitator in the interview process.

Phase 2

Borrego Water District will provide meeting facilities for stakeholder meetings and will provide staff to facilitate meeting logistics (contact lists, notices to stakeholders, documents for meetings, etc.)

CCP will provide written materials (agendas, meeting notes, etc.) electronically in a text-ready format.

In communication between CCP and DWR on project priorities, hours may be switched between tasks in the event that some tasks require more attention while others take less.

In communication between CCP and DWR on project priorities, funding can be switched between CCP Professional Service category and the Other Direct Costs budget category if necessary for programmatic enhancement.

Wages and Fees Phase 1	Hours	Hourly Rate FY 10-11	Total
Labor Category			
Senior Facilitator	75	\$ 171	\$12,825.00
Total Personnel Services			
Expenses			
Other Direct Costs			
Travel – Car rental, gas, meals	2 trips	\$650 per trip	\$1300.00
University Admin Fee (7.5% of Expenses)			\$97.50
			\$1,397.50
Total Expenses			
Total Cost			\$14,222.50

Wages and Fees Phase 2	Hours	Hourly Rate FY 10-11	Total
Labor Category			
Senior Facilitator	30 per meet X6	\$ 171	\$30,780
Total Personnel Services			\$30,780
Expenses			
Other Direct Costs			
Travel – Car rental, gas, meals	6 trips	\$500 per trip	\$3000.00
University Admin Fee (7.5% of Expenses)			\$225.00
			\$3,225.00
Total Expenses			
Total Cost			\$34,005.00

The total cost for Phase 1 and Phase 2 is: **\$48,227.50**

The budget provided is a not-to-exceed budget.

V. CONTACT PERSONS:

Contact persons for the term of this agreement are as follows. The contact persons can be changed upon written notice to the other party.

Contractor's Project Manager:

Dale Schafer
Senior Mediator/Facilitator
Center for Collaborative Policy
California State University, Sacramento
815 S Street, First Floor
Sacramento, California 95811
Office phone: (310) 457-3004
Office fax: (310) 589-2994
daleschafer@msn.com
Center phone: (916) 445-2079
Center fax: (916) 445-2087

DWR's Project Manager:

Mary Scruggs
Division of Integrated Regional Water
Management
Department of Water Resources
P.O. Box 942836
Sacramento, California 94236-0001
Phone: (916) 654-1324
Fax: (916) 651-9292
mscruggs@water.ca.gov

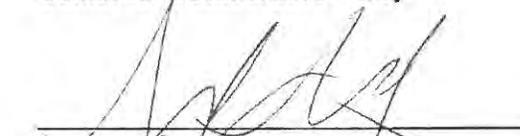
Contractor and DWR agree the services in this Task Order will be performed in accordance with the terms and conditions of DWR Agreement No. 4600007671.

STATE OF CALIFORNIA
Department of Water Resources

**CALIFORNIA STATE UNIVERSITY,
SACRAMENTO**
Center for Collaborative Policy


Kamyar Guivetchi, Chief
Statewide Integrated Water Management

Date 4/28/2011


Suzanne Swartz
Contract Administrator

Date 4/27/11

Title

Principal

Education

Ph.D., Civil Engineering, University of California, Davis

M.S., Civil Engineering, University of California, Davis

B.S., Civil Engineering, University of California, Berkeley

Registration

Professional Engineer, California, #50494

Professional Engineer, Arizona

Experience

Over 20 years

Summary

Dr. Ali Taghavi has over 20 years of experience in water resources planning, management and engineering. His expertise includes surface and groundwater, water quality, reservoirs operations, conveyance and distribution systems operations, water demand forecasting, wastewater systems evaluation, groundwater flow and contaminant transport modeling, agricultural land and water use analysis, and urban water conservation and management plans.

Ali has coordinated a wide range of hydrologic, hydrogeologic, and geologic investigations for groundwater management, conjunctive use and other water supply plans. He was involved in the planning and design of conjunctive use projects and other major basin planning efforts in the Sacramento Valley, San Joaquin Valley, and Southern California as well as on the Central Coast of California. He has provided hydrologic and water quality analysis in support of environmental reviews, and has managed and directed many water resource planning efforts through the complete project life cycle—data collection, basin characterization, model development, establishment of goals and objectives, feasibility studies, conceptualization and screening of alternatives, and support for environmental evaluations.

As a recognized expert in integrated hydrologic and water resources modeling and data management, Ali was a key member of the U.S. Bureau of Reclamation's development team for the Integrated Groundwater and Surface Water Model (IGSM). He co-authored the model code and has since applied the model to number of river basins in the U.S. He has developed an optimization model for waste treatment technology assessment, and a multi-reservoir simulation model for the San Joaquin River Basin in California.

Ali has provided training courses on water and groundwater management, and hydrologic and water resources systems analysis, to both private consultants and local, state, and federal agencies in the US and abroad. He has served as keynote speaker at several groundwater management conferences, and as an expert witness on several major legal cases.

Relevant Experience

Water Management Planning

Water Resources and Planning Technical Services Project, Division of Local Planning and Assistance (DPLA), California Department of Water Resources (DWR), Conjunctive Water Management Branch (CWMB)

Program Manager. Technical and engineering services to the DWR and its local partners in planning and management of water supply, conjunctive use, and integrated regional water management planning projects. Involved developing data management systems, conducting basin assessments, evaluating conjunctive use potential of many groundwater basins, and other services as requested. Ali managed a team of over 80 professionals from twelve companies, and was the primary point of contact on the contract with the DWR project manager.

Central Valley Project Improvement Act (CVPIA) Programmatic EIS Project

Program Manager. Ali successfully led the integration of the reservoir operation,

groundwater simulation, and agricultural economics models to analyze the impact of the CVPIA on the water and economic resources of the Central Valley and other parts of California.

Salinas Valley Water Project, Monterey County Water Resources Agency

Project Manager. Evaluation of a large number of alternative structural and non-structural alternatives to supply and/or transfer sufficient water to help stop the seawater intrusion, bring the basin into balance, and meet the future water needs for the agricultural and urban uses. The main analytical tool used for the analysis of alternatives was an Integrated Groundwater and Surface Water Model (IGSM) developed specifically for this project. Some of the facilities considered were trans-basin pipelines, major river diversion facilities, Ranney collectors, off-stream storage facilities, and distribution systems.

A cost allocation advisory committee was formed, and Ali was instrumental in presenting cost allocation processes and procedures to the decision makers. He led numerous public workshops, involving stakeholders and their technical and legal representatives to present methodologies and approaches on the analytical tools to be used, analysis of alternatives, and results of the project. The final project EIR was certified in 2001, which included an inflatable dam to divert water to a coastal distribution system, re-operation of the existing reservoirs, and nonstructural water conservation and nutrient management plans. Additional support is currently provided to develop the biological opinions and final consultations with NMFS.

Hemet-San Jacinto Groundwater Management Area, Basin Assessment Report (BAR) and Integrated Water Management Plan (IWMP), Department of Water Resources (in coordination with the Local Partners)

Project Director. The operational yield of the management area was estimated and, along with other analyses, used as the basis for determination of the combination and size of conjunctive use projects identified and considered for the BAR and IWMP. The analyses developed were used as part of technical information for development of the groundwater management principles among the Study Partners. The IWMP was completed in 2004. The results of the BAR and IWMP determined specific projects to pursue for the next phase of feasibility investigation, design, and potential construction.

Pajaro Valley Water Management Agency Basin Management, Pajaro Valley Water Management Agency

Project Manager and Engineer. Evaluation of overdraft and seawater intrusion in the Pajaro Valley for the Pajaro Valley Water Management Agency, which included:

- Major data collection efforts
- Hydrogeologic characterization
- Development, calibration and application of the Pajaro Valley Integrated Groundwater and Surface Water Model (PVIGSM)
- Demand forecasting
- Evaluation of issues and constraints
- Design of local and regional alternatives, including building an import pipeline to allow implementation of the PVWMA Central Valley Project contract
- Development of legal, technical, economic screening criteria
- Application of the criteria and IGSM to the analysis of alternatives
- Production of an EIR/EIS

This was a multi-year process that included initiation and resolution of numerous lawsuits; and extensive public workshops and multiple legislative and State Water Resources Control Board hearings related to potential adjudication of the basin. One element of the long-term solution is the transfer of other CVP water and coordinated operations with other up basin users.

Groundwater Management Plan, Imperial County, California

Project Manager. Development of a groundwater management plan for Imperial County, California. The study involved a comprehensive look at the surface and groundwater resources in the County, and the development of a conjunctive use model to assist in estimation of the safe yield and evaluation of the impact of lining the All American Canal. The work involved the application of an Integrated Groundwater and Surface Water Model (IGSM) to the Imperial Valley, development of a water quality model, and impact assessment of various

alternatives on the water resource conditions in the basin.

