Cortaro Water Users' Association

Automated Gate for Marana Road Canal

Tucson AMA
Cover Page
**Program/Project Title AND Brief Description:** Installation of automatic gate for Marana Road canal. At this location there are currently weir boards that allow a constant flow of .3 cfs to leak through. The automatic gate will keep the water level on Marana Road at a precise preset level without any water leaking through. Any excess or shortage of water will be directed down the main canal where it can be utilized more effectively. The gate will be connected to our SCADA system to allow remote operation.

**Type of Program or Project:**
- [ ] Water Innovation & Technology
- [ ] Infrastructure Water Efficiency
- [ ] Ecological Enhancement
- [ ] Public Outreach & Engagement

**Your level of commitment to maintenance of project benefits and capital improvements:**
- [ ] < 5 years
- [ ] 5-10 years
- [ ] 11-15 years
- [x] 16-20 years

**Applicant Information:**
- **Name/Organization:** Cortaro-Marana Irrigation District
- **Address:** 12253 W Grier Road
- **City:** Marana
- **State:** AZ
- **ZIP Code:** 85653
- **Phone:** 520-682-3233
- **Tax ID No.:** [Redacted]

**AMA:**
- [ ] Phoenix
- [x] Tucson
- [ ] Prescott
- [ ] Pinal
- [ ] Santa Cruz

If the project is located outside of an AMA, it is not eligible for funding.

**Contact Person:**
- **Name:** Doug Greenland
- **Title:** General Manager
- **Phone:** 520-682-3233
- **e-mail:** cmid12253@comcast.net

**Does this project meet any of our priority criteria? If so, which?**
- [x] Additional contribution
- [ ] Innovative qualities
- [ ] Demonstrate high impact
- [ ] Demonstrate multiple benefits

**Water Management Assistance Program Grant Amount Requested:**
- $30,092

**Additional Contribution Obtained and Secured:**

<table>
<thead>
<tr>
<th>Applicant/Agency/Organization</th>
<th>Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Applicant</td>
<td>12,000</td>
</tr>
<tr>
<td>2.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
</tbody>
</table>

**Total:** 12,000

Signature of the undersigned certifies understanding and compliance with all terms, conditions and specifications in the application. Additionally, signature certifies that all information provided by the applicant is true and accurate. The undersigned acknowledges that intentional presentation of any false or fraudulent information, or knowingly concealing a material fact regarding this application is subject to criminal penalties as provided in A.R.S. Title 13. The ADWR Director may approve Grant Awards with modifications to scope items, methodology, schedule, final products and/or budget.

| **Cortaro-Marana Irrigation District/Doug Greenland** |
| **General Manager** |

| **Name of Applicant / Authorized Representative** |
| **Title** |

| **520-682-3233** |
| **Signature** |

| **Date Signed** | 2/13/2020 |
Project Map
Executive Summary
The Cortaro-Marana Irrigation District (CMID) and its agent the Cortaro Water Users’ Association (CWUA) serve approximately 11,000 acres of land and deliver 40,000 ac-ft of water each year. Located in the Northwest part of Marana, the district has 65 miles of canals and over 16 miles of pressurized irrigation pipeline. The canals are cement lined but currently there is no automation of any of the canal gates. The Marana Road turnout is currently controlled by placing wooden boards in the canal and measuring the water with a weir stick. The higher the water level, the more water that will leak through the boards. At low levels the leakage has been found to be .3 cfs or .6 ac-ft per day. During higher flows the waste is at least .5 cfs or 1 ac-ft per day. Given the 7 months of constant running this equals 126-210 ac-ft lost each year. This is also the only turnout we have on the East side of I-10 making it time consuming to check the flow several times each day. The new automatic gate will automatically adjust to keep a preset amount of water flowing down the Marana Road canal. This will keep the canal from flooding and reduce maintenance costs associated with flooding. The gate will be connected to our SCADA system. We will be able to change the settings and monitor the flow at either the office or on mobile devices saving water as well as operator time. There are no power lines in the immediate area so this will all be powered using solar power.
Project Overview
Project Overview

This project will conserve ground water by allowing the exact amount of water needed to go down the Marana Road canal. This is done by eliminating the gaps and water leaking through wooden weir boards and replacing them with an automatic gate that can be programmed remotely or on site for the precise amount of water that is needed. The gate will automatically adjust to any fluctuations in the canal level and continue to send the requested amount of water to the Marana Road Canal. Shortages or excess water will be directed down the main canal where it is more likely to be able to use the excess or make up the shortage of water. This will cause less water to be pumped, helping to reach the Tucson AMA’s goal of safe yield.

To measure the savings associated with this gate installation we will measure the amount of water leaking through the weir boards at different levels of flow and use an average of the measurements. This will then be multiplied by 210 days, which represents the average number of days we have water in this canal. The gate manufacturer says there will be no leakage through the gate which will be verified upon installation.

This project is located on the west bound frontage road of I-10, .2 miles Southeast of the I-10 and the Sandario Road intersection, in Township 11 South, Range 11 East, Section 22 on the mid-section line between the Northwest ¼ section and the Southwest ¼ section. The latitude is 32 Degrees, 27 minutes, 38.26 seconds North and Longitude is 111 Degrees, 12 minutes, and 49.10 seconds West.

Savings realized from this project will benefit all members of the Cortaro Water Users’ Association as it will reduce the operating cost for the association. Please see attachment A for a resolution supporting this project by the CMID and CWUA Board of Directors.

This project will be the first automation of any gate within the district and knowledge gained from it will be used to automate gates at the other turnouts along the main canal. It is anticipated that an additional 6-8 gates will be automated using either the bureau of Reclamation’s WaterSMART program or funds from state or local grants.

The structural design life of the gate is 30 years. Seals, sensors, and motors will need to be replaced on an as needed basis and it is recommended that the cable tension, sensor readings, and testing are done every 6 months. Maintenance support if needed, is available in the Phoenix area.

