

Attachment 3 consists of the following:

- ✓ **Work Plan.** This includes a system map, work items to be performed under each task, task deliverables, and the plan for environmental compliance and permitting for the *Regional Turf Reduction Program* and the *DWA Energy Efficiency Project*. The work plan is consistent with the budget (Attachment 4) and schedule (Attachment 5).

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Description of the Proposal

CVWD and DWA have partnered to submit this Water-Energy Grant Proposal in order to seek funding for the *Regional Turf Reduction Program* and the *DWA Energy Efficiency Project*. Together, these projects will save water in the CVWD and DWA service areas, reduce energy use, and reduce GHG emissions. The *Regional Turf Reduction Program* consists of providing rebates to residential, commercial, municipal customers, and golf courses to replace high water using turf with drought-resistant landscaping. This project will reduce groundwater pumping and energy required to deliver water to municipal customers in the CVWD and DWA service areas, thereby saving energy and reducing GHG emissions. The *DWA Energy Efficiency Project* focuses on improving pump efficiency at DWA's Well No. 20, a well critical to the agency's water supply system. By improving efficiency, a significant amount of energy will be saved annually, also resulting in avoided GHG emissions.

Projects that save water and reduce energy use are vital to the Coachella Valley. In 2014 the Coachella Valley and other regions in California received a 5% allocation from the State Water Project (SWP). Given that imported water sources are used to replenish the Region's groundwater basins, this reduction in SWP allocations directly impacts the Region's ability to manage its groundwater resources. In order to manage groundwater overdraft in a time of limited imported water supplies, the Region must reduce groundwater pumping.

In response to the 2014 drought and the need to reduce groundwater pumping, on August 12, 2014 CVWD implemented mandatory water use restrictions (see **Appendix A**). Within six weeks of the mandatory water use restrictions, CVWD received turf conversion program applications for replacement of 1,995 square feet of turf; this represents as many turf replacement applications as the agency had received in a three-year time period (see **Appendix B**). Similarly, DWA implemented a resolution to urge residents to reduce water use by 20% in accordance with the Governor's request that all Californians reduce their water usage by 20% (see **Appendix C**). DWA also conducted outreach to its customers summarizing the mandatory water use restrictions that went into effect August 5, 2014 (see **Appendix A**). As a result of DWA's resolution for conservation and its substantial outreach efforts about demand management, DWA also experienced a higher-than-average request for funding for turf replacements from customers throughout their service area. Specifically, DWA provided rebates for four years-worth of turf conversion in just a 60-day period.

Furthermore, since 2013 CVWD, DWA, Indio Water Authority, Mission Springs Water District, and the Coachella Water Authority (collectively referred to as the Coachella Valley Regional Water Management Group or CVRWMG) have been implementing a regional conservation program known as "CV Water Counts". CV Water Counts is a multi-faceted water conservation program that, among other things, includes an interactive website that connects water users with applicable water conservation and rebate programs (<http://cvwatercounts.com/>). All CVRWMG agencies have indicated that since the initiation of CV Water Counts and increased awareness about demand management, there has been a notable increase in customer requests for turf rebates to replace water-consumptive turf grass with water-efficient landscaping.

As explained in Attachment 2, despite the Region's reliance upon imported water sources, imported water is not directly delivered to municipal customers. Rather, imported water is used for artificial recharge of the groundwater basin and water is delivered by pumping groundwater into municipal supply systems or groundwater is directly pumped by private users that are not part of the municipal supply system. This system allows for efficient and effective storage of water within the Region but also requires a substantial amount of energy associated with pumping. A regional analysis from CVWD shows that in 2009 electrical energy demand for water management in the Coachella Valley was 211,130,000 kilowatt hours per year, and that groundwater pumping attributed to approximately 93 percent of the overall energy demand associated with water management (see reference in **Appendix F**). Due to regional pumping requirements, it is imperative that groundwater pumps are regularly tested for efficiency and replaced or rehabilitated when such tests reveal efficiency issues. The *DWA Energy Efficiency Project* is part of the Region's efforts to maintain reliable and efficient municipal systems by resolving identified efficiency issues with Well 20, which is an integral component of DWA's municipal water system.

Together, the projects included in the Proposal will help to ensure that groundwater resources are effectively managed and efficiently distributed throughout the Region to save water and energy and reduce GHG emissions.

Regional Turf Reduction Program

Due to the substantial need to reduce water demands in the Region and the noteworthy increase in demands for turf rebate programs across the Coachella Valley, CVWD and DWA have proposed a turf reduction program to provide rebates to incentivize the removal of high-water consuming turf grass and replace turf grass with desert-friendly, water-efficient landscaping. By reducing the need for irrigation water used on turf, the program will help decrease groundwater pumping, preserving groundwater supplies and reducing groundwater overdraft conditions.

The *Regional Turf Reduction Program* is a multifaceted program that will make turf rebates available throughout CVWD and DWA service areas for a variety of water customers, including: golf courses, residential, commercial, and municipal sites. This program will assist the water purveyors in effectively managing groundwater by reducing demands, which will directly offset groundwater pumping. The *Regional Turf Reduction Program* is an extension of a project that was awarded funding through the 2014 Drought Solicitation through the Integrated Regional Water Management (IRWM) Program. As explained in the preceding section, as a result of outreach and other efforts, CVWD and DWA have experienced a significant influx in applicants for turf rebates; as a result of this influx both agencies have demonstrated needs for turf rebate funding beyond what was awarded through the 2014 Drought Solicitation. A compilation of 32 support letters from various local stakeholders, indicating their interest and need for turf rebates and associated support of the *Regional Turf Reduction Program* are included in **Appendix E**.

CVWD will provide rebates to golf courses within its service area. DWA will provide rebates to residential, commercial, and municipal customers in its service area. There are three components to implementing the turf reduction program portion of the project as described below.

1. **Develop Guidelines and Specifications.** Guidelines and specifications for each applicable use sector (golf, residential, commercial, municipal, and multi-family) will be prepared based upon the Coachella Valley Association of Governments Water Efficient Landscape Ordinance and upon water budgets set for golf users (CVWD only). Guidelines and specifications will address program specifics such as:
 - i. The amount of funding available per square-foot of turf removed
 - ii. The types of plants that may be used for the conversion (approved plant palette)
 - iii. Requirements for onsite irrigation systems
2. **Outreach.** An outreach program will be developed and implemented based on materials that have been developed for the CV Water Counts Program and information from other agencies that have turf rebate programs in place to raise awareness about the program as well as facilitate users in implementing the program. A program website will be developed and maintained.
3. **Rebate Program.** The program will be administered. CVWD and DWA customers interested in participating will apply. The application will be reviewed and approved by CVWD and DWA. The partners will also conduct pre- and post-visits to customer sites, verification of successful project completion, customer support, and rebate check processing. This includes work to measure and report program progress and budgeted funds for materials and equipment necessary to implement the water-efficient landscape upgrades.

DWA Energy Efficiency Project

DWA operates numerous groundwater wells and associated pumps throughout its service area. Each year Southern California Edison (SCE) performs annual efficiency pump testing at the request of DWA to monitor pump performance and assist in identifying areas for efficiency improvements. All available sites are tested and SCE provides DWA a letter including information gathered and the results of the site's overall efficiency. DWA's Well 20, a 300 horsepower (hp) well, has been a site that has been degrading over time and was identified as a prime target for improved efficiency. DWA experienced similar issues with Well 40 and in 2013, removed the pump for Well 40, refurbished it, and replaced the pump to

improve efficiency. The *DWA Energy Efficiency Project* would be similar in that DWA would hire a contractor to rehabilitate or replace the degraded pump at Well 20. In 2013, SCE performed an energy efficiency test on Well 20 revealing the pumping plant efficiency is currently 54.9%. SCE derived potential improved plant efficiency from past historical performance and the Overall Plant Efficiency Ranges for Wire to Water Testing. SCE estimated efficiency of Well 20 could be improved to 72%. As shown in **Table 3-1**, in 2005 the plant efficiency was as high as 71.7% and has decreased almost every year since then. This project will reduce energy use and reduce greenhouse gas emissions.

Table 3-1: Reduction in Pumping Efficiency for Well 20

Year	Well 20 Pumping Plant Efficiency
2013	54.9%
2012	56.9%
2011	57.2%
2009	61.5%
2007	59.5%
2006	65%
2005	71.7%

Source: SCE Hydraulic Pump Efficiency Test Reports, see **Appendix D**

Implementation of the *DWA Energy Efficiency Project* consists of making improvements to the existing pumping plant at Well 20 in order to improve efficiency. DWA hired McKeever Water Well & Pump Service, Inc. in 2013 to perform a similar project for Well 40. This work will provide the basis for the work plan and budget for the pump improvements at Well 20. A support letter from SCE for the *DWA Energy Efficiency Project* is included in **Appendix E**.

The pump efficiency test results will be provided to a qualified pump contractor to make the efficiency improvements to the pumping station. Improvements could include, but are not limited to: adjusting bowl and impeller assembly, pump overhaul and replacement, motor modifications, screen cleaning, among other improvements and modifications. Exact improvements to the pump will not be known until it is removed from the well and evaluated. To implement this project, DWA will hire a pump contractor to review the pump tests performed by SCE, remove and evaluate the pump, perform improvements and modifications to improve efficiency, and reinstall the pump.

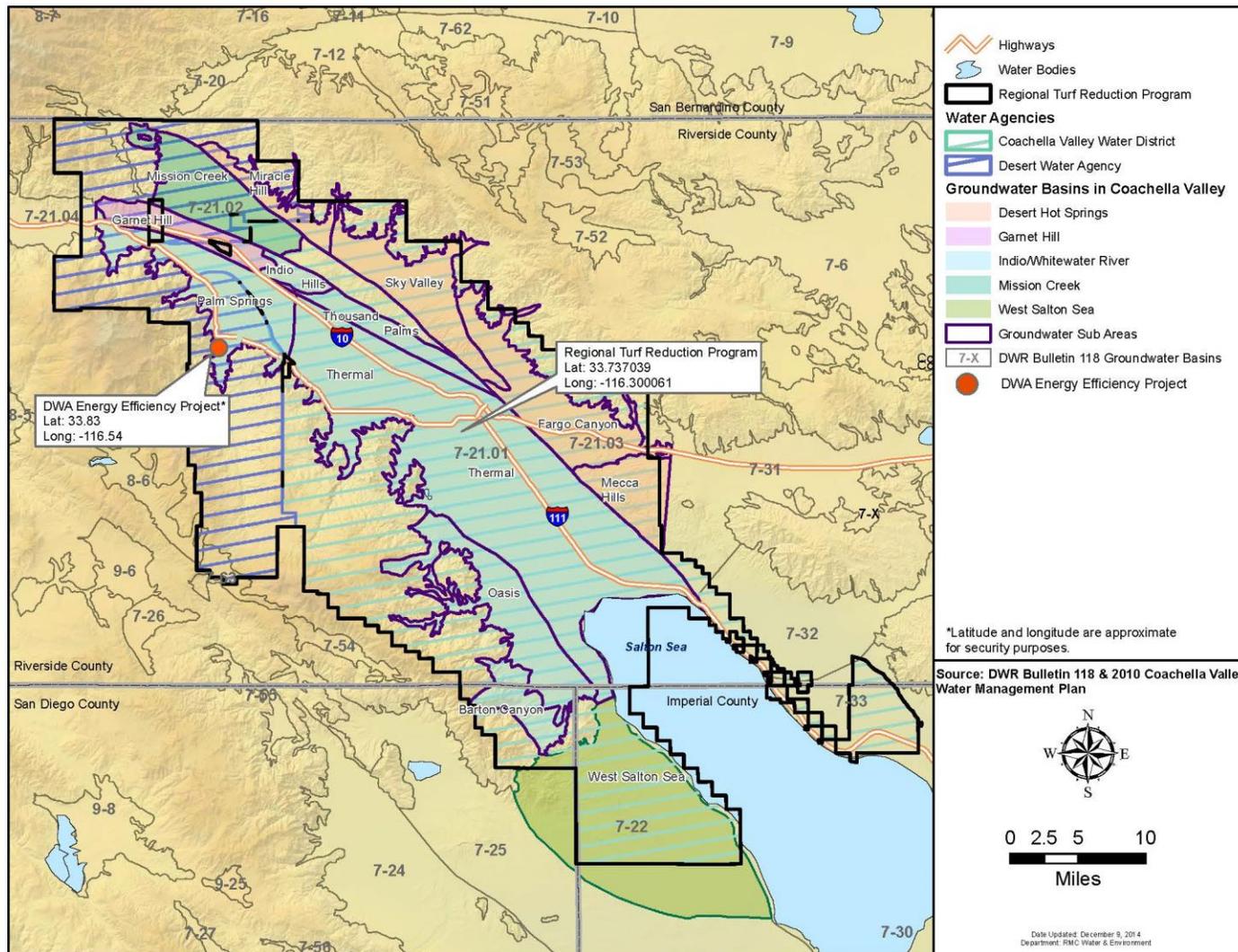
System Map

The following figure is a system map that shows project locations, associated water infrastructure, entity jurisdictional boundaries associated with infrastructure, and area of benefit. *The DWA Energy Efficiency Project* is shown on the map as a red dot. DWA does not release exact locations of its wells, therefore, this location is approximate. The *Regional Turf Reduction Program* will be implemented through the DWA and CVWD service areas. Therefore, the boundary of the Program is congruent with the area of benefit.

Project Proponent/Partner

The applicant for this Water-Energy Grant Proposal is CVWD. CVWD has partnered with DWA to implement the *Regional Turf Reduction Program* and the *DWA Energy Efficiency Project*. As described in detail in Attachment 1, DWA and CVWD have a Letter of Commitment that defines the manner in which grant funding is allocated between the two entities and assures for efficient submittal of requisite materials to DWR.

Figure 3-1: System Map



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Work Plan Tasks

A summary of the tasks required to implement the *Regional Turf Reduction Program* and the *DWA Energy Efficiency Project*, including anticipated tasks necessary to complete the projects, deliverables, and current status of the tasks are described in the following sections.

Regional Turf Reduction Program

Task 1: Direct Project Administration and Reporting

Task 1 will involve grant administration and coordinating with DWR per terms of the Grant Agreement and will also involve coordination between the CVWD and DWA. The task also involves preparation of quarterly progress reports, as well as a final report and post-completion report as required per terms of the Grant Agreement. This work will be completed by the CVWD and DWA and is included in the budget. It is anticipated a Labor Compliance Program will not be required for the *Regional Turf Reduction Program*.

Task 1 Deliverables:

- *Progress reports and invoices*
- *Supporting documentation*
- *Quarterly progress report*
- *Final and post-completion reports*

Task 2: Easement(s)

This task is not applicable as the project does not require easement or property acquisition.

Task 3: Project Evaluation / Design / Engineering

CVWD and DWA have completed substantial work related to conservation and outreach to develop the *Regional Turf Rebate Program*. This work has prepared the project for implementation. CVWD and DWA will develop Program Guidelines and Specifications, but this work has been included in *Task 7: Implementation of the Turf Reduction Program*.

Funding is not being requested for this task as it is already complete.

Task 3 Deliverables:

- *Existing conservation programs to provide a basis for a Regional Turf Reduction Program*

Task 4: Environmental Documentation

Environmental documentation is not required for the *Regional Turf Reduction Program*, because it would not be considered a “project” per definitions established in the California Environmental Quality Act (CEQA). Therefore, no action is required under Task 4 and this task is not included in the budget.

Task 4 Deliverables:

- *None*

Task 5: Permitting

Permits are not required to implement the *Regional Turf Reduction Program*. Funding is not being requested for this task and costs are not included in the budget.

Task 6: Proposal Monitoring Plan

CVWD and DWA will prepare a Proposal Monitoring Plan to describe the tools and methodology to perform project monitoring in order to verify the water and energy savings and greenhouse gas (GHG) reductions. The parameters monitored will be quantifiable and described in the Monitoring Plan. The Plan will be based on the general methodology described in Attachment 6, Proposal Monitoring.

Task 6 Deliverables:

- *Proposal Monitoring Plan*

Task 7: Construction/Implementation

There are three components to implementing the turf reduction program portion of the project as described in Subtasks 7.1 through 7.3.

Subtask 7.1: Develop Guidelines and Specifications

CVWD and DWA will develop guidelines and specifications for each applicable use sector (golf, residential, commercial, municipal, and multi-family). These guidelines and specifications will describe the program in detail and be made available to customers for informational purposes. The guidelines and specifications will be based upon the Coachella Valley Association of Governments Water Efficient Landscape Ordinance and upon water budgets set for golf users (CVWD only). Under this subtask, CVWD and DWA will also develop an application for the customers to complete if interested in receiving a turf rebate.

Preliminary landscape eligibility information from DWA includes the following parameters that will be incorporated into the guidelines and specifications:

- Existing turf in the area must be living (or in the process of being killed off) and irrigated using an in-ground irrigation systems
- Property owner must replace existing high water turf grass with water wise landscaping
- Tamarisk trees are prohibited in the conversion
- Converted areas must be permeable to air and water (non-permeable hardscapes not included in project area)
- Property owner must install a “Smart” irrigation controller
- If the existing irrigation system consists of overhead spray irrigation systems, the conversion area must be converted to micro-irrigation or low application rate rotating nozzles
- The new area must be on a separate irrigation valve from existing remaining turf
- A low-flow irrigation system must be installed on the conversion area
- A pressure regulator and filter are required to be installed to prevent damage to the low-volume irrigation system
- The conversion area must have enough plants to ensure a minimum of 50% living plant cover
- Each plant will be measured using full maturity square footage
- The landscape must be covered with mulch that is permeable to air and water. Some examples include rock, bark, un-grouted pavers, or synthetic turf
- Permeable weed barriers are required; plastic weed barriers are prohibited

Golf course budgets will be developed in accordance with requirements from CVWD and information provided by golf courses. Information required by golf courses to develop water budgets are anticipated to include:

- A description of the golf course’s existing onsite irrigation system
- Data that demonstrates the average amount of groundwater pumping required for golf course irrigation (pre-conversion conditions)
- An overall explanation of the golf course and the areas (likely non-play areas) that will be replaced with water-efficient landscaping

Subtask 7.2: Outreach

CVWD and DWA will continue to implement their existing and highly effective outreach programs, which have led to substantial interest in turf replacement as shown in the support letters included in **Appendix E**. Continued outreach efforts will be conducted to raise awareness about the program as well as facilitate users in implementing the program. It is anticipated that the outreach program will include the following components:

The foundation for outreach will be a microsite (mini web site) that details the program, provides easily accessible information, and holds all of the necessary forms for property owners. The microsite will also include design ideas, how-to assistance, and Frequently Asked Questions.

