



*Borrego Springs Watermaster*

# Ad Hoc Meeting Environmental Working Group

December 21, 2021

# Today's Agenda

1. Public Comment
2. DWR Grant Application
  - i. Review Solicitation Package for a “Call for Projects”
  - ii. Discuss grant-eligible Projects recommended by EWG
  - iii. Identify EWG members that want to help prepare the Project submittals
3. Public comment

# Grant Application Process

- Final Guidelines and Proposal Solicitation Package (PSP) has been published
  - Borrego Water District is an eligible applicant. Watermaster is not eligible.
  - Development of a \$10 million Spending Plan of “grant-eligible” projects for a \$7.6 million grant
  - Updated scoring criteria for project submittals → Table 7 of PSP
  - Applications are due by **February 18, 2022**
- Watermaster Solicitation Package – Call for Projects
  - Watermaster prepared instructions and a form for Project submittals
  - Disseminated to Watermaster’s email distribution list and posted to Watermaster website
  - Conducting TAC and EWG meetings
  - Solicitation package is being updated and re-released based on final Guidelines and PSP
  - BWD is conducting its own process and is working with NGOs
- Project Review Committee
  - Project Review Committee evaluates and ranks project submittals and submits Spending Plan to DWR
  - DWR negotiates the final grant

# Grant Application Process

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# Grant-Eligible Projects – Borrego Water District

- Rams Hill Wastewater Treatment Facility
- Advanced Metering Infrastructure (AMI)
- Well Abandonment
- In-Lieu Fee Study and Program Development
- Voluntary Fallowing of Agricultural Land Implementation
- Weather Station and Air Quality Monitoring
- Coyote Creek Non-standard Stream Gauging

# Grant-Eligible Projects – County of San Diego

Project Description	Project Benefits	Estimated Cost (WY 2021-2024)	Notes
TAC and EWG Outreach/Meetings		\$400,000 (from WMB budget)	Watermaster General Implementation of SGMA
Groundwater Monitoring and Reporting (Annual Reports, DMS, CASGEM)		\$400,000 (from WMB budget)	
*Native yield study/GSP Update	Improve existing model with ag and rec pumping data, water level data, etc.		
Destruction of abandoned wells; Outfitting existing wells for monitoring; Expand groundwater monitoring network; Update monitoring plan.			Requested by Director Jorgenson and stakeholders
Monitoring Well in northern portion of basin (identified data gap in GMP)	Water quality and levels for model. Determine extent of nitrate concentration in upper aquifer. Screen in lower and upper aquifers to see if there is elevated arsenic and vertically delineate nitrate and TDS concentrations in the upper aquifer.		Listed as data gap in GMP
Aquifer tests (identified data gap in GMP)	Obtain site specific data in upper and middle aquifers to improve accuracy of the BVHM.		
Manual stream flow measurements/surface water monitoring (identified data gap in GMP)	Collection of this information can be used to further verify the accuracy of the Basin Characterization Model used in the BVHM, and ultimately to provide a more accurate estimate of stream leakage.		
Prepare GDE Monitoring Workplan			Expand upon EWG activities
GDE Monitoring/Enhancement			
Prepare Biological Restoration Plan			
Fallowing/Biological Restoration			

# Topics of Interest for the EWG

## List of Topics and Preliminary Ranking:

1. **Biological Restoration.** A potential solution for addressing potential adverse impacts associated with fallowing agricultural lands.
2. **Groundwater Dependent Ecosystems.** More study may be necessary to determine if historical GDEs are still dependent on groundwater.
3. **Air Quality.** Degradation of air quality is a concern related to fallowed lands.
4. **Development.** Potential impacts on hydrology of the Basin from development.
5. **Removal of Invasive Species.** Potential for water conservation and enhanced basin yield.
6. **Abandoned Wells.** Improperly abandoned wells are a public health and safety issue.