This project can be duplicated in other areas where precise water control is needed and there is room for a tilting gate. This works best when the gate is placed in a cement head wall with a drop in the down stream direction. These gates are solar powered and therefore can be used in remote areas.
RESOLUTION NO. 2020-2-11A

Cortaro Water Users Association
As agents for Cortaro-Marana Irrigation District

WHEREAS, The Cortaro Water Users' Association Board must maintain, provide for, and service the water delivery system,

WHEREAS, The Board sees the need to improve control structures along its canals to improve water usage efficiency,

WHEREAS, The Board desires to obtain funding from the Arizona Department of Water Resources, Groundwater Users Advisory Council, Tucson Active Management Area, Water Management Assistance Program.

NOW THEREFORE, BE IT RESOLVED that the Board of Directors, agrees and authorizes that:

1. The Water Management Assistance Program project has been reviewed by the Board of Directors and supports the plan and contents therein;

DATED: 11 February 2020
SIGNED:

Daniel Post, Chairman CMID & CWUA

ATTEST:

Laurie Hughes, Secretary
Scope of Work
## Scope of Work

<table>
<thead>
<tr>
<th>Task #</th>
<th>Title</th>
<th>Objective</th>
<th>Description</th>
<th>Responsible Personnel</th>
<th>Deliverable</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Order Gate</td>
<td>Place Gate on order</td>
<td>Order Gate from Rubicon Water</td>
<td>CWUA</td>
<td>Gate ordered accounting for 16-week lead time.</td>
<td>6/1/2020</td>
</tr>
<tr>
<td>2</td>
<td>Order SCADA Cabinet</td>
<td>Place SCADA Cabinet on Order</td>
<td>Order SCADA Cabinet from Interactive Controls Inc.</td>
<td>CWUA</td>
<td>Cabinet ordered accounting for 8-week lead time.</td>
<td>8/1/2020</td>
</tr>
<tr>
<td>3</td>
<td>Installation of Gate</td>
<td>Install gate and test</td>
<td>Installation of Gate from Rubicon Water</td>
<td>CWUA</td>
<td>Gate installed &amp; operative</td>
<td>12/1/2020</td>
</tr>
<tr>
<td>4</td>
<td>Installation of SCADA equipment</td>
<td>Connect gate to SCADA controls</td>
<td>Controls installed and using solar power</td>
<td>Interactive Controls Inc./CWUA</td>
<td>Gate able to be controlled from office or mobile device</td>
<td>1/1/21</td>
</tr>
</tbody>
</table>
Budget Breakdown
APPENDIX 4:

Budget Breakdown & Narrative

<table>
<thead>
<tr>
<th>Budget Categories</th>
<th>Task 1: Order Gate From Rubicon Water</th>
<th>Task 2: Order SCADA from Interactive Controls Inc.</th>
<th>Task 3: Installation of Gate</th>
<th>Task 4: Installation of SCADA Equipment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Personnel</td>
<td>$</td>
<td>$</td>
<td>$324</td>
<td>$648</td>
<td>$972</td>
</tr>
<tr>
<td>b. Fringe Benefits</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>c. Travel</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>d. Equipment</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>e. Supplies</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$400</td>
<td>$400</td>
</tr>
<tr>
<td>f. Contractual</td>
<td>$28,720</td>
<td>$</td>
<td>$</td>
<td>$28,720</td>
<td></td>
</tr>
<tr>
<td>g. Construction</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>h. Other</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>i. Total Direct Charges (sum of a-h)</td>
<td>$28,720</td>
<td>$324</td>
<td>$1,048</td>
<td>$30,092</td>
<td></td>
</tr>
<tr>
<td>j. Indirect Charges</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>k. Totals (sum of i and j)</td>
<td>$28,720</td>
<td>$324</td>
<td>$1,048</td>
<td>$30,092</td>
<td></td>
</tr>
<tr>
<td>Total Program/Project Budget</td>
<td>$28,720</td>
<td>$324</td>
<td>$1,048</td>
<td>$30,092</td>
<td></td>
</tr>
</tbody>
</table>
Budget Narrative
Cortaro Water Users’ Association
As Agents for
Cortaro-Marana Irrigation District

Automated Gate for Marana Road Canal

BUDGET NARRATIVE
FY2020
This project will replace wooden weir boards with a metal automatic gate on the Marana Road canal turnout. Currently the higher the water level in the main canal, the more water that will leak through the weir boards. At low levels the leakage has been found to be .3 cfs or .6 ac-ft per day. During higher flows the waste is at least .5 cfs or 1 ac-ft per day. Given the 7 months of constant running this equals 126-210 ac-ft lost each year. This is also the only turnout we have on the East side of I-10 making it time consuming to check the flow several times each day. The new automatic gate will automatically adjust to keep a preset amount of water flowing down the Marana Road canal. This will keep the canal from flooding and reduce maintenance costs associated with flooding. The gate will be connected to our SCADA system we will be able to change the settings and monitor the flow at either the office or on mobile devices saving water as well as operator time. There are no power lines in the immediate area so this will all be powered using solar power. Rubicon Water will construct, deliver and install the gate for the contracted price. Cortaro Water Users’ Association will have our maintenance lead present for the installation of the gate and our backhoe will be available to lift the gate into position. The cost and Installation of the Automatic Gate, will be paid for using this Grant. Additional funds from Cortaro Water Users’ Association will pay for the cost of the SCADA system.

The total award is proposed to be spent between the tasks as follows:

<table>
<thead>
<tr>
<th>WMAP Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Purchase of Automatic Gate</td>
</tr>
<tr>
<td>2) Purchase of SCADA Equipment-Additional Contribution</td>
</tr>
<tr>
<td>3) Installation of Gate, CWUA Labor</td>
</tr>
<tr>
<td>4) Installation of SCADA Equipment Labor and Supplies</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Task #1 will require less than an hour of work to order the gate and will not be charged to the project. The contracted price for the gate includes construction, and installation is $28,720 and will be performed by Rubicon Water of Fort Collins Colorado and will be part of the groundwater conservation grant.