Riverside-Arlington Basin Groundwater Management Plan and Groundwater model Development, City of Riverside and Western Municipal Water District Joint Project

Project Director. This project involved the development of a comprehensive groundwater model to evaluate the state of the basin and to be used for evaluation of various water supply projects. The project also included development of two groundwater management plans, one for the Riverside and one for the Arlington basin. Ali was the Principal-In-Charge for this project.

Chowchilla Groundwater Basin Phase I Basin Assessment, California Department of Water Resources and Chowchilla Joint Powers Authority

Project Director. The Joint Powers Authority consists of Chowchilla Water District, Chowchilla Red Top Resource Conservation District, City of Chowchilla and others overlying the groundwater basin. This project involved basin assessment, characterization investigation, and implementation of activities identified in the groundwater management plan for the Chowchilla Groundwater Basin. Activities included describing physical characteristics at potential recharge sites and groundwater conditions near the site; documentation of regional setting; identification of surface water sources and delivery infrastructures; and discussion of program implementation issues. The work resulted in a generalized work plan for implementing in-lieu recharge and a generalized work plan for a pilot recharge project using direct methods of recharge.

Groundwater Monitoring and Data Collection Program (GMDCP), California Department of Water Resources and Calaveras County Water District.

Project Director. Development of a Groundwater Monitoring and Data Collection Program (GMDCP) and completion of the first regional analysis of the hydrogeologic setting of the Camanche/Valley Springs area for Calaveras County Water District, which was funded by an AB303 grant. The purpose of this project was:

- to develop and implement the GMDCP
- to gain a better understanding of the groundwater resources in western Calaveras County
- to provide CCWD with the tools necessary to meet future groundwater monitoring and data collection needs

The initial Groundwater Assessment and Data Collection effort was completed and the framework for program continuation was documented. The project included developing a sampling protocol for water level and water quality sampling; locating well locations using a Global Positioning System (GPS) survey; developing a Data Management System for the District to store and manage the water level and water quality data; sampling water levels and water quality in the wells; and presenting the results in the Monitoring Report. The information developed in this project is being used to update the existing groundwater management plan to meet the requirements of SB1938.

Upper Kings Basin Integrated Regional Water Management Plan (IRWMP), Upper Kings Water Forum, Department of Water Resources and Local Partners

Project Director. Development of the Upper Kings Basin Integrated Regional Water Management Plan (IRWMP). Ali was instrumental in developing relationships between partners and establishing long term goals that benefit all parties. The main objective of the IRWMP was to identify and define different water management scenarios for the Kings Basin and evaluate alternatives to determine the most economical and best use of the water resources of the region as a whole. This was accomplished through both the development of the IRWMP, but also the development of an Integrated Groundwater and Surface Water Model for the Upper Kings Basin (KingsIGSM) that all parties have a share in and can agree on the modeled outcomes when developing water management scenarios.

Upper Kings Basin, Basin Assessment Report (BAR), California Department of Water Resources and Upper Kings Basin ISI Participants

Project Director and Principal-in-Charge. Completion of a Basin Assessment Report (BAR) for the Upper Districts of the Kings River Conservation District, which include Alta Irrigation District, Consolidated Irrigation District, and Fresno Irrigation District. The BAR includes a regional analysis of existing and future land and

water use conditions, and a hydrologic and hydrogeologic analysis to identify potential recharge opportunities. Project coordination and public outreach was handled through monthly Basin Advisory Panel (BAP) meetings. The BAP began addressing future regional groundwater management through Basin Management Objectives (BMOs) as outline in Senate Bill 1938.

Merced Basin Data Assessment Report, Merced Area Groundwater Pool Interests (MAGPI)

Project Director and Principal-in-Charge. The MAGPI Data Assessment Report included identification and collection of available data to describe the regional hydrogeologic setting of eastern Merced County, investigate potential conjunctive use opportunities in the Merced Groundwater Basin, and develop a data management plan for MAGPI members. Much of the information collected was later used to complete a conjunctive use assessment of three different potential recharge sites in the Merced Basin.

Soquel-Aptos Groundwater Basin Investigation and IGSM Development. Soquel Creek Water District.

Project Manager. Development and application of the Integrated Hydrologic Model for the Soquel-Aptos Groundwater Basin. The work involved development of an Integrated Groundwater and Surface Water Model (IGSM) for the study area; and data collection, data processing and development, and calibration of the model. In addition, the model was used to analyze the hydrologic impacts of various conjunctive use and water supply alternatives, and to evaluate the effect on the surface and groundwater resources in the basin.

Chino Basin Groundwater Management Study, Santa Ana Watershed Project Authority

Project Manager. Evaluation of the impact of conjunctive use operations and importation of State Water Project water on the quantity and quality of groundwater resources in the Chino Basin in Southern California. To quantify the specific impact levels, the project required:

- The development of a groundwater simulation and optimization model for the Chino groundwater basin
- A solute transport model to simulate the movement of nitrate, which resulted from agricultural practices and dairy industry, in the saturated-unsaturated aquifer.

The model is used to analyze alternative artificial recharge schemes and their effects on the regional aquifer and the Santa Ana River. Services also included the development and application of a dynamic optimization model to determine optimal combination of surface water/groundwater usage and optimal combination of waste disposal/treatment subject to social, economic, and physical constraints.

San Joaquin Valley Drainage Program, U.S. Bureau of Reclamation

Project Manager. Analysis of impacts of alternative reservoir operational criteria in the San Joaquin and Tulare Basins on the quality and quantity of the groundwater resources, including the impact on the drainage of agricultural lands in the West side of San Joaquin Valley. The project required the development of a reservoir operations model integrated with a groundwater flow and quality model. The San Joaquin-Tulare Conjunctive Use Model (SANTUCM) simulates the groundwater flow and salt balance under conjunctive use operation of surface water and groundwater resources. The model is also used to evaluate the quantity and quality of the outflow to Sacramento-San Joaquin Delta, under different operational schemes.

Decision Support System for the Snake River System

Key Member of Development Team. Ali was responsible for development of the preliminary design of User Attributes and Information Network systems, and the design and implementation coordination of the hydrology and operations modules.

Salinas Valley IGSM, Monterey County Water Resources Agency

Project Manager. Development and calibration of the groundwater simulation and transport model for the Salinas Valley, California. The model was developed using Integrated Groundwater and Surface Water Model (IGSM) flow and quality models, including code development and calibration of reservoir operation module. Upon extensive and detailed calibration efforts, the model is utilized for various alternative analyses for remediation of seawater intrusion problems in the basin.

American River Water Resources Investigation (ARWRI), U. S. Bureau of Reclamation and Sacramento Metropolitan Water Authority

Project Manager. Management of the groundwater and surface water resources in the southern Sutter and western

Placer Counties in California, which covers 360 square miles. The project required the development of an Integrated Groundwater and Surface Water Model (IGSM) for the northern American River Watershed Study Area. The study also involved the analysis of safe yield and conjunctive use as part of an overall groundwater management plan for the American River Service Area.

Friant Service Area Groundwater Model (FSASIM), U.S. Bureau of Reclamation

Project Manager. Development of the Friant Service Area groundwater model (FSASIM). This model covers the groundwater basin underlying over 30 Central Valley Project (CVP) contractors and local water users, and was used by the U.S. Bureau of Reclamation for analysis of water availability and conjunctive use alternatives during the Friant Service Area contract renewal EIR/EIS.

San Joaquin River Area Simulation Model (SANJASM), West Side Drainage Program. U.S. Bureau of Reclamation

Project Manager. Development and calibration of the San Joaquin River Area Simulation Model (SANJASM). This model simulates the operation of the surface water storage and conveyance facilities on the east side of San Joaquin River, California. The model was used as part of the Sacramento-San Joaquin Delta hearings to analyze effects of various alternative operations on the outflow to Delta.

Salinas Valley Reservoir Operations Model, Monterey County Water Resources Agency

Project Manager. Development and application of a reservoir operations model that operates the two multipurpose reservoirs on the Salinas River system, in order to meet the downstream water needs, including groundwater recharge requirements. The model is dynamically linked to the Salinas Valley Integrated Groundwater and Surface Water Model (IGSM). The model is used to evaluate the impact of the alternative reservoir operations criteria on the downstream surface water and groundwater systems. These alternatives include structural changes to the reservoirs such as widening and raising the dam spillways, as well as nonstructural changes such as flood control rule curves and other operational criteria.

Major Integrated Groundwater and Surface Water Model (IGSM) Development Projects

Project Manager, Principal Developer, and/or Principal-in-Charge. Development and/or application of many of the Integrated Groundwater Surface Water Model (IGSM) projects in various parts of the state. These include:

- Alameda County
- Central Valley
- Friant Service Area
- Imperial County
- Kings River Basin
- North American River Basin
- Pajaro Valley
- Sacramento County
- Salinas Valley
- Yolo County
- San Joaquin County
- Soquel-Aptos Groundwater Basin
- Southeast Bay Plain
- Stony Creek Fan Basin
- Colusa County

Westside Groundwater Basin MODFLOW Model, Westside Groundwater Basin Partners.