# Prepare a Biological Restoration Plan

1. Perform a high-level “biological assessment” of lands that have been fallowed or have potential for future fallowing.
  - Type(s) of habitat that were once present on the lands
  - Type(s) of habitat that could be restored
  - Prioritization
2. Describe the various methods for implementing biological restoration projects
3. Prepare a list of potential grant opportunities and outside partners

## EWG Recommendation for WY 2022

1. Prepare a base map of lands that are current/potential fallowed lands.
2. Prepare a Biological Assessment Workplan
  - Steps and costs to perform a high-level biological assessment and prioritize the lands by habitat value → Workplan will inform future Watermaster budget process

# Prepare GDE Monitoring Workplan

- GMP indicated that because of historical drawdown, the historical GDEs within the Borrego Springs Subbasin are now disconnected from the aquifer system
- The EWG recommends a monitoring program to check/verify the conclusions of the GMP.
  - First step → Develop a GDE Monitoring Workplan under the guidance of the EWG
  - The GDE Monitoring Workplan would include the steps and costs to implement the workplan

## EWG Recommendation for WY 2022

1. **Review the technical work that supported the conclusions in the GMP**
2. **Prepare GDE Monitoring Workplan** → Workplan will inform future Watermaster budget process

# EWG Meetings

- Two meetings in WY 2022 to conduct its business and make timely recommendations to the Board.
- One of the meetings will be in-person and will include a field reconnaissance of the Borrego Springs Subbasin
  - Potential GDEs (*e.g.*, Honey Mesquite forest near the Borrego Sink)
  - Fallowed and potential future fallowed lands

**Table 1. EWG Budget for WY 2022**

<b>Task</b>	<b>Task Totals</b>
Prepare Biological Restoration Plan	\$17,606
Prepare GDE Monitoring Workplan	\$5,469
EWG Meetings	\$14,005
Totals for WY 2022	\$37,080

# Potential Grant-Eligible Projects

- Mark Jorgensen

1. Obtain new satellite technology to monitor changes in agriculture, golf course turf reduction, ground cover, development and future subsidence, as well as other issues.
2. Develop a wider array of water level monitoring wells in the northern and northeastern area of our basin. We have a paucity of water level monitoring in static wells in our study, yet there are many existing wells we can use.
3. Study the mortality of the mesquite bosque vegetation community to determine causes of decline. Set up studies to compare the Borrego Sink bosque, which is overdrafted, with the unpumped Clark Valley.
4. Set up natural aquifer input gauging stations in main watershed drainages: Coyote Canyon, Palm Canyon, Hellhole Canyon and Tubb Canyon.
5. Establish a model project for restoration of fallowed lands.
6. Explore conversion of Human Resources from farming to natural restoration projects. Maintain and increase employment opportunities in the future conversion of consumptive water use activities to conservation and restoration of agricultural lands and possibly reduced golf course acreage.

# Potential Grant-Eligible Projects

- Others

1. .