Task #2 will require less than an hour of work to order the SCADA components and will not be charged to the project.

Task #3 will require an estimated 16 hours of work performed by CWUA’s maintenance leader at the hourly rate of $20.26. This comes to $324. No indirect costs are included.

Task #4 will require an estimated 32 hours of work performed by CWUA’s Maintenance leader at the hourly rate of $20.26. This comes to $648. There will also be an estimated additional $400 worth of wiring & conduit that will be purchased with the grant funds.
<table>
<thead>
<tr>
<th>ITEM</th>
<th>RATE</th>
<th>QTY</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel</td>
<td>$20.26</td>
<td>48</td>
<td>$972</td>
</tr>
<tr>
<td>Fringe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies</td>
<td>$400</td>
<td>1</td>
<td>$400</td>
</tr>
<tr>
<td>Contractual</td>
<td>$28,720</td>
<td>1</td>
<td>$28,720</td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Direct Charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect Charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>$30,092</td>
</tr>
</tbody>
</table>

Task #1 activities will include:

1. Signing the quote for the automatic gate and returning it to Rubicon Water to place the order for the construction and installation of the gate. There is a 16 week lead time once the order is placed.

Task #2 activities will include:

1. Signing the quote for the SCADA components and returning it to Interactive Controls Inc. to place the order for the cabinet and components needed for the SCADA system on order. 6-8 week lead time.

Task #3 activities will include:

1. Overseeing the installation of the automatic gate, seeing how it is assembled, calibrated, and adjusted, as well as setting up a maintenance schedule.

Task #4 activities will include:

1. Installation of electrical conduit, wiring and connecting the SCADA system with the automatic gate and antenna.
Additional Contribution Breakdown
Additional Contribution Breakdown

This project has been approved by the Cortaro Water Users’ Association Board. See attachment A included in the project overview. This includes the approval of funds to connect the automated gate to our SCADA system. The estimate from interactive controls was for $12,000, all of which will be paid for by CWUA. Interactive Controls has already been in contact with Rubicon Water to make sure that we can integrate this gate into our current SCADA system and to ensure that the solar panel will generate enough electricity to power not only the gate but also the SCADA system.

1 SCADA system remote terminal unit controller, and antenna installed and integrated into our current software by Interactive Controls Inc. $12,000
Supplemental Information:

Evidence of Physical and Legal Availability of Water
Physical and Legal Availability of water

The Cortaro Marana Irrigation District has the following permits/rights.

Permit 72-538100.0008 allows 20,000 ac-ft of groundwater storage per year consisting of CAP water and Effluent, as long as we don’t pump a combined total of more than 60,000 ac-ft from the wells listed in the permit. See attachment D

Permit 74-568133 is our recovery well permit and lists the wells we can use for recovery. See attachment E for the list of wells.

Permit 33-43288 shows 1,800 ac-ft of effluent surface water right. See attachment F

4,313 ac-ft of water from the agricultural settlement Pool.

Certificate 1292 allowing for 29,190 ac-ft of surface water for irrigation purposes. See attachment G

Our groundwater storage water is delivered to us through the CAP canal and is our customers water. Because of this we do not have a contract directly with CAP, our contracts are with the CAP customers who want us to store water. In the Past we have stored water for Metro Water, Tucson Water, Spanish Trail Water Company, Arizona Water Banking Authority, the Bureau of Reclamation, and Indian Tribes. In 2020 we are scheduled to receive 9,247 ac-ft of water for storage.

In addition to receiving CAP water, Our main supply of water comes from 43 Wells that we pump water from to meet our irrigation needs.
ARIZONA DEPARTMENT OF WATER RESOURCES
GROUNDWATER SAVINGS FACILITY PERMIT
EIGHTH AMENDED

PERMIT NO. 72-538100.0008

STATE OF ARIZONA )ss.
COUNTY OF MARICOPA )

Pursuant to A.R.S. § 45-814.01(G), the Director hereby issues this eighth amended Groundwater Savings Facility Permit No. 72-538100.0008. This permit renews and replaces Groundwater Savings Facility Permit No. 72-538100.0007 and grants authority to Cortaro-Marana Irrigation District to operate a groundwater savings facility, subject to the following limitations and conditions:

**Permit Limitations**

Permittee: Cortaro-Marana Irrigation District
12253 W. Grier Rd.
Marana, AZ 85653
Recipients: The irrigation grandfathered rightholders located within the Cortaro-Marana Irrigation District

Active Management Area: Tucson

Subbasins: Avra/Altar Valley and Upper Santa Cruz

Grandfathered Groundwater Rights within the External Boundaries of the District under which Groundwater Withdrawals will be Curtailed:

Wells from which Groundwater Withdrawals will be Curtailed:

Sources of In-Lieu Water: See Attachment A of this permit

Central Arizona Project (CAP) Water Effluent

Maximum Savings at Facility: See Attachment B of this permit

20,000 acre-feet per annum, subject to condition 7 of this permit

Permit Effective Date: October 7, 2019

Permit Expiration Date: October 7, 2024

Permit Conditions

1. The permittee shall deliver in-lieu water to the Recipients, as defined in A.R.S. § 45-802.01(14), who have agreed to use the water delivered to the facility directly in lieu of groundwater on a gallon-for-gallon substitute basis.

2. The facility shall be operated pursuant to the documents comprising the Cortaro-Marana Irrigation District Plan of Operation date stamped April 5, 2019 (“Plan of Operation”), which are incorporated into this permit; however, to the extent that the Cortaro-Marana Irrigation District Plan of Operation is inconsistent with the limitations and conditions of this permit, the limitations and conditions supersede the Plan of Operation.