In addition, an outreach campaign will be implemented that will utilize social media, direct mail, newsletter articles, press releases and other tools. CVWD and DWA have a growing list of customer email addresses which will be utilized to share information regarding the program. DWA and CVWD's current outreach campaigns related to conservation have components regarding turf rebates, which can be enhanced and used in paid and earned advertising campaigns.

CVWD and DWA will also work to secure speaking engagements with community groups, Homeowners' Associations, and other organized groups that have the highest potential to participate in the program.

Subtask 7.3: Rebate Program Implementation and Administration

CVWD and DWA will implement and administer the rebate program. Customers interested in participating will apply using the application developed in Subtask 7.1. The application will be reviewed and approved by CVWD and DWA.

Prior to turf conversion, CVWD and/or DWA will visit the applicant's site. The site will be visited again post-implementation in order to verify successful project completion per terms of the guidelines and specifications developed in Subtask 7.1 and provide customer support. CVWD will also verify that post-conversion water use at golf course sites is in accordance with established water budgets. After an applicant's site is converted and has been confirmed as complete per terms of the rebate program, CVWD and DWA will process the applicant's rebate check.

This subtask also includes work to measure and report program progress and budgeted funds for materials and equipment necessary to implement the water-efficient landscape upgrades. Eligible costs include, but are not limited to: approved water-efficient plants and mulch and hardware (weather-based irrigation controllers, irrigation piping, meters, valves, etc.).

CVWD and DWA will also continually track progress of the program and produce internal memoranda, staff reports, presentations, and other materials to summarize progress. It is anticipated that this information and information obtained from rebate recipients such as lessons-learned will be tracked and compiled for internal use about program success and used externally for outreach purposes.

Finally, CVWD and DWA staff may conduct drive-by inspections as needed. If there is concern that the terms of the program have been violated, CVWD and DWA staff may schedule another visit with the property owner to gain additional information.

Task 7 Deliverables:

- *Program-related guidelines and specifications, including:*
 - *Amount of money available per square-foot or acre of turf replaced*
 - *Plant palette specifications*
 - *Limitations on hardscape*
 - *Irrigation system requirements*
- *Golf course water budgets (CVWD only), including:*
 - *Golf course information, pre-conversion water use, and groundwater pumping information*
- *Outreach campaign specified to different end-users*
- *Microsite (mini website) with program details and forms*
- *Draft design plans and ideas, how-to assistance, FAQs, and other supporting documents*
- *Outreach tools and materials (social media, mailers, newsletters, press releases, etc.)*
- *Site visit reports (pre- and post-) to measure water use and confirm that installations have occurred in accordance with applicable guidelines and specifications*
- *Maps with geographic locations of program participants*
- *Report documenting compliance with water budgets (CVWD only)*

DWA Energy Efficiency Project

Task 1: Direct Project Administration and Reporting

Task 1 will involve grant administration and coordination between the CVWD and DWA. The task also involves preparation of quarterly progress reports, as well as a final report and post-completion report as required per terms of the Grant Agreement. This work will be completed by the CVWD and DWA and is included in the budget. It is anticipated a Labor Compliance Program will not be required for the *DWA Energy Efficiency Project*.

Task 1 Deliverables:

- *Progress reports and invoices*
- *Supporting documentation*
- *Quarterly progress report*
- *Final and post-completion reports*

Task 2: Easement(s)

This task is not applicable as the project does not require easement or property acquisition.

Task 3: Project Evaluation / Design / Engineering

DWA has data demonstrating the inefficiency of the Well 20 pump and need for the *DWA Energy Efficiency Project*. Design and engineering are not conducted for pump rehabilitation since improvements cannot be identified until the pump has been pulled out of the well. The work items and associated costs for determining the specific improvements to the pump are included in *Task 7: Implementation of DWA Energy Efficiency Project*.

Funding is not being requested for this task as it is already complete.

Task 3 Deliverables:

- *SCE Pump Efficiency Tests for Well 20 (refer to **Appendix D**)*.

Task 4: Environmental Documentation

The *DWA Energy Efficiency Project* involves minor alteration of existing facilities at the Well 20 site, resulting in no significant impacts. Therefore, a Categorical Exemption is anticipated for CEQA compliance. The project manager at DWA will complete and file the Notice of Exemption (NOE) with the State Clearinghouse and/or County Clerk.

Task 4 Deliverables:

- *CEQA Notice of Exemption*

Task 5: Permitting

Permits are not required to implement the *DWA Energy Efficiency Project*. Funding is not being requested for this task and costs are not included in the budget.

Task 6: Proposal Monitoring Plan

DWA will prepare a Proposal Monitoring Plan to describe the tools and methodology to perform project monitoring in order to verify the water and energy savings and greenhouse gas (GHG) reductions. The parameters monitored will be quantifiable and described in the Monitoring Plan. The Plan will be based on the general methodology described in Attachment 6, Proposal Monitoring.

Task 6 Deliverables:

- *Proposal Monitoring Plan*

Task 7: Construction/Implementation

Implementation of the DWA Energy Efficiency Project consists of making improvements to the existing pumping plant at Well 20 in order to improve efficiency. DWA hired McKeever Water Well & Pump Service, Inc. in 2013 to perform a similar project for Well 40. This work provides the basis for the work plan and budget for the pump improvements at Well 20. The invoices from the Well 40 work are provided as **Appendix D**.

SCE recommends the pump efficiency test results be provided to a qualified pump contractor to make the efficiency improvements to the pumping plant. Anticipated improvements are described below; exact improvements to the pump will not be known until the pump is removed from the well and evaluated.

DWA will hire a pump contractor to complete the following work items under Subtask 7:

- **Review Existing Information.** The contractor will review the pump tests performed by SCE, as well as original design criteria of Well 20 including flow rates, groundwater level, and total head. Other information that may be reviewed includes well logs and flow data. The contractor will perform a site visit to document existing conditions, equipment, and other information needed to confirm existing data.
- **Perform Improvements.** In order to make the necessary modifications to improve pump efficiency, the contractor will remove the pump from Well 20, evaluate it and identify recommended pump improvements. The recommended improvements will be reviewed with DWA and upon review and discussion, the contractor will perform improvements and modifications to improve efficiency, including:
 - Load up tools and go to well site
 - Remove external casing (fan and electrical wires, etc.)
 - Remove existing 300 horsepower motor
 - Bring existing motor to yard and evaluate efficiency issues
 - Make improvements to address identified efficiency issues
 - Bring refurbished motor back to well site
 - Replace well, check rotation, re-set lateral nut adjustment, reinstall fan and electrical wires
 - Test run the unit to ensure proper operation
- **Restore Site to Existing Conditions.** Upon completion, the contractor will confer with DWA staff that the well has been replaced and is operating per required efficiency standards. Once replacement is complete, contractor will ensure that site is returned to pre-installation conditions.

Task 7 Deliverables:

- *Improved Pump Efficiency at Well 20 from Pump Improvements*

Appendix A: CVWD and DWA Mandatory Water Use Restriction Information



Coachella Valley Water District

Water-use restrictions fact sheet

In response to California's devastating drought and state-mandated restrictions, Coachella Valley Water District (CVWD) implemented mandatory water-use restrictions on Aug. 12, 2014, effective immediately.

What are the restrictions that apply to everyone using domestic water?

1. Irrigate lawns/other landscaping only after sunset and before 10 a.m., except when over-seeding.
2. Use CVWD's *drought watering guide* to irrigate: www.cvwd.org/conservation/wateringguide.php.
3. Repair broken sprinklers within 24 hours of being notified.
4. Do not wash down driveways, sidewalk and other hardscapes.
5. Only use a hose with a shutoff nozzle when washing vehicles, windows, solar panels, tennis courts.
6. Prevent runoff onto a neighbor's property or hardscape such as sidewalks or roads.
7. Operate fountains or other water features only if they recirculate the water.

Some of the listed actions are not prohibited if they are needed to address an immediate health and safety need, use recycled water or if taken to comply with a condition of a state or federal agency-issued permit.

What about businesses?

The above restrictions apply to residents and businesses. In addition:

1. Restaurants can serve water to customers only upon request.
2. Hotels are being asked to place messages in guest rooms promoting water conservation.

What are the fines for violating the restrictions?

First offense is a written warning; 2nd offense is a \$50 fine on the water bill; 3rd offense is a \$100 fine; and 4th offense is a \$200 fine.

What is CVWD doing to help residents and businesses conserve water?

Also on Aug. 12, CVWD approved an additional \$540,000 for conservation programs, increasing funding to nearly \$1.4 million for the fiscal year. Conservation programs include:

1. Residents can receive \$1 a square foot, up to \$1,000 per project (maximum two projects), for converting grass lawns to desert-friendly landscaping. Commercial/large landscape customers can receive up to \$25,000 per project.
2. Smart controllers are free for residents; CVWD will refund half the cost for large landscape customers.
3. Rebates cover the cost of new generation irrigation nozzles (up to \$4 each).
4. Indoor water conservation kits are free for residents:
<http://www.cvwd.org/conservation/residentialkit.php>
5. Residents can receive \$100 rebates for installing a high-efficiency toilet (maximum two per home). Commercial establishments, such as hotels, can receive a rebate of half the cost of installing these water-efficient toilets.
6. Pre-rinse nozzles and water broom sets will be distributed free to restaurants, schools and other commercial, institutional or industrial customers.

Where can I find additional information?

Visit CVWD's website at www.cvwd.org.



IMPORTANT INFORMATION

FOR DWA CUSTOMERS



Water use restrictions went into effect on August 5, 2014

The State Water Resources Control Board enacted emergency regulations on July 15, 2014, for mandatory water conservation that went into effect on July 29, 2014. The regulations implement a series of conservation measures requiring residents and water agencies to reduce water use.

DWA's Board of Directors addressed the emergency regulations during a public hearing on August 5 and moved to implement the Agency's drought contingency plan.

For more information about DWA's conservation programs and for water saving tips, please visit:

As part of DWA's drought contingency plan, the following DWA water use restrictions went into effect beginning August 5, 2014:



Washing hardscape prohibited at any time



Running water for car washing prohibited (bucket allowed, nozzle allowed for rinsing only)



Commercial nurseries may only water between midnight and 6 a.m.



Restaurants may only provide water upon request



Parks, golf courses, and schools may only irrigate landscapes between sunset and sunrise



Lawn watering and construction meter use may only occur between 5 p.m. and 10 a.m.

YOUR PARTNER IN CONSERVING

DESERT WATER



1200 Gene Autry Trail South
PO Box 1710
Palm Springs, CA 92263-1710

Dear DWA Customers,

As you know, Governor Jerry Brown declared a drought emergency earlier this year.

In order to address the record-breaking drought conditions, the State Water Resources Control Board recently implemented numerous emergency drought regulations to ensure that water will be available throughout the summer and into the future.

DWA is committed to conservation and works hard to provide the tools and information necessary to help you save water in your home and/or business.

To ensure that water saving practices are implemented, DWA's Board of Directors has initiated the Agency's drought contingency plan. **Please review the back of this card carefully to find out more about the restrictions that were implemented beginning August 5, 2014.**

Thank you and please do not hesitate to contact us if you have any questions.

Sincerely,

David K. Luker

GENERAL MANAGER AND CHIEF ENGINEER, DESERT WATER AGENCY

Appendix B: Turf Conversion Program Memo





COACHELLA VALLEY WATER DISTRICT

Inter Office Memo

TO: Heather Engel

DATE: October 1, 2014

FROM: Dave Koller

SUBJECT: Conservation Programs Funding Update

Per your request I am providing you with this update on the turf conversion/nozzle rebate program. In short, the public's response to the drought and CVWD's increased outreach has resulted in an unprecedented number of applications for our rebate programs. In the first six weeks since the Board Resolution on August 12, 2014 approving mandated water use restrictions, CVWD has received turf conversion program applications totaling 1,995,000 square feet. In this short time we have received applications for as much turf replacement as we did during the first three years of the program.

Therefore, the purpose of this memo is to provide an estimate of how our conservation program budget allocations compare with the projected expenditures at this point. From past years we know that not all projects applied for will either (a) receive approval, (b) finish during this fiscal year, or (c) convert all the turf applied for. Of the 1,995,000 square feet applied for, we have given the "go-ahead" or approval for approximately 1,321,000 square feet (Table A attached). From past experience, we can project that about 70% of the total turf conversion area approved (924,594 square feet) will finish within this fiscal year at a rebate amount of one dollar per square foot.

Table B shows projected costs for all other rebate programs. Table C shows the combination of all other programs and turf conversions/nozzles. Table D breaks down the FY 2014-15 funding for all conservation rebate and work order programs. (Work orders is the installation of residential smart controllers, not a rebate program.) Finally, Table E provides the overall difference between conservation funding and projected expenditures for FY 2014-15.

In summary, if we approve no more turf conversion/nozzle applications, and all other programs play out as expected, there is still a surplus of approximately \$85,000. Unfortunately, there are turf conversion rebate applications totaling about 674,000 square feet that have not been given the approval to proceed. Consequently, we will either need to acquire more funding for the increased demand, or we will need to stop accepting and approving applications.

Appendix C: DWA 20% Reduction Resolution



RESOLUTION NO. 1090

A RESOLUTION OF THE BOARD OF DIRECTORS OF DESERT WATER AGENCY COMMITTING TO SUSTAINABLE MANAGEMENT OF GROUNDWATER RESOURCES WITHIN ITS JURISDICTION AND CALLING ON ALL CUSTOMERS TO ACHIEVE ADDITIONAL REDUCTIONS IN WATER CONSUMPTION

WHEREAS, Groundwater provides ninety-nine percent of the water used in the Coachella Valley, and Desert Water Agency is responsible for the management of the groundwater basin within its jurisdictional boundaries; and

WHEREAS, Desert Water Agency has been responsibly managing the groundwater basin through long-term efforts to address overdraft for more than 50 years, and will work to continue efforts for sustainable groundwater now and in the future; and

WHEREAS, the United States Geological Survey defines Sustainable Groundwater Management as, “Development and use of groundwater in a manner that can be maintained for an indefinite time without causing unacceptable environmental, economic, or social consequences”, and the State of California, through the Department of Water Resources and the State Water Resources Control Board is developing regulations and procedures for the sustainable management of groundwater; and

WHEREAS, the Association of California Water Agencies, which includes representation from the Desert Water Agency, adopted on March 28, 2014 a policy statement on sustainable groundwater management that defines it as “..the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing unacceptable related environmental, economic or social consequences through the development, implementation and updating of plans and programs based on the best available science, monitoring, forecasting and use of technological resources”; and

WHEREAS, on January 17, 2014 Governor Jerry Brown proclaimed a state of emergency to exist in the State of California due to current drought conditions and has asked all Californians to reduce their water usage by 20 percent; and

WHEREAS, the Board of Directors of Desert Water Agency urges the State of California to move forward in completing the State Water Project including the addition of storage and conveyance facilities to increase system reliability, and

WHEREAS, the Board of Directors of Desert Water Agency has determined that given all of the above described considerations, all necessary and prudent measures will be taken by the Agency to continue the sustainable management of the groundwater basin.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of Desert Water Agency:

1. Is committed to managing for long-term sustainability the groundwater resources within its jurisdiction, including obtaining reliable supplies and reducing customer demand.

2. Acknowledges the ongoing conservation efforts of customers and appreciates their contributions to conserving and preserving our available water supplies, reducing water consumption 20 percent since 2007.

3. Asks all Agency customers to be judicious and prudent with every gallon of water used, and commits to working with our customers so that we achieve an additional 20 percent reduction of water consumption agency-wide.

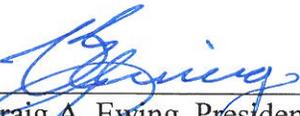
4. Asks all customers to consider specific ways to reduce water use:
- a. Conduct regular inspections of outdoor irrigation systems.
 - b. Replace ornamental turf with desert-appropriate landscaping.
 - c. Inspect and repair leaks inside and outside the home.
 - d. Replace older toilets, dishwasher, and washing machines with new, more water-efficient appliances.

5. Continues to support the State Water Project contract extension and directs staff to remain active in negotiations and regularly report to the Board on the status and outcome of such negotiations.

6. Recognizes that the conditions related to water supplies, including weather, water availability, and State and federal actions, require that the Agency be alert and agile in managing its response to the current drought, and directs staff to use all available resources to assure that the Agency takes maximum advantage of opportunities to obtain and conserve water.

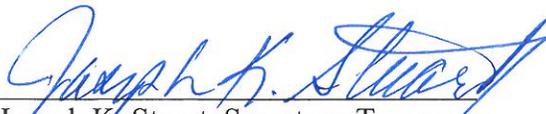
7. Thanks Agency customers for their anticipated cooperation and fully understands that it will take all of us, customers, staff and the Board of Directors of Desert Water Agency to successfully navigate this situation.

ADOPTED this 15th day of April 2014.