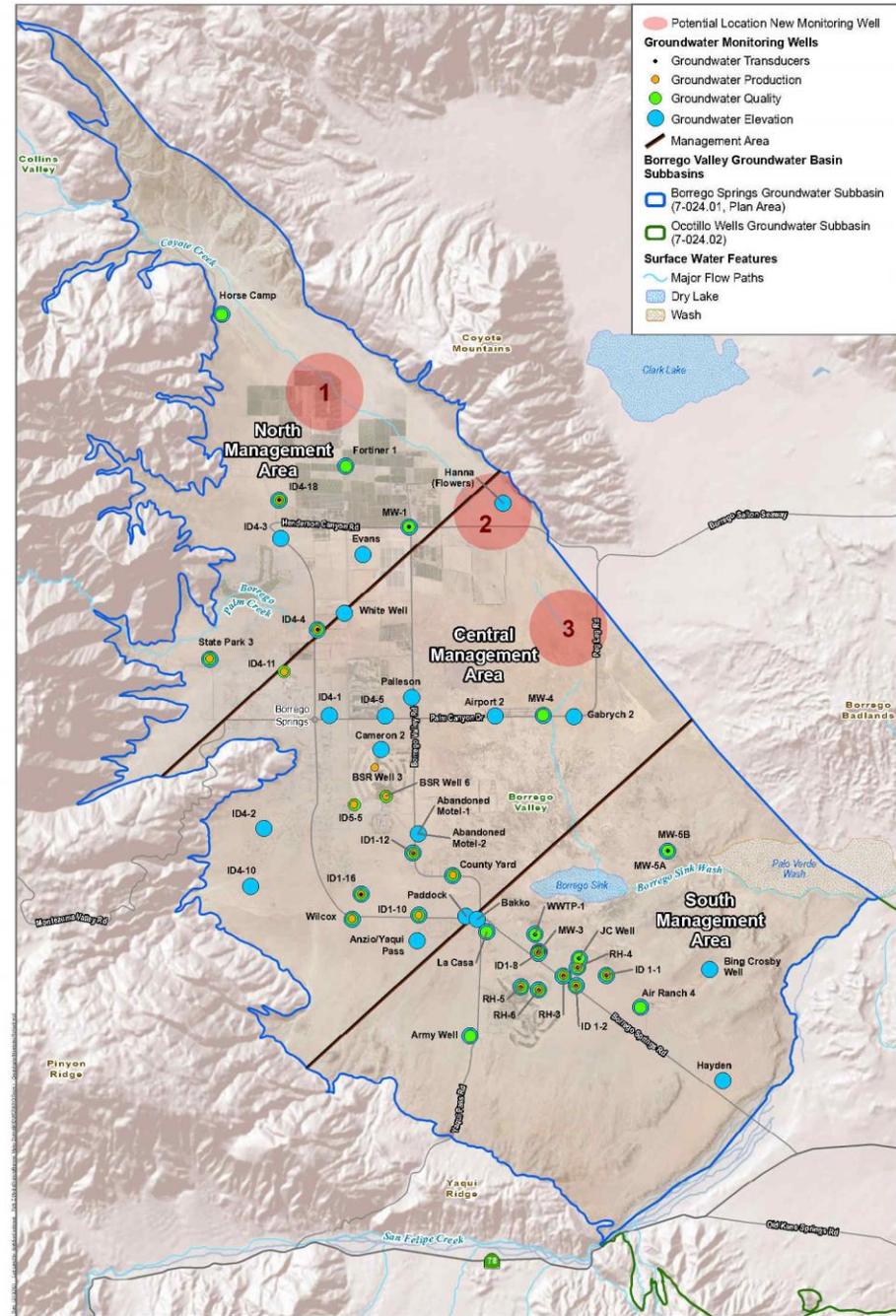
**Table 2**  
**Topics of Interest for the Environmental Working Group**

Average Rank	Topic	Nexus to Watermaster Mission	Potential EWG Involvement	Potential Cooperating Entities and Resources	EWG Member(s) with Expertise
1.7	<p><b>Groundwater Dependent Ecosystems (GDEs)</b>            More study may be necessary to determine if historical GDEs are still dependent on groundwater, or not.</p>	<p>The Watermaster's groundwater management plan is intended to avoid the undesirable result of adverse impacts to environmental uses/users of groundwater, such as GDEs.</p>	<p>1. Develop specific questions regarding the dependency of local ecosystems on groundwater.             2. Recommend appropriate monitoring strategies to answer the questions.</p>	<p>Steele/Burnand Anza Borrego Desert Research Center.            UC Irvine.            UC Reserve system.</p>	<p>Mark Jorgensen            Andy Malone</p>
3.7	<p><b>Removal of Invasive Species</b>            Invasive species commonly consume more water than native species, and can out compete native species which adversely impacts natural ecosystems. Invasive species within the Basin include tamarisk, Sahara mustard, and Volutaria.</p>	<p>Removal of invasive species could result in water conservation and increase the sustainable yield of the groundwater basin.</p>	<p>Facilitate partnerships with state and local entities to encourage the removal of invasive species within the Borrego Springs subbasin.</p>	<p>California State Parks currently conducts invasive plant management and restoration programs within Anza Borrego State Park and throughout the region.             County Board of Supervisor Jim Desmond has ongoing Revitalization Committee meetings in Borrego Springs and there is an invasive species subcommittee.</p>	<p>Mark Jorgensen            Mike Wells            Jim Dice</p>
4.7	<p><b>Development.</b>            Historical development has modified natural surface-water flow and recharge patterns. New development could have similar hydrologic impacts, which could result in groundwater-level changes and reductions in the Sustainable Yield of the groundwater basin.</p>	<p>The Watermaster is charged with sustainably managing the Borrego Springs subbasin to its Sustainable Yield.</p>	<p>Review and comment on CEQA documents for any future development projects.</p>		<p>Mark Jorgensen            John Peterson</p>