Principal-in-Charge. Implementation and calibration of a MODFLOW model for the Westside groundwater basin in the San Francisco Peninsula. This model was developed in a collaborative forum between Cities of San Bruno, Daly City, and San Francisco Public Utilities Commission. The purpose of the model is to simulate the groundwater flow conditions in the basin and to estimate the yield of the groundwater basin, available groundwater storage for potential conjunctive use opportunities, and impacts of potential groundwater and recycled water projects in the basin. The MODFLOW model was developed using the GWVISTA modeling platform.

Central Valley Water Quality Evaluation. California State Water Resources Control Board (SWRCB)

Project Manager. Analysis of flow and salinity impact of various project and non-project storage and conveyance facilities along the Sacramento and San Joaquin river systems, and various agricultural water diversions on the Delta. This analysis is made as part of the SWRCB hearings on water quality control plan for salinity in the Delta. This project involved application of DWRSIM, PROSIM, CVGSM, and other appropriate computer models.

Kings Groundwater Basin Hydrogeologic Investigation Kings River Conservation District

Principal-in-Charge. Hydrogeologic investigative study in the Kings groundwater basin. This project included significant data collection and analysis activities, collaboration and coordination with local and regional planning agencies, and technical oversight and coordination by state and federal agencies. The project resulted in detailed

hydrogeologic characterization of the Kings groundwater basin. The findings of this study were incorporated in the development of the Kings Basin IGSM model for planning and management of the groundwater basin.

San Luis Obispo Groundwater Basin Investigation

Project Manager. Evaluation of groundwater resources and sustained yield analysis for the San Luis Obispo groundwater basin. The project involved urban and agricultural water use, geohydrologic, and land use analysis.

Transbasin Diversion, Reservoir Operations Evaluation, Salinas Valley, Monterey County Water Resources Agency

Project Manager. Feasibility study of a transbasin diversion project. As part of the alternatives used for the Salinas Basin Management Plan, large-scale transbasin diversion facilities were considered. These include off-stream storage facilities, pump stations, regulating tanks, and pipelines. Transfer facilities between the two water supply reservoirs were also evaluated to maximize the yield of the two reservoirs.

Salinas Valley Water Project EIR Support, Monterey County Water Resources Agency

Project Manager. Evaluation of impacts and benefits using Salinas Valley Integrated Groundwater and Surface Water Model (IGSM) and in accordance with the California Environmental Quality Act (CEQA). This includes support to the Technical Advisory Committee that reviewed the model analysis and calibration, and the application of the model to the screening and analysis of alternatives. Technical memorandums were prepared to support development of the baseline conditions, future no project conditions, and the environmental settings. Additional documentation was prepared to compare the impacts and benefits of the alternative in terms of the effects on the water budget, basin yield, stream flow loss to the ocean, water quality, water levels and seawater intrusion.

Pajaro Valley Basin Management Plan. Pajaro Valley Water Management Agency.

Project Engineer. Evaluation of impacts and benefits using Pajaro Valley Integrated Groundwater and Surface Water Model (PVGSM). Support was provided to the consultant preparing the Environmental Impact Report. A number of technical memorandum on agricultural water uses, existing groundwater conditions, and applied the model to the analysis of alternatives were produced. Testimony was presented before the Board of Directors and at public meetings.

Central Valley Project Improvement Act, U.S. Bureau of Reclamation Programmatic Environmental Impact Statement (PEIS)

Project Manager. Modeling activities in the Central Valley Project Improvement Act (CVPIA) Programmatic EIS, which involved the coordination, data exchange, and integration of several operations, hydrologic, and economic models, such as Reclamation's PROSIM, and SANJASM operations models, Central Valley groundwater model (CVGSM), and Central Valley agricultural economic model (CVPM). The results of these models will be integrated into water quality, power and fisheries models developed and/or expanded as part of the project.

Sacramento County Zone 40 Water Supply Master Plan Update, County of Sacramento, DERA

Project Director. Hydrologic analysis and analysis of alternative water supply options for the Zone 40 update of the water supply master plan. Ali presented compelling documents and technical information to the stakeholder group to use the analytical tools developed for the County for evaluation of the study alternatives. He was involved in development of the alternative water supply plans, oversaw the detailed hydrologic analysis to support the EIR, and presented the results of the study to the Central Groundwater Basin Water Forum members. He was author of the final report for the study, and also involved in authoring sections of the DEIR.

Publications

Dr. Ali Taghavi has published numerous articles in professional and peer-reviewed and trade journals. He is the author of many reports and documentations, and has made many professional presentations at national and world conferences on topics of water resources, conjunctive water use, climate change implications on water resources systems, integrated hydrologic modeling, and integrated regional plans. A list of publications is available upon request.



WILDERMUTH™
ENVIRONMENTAL INC.

April 14, 2011

Borrego Water District
Attention: Board of Directors
806 Palm Canyon Drive
Borrego Springs, CA 92004-3101

Subject: Update of the Groundwater Management Plan and Anza Borrego Desert Integrated Regional Water Management Plan

Members of the Board:

Pursuant to Director Lyle Brecht's request, Wildermuth Environmental, Inc. (WEI) analyzed the 2009 *Anza Borrego Desert Integrated Regional Water Management Plan* (ABD IRWMP) developed by Bill Mills and the 2002 *Groundwater Management Plan* (GMP) and subsequently prepared a process description and cost estimate to update and synchronize those plans. Our observations regarding the *current situation on the ground* and past management plan efforts are listed below:

- The groundwater basin is in a serious state of overdraft, and the adverse economic consequences of overdraft are imminent. This is evident in the review of groundwater level and chemistry data and corroborated in the ongoing USGS studies in the basin where the hydrogeologic impacts of future pumping scenarios are being evaluated. It is highly unlikely that the overdraft and its attendant economic consequences will be self-correcting over time. What will be required is the active management of the basin to achieve an economically least-cost future for the Valley.
- The upper aquifer of the basin is deeper in the northern portion of the basin where agricultural production occurs and shallower in the southern portion of the basin where the District's production occurs. It is likely that the District's wells will go out of production long before any agricultural wells are threatened.
- In addition to these production problems, the District will most likely be required to treat groundwater, at great cost, prior to use as water quality deterioration is likely to be exacerbated as overdraft continues and the water levels of the upper aquifer drop towards the middle and lower aquifers. This requirement for advanced water treatment is common when withdrawals occur in older geologic sediments, which will occur in the basin as the water table in the upper aquifer drops further and withdrawals commence from the middle and lower aquifers.
- The Bureau of Reclamation is in the process of evaluating the importation of water into the ABD area; this work will be completed in the near future. The USGS investigation will also be completed in the near future. The implications of these two investigations will require updates to the GMP and the ABD IRWMP.

That said, the District and other Valley stakeholders will need to develop and implement a GMP now to ensure sustainable water use both for the purposes of using the basin for water banking and if importation is not economically feasible at this time.

- The 2002 GMP produced recommendations that would limit groundwater production to a yield that would be sustainable over time.
- The 2009 ABD IRWMP produced recommendations to augment local supplies with imported water and did not incorporate the recommendations of the 2002 GMP; at present, the two plans are neither consistent nor synchronized.
- These two plans need to be updated and synchronized to enable the District to be eligible for state grants under Proposition 84—the 2012 state water bond, should it be approved by the voters—and other future state grant programs.

We have observed and/or participated in the development of GMPs and IRWMPs, and based on our experience in these processes, we respectfully recommend that the District and the Valley's other stakeholders commence with the actions described below in a deliberate and expedited manner.

Develop an Implementable Groundwater Management Plan and ABD IRWMP with the Clear Objective of Establishing a Managed Borrego Valley Groundwater Basin

Scope. The tasks required to develop an implementable groundwater management plan and an ABD IRWMP that are mutually supportive of the objective to establish a managed Borrego Valley Groundwater Basin include the following:

1. Establish a stakeholder group that will be administered by the District.
2. Clearly articulate the objectives of the GMP and ABD IRWMP.
3. Clearly articulate current and planned water use in the Borrego Valley Groundwater Basin.
4. Clearly describe the state of the Basin based on existing and new data collected as part of the development of the GMP.
5. Develop two management plan alternatives: one based on no importing of supplemental water and the other based on importing supplemental water.
6. Develop preliminary implementation plans and costs for each groundwater management plan alternative. The implementation plans must include schedules and milestones to achieving sustainable groundwater production.
7. Develop financing alternatives for each groundwater management plan alternative.
8. Complete CEQA/NEPA processes for the GMP and ABD IRWMP.
9. Conduct a public process consistent with IRWMP and CEQA scoping requirements.
10. Revise the GMP to comport with the CEQA/NEPA process.