Craig A. Ewing, President
Board of Directors

ATTEST:



Joseph K. Stuart, Secretary-Treasurer
Board of Directors

Appendix D: SCE Pump Tests and Pump Removal Invoice Example



January 18, 2013

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALLE HP: 300.0
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on January 14, 2013, billing history for the past 12 months, and your current rate of TOU-PA-B.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 54.9% to 72.0%.
2. This can save you up to 517,131 kWh and \$36,199.19 annually.
3. These kWh savings translate to a 225-ton decrease in CO₂ emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	2,181,324	1,664,193	517,131
kW Input	252.1	192.3	59.8
kWh per Acre Foot	871	664	206
Acre Feet per Year	2,504.6		
Average Cost per kWh	\$0.07		
Average Cost per Acre Foot	\$60.97	\$46.51	\$14.45
Overall Plant Efficiency (%)	54.9	72.0	
Total Annual Cost	\$152,692.68	\$116,493.49	\$36,199.19

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact MIKE POORTENGA at (909)820-5159.

RON FORD
Manager
Hydraulic Services



**Save Energy,
Save Money. . .
Your test results show that you can!**

January 18, 2013

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALLE HP: 300.0
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our Technical Specialist performed a free energy efficiency test on one or more pumps at your facility on January 14, 2013. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Projected Incentive, Energy, and Cost Savings			
	<u>Existing</u>	<u>Improved</u>	<u>Savings</u>	<u>Cash Incentive</u>
Total kWh	2,181,324	1,664,193	517,131	\$41,370.50
kW Input	252.1	192.3	59.8	
kW on-peak activity factor *			38.8	\$3,884.78
Acre Feet per Year	2,504.6			
kWh per Acre Foot	871	664	206	
Average Cost per Acre Foot	\$60.97	\$46.51	\$14.45	
Overall Plant Efficiency (%)	54.9	72.0		
<hr/> Annual Total	<hr/> \$152,692.68	<hr/> \$116,493.49	<hr/> \$36,199.19	<hr/> \$45,255.28

(*The kW on-peak activity factor represents how the kW impacts the SCE system during on-peak periods as determined by SCE's agricultural and water pumping customers' average load profiles. By improving efficiency, your expected kW savings is 59.8 kW, and the savings used for incentive calculations is 65% of 59.8, or 38.8 kW.)

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from **54.9% to 72.0%**.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-B, we estimate that you may save up to 517,131 kWh annually (which translates to a 225-ton decrease in CO₂ emissions). This may result in **energy cost savings of \$36,199.19**.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you have the potential to receive an incentive of \$0.08 per kWh and \$100 per on-peak activity factored kW reduced, courtesy of SCE's Customized Efficiency Program. Based on your estimated kWh and kW, you would be eligible for a **Potential Cash Incentive of \$45,255.28**, capped at 50% of your project cost. (See contract for details.)

If you are interested in an incentive for this pump, please contact **AMY OLSON** at **(909)873-7956** to complete a project application. All applicants must receive a **written approval authorization before** implementing any project; failure to comply will result in forfeiture of incentive funding.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

April 6, 2012

RECEIVED

APR 19 2012

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

**DESERT WATER AGENCY
ENGINEERING**

HYDRAULIC TEST RESULTS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300.0
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref.#: 6708

In accordance with your request, an energy efficiency test was performed on your turbine well pump on April 4, 2012. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

Equipment
Pump: PEER No: 228027
Motor: U S No: 3201810912

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	114.7	133.3	149.8
Standing Water Level, Feet	210.0	210.0	210.0
Drawdown, Feet	2.4	2.0	1.7
Discharge Head, Feet	265.0	307.9	346.0
Pumping Water Level, Feet	212.4	212.0	211.7
Total Head, Feet	477.4	519.9	557.7
Capacity, GPM	1,594	1,475	1,355
GPM per Foot Drawdown	664.2	737.5	797.1
Acre Feet Pumped in 24 Hours	7.045	6.520	5.989
kW Input to Motor	251.7	250.4	247.6
HP Input to Motor	337.5	335.8	332.0
Motor Load (%)	106.4	105.9	104.7
Measured Speed of Pump, RPM	1,774		
Customer Meter, GPM	1,527		
kWh per Acre Foot	858	922	992
Overall Plant Efficiency (%)	56.9	57.7	57.5

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

RON FORD
Manager
Hydraulic Services

April 6, 2012

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300.0
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on April 4, 2012, billing history for the past 12 months, and your current rate of TOU-PA-A.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 56.9% to 72.0%.
2. This can save you up to 459,433 kWh and \$35,008.76 annually.
3. These kWh savings translate to a 200-ton decrease in CO₂ emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	2,195,460	1,736,027	459,433
kW Input	251.7	199.0	52.7
kWh per Acre Foot	858	678	179
Acre Feet per Year	2,560.1		
Average Cost per kWh	\$0.08		
Average Cost per Acre Foot	\$65.35	\$51.67	\$13.67
Overall Plant Efficiency (%)	56.9	72.0	
Total Annual Cost	\$167,294.05	\$132,285.29	\$35,008.76

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

RON FORD
Manager
Hydraulic Services



Save Energy, Save Money. . . Your test results show that you can!

April 6, 2012

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300.0
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref.#: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our Technical Specialist performed a free energy efficiency test on one or more pumps at your facility on April 4, 2012. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Projected Incentive, Energy, and Cost Savings			
	<u>Existing</u>	<u>Improved</u>	<u>Savings</u>	<u>Cash Incentive</u>
Total kWh	2,195,460	1,736,027	459,433	\$41,348.93
kW Input	251.7	199.0	52.7	
kW on-peak activity factor *			34.2	\$3,423.68
Acre Feet per Year	2,560.1			
kWh per Acre Foot	858	678	179	
Average Cost per Acre Foot	\$65.35	\$51.67	\$13.67	
Overall Plant Efficiency (%)	56.9	72.0		
<hr/> Annual Total	<hr/> \$167,294.05	<hr/> \$132,285.29	<hr/> \$35,008.76	<hr/> \$44,772.61

(*The kW on-peak activity factor represents how the kW impacts the SCE system during on-peak periods as determined by SCE's agricultural and water pumping customers' average load profiles. By improving efficiency, your expected kW savings is 52.7 kW, and the savings used for incentive calculations is 65% of 52.7, or 34.2 kW.)

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 56.9% to 72.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-A, we estimate that you may save up to 459,433 kWh annually (which translates to a 200-ton decrease in CO₂ emissions). This may result in **energy cost savings of \$35,008.76.**
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you have the potential to receive an incentive of \$0.09 per kWh and \$100 per on-peak activity factored kW reduced, courtesy of SCE's Customized Efficiency Program. Based on your estimated kWh and kW, you would be eligible for a **Potential Cash Incentive of \$44,772.61**, capped at 50% of your project cost. (See contract for details.)

If you are interested in an incentive for this pump, please contact **Amy Olson** at [redacted] to complete a project application. All applicants must receive a **written approval authorization before** implementing any project; failure to comply will result in forfeiture of incentive funding.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

January 27, 2011

STEVE JOHNSON
 DESERT WATER AGENCY
 P. O. BOX 1710
 PALM SPRINGS, CA 92263

HYDRAULIC TEST RESULTS, Plant: WELL # 20
 Location: 410 AVE CABALRS HP: 300
 Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
 Meter: V349N-2870 Pump Ref.#: 6708

In accordance with your request, an energy efficiency test was performed on your turbine well pump on January 26, 2011. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

Equipment

Pump: PEER No: 228027
 Motor: U S No: 3201810912

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	116.8	133.2	153.4
Standing Water Level, Feet	229.4	229.4	229.4
Drawdown, Feet	1.9	1.7	.5
Discharge Head, Feet	269.8	307.7	354.4
Pumping Water Level, Feet	231.3	231.1	229.9
Total Head, Feet	501.1	538.8	584.3
Capacity, GPM	1,550	1,442	1,323
GPM per Foot Drawdown	815.8	848.2	2,646.0
Acre Feet Pumped in 24 Hours	6.851	6.374	5.848
kW Input to Motor	255.5	253.5	250.7
HP Input to Motor	342.6	339.9	336.2
Motor Load (%)	108.0	107.2	106.0
Measured Speed of Pump, RPM	1,783		
Customer Meter, GPM	1,486		
kWh per Acre Foot	895	955	1,029
Overall Plant Efficiency (%)	57.2	57.7	58.1

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

WILLIAM HAMMOND
 Manager
 Hydraulic Services



January 27, 2011

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on January 26, 2011, billing history for the past 12 months, and your current rate of TOU-PA-A.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 57.2% to 72.0%.
2. This can save you up to 327,604 kWh and \$30,303.40 annually.
3. These kWh savings translate to a 143-ton decrease in CO₂ emissions.

	<u>Existing</u>	<u>Plant Efficiency Improved</u>	<u>Savings</u>
Total kWh	1,598,664	1,271,060	327,604
kWh Input	255.5	203.1	52.4
kWh per Acre Foot	895	712	183
Acre Feet per Year	1,785.8		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$82.81	\$65.84	\$16.97
Overall Plant Efficiency (%)	57.2	72.0	
Total Annual Cost	\$147,876.42	\$117,573.02	\$30,303.40

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

WILLIAM HAMMOND
Manager
Hydraulic Services



**Save Energy,
Save Money. . .
Your test results show that you can!**

January 27, 2011

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our Technical Specialist performed a free energy efficiency test on one or more pumps at your facility on January 26, 2011. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Projected Incentive, Energy, and Cost Savings			
	<u>Existing</u>	<u>Improved</u>	<u>Savings</u>	<u>Cash Incentive</u>
Total kWh	1,598,664	1,271,060	327,604	\$29,484.39
kW Input	255.5	203.1	52.4	
kW on-peak activity factor *			34.0	\$3,403.27
Acre Feet per Year	1,785.8			
kWh per Acre Foot	895	712	183	
Average Cost per Acre Foot	\$82.81	\$65.84	\$16.97	
Overall Plant Efficiency (%)	57.2	72.0		
Annual Total	\$147,876.42	\$117,573.02	\$30,303.40	\$32,887.66

(*The kW on-peak activity factor represents how the kW impacts the SCE system during on-peak periods as determined by SCE's agricultural and water pumping customers' average load profiles. By improving efficiency, your expected kW savings is 52.4 kW, and the savings used for incentive calculations is 65% of 52.4, or 34.0 kW.)

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 57.2% to 72.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-A, we estimate that you may save up to 327,604 kWh annually (which translates to a 143-ton decrease in CO₂ emissions). This may result in **energy cost savings of \$30,303.40.**
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you have the potential to receive an incentive of \$0.09 per kWh and \$100 per on-peak activity factored kW reduced, courtesy of SCE's Customized Efficiency Program. Based on your estimated kWh and kW, you would be eligible for a **Potential Cash Incentive of \$32,887.66**, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for a **Premium Efficiency Motor Incentive**. For more information about your test results, options, and incentive opportunities, contact **AMY OLSON** at (909)873-7956.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

January 28, 2009



STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

HYDRAULIC TEST RESULTS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust #: 0-000-7100 **Serv. Acct. #:** 000-4360-56
Meter: V349N-2870 **Pump Ref. #:** 6708

In accordance with your request, an energy efficiency test was performed on your turbine well pump on January 21, 2009. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

Equipment

Pump:	PEER	No:	228027
Motor:	U S	No:	3201810912

Results	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	114.2	138.8	160.0
Standing Water Level, Feet	219.5	219.5	219.5
Drawdown, Feet	1.8	1.7	1.5
Discharge Head, Feet	263.8	320.6	369.6
Pumping Water Level, Feet	221.3	221.2	221.0
Total Head, Feet	485.1	541.8	590.6
Capacity, GPM	1,713	1,529	1,345
GPM per Foot Drawdown	951.7	899.4	896.7
Acre Feet Pumped in 24 Hours	7.571	6.758	5.945
kW Input to Motor	254.5	253.5	248.0
HP Input to Motor	341.3	339.9	332.6
Motor Load (%)	105.8	105.4	103.1
Measured Speed of Pump, RPM	1,775		
Customer Meter, GPM	1,650		
kWh per Acre Foot	807	900	1,001
Overall Plant Efficiency (%)	61.5	61.5	60.3

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services

January 28, 2009

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

The following energy efficiency analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on January 21, 2009, billing history for the past 12 months, and your current rate of TOU-PA-A.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall plant efficiency can be improved from 61.5% to 72.0%.
2. This can save you up to 245,325 kWh and \$20,558.20 annually.
3. These kWh savings translate to a 107-ton decrease in CO₂ emissions.

	<u>Existing</u>	Plant Efficiency <u>Improved</u>	<u>Savings</u>
Total kWh	1,680,000	1,434,675	245,325
kW Input	254.5	217.3	37.2
kWh per Acre Foot	807	689	118
Acre Feet per Year	2,082.1		
Average Cost per kWh	\$0.08		
Average Cost per Acre Foot	\$67.61	\$57.74	\$9.87
Overall Plant Efficiency (%)	61.5	72.0	
Total Annual Cost	\$140,784.00	\$120,225.80	\$20,558.20

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services



Save Energy, Save Money. . . Your test results show that you can!

January 28, 2009

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref. #: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our technical specialists performed a free energy efficiency test on one or more pumps at your facility on January 21, 2009. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash rebate.

	Plant Efficiency		Savings
	Existing	Improved	
Total kWh	1,680,000	1,434,675	245,325
kW Input	254.5	217.3	37.2
kWh per Acre Foot	807	689	118
Acre Feet per Year	2,082.1		
Average Cost per kWh	\$0.08		
Average Cost per Acre Foot	\$67.61	\$57.74	\$9.87
Overall Plant Efficiency (%)	61.5	72.0	
<hr/>	<hr/>	<hr/>	<hr/>
Total Annual Cost	\$140,784.00	\$120,225.80	\$20,558.20
Cash Incentive			\$22,079.21

Case studies have shown that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 61.5% to 72.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-A, we estimate that you may save up to 245,325 kWh annually (which translates to a 107-ton decrease in CO₂ emissions). This may result in energy cost savings of \$20,558.20.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you would receive an incentive of \$0.09 per kWh saved, courtesy of SCE's Agricultural Energy Efficiency Program. Based on your estimated kWh savings, you would be eligible for a potential cash incentive of \$22,079.21, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for pump motor incentives. For more information about your test results, options, and incentive opportunities, contact CURTIS DEWOODY at (760)951-3256.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

December 14, 2007

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

HYDRAULIC TEST RESULTS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref #: 6708

In accordance with your request, a test was made on your turbine well pump on November 26, 2007. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

Pump Mfg.: PEER No.: 228027
Motor Mfg.: U S No.: 5801810912

RESULTS	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	116.8	138.0	155.0
Standing Water Level, Feet	215.0	215.0	215.0
Drawdown, Feet	.9	.8	.7
Discharge Head, Feet	269.8	318.8	358.1
Pumping Water Level, Feet	215.9	215.8	215.7
Total Head, Feet	485.7	534.6	573.8
Capacity, GPM	1,670.0	1,496.0	1,366.0
GPM per Foot Drawdown	1,855.6	1,870.0	1,951.4
Acre Feet Pumped in 24 Hours	7.381	6.612	6.038
KW Input to Motor	256.5	256.0	253.0
HP Input to Motor	344.0	343.3	339.3
Motor Load (%)	106.6	106.4	105.2
Measured Speed of Pump, RPM	1,777		
kWh per Acre Foot:	834	929	1,006
Overall Plant Efficiency (%)	59.5	58.8	58.3
Customer Meter, GPM	1,634		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services

December 14, 2007

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref #: 6708

The following analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on November 26, 2007, billing history for the past 12 months, and your current rate of TOU-PA-A.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall Plant Efficiency can be improved from 59.5% to 72.0%.
2. This can save you up to 299,787 kWh and \$25,721.71 annually.

	Plant Efficiency		<u>Savings</u>
	<u>Existing</u>	<u>Improved</u>	
Total kWh	1,733,544	1,433,757	299,787
kW Input	256.5	212.1	44.4
kWh per Acre Foot	834	690	144
Acre Feet per Year	2,078.2		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$71.57	\$59.19	\$12.38
Overall Plant Efficiency (%)	59.5	72.0	
Total Annual Cost	\$148,738.08	\$123,016.37	\$25,721.71

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services



**Save energy,
Save money...
Your test results show that you can!**

December 14, 2007

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref #: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our technical specialists performed a free pump-efficiency test on one or more pumps at your facility on November 26, 2007. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Plant Efficiency		Savings
	Existing	Improved	
Total kWh	1,733,544	1,433,757	299,787
kW Input	256.5	212.1	44.4
kWh per Acre Foot	834	690	144
Acre Feet per Year	2,078.2		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$71.57	\$59.19	\$12.38
Overall Plant Efficiency (%)	59.5	72.0	
<hr/> Total Annual Cost	<hr/> \$148,738.08	<hr/> \$123,016.37	<hr/> \$25,721.71
Cash Incentive			\$23,982.96

Case studies show that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be **improved from 59.5% to 72.0%**.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-A, we estimate that you may save up to 299,787 kWh annually, resulting in **energy cost savings of \$25,721.71**.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you would receive an incentive of \$0.08 per kWh saved, courtesy of SCE's Agricultural Energy Efficiency Program. Based on your estimated kWh savings, you would be eligible for a potential **cash incentive of \$23,982.96**, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for pump motor incentives. For more information about your test results, options, and incentive opportunities, **contact CURTIS DEWOODY at (760)951-3256**.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

Program funded by California utility ratepayers, and administered by Southern California Edison under the auspices of the California Public Utilities Commission.