3. The in-lieu water delivered to the facility shall be measured in a manner consistent with the requirements and specifications for water measuring devices adopted pursuant to A.R.S. § 45-604.

4. The facility shall continue to meet the requirements of A.R.S. § 45-812.01 during operation of the facility. If the facility does not meet the requirements of A.R.S. § 45-812.01, the Director of the Arizona Department of Water Resources (“Director”) may
ATTACHMENT A

Groundwater Rights Within the External Boundaries of Facility Under Which Groundwater Withdrawals Will Be Curtailed

<p>| 58-100175.0000 | 58-101956.0006 | 58-108018.0026 | 58-114622.0003 |
| 58-100238.0001 | 58-101956.0010 | 58-108018.0027 | 58-114622.0004 |
| 58-100238.0002 | 58-102481.0001 | 58-108018.0028 | 58-114649.0005 |
| 58-100468.0004 | 58-102502.0004 | 58-108428.0001 | 58-114649.0007 |
| 58-100468.0005 | 58-102502.0005 | 58-108942.0004 | 58-114649.0008 |
| 58-100473.0001 | 58-102519.0002 | 58-108942.0005 | 58-114669.0006 |
| 58-100584.0001 | 58-102963.0001 | 58-109113.0000 | 58-114669.0011 |
| 58-100584.0002 | 58-103040.0001 | 58-109115.0001 | 58-115352.0000 |
| 58-100584.0004 | 58-103236.0000 | 58-109115.0002 | 58-115538.0002 |
| 58-100602.0001 | 58-103237.0001 | 58-109144.0000 | 58-115635.0001 |
| 58-100602.0002 | 58-103238.0000 | 58-109149.0000 | 58-115713.0000 |
| 58-100670.0001 | 58-103246.0001 | 58-109176.9999 | 58-117247.0001 |
| 58-100831.0000 | 58-103937.0002 | 58-109891.0002 | 58-160001.0002 |
| 58-100858.0001 | 58-103937.0004 | 58-109891.0003 | 58-160001.0004 |
| 58-100968.0005 | 58-104967.0001 | 58-110689.0000 | 58-160001.0005 |
| 58-100968.0006 | 58-106468.0000 | 58-110690.0001 | 58-160002.0000 |
| 58-100968.0007 | 58-106537.0001 | 58-110991.0001 | 58-160003.0000 |
| 58-100968.0008 | 58-108018.0007 | 58-111065.0000 | 58-160005.0000 |
| 58-100968.0009 | 58-108018.0008 | 58-111536.0002 | 58-160006.0004 |
| 58-100968.0010 | 58-108018.0009 | 58-112400.0003 | 58-160006.0006 |
| 58-100968.0011 | 58-108018.0014 | 58-112400.0004 | 58-160007.0000 |
| 58-101150.0006 | 58-108018.0016 | 58-112857.0001 | 58-160008.0001 |
| 58-101150.0009 | 58-108018.0019 | 58-112857.0002 | 58-160017.0001 |
| 58-101152.0002 | 58-108018.0021 | 58-113494.0004 | 58-160021.0000 |
| 58-101350.0007 | 58-108018.0024 | 58-113494.0005 | 58-160037.0001 |
| 58-101508.0000 | 58-108018.0025 | 58-113546.0003 | 58-160079.0000 |</p>
<table>
<thead>
<tr>
<th>CMID</th>
<th>DWR</th>
<th>CMID</th>
<th>DWR</th>
</tr>
</thead>
<tbody>
<tr>
<td>well</td>
<td>NO. 55-</td>
<td>well</td>
<td>NO. 55-</td>
</tr>
<tr>
<td>8J</td>
<td>604855</td>
<td>1</td>
<td>604800</td>
</tr>
<tr>
<td>16D1</td>
<td>604854</td>
<td>2</td>
<td>604801</td>
</tr>
<tr>
<td>16D2</td>
<td>604837</td>
<td>3</td>
<td>604802</td>
</tr>
<tr>
<td>16F1</td>
<td>503931</td>
<td>4</td>
<td>604803</td>
</tr>
<tr>
<td>16L</td>
<td>604833</td>
<td>5</td>
<td>604804</td>
</tr>
<tr>
<td>16P</td>
<td>604834</td>
<td>6</td>
<td>604805</td>
</tr>
<tr>
<td>17I1</td>
<td>604835</td>
<td>7</td>
<td>604806</td>
</tr>
<tr>
<td>21B</td>
<td>562833</td>
<td>8</td>
<td>604807</td>
</tr>
<tr>
<td>21C1</td>
<td>604830</td>
<td>9</td>
<td>503290</td>
</tr>
<tr>
<td>21C2</td>
<td>604829</td>
<td>10</td>
<td>604809</td>
</tr>
<tr>
<td>21F</td>
<td>604828</td>
<td>11</td>
<td>604810</td>
</tr>
<tr>
<td>21K</td>
<td>503291</td>
<td>12</td>
<td>500556</td>
</tr>
<tr>
<td>21-O</td>
<td>604824</td>
<td>13</td>
<td>500556</td>
</tr>
<tr>
<td>21P</td>
<td>521658</td>
<td>14</td>
<td>604812</td>
</tr>
<tr>
<td>22P</td>
<td>604826</td>
<td>15</td>
<td>604813</td>
</tr>
<tr>
<td>25M</td>
<td>604819</td>
<td>16</td>
<td>604814</td>
</tr>
<tr>
<td>26E</td>
<td>604822</td>
<td>17</td>
<td>604814</td>
</tr>
<tr>
<td>26J2</td>
<td>209703</td>
<td></td>
<td>604815</td>
</tr>
<tr>
<td>26J3</td>
<td>604820</td>
<td>18</td>
<td>604816</td>
</tr>
<tr>
<td>35H</td>
<td>604818</td>
<td></td>
<td>604817</td>
</tr>
<tr>
<td>36C</td>
<td>604843</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36H</td>
<td>604842</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22N</td>
<td>561433</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1F</td>
<td>604856</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36N</td>
<td>604841</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
ARIZONA DEPARTMENT OF WATER RESOURCES

RECOVERY WELL PERMIT

PERMIT NO. 74-568133

STATE OF ARIZONA     )
COUNTY OF MARICOPA     ) ss.