1.3	<p><b>Biological Restoration</b> Biological restoration could be a solution for addressing potential adverse impacts associated with fallowing agricultural lands. This could be done on a parcel-by-parcel basis as farmers choose to consider restoration of their fallowed land. Or, for example, while potentially difficult to setup, a mitigation bank could fund ecosystem restoration efforts on fallowed lands, which could avoid the potential for air-quality degradation and invasive species growth associated with fallowed lands.</p>	<p>Fallowing of agricultural lands is an important component of the Rampdown in groundwater pumping that is required to achieve sustainable pumping.</p>	<ol style="list-style-type: none"> <li>1. Identify and describe the various methods for implementing biological restoration projects.</li> <li>2. Identify opportunities and partners for biological restoration projects.</li> <li>3. Perform a GIS review of land that has been fallowed or has potential for future fallowing. Then perform a high level biological assessment of those lands. There is different mitigation credit values for different habitat types.</li> <li>4. Once methods for restoration, potential partnerships, and a biological assessment is conducted, seek interest of farmers/landowners of existing or future fallowed lands.</li> </ol>	<p>State and Federal Wildlife Agencies County of San Diego Anza Borrego Foundation</p>	<p>Jim Bennett Mark Jorgensen John Peterson Mike Wells Jim Dice</p>
2.7	<p><b>Air Quality</b> Degradation of air quality is a concern related to fallowed lands.</p>	<p>Fallowing of agricultural lands is an important component of the Rampdown in groundwater pumping that is required to achieve sustainably pumping.</p>		<p>Steele/Burnand Anza-Borrego Desert Research Center owns and operates air quality monitoring stations in the region.</p> <p>County Board of Supervisor Jim Desmond has ongoing Revitalization Committee meetings in Borrego Springs and there is an air quality subcommittee.</p>	
4.3	<p><b>Abandoned Wells</b> Improperly abandoned wells are a public health and safety issue.</p>	<p>Improperly abandoned wells can adversely impact groundwater quality.</p>	<p>Coordinating with the County of San Diego to ensure that abandoned wells are properly destroyed or converted to monitoring wells.</p>	<p>County of San Diego.</p> <p>County Board of Supervisor Jim Desmond has ongoing Revitalization Committee meetings in Borrego Springs and there is an abandoned wells subcommittee.</p>	<p>John Peterson</p>

# Future EWG Meetings

- March/April 2022 - in-person
  - Field reconnaissance of the Borrego Springs Subbasin
  - Review recommended EWG scope/budget for WY 2023
- May/June 2022
  - Finalize EWG scope/budget recommendation



- Potential Location New Monitoring Well
- Groundwater Monitoring Wells**
  - Groundwater Transducers
  - Groundwater Production
  - Groundwater Quality
  - Groundwater Elevation
- Management Area
- Borrego Valley Groundwater Basin Subbasins**
  - Borrego Springs Groundwater Subbasin (7-024.01, Plan Area)
  - Occitillo Wells Groundwater Subbasin (7-024.02)
- Surface Water Features**
  - Major Flow Paths
  - Dry Lake
  - Wash

DRAFT  
 DATUM: NAD 1983 DATA SOURCE: GARDIG  
**DUDEK**

**FIGURE 1**  
 Groundwater Monitoring Network  
 TSS Grant