January 26, 2007

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

HYDRAULIC TEST RESULTS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref #: 6708

In accordance with your request, a test was made on your turbine well pump on January 11, 2007. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

Pump Mfg.: PEER No.: 228027
Motor Mfg.: U S No.: 5801810912

RESULTS	<u>Test 1</u>	<u>Test 2</u>	<u>Test 3</u>
Discharge Pressure, PSI	117.0	134.3	157.0
Standing Water Level, Feet	214.2	214.2	214.2
Drawdown, Feet	1.0	1.0	.8
Discharge Head, Feet	270.3	310.2	362.7
Pumping Water Level, Feet	215.2	215.2	215.0
Total Head, Feet	485.5	525.4	577.7
Capacity, GPM	1,681.0	1,540.0	1,355.0
GPM per Foot Drawdown	1,681.0	1,540.0	1,693.7
Acre Feet Pumped in 24 Hours	7.430	6.807	5.989
kW Input to Motor	259.0	258.0	254.5
HP Input to Motor	347.3	346.0	341.3
Motor Load (%)	107.7	107.3	105.8
Measured Speed of Pump, RPM	1,774		
kWh per Acre Foot:	837	910	1,020
Overall Plant Efficiency (%)	59.3	59.1	57.9
Customer Meter, GPM	1,691.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services





January 26, 2007

STEVE JOHNSON
 DESERT WATER AGENCY
 P. O. BOX 1710
 PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
 Location: 410 AVE CABALRS HP: 300
 Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
 Meter: V349N-2870 Pump Ref #: 6708

The following analysis is presented as an aid to your cost accounting. This is an estimate based on the conditions present during the Edison pump test performed on January 11, 2007, billing history for the past 12 months, and your current rate of TOU-PA-A.

Assuming that water requirements will be the same as for the past year, and all operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test, it is estimated that:

1. Overall Plant Efficiency can be improved from 59.3% to 72.0%.
2. This can save you up to 366,486 kWh and \$33,936.56 annually.

	Plant Efficiency		Savings
	Existing	Improved	
Total kWh	2,083,956	1,717,470	366,486
kW Input	259.0	213.5	45.5
kWh per Acre Foot	837	690	147
Acre Feet per Year	2,490.5		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$77.48	\$63.86	\$13.63
Overall Plant Efficiency (%)	59.3	72.0	
Total Annual Cost	\$192,974.33	\$159,037.76	\$33,936.56

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
 Manager
 Hydraulic Services

Save energy,
Save money...
Your test results show that you can!



An EDISON INTERNATIONAL® Company

January 26, 2007

STEVE JOHNSON
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

PUMPING COST ANALYSIS, Plant: WELL # 20
Location: 410 AVE CABALRS HP: 300
Cust. #: 0-000-7100 Serv. Acct. #: 000-4360-56
Meter: V349N-2870 Pump Ref #: 6708

Dear SCE Customer:

Helping California businesses save energy and money is a major goal at SCE. As you know, our technical specialists performed a free pump-efficiency test on one or more pumps at your facility on January 11, 2007. We thank you for the opportunity to provide this service, and appreciate your interest in the performance of your pumps.

The results of the testing, shown in the table below, indicate that the pump listed above has the potential for improved Overall Plant Efficiency (OPE), lower energy costs, and a cash incentive.

	Plant Efficiency		Savings
	Existing	Improved	
Total kWh	2,083,956	1,717,470	366,486
kW Input	259.0	213.5	45.5
kWh per Acre Foot	837	690	147
Acre Feet per Year	2,490.5		
Average Cost per kWh	\$0.09		
Average Cost per Acre Foot	\$77.48	\$63.86	\$13.63
Overall Plant Efficiency (%)	59.3	72.0	
<hr/> Total Annual Cost	<hr/> \$192,974.33	<hr/> \$159,037.76	<hr/> \$33,936.56
Cash Incentive			\$29,318.85

Case studies show that repairing, retrofitting, or replacing inefficient pumps can save energy and money, and may even help you avoid serious operational problems. For your business, this could mean the following:

- **Improved Plant Efficiency:** Your OPE can be improved from 59.3% to 72.0%.
- **Lower Energy Costs:** Based on the test data, your past energy usage, and your current rate of TOU-PA-A, we estimate that you may save up to 366,486 kWh annually, resulting in **energy cost savings of \$33,936.56**.
- **Cash Incentive:** Through the retrofit and installation of more energy-efficient equipment, you would receive an incentive of \$0.08 per kWh saved, courtesy of SCE's Agricultural Energy Efficiency Program. Based on your estimated kWh savings, you would be eligible for a potential **cash incentive of \$29,318.85**, capped at 50% of your project cost. (See contract for details.)

You may also be eligible for pump motor incentives. For more information about your test results, options, and incentive opportunities, **contact CURTIS DEWOODY at (760)951-3256**.

We encourage you to review your results and take advantage of SCE's energy efficiency expertise and incentives. Visit www.sce.com/rebatesandsavings, or give us a call and let us know how we can be of further service to you.

Sincerely,

Southern California Edison

Program funded by California utility ratepayers, and administered by Southern California Edison under the auspices of the California Public Utilities Commission.

CONFIDENTIAL/PROPRIETARY INFORMATION

March 10, 2006

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
DATE OF TEST: March 2, 2006

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: V349E-2811
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	117.2	137.0	154.0
Standing Water Level, Ft.	215.1	215.1	215.1
Drawdown, Ft.	0.5	0.5	0.4
Discharge Head, Ft.	270.7	316.5	355.7
Pumping Water Level, Ft.	215.6	215.6	215.5
Total Head, Ft.	486.3	532.1	571.2
Capacity, GPM	1,811.0	1,626.0	1,442.0
GPM per Ft. Drawdown	3,622.0	3,252.0	3,605.0
Acre Ft. Pumped in 24 Hrs.	8.005	7.187	6.374
kW Input to Motor	255.0	255.6	252.6
HP Input to Motor	342.0	342.8	338.7
Motor Load (%)	106.0	106.3	105.0
Measured Speed of Pump, RPM	1,775		
kWh per Acre Ft.	765	854	951
Overall Plant Efficiency (%)	65.0	63.7	61.4
Customer Meter, GPM	1,740.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services

CONFIDENTIAL/PROPRIETARY INFORMATION

March 10, 2006

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS - HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed March 2, 2006 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved from 65.0% to 72.0%.
These improvements can save you up to 137,774 kWh annually.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY		IMPROVED PLANT EFFICIENCY	
	TOU-PA-A		TOU-PA-A	
	Current Rate	Current Rate	Savings	
	-----	-----	-----	-----
Total kWh	1,424,580	1,286,806	137,774	
kW Input	255.0	230.3	24.7	
kWh per Acre Ft.	765	691	74	
Acre Ft. per Year	1,862.9	1,862.9		
Avg. Cost per kWh	\$0.08			
Avg. Cost per Acre Ft.	\$63.32	\$57.19	\$6.12	
Overall Plant Eff. (%)	65.0	72.0		
	-----	-----	-----	-----
TOTAL ANNUAL COST	\$117,955.22	\$106,547.50	\$11,407.73	

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any additional questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services

CONFIDENTIAL/PROPRIETARY INFORMATION

June 12, 2005

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
DATE OF TEST: May 26, 2005

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: V349E-2811
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	114.2	132.0	142.8
Standing Water Level, Ft.	226.3	226.3	226.3
Drawdown, Ft.	37.7	34.9	32.6
Discharge Head, Ft.	263.8	304.9	329.9
Pumping Water Level, Ft.	264.0	261.2	258.9
Total Head, Ft.	527.8	566.1	588.8
Capacity, GPM	1,898.0	1,757.0	1,681.0
GPM per Ft. Drawdown	50.3	50.3	51.6
Acre Ft. Pumped in 24 Hrs.	8.389	7.766	7.430
kW Input to Motor	261.8	261.9	260.7
HP Input to Motor	351.1	351.2	349.6
Motor Load (%)	108.8	108.9	108.4
Measured Speed of Pump, RPM	1,774		
kWh per Acre Ft.	749	810	842
Overall Plant Efficiency (%)	72.1	71.5	71.5
Customer Meter, GPM	1,750.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services



SOUTHERN CALIFORNIA EDISON

CONFIDENTIAL/PROPRIETARY INFORMATION

June 12, 2005

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed May 26, 2005 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A

Current Rate

Total kWh	865,632
kW Input	261.8
kWh per Acre Ft.	749
Acre Ft. per Year	1,155.6
Avg. Cost per kWh	\$0.10
Avg. Cost per Acre Ft.	\$72.96
Overall Plant Eff. (%)	72.1
-----	-----
TOTAL ANNUAL COST	\$84,312.56

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any additional questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services

me

CONFIDENTIAL/PROPRIETARY INFORMATION

February 20, 2004

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
DATE OF TEST: February 11, 2004

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: V349E-2811
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.3	134.3	156.2
Standing Water Level, Ft.	218.9	218.9	218.9
Drawdown, Ft.	53.3	49.6	44.3
Discharge Head, Ft.	266.3	310.2	360.8
Pumping Water Level, Ft.	272.2	268.5	263.2
Total Head, Ft.	538.5	578.7	624.0
Capacity, GPM	1,702.0	1,583.0	1,410.0
GPM per Ft. Drawdown	31.9	31.9	31.8
Acre Ft. Pumped in 24 Hrs.	7.523	6.997	6.232
kW Input to Motor	255.4	255.4	251.7
HP Input to Motor	342.5	342.5	337.5
Motor Load (%)	106.2	106.2	104.6
Measured Speed of Pump, RPM	1,775		
kWh per Acre Ft.	815	876	969
Overall Plant Efficiency (%)	67.6	67.5	65.8
Customer Meter, GPM	1,681.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

February 20, 2004

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 - SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed February 11, 2004 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY

TOU-PA-A
Current Rate

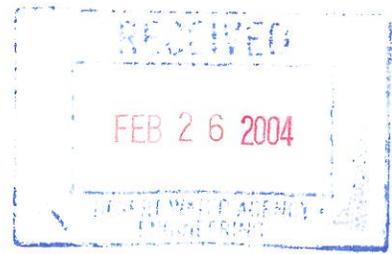
Total kWh	1,156,692
kW Input	255.4
kWh per Acre Ft.	815
Acre Ft. per Year	1,419.3
Avg. Cost per kWh	\$0.10
Avg. Cost per Acre Ft.	\$77.68
Overall Plant Eff. (%)	67.6
-----	-----
TOTAL ANNUAL COST	\$110,255.88

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any additional questions regarding this report, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services



MJK

CONFIDENTIAL/PROPRIETARY INFORMATION

June 22, 2003

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
DATE OF TEST: May 15, 2003

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

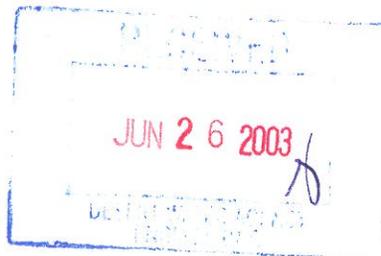
EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: V349E-2811
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.5	131.0	149.5
Standing Water Level, Ft.	210.6	210.6	210.6
Drawdown, Ft.	82.4	78.3	69.9
Discharge Head, Ft.	266.8	302.6	345.3
Pumping Water Level, Ft.	293.0	288.9	280.5
Total Head, Ft.	559.8	591.5	625.8
Capacity, GPM	1,713.0	1,583.0	1,442.0
GPM per Ft. Drawdown	20.8	20.2	20.6
Acre Ft. Pumped in 24 Hrs.	7.571	6.997	6.374
kW Input to Motor	255.4	256.1	256.6
HP Input to Motor	342.5	343.4	344.1
Motor Load (%)	106.2	106.5	106.7
Measured Speed of Pump, RPM	1,774		
kWh per Acre Ft.	810	879	966
Overall Plant Efficiency (%)	70.7	68.8	66.2
Customer Meter, GPM	1,645.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

June 22, 2003

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed May 15, 2003 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A
Current Rate

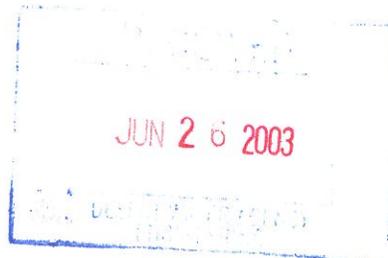
Total kWh	1,478,580
kW Input	255.4
kWh per Acre Ft.	810
Acre Ft. per Year	1,826.1
Avg. Cost per kWh	\$0.11
Avg. Cost per Acre Ft.	\$86.80
Overall Plant Eff. (%)	70.7
-----	-----
TOTAL ANNUAL COST	\$158,503.78

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.

DAN L. JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

May 17, 2002

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
DATE OF TEST: April 9, 2002

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: V349E-2811
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.6	137.2	156.8
Standing Water Level, Ft.	201.7	201.7	201.7
Drawdown, Ft.	52.4	48.2	43.3
Discharge Head, Ft.	267.0	316.9	362.2
Pumping Water Level, Ft.	254.1	249.9	245.0
Total Head, Ft.	521.1	566.8	607.2
Capacity, GPM	1800.0	1702.0	1594.0
GPM per Ft. Drawdown	34.4	35.3	36.8
Acre Ft. Pumped in 24 Hrs.	7.956	7.523	7.045
kW Input to Motor	257.1	253.9	252.9
HP Input to Motor	344.8	340.5	339.1
Motor Load (%)	106.9	105.5	105.1
Measured Speed of Pump, RPM	1775		
kWh per Acre Ft.	776	810	862
Overall Plant Efficiency (%)	68.7	71.5	72.1
Customer Meter, GPM	1745.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

May 17, 2002

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed April 9, 2002 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A
Current Rate

Total kWh	1878132
kW Input	257.1
kWh per Acre Ft.	776
Acre Ft. per Year	2421.2
Avg. Cost per kWh	\$0.10
Avg. Cost per Acre Ft.	\$78.42
Overall Plant Eff. (%)	68.7
-----	-----
TOTAL ANNUAL COST	\$189,879.15

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.

DAN JOHNSON
Manager
Hydraulic Services



CONFIDENTIAL/PROPRIETARY INFORMATION

March 9, 2001

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
DATE OF TEST: February 6, 2001

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: ZYF019-336227
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	117.8	136.0	156.0
Standing Water Level, Ft.	188.7	188.7	188.7
Drawdown, Ft.	45.3	43.6	40.4
Discharge Head, Ft.	272.1	314.2	360.4
Pumping Water Level, Ft.	234.0	232.3	229.1
Total Head, Ft.	506.1	546.5	589.5
Capacity, GPM	1659.0	1496.0	1258.0
GPM per Ft. Drawdown	36.6	34.3	31.1
Acre Ft. Pumped in 24 Hrs.	7.333	6.612	5.560
kW Input to Motor	252.6	254.1	253.6
HP Input to Motor	338.7	340.7	340.1
Motor Load (%)	105.0	105.6	105.4
Measured Speed of Pump, RPM	1778		
kWh per Acre Ft.	827	922	1095
Overall Plant Efficiency (%)	62.6	60.6	55.1
Customer Meter, GPM	1738.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN JOHNSON
Hydraulic/Industrial
Test Supervisor



CONFIDENTIAL/PROPRIETARY INFORMATION

March 9, 2001

MARK KRAUSE
DESERT WATER AGENCY
P. O. BOX 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed February 6, 2001 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY TOU-PA-A Current Rate	IMPROVED PLANT EFFICIENCY TOU-PA-A Current Rate	Savings
Total kWh	1228692	1068159	160533
kW Input	252.6	219.6	33.0
kWh per Acre Ft.	827	719	108
Acre Ft. per Year	1485.9	1485.9	
Avg. Cost per kWh	\$0.08		
Avg. Cost per Acre Ft.	\$63.67	\$55.35	\$8.32
Overall Plant Eff. (%)	62.6	72.0	
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TOTAL ANNUAL COST	\$94,609.28	\$82,248.25	\$12,361.03

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.



DAN JOHNSON
Hydraulic/Industrial
Test Supervisor



CONFIDENTIAL/PROPRIETARY INFORMATION

July 6, 2000

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
410 AVE CABALRS
CIS ACCT: 59-79-351-4100-01
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
DATE OF TEST: May 2, 2000

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: PEER NO: 228027
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	110.4	126.0	134.0
Standing Water Level, Ft.	186.0	186.0	186.0
Drawdown, Ft.	46.4	45.1	43.9
Discharge Head, Ft.	255.0	291.1	309.5
Pumping Water Level, Ft.	232.4	231.1	229.9
Total Head, Ft.	487.4	522.2	539.4
Capacity, GPM	1692.0	1594.0	1540.0
GPM per Ft. Drawdown	36.5	35.3	35.1
Acre Ft. Pumped in 24 Hrs.	7.479	7.045	6.807
kW Input to Motor	243.0	244.0	253.9
HP Input to Motor	325.9	327.2	340.5
Motor Load (%)	101.0	101.4	105.5
Measured Speed of Pump, RPM	1781		
kWh per Acre Ft.	780	831	895
Overall Plant Efficiency (%)	63.9	64.2	61.6
Customer Meter, GPM	1763.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.



DAN JOHNSON
Hydraulic/Industrial
Test Supervisor

CONFIDENTIAL/PROPRIETARY INFORMATION

July 6, 2000

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CIS ACCT: 59-79-351-4100-01
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed May 2, 2000 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY		IMPROVED PLANT EFFICIENCY	
	TOU-PA-A		TOU-PA-A	
	Current Rate	Current Rate	Savings	
Total kWh	551484	489504	61980	
kW Input	243.0	215.7	27.3	
kWh per Acre Ft.	780	692	88	
Acre Ft. per Year	707.1	707.1		
Avg. Cost per Acre Ft.	\$69.57	\$61.75	\$7.82	
Overall Plant Eff. (%)	63.9	72.0		
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TOTAL ANNUAL COST	\$49,192.37	\$43,663.74	\$5,528.63	

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.

DAN JOHNSON
Hydraulic/Industrial
Test Supervisor

MM

CONFIDENTIAL/PROPRIETARY INFORMATION

April 2, 1999

**MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS**

**SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
CIS ACCT: 59-79-351-4100-01
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
410 AVE CABALRS
DATE OF TEST: March 16, 1999**

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

**PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708**

TEST RESULTS	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	112.0	126.5	144.0
Standing Water Level, Ft.	185.4	185.4	185.4
Drawdown, Ft.	47.7	46.2	43.6
Discharge Head, Ft.	258.7	292.2	332.6
Pumping Water Level, Ft.	233.1	231.6	229.0
Total Head, Ft.	491.8	523.8	561.6
Capacity, GPM	1789.0	1692.0	1551.0
GPM per Ft. Drawdown	37.5	36.6	35.6
Acre Ft. Pumped in 24 Hrs.	7.907	7.479	6.855
kW Input to Motor	253.4	255.3	255.8
HP Input to Motor	339.8	342.4	343.0
Motor Load (%)	105.3	106.1	106.3
Measured Speed of Pump, RPM	1775		
kWh per Acre Ft.	769	819	896
Overall Plant Efficiency (%)	65.4	65.4	64.1
Customer Meter, GPM	1750.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

**DAN JOHNSON
Hydraulic/Industrial
Test Supervisor**



CONFIDENTIAL/PROPRIETARY INFORMATION

April 2, 1999

**MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS**

**SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
CIS ACCT: 59-79-351-4100-01
CUST #: 0-000-7100 SERV ACCT #: 000-4360-56
HYDRAULIC TEST REFERENCE NUMBER: 6708**

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed March 16, 1999 and billing history for the past 12 months.