Cost and Time Required to Complete this Work. The estimated cost to complete these plans is about \$300,000 to \$400,000, exclusive of CEQA/NEPA process. This cost assumes that the Bureau and the USGS's ongoing work will be available for use in the GMP and ABD IRWMP. The cost of the CEQA/NEPA process will be largely driven by the imported water alternative; thus, its cost is difficult

to estimate. For planning purposes, the District should budget \$100,000 for the CEQ/NEPA effort. It is estimated that it will take about two years to complete this work.

Development of the Governance Structure and Rules to Implement the Groundwater Management Plan for the Borrego Valley Groundwater Basin Portion of the ABD IRWMP that Establishes a Managed Basin

The scope of this effort will be determined more precisely during the development of groundwater management implementation and the ABD IRWMP. Based on our experience in the Beaumont and Chino Basins, it could cost between \$1 million to \$4 million and take two to four years to develop and implement a governance structure for establishing a managed Borrego Valley Groundwater Basin. There may be additional costs borne by the other pumpers in the basin, and these costs may also be considerable.

Please call me if you have any questions regarding the above or need further assistance in scoping and developing these plans.

Very truly yours,

Wildermuth Environmental, Inc.

Mark Wildermuth, PE
President

BORREGO WATER DISTRICT STRATEGY TO ADDRESS THE OVERDRAFT

ESTIMATED ANNUAL WITHDRAWALS

Category of Withdrawal	Percent Usage	Business-as-Usual Withdrawals (acre-feet/year)
For agricultural purposes	70%	14,000
For recreational purposes	20%	4,000
For residential purposes	10%	2,000
Total annual withdrawals		20,000

What the charts illustrate is that if the overdraft continues at about 16,100 acre-feet/year (total withdrawals beyond the average natural recharge rate), then the present estimate for the dewatering of the upper aquifer of the basin by around 50-years from now may likely reflect a probable reality.

DATA	VALUE	SOURCE
What are the average annual withdrawals from the Borrego Valley Groundwater Basin	20,000 acre-feet/year [af/y] (April 7, 2010 Town Hall meeting USGS presentation of preliminary data).	This will be presented in the final USGS report.
At present annual withdrawal rates, approximately how many years before the upper aquifer is dewatered?	50 years, subject to many variables* (April 7, 2010 Town Hall meeting USGS presentation of preliminary data). The final report will discuss this estimate in detail.	*Variables include: water quality changes, well depth, well density, fallowing of agricultural land, golf course water conservation, crop prices, etc.
What is the average annual recharge rate of the basin?	4,800 af/y (April 7, 2010 Town Hall meeting USGS presentation of preliminary data).	This will be presented in the final USGS report.
What is the groundwater flow out of the basin?	The simulated groundwater underflow out of the basin is 900 acre-ft per year.	This will be presented in the final USGS report.
How long has the basin been in overdraft (rates of ground water extraction exceed rates of recharge)?	The basin has been in overdraft since 1945 and continues to be in overdraft today. The 1982 USGS report indicated an overdraft of, on average, 9,400 af/y between 1945-1980.	January 26, 1993 letter from David Huntley, PhD., San Diego State University Department of Geological Sciences to John Peterson, San Diego County Planning Department

Strategy of Previous General Manager & Board to Address the Overdraft circa 2008-2010:

- ☉ The technical water management projects undertaken by the previous General Manager and Board of Directors largely focused on imported water programs, not on the management of the Borrego Valley Groundwater Basin. These included: (1) focusing the United States Geological Survey (USGS) work on storage programs rather than on the optimization of the existing water source, (2) participating in a U.S. Bureau of Reclamation (Reclamation) investigation of imported water and storage opportunities, (3) development of the Clark Lake water source and (4) designing a pipeline to Highway 78 to access potential groundwater sources from the San Felipe Creek drainage system. Some of these projects were funded by grants and some were paid directly from BWD reserves.
- ☉ The 2002 Groundwater Management Plan's directive to fallow agricultural lands was implemented by purchasing agricultural lands to fallow to create water credits for resale to developers. \$1,000,000 has been spent; approximately \$6,500,000 obligated or promised.

Proposed Strategy of Present Board to Address the Overdraft - as of March 2011:

The present Board is currently investigating a new strategy to address the overdraft that is based solidly on California water law and that includes the following objectives:

- ☉ Return the District to fiscal stability and creditworthiness by January 31, 2013. This is absolutely necessary to implement any strategy to address the overdraft;
- ☉ Determine the various viable legal options for establishing rights of all pumpers to withdraw water from an overdrafted basin and determine the costs to ratepayers for each practicable option. By April 30, 2014;
- ☉ Perform the necessary legal, policy, and economic work not performed by the previous Board to determine how the District's water credits program may be used to facilitate the County's Groundwater Mitigation requirements for new development in the Valley without placing the District and its ratepayers at undue financial risk. By December 31, 2011;
- ☉ Work closely with the USGS and Reclamation teams to ensure that the Borrego Valley Groundwater Basin is fully defined and that options for managing the basin and for importing water for storage, recharge, and supplemental supply are evaluated on a timely basis. The Board has chosen to extend the due date of the USGS work so that the District will have time to complete its financial analyses and to select basin management alternatives to be applied and documented in the final report. The final USGS report is expected to be available by the first quarter 2012. The Reclamation report will include economic analyses of the cost for importing water from viable regional sources. The Reclamation report should be completed by December 2012;
- ☉ Determine how the investigations of Clark Lake aquifer and the San Felipe Creek groundwater sources as sustainable and affordable sources of potable water might continue and at what cost to the ratepayers. By December 31, 2011.

Lyle Brecht
Tuesday, March 22, 2011

I attended approximately six Anza Borrego Desert-Integrated Regional Management (ABD-IRWM) stakeholder meetings in the spring, summer and fall of 2010. I am familiar with the Department of Water Resources (DWR) IRWM guidelines and wrote a summary of these guidelines. I also had numerous conversations with DWR staff. I have participated in regional water resource management planning processes in two other states. I also previously directed a planning research program at the Massachusetts Institute of Technology (MIT) in Cambridge that worked with hundreds of professional planners.

The 2010 draft plan and the December 2010 round one planning grant proposal contain three assumptions that, I believe, form the foundation for the 2010 draft plan:

- ☉ Importation can be accomplished for the benefit of overlying pumpers at no cost to them. Any local costs can be passed through to BWD ratepayers;
- ☉ Importation is a means to maintain an unmanaged basin here in the Valley;
- ☉ There is no reason to be overly concerned about the overdraft of the Basin since a pipeline will solve the overdraft problem. However, to extend the useful life of the aquifer until a pipeline is built, the District should purchase land from growers to fallow to create water credits.

Unfortunately, these assumptions are not well-founded. Without revisions to the 2010 draft plan, I am uncertain that a round 2 planning grant proposal will be successful. Also, I am uncertain that this Board should, in good faith, approve the 2010 draft plan as it stands. For example:

- 1) *Importation can be accomplished for the benefit of overlying pumpers at no cost to them. Any local costs can be passed through to BWD ratepayers.*

The basic problem is that this assumption runs counter to California water law. Such a assumption is an overly simplistic evaluation of the relative rights of different classes of pumpers to groundwater. Prior to the commencement of overdraft, it is true that an appropriator (like BWD) is only entitled to the surplus that is not extracted by the overlying pumpers. However, in a situation like the one facing the Valley, there has been overdraft for more than the statutory period of five years. Under those circumstances, overlying pumpers and appropriators have

both engaged in mutual prescription against each other. This sort of situation typically results in all pumpers developing a physical solution that involves either proportional reduction of pumping, the importation of a supplemental water supply, or both. What is clear is that all of the costs cannot be passed through to BWD ratepayers. Payments have to be related in some way to benefits or the cost of service.

2) Importation is a means to maintain an unmanaged basin here in the Valley.

It is unlikely that either Imperial Irrigation District (IID) or San Diego County Water Authority (SDCWD) will do business storing water in the Borrego Valley Groundwater Basin unless it is a managed basin. Also, it is unlikely that a lender will provide funds to build a pipeline where a managed basin has not been previously established. This is necessary to determine a fair proportional share of the costs of importation are paid by all benefiting parties.

3) There is no reason to do anything about the overdraft of the Basin until a pipeline is built, other than to purchase land to fallow to create water credits that will extend the life of the aquifer until the pipeline comes.

The District's previous policy (circa 2008-2010) of using reserve funds to purchase agricultural land to fallow makes little economic sense to a community water system (like BWD) because it merely continues (albeit at a lower rate) the overdraft of the basin. An old cliché says: "When you recognize that you're in a hole, the very first thing to do is to stop digging." Continuing the fallowing land purchase program and creating "credits" becomes still another way of digging/ aggravating the overdraft, only slower.¹ Economically, this old policy asked ratepayers to pay 100% of the fallowing costs but receive only 10% of the benefits of fallowing, as ratepayers are only responsible for 10% of annual withdrawals.