This is to certify that I have examined Application No. 74-568133 for a recovery well permit to recover water stored in a storage facility pursuant to a water storage permit, and I have determined that the application meets the requirements of Title 45, Chapter 3.1, Article 3, Arizona Revised Statutes. The Department hereby grants the applicant authority to operate the recovery well(s) subject to the requirements and limitations set forth in A.R.S. § 45-834.01 and subject to the following limitations and conditions:

Permit Limitations

Permittee: Cortaro Marana Irrigation District
12253 N. Grier Road
Marana, Arizona 85653
Permit No. 74-568133

Permitted recovery well(s):

<table>
<thead>
<tr>
<th>Well Registration Number</th>
<th>Location of Well (All located within GSRB&amp;M)</th>
<th>Design Pump Capacity (GPM)</th>
<th>Well Depth (Feet)</th>
<th>Casing Diameter (Inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-500556</td>
<td>SW ¼, SW ¼, NE ¼ Sec. 28, T11N, R11E</td>
<td>2475</td>
<td>976</td>
<td>20</td>
</tr>
<tr>
<td>55-503290</td>
<td>NE ¼, NE ¼, NE ¼, Sec. 13, T11S, R10E</td>
<td>2935</td>
<td>1002</td>
<td>20</td>
</tr>
<tr>
<td>55-604800</td>
<td>SE ¼, SE ¼, SE ¼, Sec. 20, T11S, R11E</td>
<td>2800</td>
<td>840</td>
<td>20</td>
</tr>
<tr>
<td>55-604801</td>
<td>SE ¼, SE ¼, NE ¼, Sec.12, T11S, R10E</td>
<td>2588</td>
<td>883</td>
<td>20</td>
</tr>
<tr>
<td>55-604802</td>
<td>SE ¼, SE ¼, SW ¼, Sec. 16, T11S, R11E</td>
<td>2925</td>
<td>906</td>
<td>20</td>
</tr>
<tr>
<td>55-604804</td>
<td>SE ¼, SE ¼, SE ¼, Sec.18, T11S, R11E</td>
<td>2700</td>
<td>596</td>
<td>20</td>
</tr>
<tr>
<td>55-604805</td>
<td>SE ¼, SE ¼, NE ¼, Sec.34, T11S, R11E</td>
<td>3150</td>
<td>787</td>
<td>20</td>
</tr>
<tr>
<td>55-604806</td>
<td>SW ¼, SW ¼, SW ¼, Sec.20, T11S, R11E</td>
<td>2925</td>
<td>965</td>
<td>20</td>
</tr>
<tr>
<td>55-604807</td>
<td>NE ¼, NE ¼, NE ¼, Sec.24, T11S, R10E</td>
<td>2475</td>
<td>500</td>
<td>20</td>
</tr>
<tr>
<td>55-604809</td>
<td>SW ¼, SW ¼, SW ¼, Sec.12, T11S, R10E</td>
<td>2813</td>
<td>501</td>
<td>20</td>
</tr>
<tr>
<td>55-604810</td>
<td>SE ¼, SE ¼, SE ¼, Sec.28, T11S, R11E</td>
<td>2750</td>
<td>768</td>
<td>20</td>
</tr>
<tr>
<td>55-604812</td>
<td>SE ¼, SE ¼, SE ¼, Sec.35, T11S, R11E</td>
<td>2475</td>
<td>502</td>
<td>20</td>
</tr>
</tbody>
</table>
Recovered water will be used for:

Irrigation

Legal description of the land on which recovered water will be used:

Within Cortaro Marana Irrigation District Boundaries, see Certificate of Water Right No. 33-43288.

**Permit Conditions**

1. In accordance with A.R.S. § 45-875.01(D), an annual report shall be submitted no later than March 31 following the end of each completed annual reporting period. The first annual reporting period shall be from the date of this permit through December 31, 2001. Subsequent annual reporting periods shall be January 1 through December 31.

2. The annual report shall include the following information:
   a. The well registration number and location of the wells used to recover stored water.
   b. The quantity of water recovered from each well, as measured in a manner consistent with the requirements and specifications for water measuring devices adopted pursuant to A.R.S. § 45-872.01.
APPLICATION FOR PERMIT TO APPROPRIATE WATER
STATE OF ARIZONA

Examination Fee $3.00
Map (see instructions)
APPLICATION MUST BE SUBMITTED IN DUPLICATE

To be filled in by
State Land Department

Name of Applicant: Cortaro-Marana Irrigation District
13864-B W. Sandario Road, Marana, Arizona 85648 623-3323
(Address, City, State, Zip) (Phone No.)

2. Indicate by an (x) on the proper line(s) the use(s) for which this application is being submitted:
Irrigation X Domestic __ Stockwatering __ Municipal __ Power __ Mining __ Other Uses __

3. If for irrigation purposes, fill in the following:

<table>
<thead>
<tr>
<th>Township (N/S)</th>
<th>Range (E/W)</th>
<th>Section</th>
<th>Legal Subdivision</th>
<th>No. of Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>118</td>
<td>11E</td>
<td>7.6.1.36</td>
<td>22, 21, 19, 18, 17, 16,</td>
<td>12,412.5</td>
</tr>
<tr>
<td>128</td>
<td>12E</td>
<td>35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, 20, 19, 18, 17, 16,</td>
<td>12,412.5</td>
<td></td>
</tr>
</tbody>
</table>

If for domestic purposes, number of persons or families

If for stockwatering purposes, number and kind of stock watered

If for municipal purposes, name of municipality

If for power purposes, type of plant, size and rated capacity

If for mining, the water will be used in mine.