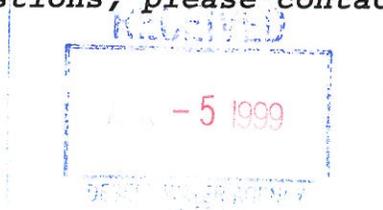
It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY TOU-PA-A Current Rate	IMPROVED PLANT EFFICIENCY TOU-PA-A Current Rate	Savings
Total kWh	963924	875344	88580
kW Input	253.4	230.1	23.3
kWh per Acre Ft.	769	699	71
Acre Ft. per Year	1253.1	1253.1	
Avg. Cost per Acre Ft.	\$62.31	\$56.58	\$5.73
Overall Plant Eff. (%)	65.4	72.0	
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TOTAL ANNUAL COST	\$78,077.84	\$70,902.84	\$7,175.01

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.



**DAN JOHNSON
Hydraulic/Industrial
Test Supervisor**

MAK

CONFIDENTIAL/PROPRIETARY INFORMATION



March 28, 1998

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 59-79-351-4100-01
410 AVE CABALRS
DATE OF TEST: March 3, 1998

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	114.3	130.6	147.0
Standing Water Level, Ft.	195.7	195.7	195.7
Drawdown, Ft.	47.3	45.9	42.2
Discharge Head, Ft.	264.0	301.7	339.6
Pumping Water Level, Ft.	243.0	241.6	237.9
Total Head, Ft.	507.0	543.3	577.5
Capacity, GPM	1713.0	1626.0	1518.0
GPM per Ft. Drawdown	36.2	35.4	36.0
Acre Ft. Pumped in 24 Hrs.	7.571	7.187	6.710
kW Input to Motor	254.1	255.0	254.1
HP Input to Motor	340.7	342.0	340.7
Motor Load (%)	105.6	106.0	105.6
Measured Speed of Pump, RPM	1780		
kWh per Acre Ft.	806	852	909
Overall Plant Efficiency (%)	64.4	65.2	65.0
Customer Meter, GPM	1738.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN JOHNSON
Hydraulic/Industrial
Test Supervisor

MAD

CONFIDENTIAL/PROPRIETARY INFORMATION



March 28, 1998

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 59-79-351-4100-01
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed March 3, 1998 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY TOU-PA-A Current Rate	IMPROVED PLANT EFFICIENCY TOU-PA-A Current Rate	Savings
Total kWh	1419360	1268810	150550
kW Input	254.1	227.1	27.0
kWh per Acre Ft.	806	720	85
Acre Ft. per Year	1761.9	1761.9	
Avg. Cost per Acre Ft.	\$61.22	\$54.73	\$6.49
Overall Plant Eff. (%)	64.4	72.0	
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TOTAL ANNUAL COST	\$107,871.36	\$96,429.60	\$11,441.76

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.

DAN JOHNSON
Hydraulic/Industrial
Test Supervisor

MAK

CONFIDENTIAL/PROPRIETARY INFORMATION

April 18, 1997

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 59-79-351-4100-01
410 AVE CABALRS
DATE OF TEST: April 1, 1997

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)820-5138.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.0	136.2	153.0
Standing Water Level, Ft.	202.3	202.3	202.3
Drawdown, Ft.	44.0	41.1	37.8
Discharge Head, Ft.	265.7	314.6	353.4
Pumping Water Level, Ft.	246.3	243.4	240.1
Total Head, Ft.	512.0	558.0	593.5
Capacity, GPM	1811.0	1702.0	1583.0
GPM per Ft. Drawdown	41.2	41.4	41.9
Acre Ft. Pumped in 24 Hrs.	8.005	7.523	6.997
kW Input to Motor	253.8	255.5	254.7
HP Input to Motor	340.3	342.6	341.6
Motor Load (%)	105.5	106.2	105.9
Measured Speed of Pump, RPM	1774		
kWh per Acre Ft.	761	815	874
Overall Plant Efficiency (%)	68.8	70.0	69.5
Customer Meter, GPM	1771.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

DAN JOHNSON
Hydraulic/Industrial
Test Supervisor



CONFIDENTIAL/PROPRIETARY INFORMATION

April 18, 1997

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 59-79-351-4100-01
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed April 1, 1997 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A
Current Rate

Total kWh	1381560
kW Input	253.8
kWh per Acre Ft.	761
Acre Ft. per Year	1815.2
Avg. Cost per kWh	\$0.08
Avg. Cost per Acre Ft.	\$57.84
Overall Plant Eff. (%)	68.8
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TOTAL ANNUAL COST	\$104,998.56

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)820-5138.



DAN JOHNSON
Hydraulic/Industrial
Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

Received Eng. Dept.

APR 29 1996

Desert Water Agency

April 12, 1996

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 59-79-351-4100-01
410 AVE CABALRS
DATE OF TEST: April 2, 1996

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)930-8417.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	110.4	128.0	148.0
Standing Water Level, Ft.	195.4	195.4	195.4
Drawdown, Ft.	41.9	40.1	37.4
Discharge Head, Ft.	255.0	295.7	341.9
Pumping Water Level, Ft.	237.3	235.5	232.8
Total Head, Ft.	492.3	531.2	574.7
Capacity, GPM	1778.0	1702.0	1583.0
GPM per Ft. Drawdown	42.4	42.4	42.3
Acre Ft. Pumped in 24 Hrs.	7.859	7.523	6.997
kW Input to Motor	252.0	253.3	254.7
HP Input to Motor	337.9	339.7	341.6
Motor Load (%)	104.8	105.3	105.9
Measured Speed of Pump, RPM	1775		
kWh per Acre Ft.	770	808	874
Overall Plant Efficiency (%)	65.4	67.2	67.3
Customer Meter, GPM	1789.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

TOM OLSON
Hydraulic/Industrial Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

April 12, 1996

MARK KRAUSE
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 59-79-351-4100-01
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed April 2, 1996 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 72.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	Savings
	TOU-PA-A Current Rate	TOU-PA-A Current Rate	
Total kWh	1378956	1252723	126233
kW Input	252.0	228.9	23.1
kWh per Acre Ft.	770	699	70
Acre Ft. per Year	1791.5	1791.5	
Avg. Cost per Acre Ft.	\$66.20	\$60.14	\$6.06
Overall Plant Eff. (%)	65.4	72.0	
-----	-----	-----	-----
TOTAL ANNUAL COST	\$118,590.22	\$107,734.17	\$10,856.05

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)930-8417.

TOM OLSON
Hydraulic/Industrial Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

Received Eng. Dept.

MAR 31 1995

Desert Water Agency

March 20, 1995

RAY SWANSON
DESERT WATER AGENCY
P.O.DRAWER 1710
PALMSPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 59-79-351-4100-01
410 AVE CABALRS
DATE OF TEST: March 16, 1995

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact KORY MYERS at (909)930-8430.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.0	130.0	137.0
Standing Water Level, Ft.	195.5	195.5	195.5
Drawdown, Ft.	39.8	38.9	37.8
Discharge Head, Ft.	265.7	300.3	316.5
Pumping Water Level, Ft.	235.3	234.4	233.3
Total Head, Ft.	501.0	534.7	549.8
Capacity, GPM	1735.0	1659.0	1551.0
GPM per Ft. Drawdown	43.6	42.6	41.0
Acre Ft. Pumped in 24 Hrs.	7.669	7.333	6.855
kW Input to Motor	252.1	253.3	253.9
HP Input to Motor	338.1	339.7	340.5
Motor Load (%)	104.8	105.3	105.5
Measured Speed of Pump, RPM	1775		
kWh per Acre Ft.	789	829	889
Overall Plant Efficiency (%)	64.9	65.9	63.2
Customer Meter, GPM	1773.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

TOM OLSON
Hydraulic/Industrial Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

Received Eng. Dept.
MAR 31 1995
Desert Water Agency

March 20, 1995

RAY SWANSON
DESERT WATER AGENCY
P.O.DRAWER 1710
PALMSPRINGS, CA 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 59-79-351-4100-01
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed March 16, 1995 and billing history for the past 12 months.

It is recommended and assumed that:

1. Overall plant efficiency can be improved to 70.0%.
2. Water requirements will be the same as for the past year.
3. All operating conditions (annual hours of operation, head above, and water pumping level) will remain the same as they were at the time of the pump test.

	EXISTING PLANT EFFICIENCY TOU-PA-A Current Rate	IMPROVED PLANT EFFICIENCY TOU-PA-A Current Rate	Savings
Total kWh	886992	822739	64253
kW Input	252.1	233.8	18.3
kWh per Acre Ft.	789	732	57
Acre Ft. per Year	1124.0	1124.0	
Avg. Cost per Acre Ft.	\$71.02	\$65.88	\$5.14
Overall Plant Eff. (%)	64.9	70.0	
-----	-----	-----	-----
TOTAL ANNUAL COST	\$79,829.28	\$74,046.51	\$5,782.77

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued.

If you have any questions, please contact KORY MYERS at (909)930-8430.

TOM OLSON
Hydraulic/Industrial Test Supervisor


Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

May 22, 1994

RAY SWANSON
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA. 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 59-79-351-4100-01
410 AVE CABALRS
DATE OF TEST: April 26, 1994

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)930-8417.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	114.0	128.0	153.0
Standing Water Level, Ft.	197.4	197.4	197.4
Drawdown, Ft.	38.2	36.5	32.6
Discharge Head, Ft.	263.3	295.7	353.4
Pumping Water Level, Ft.	235.6	233.9	230.0
Total Head, Ft.	498.9	529.6	583.4
Capacity, GPM	1822.0	1735.0	1583.0
GPM per Ft. Drawdown	47.7	47.5	48.6
Acre Ft. Pumped in 24 Hrs.	8.053	7.669	6.997
kW Input to Motor	253.6	255.6	255.6
HP Input to Motor	340.1	342.8	342.8
Motor Load (%)	105.4	106.3	106.3
Measured Speed of Pump, RPM	1775		
kWh per Acre Ft.	756	800	877
Overall Plant Efficiency (%)	67.5	67.7	68.0
Customer Meter, GPM	1791.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

TOM OLSON
Hydraulic/Industrial Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

May 22, 1994

RAY SWANSON
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA. 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 59-79-351-4100-01
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed April 26, 1994 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A
Current Rate

Total kWh	1515600
kW Input	253.6
kWh per Acre Ft.	756
Acre Ft. per Year	2005.0
Avg. Cost per kWh	\$0.08
Avg. Cost per Acre Ft.	\$63.50
Overall Plant Eff. (%)	67.5
-----	-----
TOTAL ANNUAL COST	\$127,310.40

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)930-8417.

TOM OLSON
Hydraulic/Industrial Test Supervisor

PUMP TEST

Code 4

District Palm Springs

No. 6708

Name DESERT WATER AGENCY

Ray Swanson

Mailing Address P.O. 1710 - Palm Springs Co. 92263

Energy Ser. Rep. _____

Tel. No. _____

Dist. Mgr. _____

1	CUSTOMER NAME											DIV. 24	CY. 25	DIST. 27	BOOK 29	FOLIO 32
	DESERT WATER AGENCY											4	59	79	381	4100
36 TNSHIP. RANGE			WELL/BOOSTER NO. SEC. TR. SQ. NO.			TYPE	51 CUSTOMER PLANT DESIGNATION				65 DATE OF TEST					
1			-			TW	WELL #20				MO. 04	DAY 26	YR. 94			

2	PUMP LOCATION											23 PUMP MFG.		28 SERIAL NO.	
	410 AVE CABALERS											L & B		N/A	
36 MOTOR MFG.		40 H.P.	43 SERIAL NO.			53 BILL HP	57 ANNUAL KWH			65 PUMP KWH					
WS		300	5801810912				126300								

Impr. Eff. 1 % Motor Eff. _____ % Sht. Off Hd. _____ Ft.

TYPE	MODEL	CODE	FRAME	VOLTS	AMPS	POLES
Huc		F		480	325	4

Remarks _____

3	1 DISCH. P.S.I.	5 STANDING LEVEL	9 PUMPING LEVEL	13 SUCTION P.S.I.	17 SUCTION INCHES	20 PIPE ID.	27 HALL FLO MTR. (GPM)	32 KW INPUT	36 PUMP R.P.M.
	114.0	197.4	235.6			1	18220	2536	1775
40	DISCH. P.S.I.	STANDING LEVEL	PUMPING LEVEL	SUCTION P.S.I.	SUCTION INCHES	PIPE ID.	HALL FLO MTR. (GPM)	KW INPUT	CUST. G.P.M.
	128.0		233.9			1	17350	2556	1791

4	1 DISCH. P.S.I.	5 STANDING LEVEL	9 PUMPING LEVEL	13 SUCTION P.S.I.	17 SUCTION INCHES	20 PIPE ID.	27 HALL FLO MTR. (GPM)	32 KW INPUT
	1530		2300			1	15830	2556

PA-2
\$0.084

TEST POINTS	T#1	T#2	T#3	36 METER NO.	STATE
Discharge Lbs.	114.0	128.0	153.0	P0726K-1103	A
Airline/Suction				Volts 480 D.K. 3.6 M.K. 40	
Drawdown	38.2	36.5	32.6		
Discharge Ft.	263.3	295.7	353.4	Water Level 197.4	
Pumping Level	235.6	233.9	230.0	Gauge No. = Ft.	
Total Head - Ft.	498.3	528.9	583.4	Airline =	
Revs. <u>5</u> Secs.	125.3			Pipe ID 11 3/4	
Cust. G.P.M.	1791			Area 108.43	
Turb.				N.L. Voltage	
Hall Flo Meter	16.8	15.0	14.6	Test Point T#1	
G.P.M.	1822	1735	1583	Volts	474 473 473
G.P.M./Ft. DD	47.7	47.5	48.6	Amps	324 327 324
Acre Ft./24 Hours	8.052	7.668	6.997	Volts Av.	473 @ 325
Revs. 25 Secs.	51.1	50.7	50.7	KVA	265.9 P.F. 95.4
Input KW	253.6	255.6	255.6	Ground	<input type="checkbox"/> Yes <input type="checkbox"/> No
Input HP	339.9	342.5	342.5	Pump Cond.	
Water HP	229.3	232.0	233.2	Switch Board	
B.H.P. @ 93 %	316.1	318.6	318.6	Tank Pres.	Float
% of Load	105	106	106	Ed. On	Off
Pump RPM	1775			Cust. On	Off
KWH/Acre Ft.	755.9	800.1	876.9	Water Meter No.	71 12 178
Over-all Eff.	67.5	67.7	68.1	Cal.	CFX 100

Tested by Swanson

Date 4-26-94



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

April 18, 1993

RAY SWANSON
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA. 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL # 20
ACCT: 4-59-79-351-4100
410 AVE CABALRS
DATE OF TEST: April 8, 1993

In accordance with your request, a test was made on your turbine well pump on the date listed above. If you have any questions regarding the results which follow, please contact TOM LANAGHAN at (909)930-8417.

EQUIPMENT

PUMP: L&B NO: N/A
MOTOR: U S NO: 5801810912 300 HP
METER: PO726K-1103
HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
Discharge Pressure, PSI	115.0	133.8	158.0
Standing Water Level, Ft.	199.2	199.2	199.2
Drawdown, Ft.	35.4	33.4	30.3
Discharge Head, Ft.	265.7	309.1	365.0
Pumping Water Level, Ft.	234.6	232.6	229.5
Total Head, Ft.	500.3	541.7	594.5
Capacity, GPM	1800.0	1702.0	1540.0
GPM per Ft. Drawdown	50.8	51.0	50.8
Acre Ft. Pumped in 24 Hrs.	7.956	7.523	6.807
kW Input to Motor	253.3	255.0	254.1
HP Input to Motor	339.7	342.0	340.7
Motor Load (%)	105.3	106.0	105.6
Measured Speed of Pump, RPM	1783		
kWh per Acre Ft.	764	814	896
Overall Plant Efficiency (%)	66.9	68.1	67.8
Customer Meter, GPM	1801.0		

Test 1 is the normal operation of this pump at the time of the above test(s). The other results were obtained by throttling the discharge.

TOM OLSON
Hydraulic/Industrial Test Supervisor



Southern California Edison Company

1351 EAST FRANCIS STREET
ONTARIO, CALIFORNIA 91761

April 18, 1993

RAY SWANSON
DESERT WATER AGENCY
P. O. DRAWER 1710
PALM SPRINGS, CA. 92263

SUBJECT: PUMPING COST ANALYSIS
HP: 300 - PLANT: WELL # 20
ACCT: 4-59-79-351-4100
HYDRAULIC TEST REFERENCE NUMBER: 6708

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the Edison Pump Test performed April 8, 1993 and billing history for the past 12 months.

EXISTING PLANT EFFICIENCY
TOU-PA-A
Current Rate

Total kWh	675240
kW Input	253.3
Total Annual Cost (\$)	60096.36
Avg. Cost per kWh (\$)	0.089
Avg. Cost per Acre Ft. (\$)	68.02
Acre Ft. per Year	883.5
Overall Plant Eff. (%)	66.9
kWh per Acre Ft.	764

The hydraulic test results indicate that this pump is operating in an efficient manner.

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pump efficiency will be continued.

If you have any questions, please contact TOM LANAGHAN at (909)930-8417.