The planning challenge is how to begin to actually address the historical overdraft. As the current situation is not sustainable over the long run, some economic impacts will be experienced by ratepayers in the short-run unless all landowners and pumpers contribute to the solution.

¹ This does not mean that water credits are not a useful means to *bank* fallowing of citrus for meeting San Diego County's groundwater mitigation requirements for new development permitting.

DRAFT - FOR DISCUSSION PURPOSES ONLY

III. Stakeholders, Governance and Public Participation –

Those local public agencies listed below have all executed the MOU and information regarding their population, service area, and other important data is included. Narrative description of Federal and State agencies is not provided as it is assumed reviewers are aware of the mission and duties of those agencies.

[List & describe]

Each of the MOU signatories has agreed to the conditions of the MOU and condition 2.c. of the MOU states:

“The Parties will support the process and tasks necessary to develop and submit a Proposition 84 IRWMP Implementation Grant with the intention to ultimately work cooperatively on the development of an ABD-IRWM Plan as shown on Exhibit A attached hereto.”

Entities that have executed the MOU and are members of the Planning Grant Committee (PGC) include the following:

[List]

Participation of the interests listed below, but without MOU execution, has also been demonstrated through meeting attendance or communications:

[List]

Those participants that have executed the MOU are members of the Planning Grant Committee and, if consistently active in the process, they may participate in the consensus-based governance of the Program. Other parties who attend meetings are also allowed to participate in general discussions and also comment during the general public portion of the agenda. Rules of participation are inclusionary.

The members of the Planning Grant Committee (PGC) serve as the consensus based decision-making body for the Program. There is no traditional “voting” process. The PGC strives for consensus (agreement among all participants) in all of its decision-making. Working toward consensus is a fundamental principle of the ABD-IRWM Program process.

In reaching consensus, some PGC members may strongly endorse a particular proposal, while others may accept it as just “workable.” Others may be only able to “live with it.” Still others may choose to “stand aside” by verbally noting a disagreement, yet allowing the group to reach a consensus without them if the decision does not affect them or compromise their interests. Any of these actions still constitutes consensus.

The PGC oversees the program, directs actions by support staff and consultants, and provides leadership to the program. Various committees may be appointed from time to time by the PGC based on the needs of the IRWMP effort. Designated committees may meet to participate with and/or assist staff and consultants with a variety of matters for which staff needs more regular input and consultation.

Designated committees may play a role in the development of the IRWMP Grant Application at the request of the PGC, but they will have no independent decision-making authority.

The interests represented on the PGC currently include: [include actual list - this list is just example]

- Retail water purveyors
- Wastewater agencies
- Storm and flood water management agencies
- County governments and special districts
- Land use authorities non local: (U.S. Forest Service)
- Environmental stewardship organizations
- Landowner groups
- State and Federal Agencies (U.S.G.S, B.L.M.)
- Disadvantaged Communities (through local government)
- Resource conservation interests

The IRWM Program makes consistent efforts to include more interest groups and the public in this process (see Appendix F, Program email notification list). Meeting agendas and minutes are circulated to a broad and inclusive group of interests. These include local agencies with facilities within the region, public utilities, federal agencies, state agencies, local tribal interests, business groups, etc. The agenda and notice of the ABD-IRWM monthly meeting is posted on the BWD web page (http://www.borregowd.org/Page_2.php) as well as in the BWD offices approximately 5 to 6 days in advance of the monthly meetings.

An important priority since the inception of the IRWM Program has been to provide an open forum for participation in an inclusionary structure. BWD, as the managing agency, used lists of interested parties from past water resource related matters, as well as recommendations from other agencies, the public, and NGOs, to solicit interest. No attempt was made to restrict participation. Even now, the Planning Grant Committee membership is still “open” to any additional members who may wish to join by executing the MOU and complying with its terms and conditions.

The following water and/or wastewater agencies or organizations have been invited to participate in the IRWM Program, but to date they have only passively followed the Program. They receive monthly information, meeting notice, and minutes.

[List]

This governance structure, representing a valid and committed “cross section” of water and other natural resource interests in this area, has the potential to provide community infrastructure for the IRWM region, which will allow for ongoing and sustainable resource management cooperation efforts beyond the funding grant cycle and well into the future.

Sharing of information among the program participants has taken the form of written statements of interest, oral presentations, references to reports and proceedings to consider, as well as _____ . This has allowed participants in the process to slowly learn the water resource conditions within the region as it relates to their particular areas of interest. It is anticipated this educational process will provide significant dividends through facilitating a more informed discussion venue and may encourage more participants to join the program.

Through the combination of the consensus-based process, a broad and diverse set of interests, commitment by the PGC, and support from other participants, it is anticipated that there will be an orderly and equitably developed regional water resources portfolio. All participants understand that there may be some activities and/or projects that will not be acceptable to the full PGC, but which may be pursued outside the IRWM Program by individual agencies or interests.

[Disadvantaged Communities (DAC) are identified at this time based upon Census information provided by the Federal Government. Borrego Springs qualifies as a DAC with an average family income of less than 80% of the California average family income (2007 Census Data, U.S. Census Bureau). However, information will have to be refined through the planning process to better identify DAC priorities and

needs. Through the IRWM planning process, additional outreach and refinement of data should identify specific areas of special needs in those community areas.]

It is anticipated that following the development of a Planning Grant Application, there may be a reevaluation of the Governance Principles. If there are any proposed changes, they will be taken up by the PGC for their consideration and disposition.

Additionally, through the membership of the PGC and public involvement the planning process will provide valuable insights into identifying those areas most in need of prioritization for programs and projects which can improve water quality, water supply reliability, resource sustainability and affordability within an environmental stewardship ethic both today and into the future.

The actual process to prepare, through adoption, a comprehensive IRWM Plan for the region is expected to take approximately _____. The PGC has been briefed on the time and dedication needed to complete a sustainable Plan for the region, which will provide for the integrated management of resources in a cost effective fashion, consistent with balanced resource management.

The PGC expects to utilize the significant staff resources available through its membership to provide appropriate assistance along with consulting services necessary to complete the Plan. The PGC recognizes that the IRWM process is ongoing and includes a process to update the initial plan as required when new data becomes available or environmental or economic conditions change in the region.

ANZA-BORREGO DESERT INTEGRATED RESOURCE WATER MANAGEMENT (ABD-IRWM)



MISSION OF ABD-IRWM PLANNING PROCESS¹

Transitioning from Extraction to Sustainable Outcomes: Planning for regional water resource sustainability is an ongoing process that meets today's needs without compromising the ability of future generations to meet their own needs. A sustainable system generally provides for the economy, the ecosystem, equity.

PLANNING & DECISION-MAKING CORE VALUES²

1. Use a broad, stakeholder-based, long-view perspective for water management.
2. Promote management for sustainable resources on a watershed basis.
3. Increase regional drought and flood preparedness.
4. Increase regional self-sufficiency.
5. Promote regional coordination and collaboration among local governments and agencies, public and private organizations, and Tribal governments and Tribal communities.

¹ Adapted from State of California, California Natural Resources Agency, Department of Natural Resources, *California Water Plan Highlights: Integrated Water Management - Update 2009* (Bulletin 160-09), 13.

² From *IWM Highlights - Update 2009*, 12B.

ANZA-BORREGO DESERT INTEGRATED RESOURCE WATER MANAGEMENT (ABD-IRWM)

6. Determine values for economic, environmental, and social benefits, costs, and tradeoffs to base investment decisions on sustainability indicators.
7. Incorporate future variability, uncertainties, and risk in the decision-making process.
8. Apply California's water rights laws, including the longstanding constitutional principles of reasonable use and public trust, as the foundation for public policy-making, planning, and management decisions on California water resources.
9. Promote environmental justice -- the fair treatment of people of all races, cultures, and incomes.
10. Use science, best data, and local and indigenous peoples' knowledge in a transparent and documented process.

STRATEGIC OBJECTIVES³

1. Expand Integrated Regional Water Management Strategies

Promote, improve, and expand Integrated Regional Water Management to create and build on partnerships that are essential for sound water resources planning, sustainable watershed and floodplain management, and increased regional self-sufficiency.

2. Use and Reuse Water More Efficiently

Use water more efficiently with significantly greater water conservation, recycling, and reuse to help meet future water demands and adapt to climate change.

3. Expand Conjunctive Management of Multiple Supplies

Advance and expand conjunctive management of multiple water supply sources with existing and new surface water and groundwater storage to prepare for future droughts, floods, and climate change.

4. Protect Surface Water and Groundwater Quality

Protect and restore surface water and groundwater quality to safeguard public and environmental health and secure this regions water supplies for their beneficial uses.