If for other uses, describe

4. For each use specified for (use symbols) state amount of water required for each use:
Irrigation - (I), Domestic - (D), Stockwatering - (S), Municipal - (M), Power - (P), Mining - (M)
Other uses - (O)

Symbol
I - 60 cfs/gpm or 360,000 ac. ft. from Jan. 1 to Dec. 31- yearly
- cfs/gpm or ac. ft. from to
- cfs/gpm or ac. ft. from to

5. The direct source of supply is Effluent from Roger Rd. and Tan Rd., treatment plant, tributary to Santa Cruz River on the Santa Cruz River watershed.

6. The point of diversion (locate on map) is within the SW 1/4 SE 1/4, Section 8, of Township 28, Range 12W, G&SRB & M, in the County of Pima.

7. The place of use (locate on map) is in the 1/4 1/4, Section 7, 6, 1, of Township 11W, Range 12E, G&SRB & M, in the County of Pima.

8. Description of the proposed works by which the water is to be put to beneficial use
Pump into existing Flume across Santa Cruz River and blend with canal water for irrigation of farmland.

9. If water is to be stored, give capacity of reservoir in acre feet approx. 15,000, height of dam ft., area inundated in acres Use explanatory sheet for capacity for each foot of depth.

10. Construction Schedule. It is proposed to begin construction within 2-12-86 after approval of this application, to complete construction within 30- days thereafter, and to completely apply the water to the proposed use within 2-12-89 there after, and

11. Is the land owned by the applicant? Yes X No . If "No" explain on page 2.

12. Is the water to be used supplementally with other water(s)? Yes X No . If "Yes" identify other waters or water rights on page 2.

30
INSTRUCTIONS:

A map of the standard equal to the maps printed by the United States Geological Survey (Quad Sheets) or State Orthophoto base maps shall be submitted with the application.

EXPLANATORY

#11. Land is owned by shareholder of the Irrigation District and not the Irrigation District; although the District does own wellsites, canal right-ways, and land for shop facilities etc. but no farm ground.

#12. Effluent is going to be used with water from the Cortaro area well field, certificate # 1292. Priority date July 17, 1935 in place of water pumped from wells in the Marana area. Fumage will be reduced in the Marana area.

Permit No. 33-43288
Application No. 33-43288
STATE OF ARIZONA, ss.
County of Maricopa

This is to certify that I have examined the foregoing application and do hereby approve the same, and grant to the applicant a permit to appropriate the water and/or to construct the reservoir described herein subject to all prior existing rights as provided by law and to the following limitations and conditions: All conditions set forth in the Decision and Order issued March 15, 1983. Water may be stored in an existing excavated pit with an approximate capacity of 15,000 acre feet. The total reservoir capacity of other reservoirs within the project area is 15,000 acre feet.

The amount of water appropriated shall be limited to the amount which can be applied to beneficial use and shall not exceed 20,000 acre feet per annum for irrigation, pumped directly out of the Santa Cruz River into Permittee’s main canal, which is already existing and in place.

The priority date under this permit is February 25, 1977.

Actual construction work shall begin on or before February 12, 1986 and shall be prosecuted with reasonable diligence and be completed on or before February 12, 1988. Complete application of the water to the proposed use shall be made on or before February 12, 1988.

WITNESS my hand and seal of office this 12th day of February 1985.

SEAL

C. Lawrence Linser
Deputy Director
ARIZONA DEPARTMENT OF WATER RESOURCES
BEFORE THE DIRECTOR

In the Matter of the Application to Add a
Point of Diversion for Certain Water Rights
Held Pursuant to Certificate of Water Right
No. 33-43288
Applicant: Cortaro-Marana Irrigation District

No. SW00-001
Director's Findings of Fact,
Conclusions of Law, Decision
and Order

This matter was initiated by a letter requesting that the Arizona Department of Water
Resources ("Department") add a point of diversion to Certificate of Water Right No. 33-43288,
submitted on April 9, 1998 by Cortaro-Marana Irrigation District ("Cortaro"). No change of use
pursuant to A.R.S. § 45-156(B) nor severance and transfer pursuant to A.R.S. § 45-172 has been
requested in this matter. No objections to the request to add a point of diversion were received,
and no hearing was held on the matter.

Now, therefore having considered the record in this case, including all materials
submitted by Cortaro to date, the Director issues the following findings of fact, conclusions of
law, decision and order.

FINDINGS OF FACT

1. On April 9, 1998, Cortaro submitted to the Department a letter requesting that a
point of diversion be added to Certificate of Water Right No. 33-43288.

2. The water right held pursuant to Certificate of Water Right Number 33-43288 is
for waters of the Santa Cruz River, a tributary to the Gila River. **Pursuant to this water right,**
Cortaro uses 1,800 acre-feet per annum for irrigation of 11,538.74 acres of land within Pima
County, Arizona, as described in the Certificate of Water Right. **The water is currently diverted**
by an inlet maintained to the side of the river channel, which diverts a portion of the effluent
flow in the channel to a pumping plant on the river bank, located within the Southwest ¼ of the

-1-

32
Southeast ¼, Section 8, Township 12 South, Range 12 East. The pump has a capacity of five cubic feet per second and is primarily used between March and September. The pump discharges to an irrigation distribution system pipeline.