TOM OLSON
Hydraulic/Industrial Test Supervisor

PUMP TEST Code 4941 District PALM SPRINGS No. 6708

Name DESERT WATER AGENCY

Mailing Address P.O. DRAWER 1710, PALM SPRINGS, CA. 92263

Energy Ser. Rep. _____ Tel. No. _____ Dist. Mgr. _____

1	CUSTOMER NAME										DIV. 24	CY. 25	DIST. 27	BOOK 29	FOLIO 32
	<u>DESERT WATER AGENCY</u>										<u>59</u>	<u>79</u>	<u>35</u>	<u>14</u>	<u>00</u>
WELL/BOOSTER NO. RANGE					CUSTOMER PLANT DESIGNATION					DATE OF TEST					
<u>1 -</u>					<u>TW WELL #20</u>					<u>04 08 93</u>					

2	PUMP LOCATION										PUMP MFG.		SERIAL NO.	
	<u>410 AVE CABALRS</u>										<u>L+B</u>		<u>N/A</u>	
MOTOR MFG.		H.P.		SERIAL NO.			BILL HP		ANNUAL KWH		PUMP KWH			
<u>US</u>		<u>300</u>		<u>5801810912</u>			<u>56270</u>							

Impr. Eff. _____ % Motor Eff. _____ % Sht. Off Hd. _____ Ft.

TYPE	MODEL	CODE	FRAME	VOLTS	AMPS	POLES
<u>HLL</u>		<u>F</u>		<u>480</u>	<u>325</u>	<u>4</u>

3	DISCH. P.S.I.	STANDING LEVEL	PUMPING LEVEL	SUCTION P.S.I.	SUCTION INCHES	PIPE ID.	HALL FLO MTR. (GPM)	KW INPUT	PUMP R.P.M.
	<u>1150</u>	<u>1992</u>	<u>2346</u>			<u>1</u>	<u>18000</u>	<u>2533</u>	<u>1783</u>
40	DISCH. P.S.I.	STANDING LEVEL	PUMPING LEVEL	SUCTION P.S.I.	SUCTION INCHES	PIPE ID.	HALL FLO MTR. (GPM)	KW INPUT	CUST. G.P.M.
	<u>1338</u>	<u>1992</u>	<u>2326</u>			<u>1</u>	<u>17020</u>	<u>2550</u>	<u>1801</u>

4	DISCH. P.S.I.	STANDING LEVEL	PUMPING LEVEL	SUCTION P.S.I.	SUCTION INCHES	PIPE ID.	HALL FLO MTR. (GPM)	KW INPUT	
	<u>1580</u>	<u>1992</u>	<u>2295</u>			<u>1</u>	<u>15400</u>	<u>2541</u>	

TEST POINTS				<u>NOO</u>	<u>TH</u>	<u>1TH</u>		METER NO.		STATE
Discharge Lbs.				<u>115.0</u>	<u>1338</u>	<u>158.0</u>		<u>P0726K-1103</u>		<u>A</u>
Airline/Suction								Volts <u>277</u> D.K. <u>3.6</u> M.K. <u>40</u>		
Drawdown				<u>35.4</u>	<u>33.4</u>	<u>30.3</u>		<u>R.O.A.</u>		
Discharge Ft.				<u>265.7</u>	<u>309.1</u>	<u>365.0</u>		Water Level <u>199.2</u>		
Pumping Level				<u>234.6</u>	<u>232.6</u>	<u>229.5</u>		Gauge No. = _____ Ft.		
Total Head - Ft.				<u>500.3</u>	<u>541.7</u>	<u>574.5</u>		Airline = _____		
Revs. <u>5</u>	Secs.	<u>124.6</u>					Pipe ID <u>1 3/4"</u>			
Cust. G.P.M.				<u>1801</u>			Area <u>108.43"</u>			
Turb.							N.L. Voltage _____			
Hall Flo Meter				<u>16.6</u>	<u>15.7</u>	<u>14.8</u>	Test Point _____			
G.P.M.				<u>1800</u>	<u>1702</u>	<u>1540</u>	Volts	<u>482</u>	<u>480</u>	<u>479</u>
G.P.M./Ft. DD				<u>50.8</u>	<u>51.0</u>	<u>50.8</u>	Amps	<u>332</u>	<u>333</u>	<u>327</u>
Acre Ft./24 Hours				<u>7.956</u>	<u>7.524</u>	<u>6.806</u>	Volts Av. _____			
Revs. <u>30</u>	Secs.	<u>61.4</u>	<u>61.0</u>	<u>61.2</u>			KVA _____ P.F. _____			
Input KW				<u>15552</u>	<u>253.3</u>	<u>258.0</u>	Ground <input type="checkbox"/> Yes <input type="checkbox"/> No			
Input HP				<u>339.4</u>	<u>341.6</u>	<u>340.5</u>	Pump Cond. <u>GOOD</u>			
Water HP				<u>277.4</u>	<u>232.8</u>	<u>231.2</u>	Switch Board <u>GOOD</u>			
B.H.P. @ <u>93</u> %				<u>315.6</u>	<u>317.7</u>	<u>316.7</u>	Tank Pres. _____ Float _____			
% of Load				<u>105.2</u>	<u>105.9</u>	<u>105.6</u>	Ed. On _____ Off _____			
Pump RPM				<u>1783</u>			Cust. On _____ Off _____			
KWH/Acre Ft.				<u>764</u>	<u>814</u>	<u>896</u>	Water Meter No. <u>71 12 178</u>			
Over-all Eff.				<u>67.0</u>	<u>68.2</u>	<u>67.9</u>	Cal. <u>CFX100</u>			

DON'T SLAM CABINET DOOR WITH MOTOR RUNNING - HEATER WILL TRIP

Tested by Lanahan Date 4-8-93

DESSERT WATER AGENCY 59 79 351 4100 01 CC 4 ACTIVE 07/17/72 SUM
 410 AVE CABALERS MTR P07226K-001103 FSR 02 CREW RATE TOU-PA-A

DATE	READ CODE	BILL CODE	METER READ	ACCOUNTS BILLING	HISTORY	DAILY AVG	TOTAL USAGE	TOTAL BILLED
01 03/15/93	1		07171.0	33		1637.6	54040	4911.19
02 02/10/93	1		05820.0	29		1602.8	46480	4025.88
03 01/12/93	1		04658.0	34		3401.2	115640	9613.40
04 12/09/92	1		01767.0	30		2349.3	70480	6052.14
05 11/09/92	1		00005.0	31		14.2	440	486.82
06 10/09/92	1		70551.0	29		9.7	280	466.42
07 09/10/92	1		70544.0	30		437.3	13120	1850.65
08 08/11/92	1		70216.0	33		974.5	32160	3158.85
09 07/09/92	1		69412.0	28		517.1	14480	1725.36
10 06/11/92	1		69050.0	4		20.0	80	65.43
11 06/07/92	1		69048.0	25		5262.4	131560	11126.66
12 05/13/92	1		65759.0	34		5778.8	196480	16728.35
13 04/09/92	1		60847.0	30		942.7	28280	3007.56

HIGHLIGHTED AMOUNTS MAY NOT REFLECT TOTAL BILLED

LOAD CHANGE DATES-
 LOAD CHECK DATE- 09/19/79
 KWH MULTIPLIER- 40
 ENTER TRANSACTION CODE OR PAGING REQUEST-

REACTIVE METER NUMBER-
 REACTIVE MULTIPLIER-

04/09/93 12.51.37 OPID=E*Z,USER=#CE5CZ1,TERM=BNA0,VTAM=VT7G8062,APPLID=CICSTOR2

SOUTHERN CALIFORNIA EDISON COMPANY

FEBRUARY 15, 1990

DESERT WATER AGENCY
 P.O. DRAWER 1710
 PALM SPRINGS, CA 92263

SUBJECT: HYDRAULIC TEST RESULTS - WELL #20
 ACCT: 4-59-79-351-4100
 410 AVENIDA CABALLEROS
 DATE OF TEST: FEBRUARY 5, 1990

IN ACCORDANCE WITH YOUR REQUEST, A TEST WAS MADE ON YOUR TURBINE WELL PUMP ON THE DATE LISTED ABOVE. IF YOU HAVE ANY QUESTIONS REGARDING THE TEST RESULTS WHICH FOLLOW, PLEASE CONTACT T. J. OLSON, (714) 799-1222.

EQUIPMENT

PUMP: L & B NO: N/A
 MOTOR: US 300.0 HP NO: 5801810912
 METER: P0726K-1103
 HYDRAULIC TEST REFERENCE NUMBER: 6708

TEST RESULTS

	TEST 1	TEST 2	TEST 3
DISCHARGE PRESSURE, PSI	114.0	152.0	175.0
STANDING WATER LEVEL, FT	187.0	187.0	187.0
DRAWDOWN, FT	36.7	33.5	30.3
DISCHARGE HEAD, FT	263.3	351.1	404.3
PUMPING WATER LEVEL, FT	223.7	220.5	217.3
TOTAL HEAD, FT	487.0	571.6	621.6
CAPACITY, GPM	1832.0	1605.0	1437.0
GPM PER FT DRAWDOWN	49.9		
ACRE FT PUMPED IN 24 HRS	8.097	7.094	6.352
KW INPUT TO MOTOR	252.0	256.0	252.9
HP INPUT TO MOTOR	337.9	343.3	339.1
MOTOR LOAD(%)	104.8	106.4	105.1
MEASURED SPEED OF PUMP, RPM	1780.		
KWH PER ACRE FT	747.	866.	956.
OVERALL PLANT EFFICIENCY(%)	66.7	67.5	66.5
CUSTOMER'S METER, GPM	1746		

TEST 1 IS THE NORMAL OPERATION OF THIS PUMP AT THE TIME OF THE ABOVE TEST/TESTS. THE OTHER RESULTS WERE OBTAINED BY THROTTLING THE DISCHARGE.

Received Eng. Dept.

FEB 15 1990

L. D. KOVALCIK
 DISTRICT MANAGER

Desert Water Agency

**AcKEEPER WATER WELL
& Pump Service, Inc.**
82-550 Avenue 60
THERMAL, CALIFORNIA 92274
State Lic. #C57-762605

2013
Invoice 12093

(760) 399-4237 or 775-2006
FAX (760) 399-4239

V-6093

Desert Water Agency

RECEIVED

DATE 5/31/13

JOB NO.

1200 Gene Autry Trail

JUN - 7 - 2013

JOB NAME Well 40 installation PO:58236

Palm Springs, CA 92263

JOB LOCATION

TERMS

ACCOUNTING DEPT.

	DESCRIPTION	PRICE	AMOUNT
>	5/9/13 - Load up tools and small parts and 442' of 12" x 3 1/2" x		
	5/22/13 2 3/16" column tube shaft, 6 stage bowl assembly,		
	discharge head, 450 HP motor, secure load, drive to		
	job, set beams, rig up set bowl assembly with toe		
	nipple and cone strainer, 442' of 12" x 3 1/2" x 2/3/16"		
	column tube shaft, 12" x 3 1/2" BWS, 442' of 3/8" airline,		
	set discharge head, take up oil tube tension, set		
	450HP motor and wire up, with boots and lugs, shim		
	head, holt up discharge plumbing, check rotation, set		
	lateral nut adjustment, install fan, test run unit,		
	rig down and return to shop, restock tools.		
	Rig 3 man crew, service truck, labor, material, tax		
>	& freight		\$21,722 00
	AMOUNT DUE		\$21,722 00

Date Invoice Received
Extensions Checked
Quantity & Prices Verified
Payment Approved

52-220-440...-73

Thank You

**KEEVER WATER WELL
& Pump Service, Inc.**
82-550 Avenue 60
THERMAL, CALIFORNIA 92274
State Lic. #C57-762605

V-6093

Invoice 12094

(760) 399-4237 or 775-2006
FAX (760) 399-4239

Desert Water Agency

DATE 5/31/13

JOB NO.

1200 Gene Autry Trail

JOB NAME Well 40 repair PO: 58236

Palm Springs, CA 92263

JOB LOCATION

RECEIVED
JUN - 7 2013
ACCOUNTING DEPT.

TERMS

	DESCRIPTION	PRICE	AMOUNT
> 4/9/13 -	Lay out oil tube and shaft projections, disassemble,		
5/21/13	clean and rebuild 6 stage 15FMM imp# 11.520" on all 6 impellers with the following bore out stages, push out old bushings, turn impellers and machine standard wearings to fit and balance, push in new bronze bushings and ream to fit, machine new suction and discharge case bushings, machine stainless steel bowl shaft and machine new bowl adaptor bearing tube to fit new oil tube. Assemble pump with machine bolts & 12 x 10" toe nipple and 12" cone strainer. Rebuild 442' of 12" x 3 1/2" x 2 3/16" column tube shaft assembly with the following components: inspect 442' column tube shaft assembly, sandblast, clean and rebuild 22) 20' x 12" column pipe, replace 22) 20' x 3 1/2" x 2 3/16" oil tube and shaft assembly, per report to Steve & Mike could not salvage original assembly, supply and install 11) 12" x 3 1/2" tube centralizers. Remachine top make up shaft 2 3/16" DIA x 27" length 1045 steel, remachine top tension tube, 29" x 3 1/2" length, rebuild top guide bearing, rebuild stuffing box.		
	Labor, material, tax & freight		\$49,959 00
	AMOUNT DUE		\$49,959 00
	52-220-648 --- 73		

Date Invoice Received
Extensions Checked
Quantity & Prices Verified
Payment Approved

Thank You

Appendix E: Support Letters





December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent PGA WEST with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like PGA WEST are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Implementing drought tolerant landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

I am currently the President of the Hi-Lo GCSA and have been working with many clubs over the last 12 months that have a very high interest in programs to help assist with turf reduction to drought tolerant landscaping. The potential for hundreds of acres of turf removal could be realized with help through Turf Reduction Program funding.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

A handwritten signature in black ink, appearing to read "D. Miller", is written over the typed name.

Dean Miller
Director of Agronomy for PGA WEST & Hi-Lo GCSA President

VILLAS DE LAS FLORES HOME OWNERS ASSOCIATION

PALM SPRINGS, CALIFORNIA

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express our support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am the Chairman of the Villas De Las Flores Home Owners Association Desert Landscaping Committee. The HOA is a 252 unit condominium complex located in Palm Springs. The complex was built in the mid 1970's when there was abundant water available to support lush landscaping. Given the current drought conditions and the need to be more prudent with this valuable resource, we recognize the need to transform our approximately 15 acres of landscaping to be more desert appropriate. As such our HOA has been actively working to renovate our property's landscaping to be water wise and we have a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers Villas De Las Flores HOA are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,



Scott F. Gaudineer
Chair, Desert Landscaping Committee, Villas De Las Flores HOA

5826 Los Coyotes Drive, Palm Springs, California 92264-6003

cc. Board of Directors, Villas De Las Flores HOA

Coco Cabana Homeowners Association

1881 S. Araby Dr. Palm Springs, CA 92264

Phone # (760) 323-1751 Fax # (760) 320-6990

E-mail address cococabana1881@gmail.com

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent the Coco Cabana Homeowner's Association with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like our HOA are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Gordon Weisgerber
Coco Cabana HOA Board President



The Annenberg Foundation Trust at
SUNNYLANDS

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent The Annenberg Foundation Trust at Sunnylands with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like Sunnylands are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Implementing drought tolerant landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Patrick J. Truchan, CGCS

Director of Operations

December 12, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I'm one of the homeowners representing the Fairways, a homeowner's association with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like us are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration.

Best regards,

Jean-Pierre Bergeron

Landscape committee, The Fairways HOA



RANCHO LA QUINTA
COUNTRY CLUB

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent Rancho La Quinta Country Club with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like Rancho La Quinta are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Implementing drought tolerant landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Stu Rowland

Dir. Golf Course Operations - Rancho La Quinta Country Club

Immediate Past President – Hi-Lo Golf Course Superintendents Association



December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a large group of homeowner's associations with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like my HOA's are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

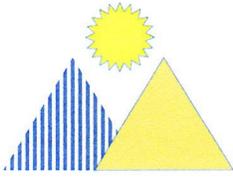
Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Lee Bothe

Owner / Community Manager

Community Association Financial Services



CANYON ESTATES HOMEOWNERS ASSOCIATION

2323 Madrona Drive
Palm Springs, CA 92264

December 12, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express our support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent an association of 254 homes with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like us are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Sincerely,

Jim Sizemore, President

11 December 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express our support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a homeowner's association with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many HOA's, such as ours, are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

For the Board of Directors, Andreas Hills HOA Phase IV

Wayne Burcham-Gulotta,

Vice President (wbg0827@yahoo.com)

AH IV, south Palm Springs, CA 92264

Sunrise East Homeowner Association

P.O. Box 2194, Palm Springs, CA 92263

Office: (760) 600-0067 ~ Phone: (760) 902-0100 ~ Fax: (888) 398-8054

Email: manager@cmadesert.com

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent Sunrise East Homeowner Organization with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like our Association are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Mary Clifford

President

Sunrise East HOA

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am a rate payer and a resident in The Fairways homeowner's association in Palm Springs. Our HOA has a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like our HOA are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Eddie Sullivan
Citizen and Property Owner

The Fairways HOA Palm Springs, CA

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am a rate payer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like myself are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Venie Dunlap
Citizen

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am a rate-payer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like myself are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Janet Wise
6055 Hazeltine Plz
Palm Springs, CA 92264
Citizen and Rate Payer

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I want to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent the Sundance II homeowners' association. Like many HOAs in the area, ours was built in the 1980s when a critical water shortage wasn't on anyone's mind, so we have a strong interest in turf buyback rebate programs, and have explore what the City of Palm Springs and the Desert Water Agency have to offer. We know that the demand for the turf buyback programs locally is significant, so much so that at this time many customers like Sundance II are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Our complex is one of the contributors to with situation. Additionally, our complex has many trees and shrubs. Sundance II has limited funds to pay for the conversion to desert landscaping, but we realize how important it is that we do so. We know that converting to desert landscaping will both save water and reduce energy consumption by decreasing the need for groundwater pumping.