5. Expand Environmental Stewardship

Practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watershed, floodplain, and in-stream functions and to sustain water and flood management systems.

6. Practice Integrated Flood Management

Promote and practice integrated flood management to provide multiple benefits including better emergency preparedness and response, higher flood protection, more sustainable flood and water management systems, and enhanced floodplain ecosystems.

³ From *IWM Highlights - Update 2009*, 12C-D

ANZA-BORREGO DESERT INTEGRATED RESOURCE WATER MANAGEMENT (ABD-IRWM)

7. Prepare Prevention, Response, and Recovery Plans

Prepare prevention, response, and recovery plans for floods, droughts, and catastrophic events to help residents and communities, particularly disadvantaged citizens, make decisions that reduce the consequences and recovery time of these events when they occur.

8. Reduce Energy Consumption of Water Systems and Uses

Reduce the energy consumption of water and wastewater management systems by implementing the water-related strategies in AB 32 Scoping Plan to mitigate greenhouse gas emissions.

9. Improve Data and Analysis for Decision-making

Improve and expand monitoring, data management, and analysis to support decision-making, especially in light of uncertainties, that support integrated regional water management and flood and water resources management systems.

10. Invest in New Water Technology

Identify and implement applied research on emerging cost-effective water technology.

11. Improve Tribal Water and Natural Resources

Develop Tribal consultation, collaboration, and access to funding for water programs and projects to better sustain Tribal water and natural resources.

12. Ensure Equitable Distribution of Benefits

Consider mitigation of impacts from the implementation of regional water projects and ensure that these programs and policies address the most critical public health threats of disadvantaged citizens.

RESOURCE MANAGEMENT STRATEGIES & GOALS⁴

1. Reduce Water Demand & Enhance Drought Preparedness

Proposals that contain projects that effectively address long-term drought preparedness by contributing to sustainable water supply and reliability during water shortages. Drought preparedness projects do not include drought California emergency response actions, such as trucking of water or lowering well intakes. Water Plan Desirable proposals will achieve one or more of the following: Promote water conservation, conjunctive use, reuse and recycling, improve landscape and agricultural irrigation efficiencies, achieve long term reduction of water use, efficient groundwater basin management, system inerties.⁵

⁴ See State of California, California Natural Resources Agency, Department of Natural Resources, *California Water Plan: Integrated Water Management - Update 2009 Volume 2 - Resources Management Strategies* (Bulletin 160-09, December 2009) available at http://www.waterplan.water.ca.gov/docs/cwpu2009/0310final/v2_all_cwp2009.pdf.

⁵ Source: Executive Order S-06-08 California Water Plan [CWP] Update 2009 from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

2. Use and Reuse Water More Efficiently

Proposals that include projects that implement water use efficiency, water conservation, recycling and reuse to help meet future water demands, increase water supply reliability and adapt to climate change. Desirable proposals include those with projects that: increase urban⁶ and agricultural water use efficiency⁷ measures such as conservation and recycling;⁸ capture, store, treat, and use urban stormwater runoff (such as percolation, sustainability to usable aquifers; underground storage beneath parks; small surface basins, domestic stormwater capture systems; or the creation of catch basins or sumps downhill of development; incorporate and implement low impact development (LID) design features, techniques, and practices to reduce or eliminate stormwater runoff.⁹

3. Climate Change Response Actions that Improve Operational Efficiency & Transfers and/or Mitigate Impacts from Climate Change

Water Management actions that will address the key Climate Change issues of: adaptation to climate change, reduction of Greenhouse Gas (GHG) Emissions, reduce energy consumption.

Proposals that contain projects that when implemented address adaptation to climate change effects in an IRWM region. Desirable proposals include those that: advance and expand

⁶ *Urban Water Use Efficiency* - California law (Senate Bill X7 7, November 2009) requires all appropriators of water in the state to reduce end-use consumption of water 20% by December 31, 2020.

⁷ "The primary benefit of improving water use efficiency is the lowering of demand and the ability to cost-effectively stretch existing water supplies. Once viewed and invoked primarily as a temporary source of water supply in response to drought or emergency water shortage situations, water use efficiency and conservation approaches have become viable long-term supply options, saving considerable capital and operating costs for utilities and consumers, avoiding environmental degradation, and creating multiple benefits." See *Resources Management Strategies*, 3-21; and http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/docs/comment043009/202020_final_report_draft.pdf.

⁸ *Agricultural Water Use Efficiency* - the use and application of scientific processes to control agricultural water delivery and achieve a beneficial outcome.

⁹ Source: CWP Update 2009; SWRCB Recycled Water Policy: DWR Sustainability Values from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

ANZA-BORREGO DESERT INTEGRATED RESOURCE WATER MANAGEMENT (ABD-IRWM)

conjunctive management of multiple water supply sources,¹⁰ use and reuse water more efficiently, water management system modifications that address anticipated climate change impacts, such as rising sea-level, and which may include modifications or relocations of intakes or outfalls.¹¹

Proposals that contain projects that reduce GHG emissions compared to alternate projects that achieve similar water management contributions toward IRWM objectives. Desirable proposals include those that: reduce energy consumption of water systems and uses, use cleaner energy sources to move and treat water.

Proposals that contain projects that reduce not only water demand but wastewater loads as well, and can reduce energy demand and GHG emissions. Desirable proposal include: water use efficiency, water recycling,¹² water system energy efficiency, reuse runoff.¹³

4. Expand Environmental Stewardship

Proposals that contain projects that practice, promote, improve, and expand environmental stewardship to protect and enhance the environment by improving watershed, floodplain, and instream functions and to sustain water and flood management ecosystems.¹⁴

Agricultural Lands Stewardship - Working landscapes will increasingly be relied on to attenuate peak precipitation runoff and conserve water, as well as to provide critical habitat at key locations and sequester carbon, while maintaining ongoing primary productivity of food and fiber. It is also anticipated that difficult decisions will be made to sacrifice some agricultural lands to ecological functions, in order to fulfill the goals of reliable water supplies and functional ecosystems.

¹⁰ *Conjunctive Management & Groundwater Storage* - Water is stored in the groundwater basin for later and planned use by intentionally recharging the basin when excess water supply is available, for example, during years of above-average surface water supply or through the use of recycled water.

¹¹ *Surface Storage* - construction of manmade reservoirs to collect water for later release and use.

¹² *Recycled Water* - the treatment and reuse of wastewater.

¹³ Source: CWP Update 2009; AB32 Managing and Uncertain Future, DWR (October 2009) from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

¹⁴ Source: CWP Update 2009 from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

ANZA-BORREGO DESERT INTEGRATED RESOURCE WATER MANAGEMENT (ABD-IRWM)

Ecosystem Restoration - Ecosystem restoration improves the condition of our modified natural landscapes and biological communities to provide for their sustainability and for their use and enjoyment by current and future generations. This strategy focuses on restoration of aquatic, riparian and floodplain ecosystems because they are the natural systems most directly affected by water and flood management actions, and are likely to be affected by climate change.

Economic Incentives - Economic incentives include financial assistance, water pricing, and water market policies intended to influence water management. Economic incentives can influence the amount of use, time of use, wastewater volume, and source of supply. Examples of economic incentives include low interest loans, grants, and water rates and rate structures. Free services, rebates, and the use of tax revenues to partially fund water services also have a direct effect on the prices paid by water users.

5. Practice Integrated Flood Management

Proposals that contain projects that promote and practice integrated flood to provide multiple benefits including: better emergency preparedness and response, improved flood protection, more sustainable flood and water management systems, enhanced floodplain ecosystems, LID techniques that store and infiltrate runoff while protecting groundwater.¹⁵

6. Protect & Improve Surface and Groundwater Quality

Proposals that include: protecting and restoring surface water and groundwater quality to safeguard public and environmental health and secure water supplies for beneficial uses, salt/nutrient management planning as a components of an IRWM Plan.¹⁶

7. Improve Tribal Water and Natural Resources

Proposals that include the development of Tribal consultation, collaboration, and access to funding for water programs and projects to better sustain Tribal water and natural resources.¹⁷

¹⁵ Source CWP Update 2009 from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

¹⁶ Source: SWRCB Recycled Water Policy from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

¹⁷ Source: CWP Update 2009 from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

8. Insure Equitable Distribution of Benefits

Proposals that: increase the participation of small and disadvantaged communities in the IRWM process.; develop multi-benefit projects with consideration of affected disadvantaged communities and vulnerable populations; contain projects that address safe drinking water and wastewater treatment needs of DACs.; address critical water supply or water quality needs of California Native American Tribes within the region.¹⁸

9. Other

Crop Idling for Water Transfers - Crop idling is removal of lands from irrigation with the aim of returning the lands to irrigation at a later time. Crop idling for water transfers is done to make water available for transfer.