3. Cortaro seeks to add a point of diversion in the Southwest ¼ of the Northwest ¼ of the Southeast ¼, Section 33, Township 11 South, Range 11 East, Gila and Salt River Base and Meridian. Cortaro seeks to divert water from the Santa Cruz River at a pump station and pump it directly into the recharge facility for the "High Plains" Underground Storage Facility (Permit No. 71-563876 and any successor permit), which will be operated by Pima County Flood Control District. Cortaro seeks to store water at the Underground Storage Facility pursuant to a Water Storage Permit (Application No. 73-563876.0100 and any successor permit), and recover it at its existing service area wells pursuant to a Recovery Well Permit (Application No. 74-568133 and any successor permit).

4. Before Cortaro diverts water at the additional point of diversion, (1) the Underground Storage Facility shall be permitted, (2) Cortaro shall have obtained a Water Storage Permit and a Recovery Well Permit to effectuate the water use, and (3) Cortaro shall have proof of authority to access the point of diversion.

5. Notice of the request to add a point of diversion was published in the Arizona Daily Star, a newspaper of general circulation in Pima County, on May 23, 30 and June 6, 2000. Notice of the request was also posted at the proposed point of diversion for three consecutive weeks.

6. Upon approval of this additional point of diversion, a point of diversion for the waters specified in paragraph (2) above will be a pump station adjacent to the Underground Storage Facility, as specified in paragraph (3) above. The point of diversion will be located within the Southwest ¼ of the Northwest ¼ of the Southeast ¼, Section 33, Township 11 South, Range 11 East, Gila and Salt River Base and Meridian.
7. Upon approval of this additional point of diversion, the place of use and the type
of use shall be the same as the original place of use and type of use described in paragraph (2)
above and in Certificate of Water Right 33-43288.

8. Certificate of Water Right Number 33-43288 specifies a priority date of February

9. The Director has determined that there will be no material hydrologic impact to
the system as a result of this additional point of diversion.

CONCLUSIONS OF LAW

1. The Director of the Arizona Department of Water Resources has jurisdiction of
this matter pursuant to A.R.S. §§ 45-152, 45-153 and 45-162.

2. Notice of this request for an additional point of diversion was properly published
and posted.

3. The water rights sought to be diverted at an additional point of diversion have
been lawfully perfected under the laws of the State of Arizona.

4. The amount of water diverted or used after the additional point of diversion is
approved will not exceed the vested rights existing at the time of this addition.

5. Approval of this request will not affect, infringe upon, or interfere with vested or
existing water rights.

DEcision AND ORDER

1. IT IS ORDERED approving this additional point of diversion in the following
terms:

a. Cortaro shall have permission to divert water at an additional point of diversion
located within the Southwest ¼ of the Northwest ¼ of the Southeast ¼, Section 33,
Township 11 South, Range 11 East, Gila and Salt River Base and Meridian, subject to the
following conditions:
(1) The "High Plains" Underground Storage Facility Permit (Permit No. 71-563876 and any successor permit) has been granted in accordance with A.R.S. § 45-811.01 et.seq.;

(2) Cortaro has obtained a Water Storage Permit (Application No. 73-563876.0100 and any successor permit) in accordance with A.R.S. § 45-831.01 and a Recovery Well Permit (Application No. 74-568133 and any successor permit) in accordance with A.R.S. § 45-834.01 to effectuate the water use; and

(3) Cortaro has proof of authority to access the point of diversion.

b. Certificate of Water Right No. 33-43288 shall be revised and reissued to reflect the additional point of diversion when Cortaro has fulfilled the conditions described in paragraph (a) above, begins diverting water at the additional point of diversion and submits to the Department an Affidavit of Appropriator and Proof of Appropriation.

c. Cortaro shall continue to have the right to use 1,800 acre-feet of water per annum for irrigation of the same 11,538.74 acres of land described in Certificate of Water Right No. 33-43288. The water will be diverted within the Southwest ¼ of the Northwest ¼ of the Southeast ¼, Section 33, Township 11 South, Range 11 East, and within the Southwest ¼ of the Southeast ¼, Section 8, Township 12 South, Range 12 East, Gila and Salt River Base and Meridian, Pima County, Arizona. The priority date of this right is February 25, 1977.

d. No change in use nor severance and transfer of this water shall be effected without approval of the Director pursuant to A.R.S. § 45-156(B) or A.R.S. § 45-172.
STATES OF ARIZONA
CERTIFICATE OF WATER RIGHT

THIS IS TO CERTIFY that CORTARO FARMS COMPANY, an Arizona Corporation, of Marana, Arizona, on its own behalf, and for the use and benefit of all other owners of the lands hereinafter described who are entitled to the use of water under or pursuant to valid and subsisting contracts and/or agreements now existing by and between said land owners and the Cortaro Farms Company, has made proof to the satisfaction of the State Land Commissioner of a right to the use of the waters of that certain underground or subterranean stream or river flowing through the Santa Cruz Valley in a natural channel between defined banks and the sub and/or underground flow of the Santa Cruz River, including its tributaries, the Rollito River or Creek and the Canada del Oro, for irrigation and stock watering purposes, under Application No. A-1635, Permit No. A-885 of the State Water Commissioner of Arizona, and that the right to the use of said waters has been perfected in accordance with the laws of Arizona, and entered of record in the office of the State Land Commissioner at Phoenix, Arizona, in Volume 4, at page 1292, on the 4th day of September, 1943; that the priority of the right hereby confirmed dates from July 17, 1938; that the amount of water to which such right is entitled and hereby confirmed, for the purposes aforesaid, is limited to an amount which can be applied to beneficial use and the total diversion from the source of supply, as determined at the various points of diversion, shall not exceed twenty (20) acre feet per annum for stock watering purposes, and twenty-nine thousand one hundred ninety (29,190) acre feet per annum for irrigation of the 14,408.19 acres of land described herein, provided that the maximum quantity of water actually applied to or used upon said lands for the irrigation thereof shall not exceed five and five-tenths (5.5) acre feet per acre per annum.