My husband and I recently drove from Palm Springs to Seattle. We passed through the central valley, and we were shocked by what we saw: miles and miles and acres and acres of dead orchards and fields. We don't want to see that kind of devastation in the Coachella Valley, and our HOA wants very much to be part of the solution that prevents that happening here. But we cannot do it without some way to defray some of the costs. At a minimum, a turf buyback grant will allow our plans to happen more quickly.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,



Elise Hamilton
Sundance II HOA Board Treasurer and Landscaping Committee Member
2885 Sundance Cir E, Palm Springs, CA. 92262 / 760-322-8905

Crystal Mohr

From: Katie Ruark <Katie@dwa.org>
Sent: Thursday, December 11, 2014 9:11 PM
To: Crystal Mohr
Subject: Fwd: Letter

Sent from my iPhone

Begin forwarded message:

From: GoodIsam@aol.com
Date: December 11, 2014 at 6:29:23 PM PST
To: Katie@dwa.org
Cc: loriogden@mac.com, jduguid@desertmanagement.com, cf33frazier@dc.rr.com
Subject: Letter

December 12, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent Cathedral Canyon Country Club Association # 10 with a strong interest in turf buyback rebate programs locally is significant, so much so that at this time many customers like association # 10 are on waiting lists for more funding to be available.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Sammuel Donelson
Vice President
Cathedral Canyon Country Club Association # 10
303-596-2269

Crystal Mohr

From: Katie Ruark <Katie@dwa.org>
Sent: Thursday, December 11, 2014 9:11 PM
To: Crystal Mohr
Subject: Fwd: Fairways HOA/34th Street Turf Removal

Sent from my iPhone

Begin forwarded message:

From: "Arenas879@yahoo.com" <arenas879@yahoo.com>
Date: December 11, 2014 at 6:23:36 PM PST
To: "kruark@dwa.org" <kruark@dwa.org>
Subject: Fairways HOA/34th Street Turf Removal
Reply-To: "Arenas879@yahoo.com" <Arenas879@yahoo.com>

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am rate payer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers **like myself** are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Cosimo Aiello
Citizen/Property Owner

Before printing this message, think about the environment.

Douglas B. Willard

P. O. Box 2227

Palm Springs, CA 92263

(818) 694-2342

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I wish to support The Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am a water customer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers are on waiting lists for more funding to be available. In addition, now that awareness of the program has increased, I speak with many local homeowners who are quite interested in exploring reducing the amount of water their property requires.

The Coachella Valley has far too large an amount of turf for a desert climate, particularly in the current California water shortage situation. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Douglas B. Willard

Homeowner

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

We are writing to express our support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. We represent rate-payers with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like ourselves are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Harry & Lana Nikonetz

Harry & Lana Nikonetz
Citizens & Rate-payers

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. As a homeowner in the desert, I have a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers are on still on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

John Colagrande

760-494-6371

Crystal Mohr

From: Katie Ruark <Katie@dwa.org>
Sent: Thursday, December 11, 2014 9:07 PM
To: Crystal Mohr
Subject: Fwd: Turf Buy Back Grant Funding Support! We need your help!

Sent from my iPhone

Begin forwarded message:

From: Jo Anne Gill <jamgill@aol.com>
Date: December 11, 2014 at 5:43:31 PM PST
To: Katie Ruark <Katie@dwa.org>
Subject: Re: Turf Buy Back Grant Funding Support! We need your help!

December 11, 2014
California Dept. Of Water Resources
Division Of Integrated Regional Water Management
P. O. Box 942836
Sacramento, CA 94236

To Whom It May Concern,

I support Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I have participated in my local agency's turf buyback program and have realized a great reduction in my monthly water consumption.

Funding for the program would greatly assist the above mentioned agencies in their effort to reduce and support their customers' water consumption.

Due to the on-going California drought conditions, I would urge you to give this request your utmost support and attention. Please contact me if you would like additional information.

Thank you,
JoAnne M. Gill
2236 E. Paseo Gracia
Palm Springs, CA 92262

Sent from my iPad

On Dec 11, 2014, at 3:14 PM, Katie Ruark <Katie@dwa.org> wrote:

Dear Customers,

I am so sorry to make this request to you so urgently, but we could use your help. DWA and Coachella Valley Water District are applying for a grant to secure more turf buyback funding for the Coachella Valley. We could really use some letters of support from

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I own a home in Desert Park Estates and have a strong interest in the turf buyback rebate program. My water bill is usually about 150.00/month because of my large yard. I was on the waiting list until more money was available and am currently scheduled to have my lawn inspected for the program. The demand for the turf buyback programs locally is significant, so much so that at this time many more customers are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Todd Barnes
626.548.0141

2900 N. Chuperosa Rd.

Palm Springs, Ca. 92262

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am a homeowner with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like myself are on waiting lists for more funding to be available. **Here's the bottom line: cost to remove grass-lawn and replace it with sand and small gravel...no desert plants included...is about \$3.00 per square foot. Average yard size is about 3000 sq ft. Cost is \$9000. The potential rebate of \$3000 is a game-changer.**

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Stephen A. Wald
Citizen 360.689.6485

2105 Tamarisk Rd Palm Springs, CA 92262

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a rate-paying homeowner's association with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like my association are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. We are two years into a lawn removal project of our own in an effort to reduce our water needs but need help to complete the plan.

Thank you,

Gordon Holt, The Fairways HOA

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a rate-payer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like myself are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Darlene & John Backlund,

1640 Miramar Plaza, Palm Springs
Citizen/

California Department of Water Resources
Division of Integrated Regional Water Management
PO Box 942836
Sacramento, CA 94236

December 11, 2014

Dear Sirs:

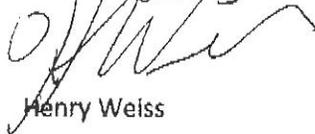
Please consider this letter to be my complete endorsement of the Desert Water Agency's (DWA) application for funding of its Turf Reduction Program. As a resident of Palm Springs for more than 37 years, i am well aware of the amount of water required to initiate and sustain grassy areas. The Coachella Valley is one of the nation's only regions that routinely plants both summer and winter grasses. Consequently, a program designed to subsidize the replacement of grass with equally attractive, but less water intensive, landscaping makes wonderful sense in economic, environmental and aesthetic terms.

I have occasionally investigated the potential benefits of replace my residential grass with "desert landscaping," but the projects always seemed to be too costly, so I deferred them. As I understand the Turf Reduction Program, the DWA would help home and business owners cover some of the costs associated with the switch to desert landscaping, so many more property owners would participate.

I would be pleased to discuss my views on this topic with DWP board members and/or staff at any time. Please feel free to call me (760-778-2513) if you wish to speak with me.

Thanks you for seeking public comments on this most important issue.

Kindest regards,



Henry Weiss

Palm Springs, CA

CANYON HEIGHTS HOMEOWNERS ASSOCIATION
P.O. BOX 1398
PALM DESERT, CA. 92261

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. Canyon Heights HOA has a strong interest in the turf buyback rebate program. We are currently on the waiting list for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. Desert Water Agency has been exemplary in their efforts to educate the community and promote the conservation of our precious water supply. Please give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,



Bob Balistreri, Vice President
Canyon Heights HOA

(760) 904-6483

Canyon Sands Homeowners Association

2269 Miramonte Circle West
Palm Springs, CA 92264
(760) 328•5219 Fax: (760) 328•1160
canyonsandshoa@dc.rr.com

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

The association is writing to express its support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program.

I represent Canyon Sands Homeowners Association. The association has a strong interest in the turf buyback rebate programs. Canyon Sands has a significant amount of turf to remove, the grants which are provided by the Department of Water Resources to Desert Water Agency and Coachella Valley Water District will immediately help lessen the impact of California's current drought situation by aiding owners and homeowners associations to immediately remove turf and convert it to drought tolerant landscaping. We have noticed that the demand for the turf buyback program is so significant that many customers, like Canyon Sands are on waiting lists for more funding to be available.

Due to the significant areas of turf in the Coachella Valley, removal of turf with conversion to desert/drought tolerant landscaping will not only save water immediately but will also reduce energy consumption by decreasing the need for ground water pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use and saving this valuable resource. I would encourage you to give this project careful consideration. Please feel welcome to contact me if you have any questions or would like additional information.

Sincerely,



Sharlene Pierce, CCAM
Association Manager

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I am on the board of the Fairways Homeowner's Association and our HOA has a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Thank you,

Patty Hoyer
HOA Board Member, Fairways Condo Association

December 12, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a water conscious customer with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like myself are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping. In the desert water is a precious commodity and we cannot demand acres of lawn in the middle of the desert. It just doesn't make sense.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Ronald Klemens

Home Owner and conservationist

Palm Springs CA 92262



THE DESERT ISLE OF PALM SPRINGS RESORT

2555 East Palm Canyon Drive, Palm Springs, CA 92264
(760) 327-8469 FAX (760) 322-0143

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent the Desert Isle of Palm Springs Association with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like me are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Charles Wendt

General Manager

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency and Coachella Valley Water District's application for the Turf Reduction Program funding through the Water Energy Grant program. I represent a rate-payer/homeowner's association/group of homeowner's associations with a strong interest in turf buyback rebate programs. The demand for the turf buyback programs locally is significant, so much so that at this time many customers like our HOA are on waiting lists for more funding to be available.

The Coachella Valley has significant areas of turf. Conversion to desert landscaping will not only save water but also reduce energy consumption by decreasing the need for groundwater pumping.

Funding for this program would greatly assist Desert Water Agency and Coachella Valley Water District in their efforts to support their customers in reducing water use. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,

Jack Pray

Past President Cathedral Canyon Country Club HOA #15

December 11, 2014

California Department of Water Resources
Division of Integrated Regional Water Management
Post Office Box 942836
Sacramento, CA 94236

To Whom It May Concern:

I am writing to express my support of Desert Water Agency's Energy Efficiency Project for funding through the Water Energy Grant. Desert Water Agency has demonstrated a significant commitment to energy savings. In addition to retrofitting inefficient equipment, the Agency participates in Southern California Edison's (SCE) Demand Response Program and recently expanded their solar power generating facility to one megawatt.

At this time, Desert Water Agency is applying for funding to rehabilitate or replace the pump at the Agency's Well 20 in order to improve energy efficiency. SCE has performed decades' worth of energy efficiency tests on this pump and has encouraged Desert Water Agency to undergo this effort. SCE estimates that efficiency of this pump could be improved from 54.9% to 72% with an energy savings up to 522,188 kWh/year.

Funding for this project would greatly assist Desert Water Agency in their consistent and effective efforts to reduce their energy demand and consumption. I would encourage you to give this project careful consideration. Please contact me if you have any questions or would like some additional information.

Thank you,



Amy Olson
Account Manager-Water Segment

Southern California Edison

Appendix F: Reference Documents



**COACHELLA VALLEY WATER MANAGEMENT PLAN
2010 UPDATE**

**Administrative Draft
Subsequent Program Environmental Impact Report
SCH No. 2007091099**

Prepared by:

Coachella Valley Water District

**P.O. Box 1058
Coachella, California 92236
(760) 398-2651**

**Steve Robbins
General Manager-Chief Engineer**

**Patti Reyes
Planning and Special Program Manager**

**With Assistance from MWH Americas, Inc.
and Water Consult, Inc.**

July 2011

schools within a half-mile of proposed sites will be notified so that detour routes for emergency responses can be planned for the construction period.

USP-2: Facilities siting, especially adjacent to schools, will consider access and will schedule construction scheduling outside of school sessions. Project specifications shall require that schools will also be notified of construction location, schedule and duration well in advance. Prior to the construction of any facilities, the schools within a half-mile of proposed sites will be notified so that detour routes can be planned for the construction period.

Therefore, the impact on public services and utilities would be less than significant with mitigation incorporated.

8.5 ENERGY RESOURCES AND CONSERVATION

CEQA Guidelines, Appendix F, require that EIRs include a discussion of the potential energy impacts of proposed projects, with emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

8.5.1 Environmental Setting

8.5.1.1 Electricity

IID supplies electricity to the IID service area in Imperial County and to the Coachella Valley area east of Washington Street and north of I-10, which includes Indio, Coachella, La Quinta, 1000 Palms, Sky Valley, Indio Hills, Thermal and Mecca. Over 65 percent of IID’s supply is generated locally using hydroelectric facilities, (geothermal), steam generation facilities, as well as several diesel and natural gas turbines. IID maintains an emergency generation facility in Coachella (IID, 2010a). USEPA reported for 2007 that the SCE and IID fuel mixes were as tabulated below (**Table 8-5**) (USEPA, 2007).

**Table 8-5
Fuel Mix (Power Content Label) Comparison for SCE and IID**

Fuel Source	SCE 2009 (% of total) ^a	IID Projected 2010 (% of total) ^b	2008 CA Power Mix (% of total) ^c
Non-hydro Renewables	15	0.45	1.3
Hydroelectric	6	17.75	18.5
Nuclear	18	4.63	4.6
Natural Gas	51	47.46	41.9
Coal	10	29.48	33.7
Oil and Other	<1.0	0.23	0.0

Source: a = SCE, 2009. b = IID, 2010; c= CEC, 2008.

SCE supplies energy to most of the West Valley. SCE uses a variety of sources to produce electricity: natural gas, hydroelectric plants, nuclear energy, and renewable resources, like solar and wind. Colmac Energy Division operates a 47 megawatt (MW) agricultural waste-to-energy plant on Cabazon Tribal land near Mecca. The energy is sold to SCE (Sacred Power Corporation, 2007).

Section 8 – Human or Built Environment

The area bordering San Geronio, Desert Hot Springs, Cathedral City and North Palm Springs is a designated Wind Energy Policy Area (Riverside County, 2008b). The wind farm contains more than 4,000 separate windmills operated by a number of private firms. The great majority of the energy is sold to SCE, with lesser amounts to the Los Angeles Department of Water and Power and to the City of San Diego.

Geothermal energy is also produced in the study area from the presence of geothermal groundwaters that border and underlie the Salton Sea. An area extending north of Mecca, west of Oasis and east 12 miles from the Salton Sea has geothermal groundwaters, wells and springs. Development of geothermal energy production is underway. In addition, fish farms and greenhouses have located here to take advantage of the warm groundwater. Geothermal groundwaters also exist in the area surrounding Desert Hot Springs in the West Valley.

The SWP is the largest single user of electrical energy in the State; it accounts for 2 to 3 percent of all the electricity consumed in California. The SWP uses an average of 5,000 gigawatt-hours (GWh) per year. The lift of SWP water to the top of the Tehachapi Mountains for delivery to Southern California requires over 2,200 kilowatt-hours per acre-foot (kWh/AF) of water pumped. Delivery of SWP Exchange water to the Coachella Valley requires 3,143 kWh/AF for the SWP plus 2000 kWh/AF of pumping energy to bring exchanged Colorado River water via the CRA to the turnout at Whitewater. Delivery of Colorado River water via the Coachella Canal also requires approximately 2,000 kWh/AF (**Table 8-6**) (CEC, 2010).

The SWP is pursuing a number of energy-efficient projects, including state of the art engineering to make SWP hydroelectric units highly efficient in pumping and generating modes, and is evaluating the feasibility of additional energy efficiency upgrades at the Edmonston Pumping Plant, which would be implemented between 2013 and 2020. The Hyatt facility units were recently refurbished and increased their efficiency from 87-91 percent to 93-95 percent. The decreased power use will be 48,500 MWh per year or 20 MW (equivalent to a 100-acre solar farm) (Water/Energy Sustainability Summit, 2010).

8.5.1.2 Natural Gas

The SCGC supplies natural gas to all consumers within the study area. The main natural gas transmission line runs eastward almost parallel to I-10 between San Geronio and Thousand Palms. From Thousand Palms, the gas line continues eastward at about 3 to 5 miles north of I-10. The gas line meets I-10 and runs parallel to it again at Mecca Hills.

Table 8-6
Existing and Projected Energy Use for the Proposed Project
(kWh/yr unless noted)

Project Component	Avg. Usage (kWh/AF)	2009 Existing Conditions	2020		2045	
			Project	Difference from 2009	Project	Difference from 2009
Project Energy						
West Valley Reclamation	340	4,481,000	6,883,000	2,402,000	9,339,000	4,858,000
West Valley GCs Canal Water (MVP)	497	1,515,000	12,161,000	10,646,000	19,240,000	17,725,000
East Valley GCs Canal Water	0	0	0	0	0	0
East Valley Agr. Canal Water	0	0	0	0	0	0
East Valley Agr. Canal Water Oasis System	338	0	0	0	7,921,000	7,921,000
Levy Facility (Dike 4) Recharge - Pumping	220	7,150,000	8,800,000	1,650,000	8,800,000	1,650,000
Martinez Canyon Recharge	350	1,103,000	1,400,000	297,000	7,000,000	5,897,000
Indio Recharge	0	0	0	0	0	0
East Valley Municipal Canal Water - Treated	410	0	12,300,000	12,300,000	36,900,000	36,900,000
East Valley Municipal Canal Water - Untreated	270	554,000	3,970,000	3,416,000	21,238,000	20,684,000
East Valley Recycled Water	160	62,000	995,000	933,000	5,042,000	4,980,000
Agricultural Drainage Desalination	1,190	0	10,908,000	10,908,000	101,150,000	101,150,000
Total Project Energy		14,865,000	57,417,000	42,552,000	216,630,000	201,765,000
Groundwater Pumping						
West Valley	varies	126,907,000	102,438,000	-24,469,000	102,414,000	-24,493,000
East Valley	varies	69,358,000	36,917,000	-32,441,000	26,194,000	-43,164,000
Total Groundwater Pumping		196,265,000	139,355,000	-56,910,000	128,608,000	-67,657,000
Total Coachella Valley		211,130,000	196,772,000	-14,358,000	345,238,000	134,108,000
Water Importation						
SWP Exchange	3,143	179,226,000	222,803,000	43,577,000	257,963,000	78,737,000
Colorado River & Desal. Drain Exchange	2,000	0	43,208,000	43,208,000	59,878,000	59,878,000
Total Imported Water		179,226,000	266,011,000	86,785,000	317,841,000	138,613,000
Total		390,356,000	462,783,000	72,427,000	663,079,000	272,721,000
Percent Change				18.6%		69.9%

GC = golf course; MVP = Mid-Valley Pipeline; SWP = State Water Project; kWh/AF = kilowatt-hours per acre-foot; kWh/yr = kilowatt-hours per year.