Irrigated Land Retirement - Irrigated land retirement is the removal of farmland from irrigated agriculture. Permanent land retirement is perpetual cessation of irrigation of lands from agricultural production, which is done for water transfer or for solving drainage-related problems.¹⁹

Water Transfers - Water transfers are a voluntary change in the way water is distributed among water users in response to water scarcity. Transfers can be between water districts that are neighboring or across the state, provided there is a means to convey and/or store the water. Water transfers can be a temporary or permanent sale of water or a water right by the water right holder; a lease of the right to use water from the water right holder; or a sale or lease of a contractual right to water supply. Water transfers can also take the form of long-term contracts for the purpose of improving long-term supply reliability.

¹⁸ Source: CWP Update 2009 from *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010)* - Guidelines available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

¹⁹ By law, the amount of water made available by land fallowing may not exceed 20 percent of the water that would have been applied or stored by the water supplier without a public hearing. (Wat. Code § 1745.05). Also, best practice is for the appropriator to have a groundwater management plan to guide implementation of water transfers that increase groundwater use or that could impact groundwater quality. See <http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm> for plan requirements.

10. Include an Update Process in the IRWM Plan

If an IRWM plan is silent on procedures to update the implementation project list, the applicant is limited to projects contained in the plan at the time of adoption.²⁰

Note: Groundwater Management Plan (GWMP) Compliance²¹ – For groundwater management and recharge projects and for projects with potential groundwater impacts, the applicant or the project proponent responsible for such projects must demonstrate that either:

- they have prepared and implemented a GWMP in compliance with CWC §10753.7;
- they participate or consent to be subject to a GWMP, basin-wide management plan, or other IRWM program or plan that meets the requirements of CWC §10753.7(a);
- the Proposal includes development of a GWMP that meets the requirements of CWC §10753.7 which will be completed within 1-year of the grant application submittal date. In the event that a grant solicitation is a 2-step process, DWR will use the due date of the Step 2 application to begin the 1-year compliance period;
- they conform to the requirements of an adjudication of water rights in the subject groundwater basin.

Projects requesting Proposition 84 IRWM Implementation funding:

Eligible projects must yield multiple benefits and include one or more of the following elements (PRC § 75026.(a)):

- Water supply reliability, water conservation and water use efficiency;
- Stormwater capture, storage, clean-up, treatment, and management;²²

²⁰ See *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines* p. 15 available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

²¹ See *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines*, p. 15-16 available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

²² *Urban Runoff Management* - Activities to manage both storm water and dry weather runoff. Dry weather runoff occurs when, for example, excess landscape irrigation water flows to the storm drain.

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- Removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands;²³
- Non-point source pollution reduction, management and monitoring;²⁴
- Groundwater recharge²⁵ and management projects;²⁶
- Contaminant and salt removal through reclamation, desalting, and other treatment technologies²⁷ and conveyance²⁸ of reclaimed water for distribution to users;²⁹

²³ *Land Use Planning & Management* - Integrating land use and water management consists of planning for the housing and economic development needs of a growing population while providing for the efficient use of water, water quality, energy, and other resources. The way in which we use land—the pattern and type of land use and transportation and the level of intensity—has a direct relationship to water supply and quality, flood management, and other water issues.

²⁴ *Pollution Prevention* - Pollution prevention can improve water quality for all beneficial uses by protecting water at its source and therefore reducing the need and cost for other water management and treatment options. An important pollution prevention strategy is implementation of proper land use management practices to prevent sediment and pollutants from entering the source water.

²⁵ *Recharge Areas Protection* - Recharge areas are those areas that provide the primary means of replenishing groundwater. Protection of recharge areas requires a number of actions based on two primary goals. These goals are (1) ensuring that areas suitable for recharge continue to be capable of adequate recharge rather than covered by urban infrastructure, such as buildings and roads; and, (2) preventing pollutants from entering groundwater to avoid expensive treatment that may be needed prior to potable, agricultural, or industrial beneficial uses.

²⁶ Both using water transfers to establish a recharge basin and/or initiating groundwater banking schemes typically will require an adjudication of water rights in order to establish who pays what amounts for the use of water once these mechanisms are out in place. See http://www.dpla2.water.ca.gov/publications/waterfacts/water_facts_3.pdf and <http://www.water.ca.gov/groundwater/bulletin118/update2003.cfm>.

²⁷ *Salt & Salinity Management* - Salts have been managed and mismanaged (or not managed) over the centuries in all parts of the globe where irrigation has been used.

²⁸ *Conveyance* - Conveyance provides for the movement of water. Conveyance infrastructure includes natural watercourses as well as constructed facilities like canals and pipelines, including control structures such as weirs. Examples of natural watercourses include streams, rivers, and groundwater aquifers.

²⁹ *Matching Water Quality to Use* - High quality water sources can be used for drinking and industrial purposes that benefit from higher quality water, and lesser quality water can be adequate for some uses.

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- ☉ Water banking,³⁰ exchange, reclamation and improvement of water quality;³¹
- ☉ Planning and implementation of multipurpose flood management programs;³²
- ☉ Watershed protection and management;³³
- ☉ Drinking water treatment and distribution;³⁴
- ☉ Ecosystem and fisheries restoration and protection.³⁵

Relationship between 2002 GMP and ABD-IRWMP

[From 2002 BWD Groundwater Management Plan (GMP) presented at a hearing on September 25, 2002 and adopted by the Board of Directors of the Borrego Water District on October 18, 2002.]

“One of the most controversial issues of the entire study and hearings was whether the District should attempt to obtain water from adjacent basins or state water projects or try to reduce

³⁰ *Groundwater Banks* - Groundwater banks consist of water that is “banked” during wet or above average years. The water to be banked is provided by the entity that will receive the water in times of need. Although transfers or exchanges may be needed to get the water to the bank and from the bank to the water user, groundwater banks are not transfers in the typical sense. The water user stores water for future use; this is not a sale or lease of water rights. It is typical for fees to apply to the use of groundwater banks.

³¹ *Groundwater and Aquifer Remediation* - Portions of aquifers the Valley’s groundwater basin has degraded water quality that does not support beneficial use of groundwater. Groundwater remediation is necessary to improve the quality of degraded groundwater for beneficial use. Drinking water supply is the beneficial use that typically requires remediation when groundwater quality is degraded.

³² *Flood Risk Management* - Flood Risk Management is a strategy specifically intended to enhance flood protection. It includes projects and programs that assist individuals and communities to manage floodflows and to prepare for, respond to, and recover from a flood.

³³ *Watershed Management* - Watershed management is the process of creating and implementing plans, programs, projects, and activities to restore, sustain, and enhance watershed functions. These functions provide the goods, services and values desired by the community affected by conditions within a watershed boundary.

³⁴ *Drinking Water Treatment & Distribution* - the reliability, quality, and safety of the raw water supply are critical to achieving the goal of maintaining adequate water treatment and distribution facilities for public water systems.

³⁵ See *Integrated Regional Management Grant Program Funded by Proposition 84 and Proposition 1E Draft (March 2010) - Guidelines*, p. 17 available at http://www.water.ca.gov/irwm/docs/prop84/guidelinepsp/GL_drtf_FINAL.pdf.

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water use in the valley to replenishment levels. As 70 percent of the water is estimated to go to agricultural use, to implement a reduction would require reducing agricultural water use. This became the major issue of the planning process.

“In the study and hearings it was determined that obtaining water from state projects and transporting it to the Borrego Valley was prohibitively expensive and much more expensive than following agricultural lands. Also, there is no additional water available as these projects are already over-subscribed. Obtaining water from adjacent areas such as San Felipe Creek, Clark Dry Lake and Ocotillo Wells is possible but also has extreme limitations. There is only limited water and, in most cases it is of poor quality. Also, the facilities to transmit and treat it would be extremely expensive for such a small district. Recharging the valley through check dams and infiltration ponds is not judged to have much impact. The use of reclaimed water also would only have minimal impact.

“The alternative approach, therefore, is to reduce groundwater use in the valley and preserve the remaining supply.

“In public meetings the Policy Committee developed a matrix to evaluate the alternative approaches. It concluded that reducing the extraction of water, rather than trying to import more, was the only realistic approach. That is the central recommendation they made to the BWD Board of Directors.

“Those recommendations were used as the basis for a series of public meetings to inform the residents and property owners of the valley of the existing and projected situation and possible remedies.

“Based upon those recommendations and information developed at the meetings, staff developed a list of Goals and Objectives that were reviewed in public hearings, modified and adopted by the Board of Directors of the BWD. Finally, staff developed a list of programs and projects that could be undertaken to implement the adopted goals. Those were considered, modified and prioritized in a series of public hearings.”

NOTE: The 2009 Integrated Water Resource Management Plan (IWRMP) by Bill Mills may not constitute an acceptable “update” to the 2002 Groundwater Management Plan (GMP) under CWC §10753.7(a) as it never went through a public review process before being approved by the board. The 2009 IRWMP also provides an inadequate economic analysis and rationale for its rejection of the results of the 2002 GMP.

According to CA IRWM guidelines, the ABD-IRWMP must be in agreement with and support of existing (or updated) GMPs in the region. The ABD-IRWMP cannot be advocating a different set of water projects that are contrary to the Board-approved 2002 GMP for the District. Also,

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both planning processes must meet the requirements of CWC §10753.7(a) for public participation in the planning process. However, if new information has been developed since the 2002 GWM plan adoption date, the ABD-IRWMP may have different projects than anticipated by the 2002 GWM plan.

My understanding is that at the State grant selection review stage, the DWR review committee will require the 2002 GMP to be updated to be in conformance with the ABD-IRWMP, or the IRWMP to be updated to be in conformance with the GWM plan. Ultimately, the two plans must be in conformance and support one another. The State will not provide funds for IRWM GMP-related projects that are not in conformance with local GWM plans.

Planning Conformance Issue Example:

2002 GWM Plan: "Obtaining water from adjacent areas such as San Felipe Creek, Clark Dry Lake and Ocotillo Wells is possible but also has extreme limitations. There is only limited water and, in most cases it is of poor quality. Also, the facilities to transmit and treat it would be extremely expensive for such a small district."

Q: What data and assumptions led the 2002 GMP to this conclusion and what new data from 2009 IRWM study contravenes this 2002 assessment? At present, these and many other planning questions and inconsistencies among the these plans are unanswered.

**REQUEST FOR QUOTATION (RFQ) FOR ASSISTANCE IN DEVELOPING A
PLANNING GRANTS APPLICATION PROPOSAL TO DWR-IRWM
FOR THE BORREGO WATER DISTRICT (BWD)**

Request for Quotation (RFQ): Integrated Regional Water Management (IRWM) is a collaborative effort to manage all aspects of water resources within a region in California. IRWM crosses jurisdictional, watershed, and political boundaries; involves multiple agencies, stakeholders, individuals, and groups; and attempts to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions. The California Department of Water Resources (DWR) has a number of IRWM grant program funding opportunities. The purpose of this RFQ is to identify technical consultants who are qualified to provide assistance in developing a successful planning grants application proposal in time for the second round DWR-IRWM grants process for the fall of 2011. Additional information regarding DWR's process may be found at <http://www.water.ca.gov/irwm/index.cfm>.

Background: The Borrego Water District (BWD) is a small public water and wastewater district serving approximately 2,200 customers in beautiful Borrego Springs, California, a retirement and resort community located about 70 miles NE of San Diego and surrounded by the Anza-Borrego Desert State Park.

In December 2009, DWR recognized the Anza Borrego Desert Integrated Regional Management (ABD-IRWM) planning region. A map of the region is at http://www.borregowd.org/uploads/ABDIRWMP_Area_Map.pdf. The Anza Borrego Desert State Park comprises about 70% of the area of the planning region. The Anza Borrego Desert Integrated Regional Water Management Group (IRWMP) was formed by three public agencies, two with water authority, consisting of BWD, the Resource Conservation District of Greater San Diego County and San Diego County. The draft ABD-IRWMP is available at http://www.borregowd.org/uploads/IRWMP_Work_Plan.pdf and additional material related to the ABD-IRWM planning process is available at: http://www.borregowd.org/Page_2.php.

In December 2010, the DWR did not select the \$500,000 IRWM planning grant proposal submitted by the ABD region for the first round of planning grants. This planning grant application is available at http://www.borregowd.org/uploads/ABD_IRWM_Planning_Grant_Application_9_28_10.pdf. However, opportunity still exists to submit a second round grant proposal for the fall of 2011. This is a link to to Borrego's Planning Grant-

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Round 1 evaluation: http://www.water.ca.gov/irwm/docs/Archives/Prop84/Awards/DraftPlanningRecommendations/CR_Borrego.pdf.

A complicating factor in this process is that the BWD Board-approved 2009 Integrated Water Resource Management Plan (IWRMP; http://www.borregowd.org/uploads/IWRMP_Final_3.2009.pdf) and Board-approved 2002 Groundwater Management Plan (GMP; http://www.borregowd.org/uploads/Groundwater_Management_Plan_Sept._25_2002_reduced.pdf) are incompatible. The 2002 GMP asserts that "*obtaining water from state projects and transporting it to the Borrego Valley [is] prohibitively expensive and much more expensive than fallowing agricultural lands*" whereas the 2009 IWRMP begins with the premise that importation is the *only* solution for the Borrego Valley Groundwater Basin overdraft situation.

However, in neither case is an adequate economic argument made to justify this assertion or premise. As well, both 2002 GMP and 2009 IWRMP plans are incomplete relative to specific implementation steps, timelines for plan implementation deliverables, estimated budget needed for completion, or financing options to fund the plans. In other words, the economic rationale and analysis for both plans is lacking. Additionally, it appears that the 2009 IWRMP and draft ABD-IRWMP assume that importation can proceed successfully without first, or concurrently, establishing a managed basin. BWD has engaged the United States Geological Survey (USGS) to model the basin (http://www.borregowd.org/uploads/borrego_110330_USGS_by_Martin_and_Faunt.pdf) and is participating with the U.S. Bureau of Reclamation (Reclamation) in its Southeast California Basin Study. The final USGS report is expected to be available by the first quarter 2012. The results of the Reclamation study should be available by December 2012.

Planning Objective: To develop a successful ABD-IRWM planning grants proposal that incorporates an updated and comprehensive managed basin implementation plan for BWD's GMP, aligns the GMP and IWRMP and ABD-IRWMP plans' objectives to be supportive of one another as required under DWR's IRWM planning guidelines, and produces an ABD-IRWMP that is capable of attracting future DWR implementation grant funding. One example of a successful implementation grants proposal for a nearby

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region is at http://www.cvrwmg.org/docs/2011_01_07_CVRWVG-ImplementationGrantProposal_170137.pdf.

RFQ Response: Please respond with: a proposal for providing assistance in developing a successful DWR-IRWM planning grants proposal.

Your response to this RFQ, at a minimum, shall address:

- (a) a brief analysis of the planning assumptions for aligning the GMP, IWRMP and ABD-IRWM planning objectives;
- (b) the level and type of effort proposed to meet DWR-IRWM planning grant proposal requirements and attendant costs;
- (c) identification of your prior experience with DWR-IRWM types of grants as well as familiarity with current IRWMP requirements; and
- (d) your firm's willingness and capability to provide further technical assistance in developing the GMP and ABD-IRWMP, should the DWR planning grant be awarded.

RFQ Due Date: Your response is due by 2:00 PM Pacific Time, Monday, July 18, 2011 by email to diana@borregowd.org.

Selection Process: The BWD's Strategic Planning Committee has been tasked with overseeing the identification and recommendation to the Board of a technical consultant. Any questions should be addressed to Director Lyle Brecht at 410.963.8680 (cell) or LBrecht@gmail.com.

STRAWMAN ABD-IRWM PLANNING OBJECTIVES FOR FALL 2011

Planning Process Objective: BWD Board approval of a phase-one Anza-Borrego Desert Integrated Regional Water Management Plan (ABD-IRWMP) by December 2011. This approval is required for Department of Water Resources (DWR) IRWMP round-two *implementation grant* eligibility. An *implementation grant* can be \$1,000,000 and up.

Requirements:

- (1) The Board-approved ABD-IRWMP must be the result of an inclusive public stakeholder process;
- (2) The ABD-IRWMP, the 2002 Groundwater Management Plan (GMP) and 2009 Integrated Water Resource Management Plan (IWRMP) must all be supportive of one another for *implementation grant* eligibility. Any updates to the 2002 GMP and 2009 IWRMP must be result from a public planning process;
- (3) There must be a funding mechanism for Plan implementation other than reliance on a DWR grant. That is because any DWR *implementation grant* will not cover 100% of the costs.

Fall 2011 Planning Tasks:

- (1) In September, a DWR round-two *planning grants* proposal must be prepared. The December 2010 round-one \$500,000 BWD planning grant proposal was rejected by DWR:
 - (a) the tasks identified and costed in the planning grant must result from a stakeholder process;
 - (b) the ABD-IRWMP governance and decision-making process must satisfy DWR;
 - (c) the *planning grants* proposal should address actual planning needs for the region necessary: (i) to arrive at a plan that will be approved by the BWD board; (ii) to develop a successful *implementation grant* proposal to DWR; and (iii) that includes necessary projects for managing the region's water resources that stakeholders plan to fund and to complete within a specified timeframe.
- (2) From October through December, in order to achieve BWD Board approval at its December 2011 business meeting, the ABD-IRWMP, 2002 GMP update and 2009 IWRMP update will need to include as a planning element a managed Borrego Valley Groundwater Basin:
 - (a) this planning objective will need to be analytically justified, identify necessary tasks, and be reviewed through a process involving stakeholders and the public.