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8.5.1.3 Energy Use at CVWD

Energy is used for well pumping; water delivery; agricultural, golf course and resort irrigation; recycled water pumping; and pumping of imported waters into the study area.

CVWD promotes energy conservation as well as water conservation. CVWD has received rebates from IID for replacement/upgrade of inefficient pumps/motors. IID Energy offers incentives to its commercial customers to encourage energy efficiency, primarily through its Energy Rewards Rebate Program. These rebates are offered for qualifying energy efficient appliances and building improvements (DSIRE, 2010).

CVWD is also taking advantage of the SCE Time of Use-Base Interruptible Program (TOU-BIP) rates and curtailment programs. The TOU-BIP is an interruptible rate designed for customers whose monthly Maximum Demand reaches or exceeds 200 kilowatts (kW) and who commit to curtail at least 15 percent of their Maximum Demand, at least 100 kW per Period of Interruption (SCE, 2010).

The District's new headquarters, under construction at this writing, will meet the LEED (Leadership in Energy and Environmental Design) Green Building Rating System™ Gold standard criteria, which promote “energy savings, water efficiency, CO₂ emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts” (U.S. Green Building Council, 2010). In addition, solar panels will be installed on the carport shade structures that will generate up to 375 kW.

CVWD provides diesel backup power at its Water Reclamation Plants (WRPs), lift stations, office buildings and more than half of its wells to maintain operation in an emergency.

CVWD uses natural gas for its buildings, including the Coachella headquarters, Palm Desert offices, and at the WRP-10 control building. CVWD also uses natural gas for water boilers; for heating, ventilating and air conditioning (HVAC) systems; and for hot water tanks for the hot water spigots throughout the buildings.

8.5.2 Significance Criteria

State CEQA Guidelines, Appendix G, does not present significance criteria related to energy conservation. CEQA Guidelines, Appendix F addresses energy conservation, impacts and mitigation in EIRs, but identifies no specific significance criteria. Since the purpose of the analysis is to “avoid or reduce inefficient, wasteful and unnecessary consumption of energy,” the CVWD would consider a Proposed Project energy impact to be significant if it:

- resulted in the inefficient, wasteful and unnecessary consumption of energy, or
- had significant effects on local and regional energy supplies and on requirements for additional capacity.

8.5.3 Impacts

The 2002 PEIR stated that the Proposed Project was expected to change energy use within and outside the Coachella Valley. Total energy usage was expected to increase due to pumping and treatment. Baseline energy usage for water and wastewater operations (1999 conditions) totaled 541,664,000 kilowatts per year (kWh/yr). With implementation of the 2002 WMP, energy use was projected to increase to 648,443,000 kWh/yr by 2015, an increase of 106,779,000 kWh/yr, and to 700,824,000 kWh/yr by 2035, an increase of 159,160,000 kWh/yr over 1999 conditions.

Implementation of the present Proposed Project is similarly expected to change energy use both within and outside the Coachella Valley. The overall Proposed Project energy demand is projected to increase from 390,356,000 kWh/yr in 2009 to approximately 462,783,000 kWh/yr by 2020, an increase of 72,427,000 kWh/yr or 18.6 percent, and to approximately 663,079,000 kWh/yr by 2045, an increase of approximately 272,723,000 kWh/yr or 69.9 percent over 2009 levels.

Energy use is discussed in terms of energy to operate in-Valley Proposed Project elements and reduction in pumping energy with reduction in overdraft and also in terms of energy to import water to the Valley from the SWP and CRA.

8.5.3.1 In Valley Energy Use

Under the Proposed Project, energy usage within the Valley for facilities is expected to increase due to increased water conveyance to and from treatment plants, tanks, pumping stations and to recharge basins, but overwhelmingly for desalination treatment. At the same time, energy usage for groundwater pumping is expected to decrease under the Proposed Project with reduced pump lifts as groundwater levels rise with the reduction in overdraft.

Existing and projected future energy usage for groundwater pumping has been estimated based upon the following assumptions:

- Total pump lift is based on the sum of depth to water, drawdown and pump discharge head (pressure above ground).
- Depth to water is computed from groundwater model results as the difference between the ground surface and the groundwater table elevations.
- Drawdown is also computed from groundwater model results using estimates of specific capacity and assuming continuous pumping.
- Discharge heads are assumed to average 60 pounds per square inch (psi) for agricultural uses, 70 psi for urban uses and 90 psi for golf courses. Regional weighted averages are computed using the proportion of pumping for the various uses. Thus discharge heads vary over time as usage changes.
- The assumed average wire-to-water energy efficiency is 63 percent (the overall or "wire-to-water" efficiency of a pumping plant is the ratio of work done by a pumping plant to the energy put into the pump, expressed as a percentage).

Section 8 – Human or Built Environment

Table 8-6 summarizes estimated energy requirements of the various components of the Proposed Project. The proposed treatment facilities and pumping stations required to deliver water would be electrically powered, possibly with standby diesel generators in case of outages. The amount of energy required will depend on the specific design of the facilities. Energy will also be required to convey imported water to the study area from the SWP over the Tehachapi Mountains for Metropolitan, as Exchange water in the Metropolitan CRA, and from the Colorado River via the Coachella Canal. The additional energy usage presented in **Table 8-6** is based on the concepts developed for the Proposed Project.

Based on this analysis, the existing (2009) electrical energy demand for water management in the Coachella Valley is approximately 211,130,000 kWh/yr of which groundwater pumping is approximately 196,265,000 kWh/yr, or 93 percent. With implementation of the Proposed Project (water conservation and increased groundwater levels as overdraft is addressed), electrical energy consumption for groundwater pumping is projected to decrease to approximately 139,355,000 kWh/yr by 2020 and to 128,608,000 kWh/yr by 2045, a saving of 56,910,000 kWh/yr (29 percent of pumping energy) by 2020 and 67,657,000 kWh/yr (35 percent of pumping energy) by 2045, compared to 2009 conditions. This is a beneficial effect of the Proposed Project. Total Coachella Valley energy use is projected to decrease from 211,130,000 kWh/yr in 2009 to 196,772,000 kWh/yr by 2020 and then to increase to 345,238,000 kWh/yr by 2045 with implementation of maximum desalination. At the same time, energy use for groundwater pumping would decrease from 196,265,000 kWh/yr to 128,608,000 kWh/yr of which 102,414,000 kWh/yr would be in the West Valley supplied by SCE, and 26,194,000 kWh/yr would be in the East Valley supplied by IID. The net increase in Valley energy use from 2009 to 2045 would be approximately 134,108,000 kWh/yr by 2045.

Operation of Proposed Project components within the Valley represents 52 percent of the total overall anticipated increase in energy use from Proposed Project implementation (as opposed to energy to importation of water from outside the Valley). The projections also reflect that the greatest increase in energy use would occur after 2020, as Proposed Project elements with the highest energy requirements are implemented. These elements are agricultural drainage desalination, treatment of Canal water, treatment of recycled water, and pumping to the completed MVP distribution system for golf course irrigation (**Table 8-6**). Desalination of agricultural drainage would require 101,150,000 kWh/yr.

Energy for WMP projects in the Valley would be supplied by SCE and IID from their own facilities and from the grid. In general, SCE would supply energy for proposed West Valley facilities and IID would supply East Valley facilities. Since the majority of the Proposed Project facilities would be in the East Valley, more of the additional energy would be required from IID. The Proposed Project facilities would contribute to base period demand, and some would contribute to peak demand as well (e.g., pumping for MVP, East Valley Oasis Canal system, and Canal water treatment). Energy for water importation on the Colorado River and SWP Exchange is and would be supplied by a complex of entities.

The proposed in-Valley elements would minimize energy use, avoiding the inefficient, wasteful and unnecessary consumption of energy. The amount of energy required for powering these

facilities, 7 MW by 2045, would have less than significant effects on local and regional energy supplies and on requirements for additional capacity. Total energy supplied by SCE is 5,000 MW (SCE, 2010), and by IID is 1100 MW (IID, 2011). Therefore, a demand of 7 MW is considered to have a less than significant potential impact on local and regional energy supplies and would not require the development of new supplies.

Therefore the energy impacts of in-Valley WMP elements are considered to be less than significant. Mitigation Measures to further reduce these effects are discussed below.

8.5.3.2 Water Importation Energy Use

Water importation to the Valley from the SWP requires energy to pump CVWD and DWA's water over the Tehachapi Mountains into southern California (where Metropolitan takes it) and also energy to pump the SWP Exchange water from the Colorado River to the Whitewater Turnout on the CRA. Energy is also required to move Colorado River water from the All-American Canal into the Coachella Canal, thence into the study area. In 2009, water importation to the Coachella Valley required approximately 179,226,000 kWh/yr. However, energy use in 2009 for water importation on the SWP was lower than average because of ongoing drought and Delta issues – i.e., the amount of water imported was less than usual. Therefore, the projected 2020 and 2045 energy demand increments for SWP Exchange water may be somewhat lower than shown in **Table 8-6**.

Total 2009 energy use estimated for Coachella Valley water importation is approximately 179,226,000 kWh/yr. Under the Proposed Project, water importation will substantially increase total Proposed Project energy use. Energy use for water importation will increase from approximately 179,226,000 kWh/yr to 266,011,000 kWh/yr by 2020 and to approximately 317,841,000 kWh/yr by 2045, increments of 86,785,000 kWh/yr and 138,613,000 kWh/yr, respectively. Additional energy for water importation is estimated to be 16 MW of electricity on the SWP and CRA by 2045.

The SWP is actively pursuing measures to improve energy efficiency of major equipment, is procuring renewable energy through a progressive procurement plan and is using best management practices for its existing facilities to minimize energy use. Metropolitan and suppliers of energy to the CRA, particularly SCE, are similarly pursuing measures to reduce energy consumption and increase renewables.

Energy for water importation to the Coachella Valley, which can be minimized but not eliminated, would not result in the inefficient, wasteful and unnecessary consumption of energy. The anticipated energy requirement for water importation by 2045 under the WMP is estimated to be 16 MW, which is a minor fraction of total energy provided by the power suppliers. Annual net energy use on the SWP is 5.1 GWh (California DWR, 2011) and energy use on the CRA is 325 to 2600 GWh depending on the number of pumps operating (Metropolitan, 2006). Therefore, the energy required for the Proposed Project is considered to be less than significant.

Section 8 – Human or Built Environment

8.5.3.3 Meeting Projected Demands

A recent California Energy Commission (CEC) report projects energy use by supplier and sector from 2010 through 2020. For SCE, projected energy demand is projected to range from approximately 109 to 121 GWh/yr between 2010 and 2020. For IID, the projected increase in energy consumption from 2010 to 2020 is 20 percent, from 4,065 GWh in 2010 to 4,888 GWh in 2020 (CEC, 2009). Long term projected energy demands for the two entities service areas are not available.

Resources plans of these entities to meet long-term projected energy demands also are not yet available. In 2010, IID completed an Integrated Resource Plan for the next 4 years, which states that “beginning in 2012, the District is short significant amounts of capacity and energy with summer capacity deficits exceeding 340 MW” (IID, 2010b). In 2005, SCE submitted to the California Public Utilities Commission (CPUC) Energy Division updates to the SCE 2004 Long Term Procurement Plan (LTPP) for the next 10 years (through 2014). Through the LTPP process, the CPUC approves plans for utilities to purchase energy; establishes policies and utility cost recovery for energy purchases; ensures that the utilities maintain a set amount of energy above what they estimate they will need to serve their customers (called a reserve margin); and implements a long-term energy planning process (CPUC, 2011). SCE has also had difficulty in meeting summer peak demand in its service area.

Proposed Project implementation between 2010 and 2045 will increase demand upon existing sources of energy for construction and more so for operation of proposed facilities. The estimated increase in power required is approximately 272,721,000 kWh/year by 2045 (about 23 MW); of which approximately 139 million kWh/yr (approximately 16 MW) would be for SWP and CRA pumping outside the Valley. This amount is considered to be less than significant, as it would represent a minor fraction of existing increased electricity demand for all uses in the study area.

To put this in perspective, one impetus for the Proposed Project, in addition to addressing overdraft, is to accommodate study area growth and development projected and approved by others. Based on an average of 7,100 kWh/yr per household in the Coachella Valley (KEMA, Inc., 2010) and an estimated 219,075 additional households in the Valley by 2045 (SCAG, 2008), additional energy required to serve projected residential and commercial growth in the study area by 2045 would be approximately 1.6 billion kWh/yr (178 MW) by 2045. Conserving and minimizing energy required for projected growth the Coachella Valley is outside the control of CVWD. The impact of projected growth on energy resources and need for development of additional supplies may be significant, but is not within the control of CVWD. See also the cumulative impact analysis in **Section 9 – Related Projects and Cumulative Impacts**.

8.5.3.4 Potential Sources of Energy

The mix of energy sources for SCE and IID, tabulated above (**Table 8-5**), would be substantially different by 2020 and by 2045, however. On April 12, 2011, California Governor Jerry Brown signed SB X1 2, requiring public and private utilities to obtain 33 percent of their electricity from renewable energy sources by 2020. The new renewable power standard (RPS) established by the bill is anticipated to create new jobs while reducing air pollution and GHG emissions.

Therefore, the future fuel mixes of IID and SCE will change in the future. As shown in **Table 8-5** above, in 2009 SCE derived 21 percent of its energy from hydroelectric power generation and non-hydroelectric renewable energy sources; IID derived 19.8 percent of its energy from these sources.

IID is developing solar and geothermal energy in facilities near the southeastern shore of the Salton Sea (IID, 2010a). Wind energy is being developed in and north of the Coachella Valley with sales to SCE. Both agencies also are investigating other renewable sources, not presented in detail here.

With respect to natural gas, the CEC reports that gas is an increasingly important fuel since more of the state's power plants rely on natural gas. While successful conservation and efficiency programs and renewable sources of electricity should slow the future demand for natural gas, competition for the state's imported supply is increasing.

Imported liquefied natural gas (LNG) is expected to supplement conventional supply sources. Thirteen new LNG terminals are proposed for the West Coast of the U.S. but none have been approved in California or Oregon at this time. Approximately half of the LNG from the new Sempra terminal located between Rosarito and Ensenada in Baja California, which began operation in 2008, would be available to California. A shortage of natural supplies to California is not currently predicted, however (CEC, 2011).

8.5.3.5 Meeting the Proposed Project Energy Supply and Demand

The estimated amount of future energy required for the Proposed Project is based on growth assumptions adopted by SCAG; which will determine, for example, how much if any desalination will be implemented after 2020. Actual energy requirements and sources will emerge over time, as growth does or does not occur, and at what rate. If growth does not occur or occurs at a lower rate than currently predicted, the magnitude of Proposed Project elements and their energy requirements would be similarly reduced.

Valley wide, projected city and county populations and land uses will result in substantial increases in electricity and natural gas usage. CVWD has no control over the demand for energy to serve development. Impacts of growth on energy use also will be potentially significant, but can and should be mitigated by others.

In any case, it is assumed for the WMP that both SCE and IID are planning for long-term growth and associated infrastructure and would be able to supply the Proposed Project elements as they are implemented in the future. CVWD will confer with both agencies on their long term projected WMP energy needs. A total future need of 23 MW is not considered to be outside the range of existing planning. Nevertheless, Proposed Project facilities will be designed to minimize energy consumption in construction and operation and will therefore avoid the wasteful, inefficient and unnecessary consumption of energy. Energy demand can be minimized or reduced, but not avoided or eliminated.

CVWD may implement alternative sources of energy for its own long-term projects (for example, supplying a portion of the desalination by solar or other renewable power), which

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potentially could reduce the demand for energy supplied by SCE or IID. A solar energy facility for desalination would be analyzed in a separate feasibility study and second tier CEQA document. For example, the Tribal Energy and Environmental Information Clearinghouse estimates that a 12 MW solar facility could require approximately 50 to 150 acres of land, depending on the solar technology used (TEEIC, 2011).

In conclusion, the magnitude of energy demand for the Proposed Project is largely a function of population growth. If the population growth does not materialize, then energy usage for the WMP would not need to increase. The Proposed Project impact on long-term energy resources of an additional 23 MW with full implementation of Project elements and with projected growth, even in the absence of long-term plans for resource development by SCE, IID or other suppliers, is considered to be less than significant because it would be a small fraction of the total electricity demand anticipated in the study area for all uses. Mitigation measures to further reduce energy usage are presented below.

8.5.4 Mitigation Measures

Potential energy mitigation measures are presented in State CEQA Guidelines, Appendix F Energy Conservation. Based on that information, the following measures are proposed to further decrease energy usage associated with the Proposed Project:

EN-1: The siting, orientation and design of water and wastewater facilities shall minimize energy consumption, including transportation energy, in compliance with CalGreen and the 2010 Uniform Building Code 2010.

EN-2: Energy conservation, water conservation and solid waste reduction measures shall be incorporated into the design of WMP elements in compliance with CalGreen and the 2010 Uniform Building Code 2010.

EN-3: Operations of WMP elements shall include some or all of the following, as applicable, as energy minimization measures:

- periodic energy audits,
- system modifications to reduce energy use in response to audits, including scheduling to use off-peak power,
- use of low energy demand equipment,
- compliance with LEED certification standards for new structures, and
- evaluation and incorporation of emerging and innovative energy conservation measures.

EN-4: CVWD will continue to develop and use alternative fuels for its own operations, as opportunities arise.

EN-5: CVWD will coordinate with IID and SCE on anticipated energy needs for CVWD operations.