The place of using water for stock watering purposes and the lands upon which the water is used for irrigation, and to which the right is appurtenant, are located in Pima County, Arizona, within the following legal subdivisions:

In Township 11 South, Range 10 East, G. & S. R. M.:          No. Acres

S½ of Section 1  296.81
S½ of Section 2  300.12
S½ of Section 3  298.00

All of Section 10, excepting 10 acres in that portion of SW¼ SE¼ lying South of the North Bank of the Santa Cruz River  630.00
All of Section 11  640.00
All of Section 12  629.64
All of Section 13  629.80
SW¼ NW¼; & NE¼; and NW¼ SE¼ of Section 14  280.00

W½ NW¼; & NE¼ of Section 2a  235.79

In Township 11 South, Range 11 East, G. & S. R. M.:          No. Acres

S½ NW¼; & SE¼ NW¼ of Section 7  585.08
Evidence of Control and Tenure of Land
Evidence of Control and Tenure of Land

On December 1st, 1946 the Cortaro Farms Company Granted the Cortaro Water Users’ Association a right of way for the land where the canals are. This included a 25 foot right of way for the main canal. See attachment H. On September 12th 1951 Cortaro Water Users’ Association conveyed certain lands to the State of Arizona for purposes of building a road. But certain areas were reserved for CWUA including the section of land where the proposed project is located. See attachment I. This section of the canal is still in use today and CWUA is granted a blanket permit each year by ADOT for maintaining the canal and right of way.
RIGHT OF WAY AGREEMENT

THIS AGREEMENT, made and entered into this 31st day of December, 1946, by and between CORTARO FARMS COMPANY, an Arizona corporation, first party, and CORTARO WATER USERS’ ASSOCIATION, an Arizona corporation, second party, WITNESSETH:

THAT, WHEREAS, first party is the owner of certain lands situate in the County of Pima, State of Arizona, over and across which the hereinafter described rights of way now exist and are being used by it for the transmission, carriage and delivery of irrigation water; and

WHEREAS, second party is desirous of acquiring said rights of way in connection with and as a part of its irrigation and water delivery system and other corporate purposes;

NOW, THEREFORE, THIS AGREEMENT FURTHER WITNESSETH:

That said first party, in consideration of the sum of Ten Dollars ($10.00) and other good and valuable consideration to it in hand paid by said second party, the receipt whereof is hereby acknowledged, does hereby grant and convey unto said second party, and to its successors and assigns, the following described rights of way and easements, situate in the County of Pima, State of Arizona, to-wit:

MAIN CANAL:
A strip of land 25 feet in width, the center line of which is described as follows: Beginning at a point on the East section line of Section 7, Township 16 South, Range 12 East, which point is 734.7 feet southerly from the Northeast corner of said Section 7, and running thence in a Northwesterly direction through the North one-quarter of the Northwest quarter of said Section 7, to a point which is approximately 280 feet South and 12.5 feet East of the North one-quarter corner of said Section 7; thence Northerly 12.5 feet parallel and at right angles to the North and South center lines of Sections 7 and 6 of said Township and Range to a point on the South one-sixteenth line of said Section 6, and continuing thence Northerly and parallel to the said North and South center line of Section 6 to a point on the line which is 72.5 feet Southwesterly from and parallel to the Southwest right-of-way line of the Southern Pacific Railroad; thence in a Northwesterly direction and parallel to said right-of-way line to a point on the North section line of said Section 6;
thence in a Northwesterly direction and parallel to said right-of-way line through the Southwest Quarter of the Southeast Quarter of Section 31, Township 11 South, Range 12 East, to a point on the East section line of Section 36, Township 11 South, Range 11 East; thence in a Northwesterly direction and parallel to said right-of-way line through Sections 36, 35, 26, 27, 28 and 21 all in Township 11 South, Range 11 East, to a point on the South section line of Section 16 of said Township and Range; thence in a Northwesterly direction and following all curves and angles of the said Main Canal as now located on the ground to a point on a line which is 11/2 feet Southwesterly from and parallel to the Southwest right-of-way line of the Southern Pacific Railroad; thence in a Northwesterly direction and parallel to said right-of-way line through Sections 16 and 17, Township 11 South, Range 11 East to a point on the North section line of said Section 17; thence in a Northwesterly direction and parallel to said right-of-way line through a portion of the Southeast Quarter of the South Quarter of Section 6, Township 11 South, Range 11 East to a point on a line which is 37.5 feet Northerly from the South section line of said Section 8, said point also being the starting point for the center line of Lateral No. 10.

LATERAL NO. 4:
A strip of land 15 feet in width, the center line of which is described as follows: Beginning at a point on the Main Canal which point is 12.5 feet East and approximately 280 feet South of the North one-quarter corner of Section 7, Township 12 South Range 12 East, and running thence Northerly approximately 25 feet to a point; thence Westerly approximately 52.5 feet Westerly from and parallel to the North and South center line of said Section 7 to its intersection with the South section line of said Section 6 of said Township and Range.

LATERAL NO. 5:
A strip of land 15 feet in width, the center line of which is described as follows: Beginning at a point on the Main Canal which point is 7.5 feet South of the intersection of the Main Canal with the South one-sixteenth line of Section 6, Township 12 South, Range 12 East; thence Westerly and parallel to the South one-sixteenth line of said Section 6, to a point on the East section line of Section 1, Township 12 South, Range 11 East; thence in a Northwesterly direction through the Northeast Quarter of the Southwest Quarter of said Section 1, to a point on the East one-sixteenth line of said Section 1.

LATERAL NO. 6:
A strip of land 15 feet in width, the center line of which is described as follows: Beginning at a point on the Main Canal, which point is 17.5 feet South of the intersection of the Main Canal with the East and West center line of Section 6, Township 12 South, Range 12 East; thence Westerly and parallel to the said East and West center line of said Section 6 to a point on the East section line of Section 1, Township 12 South, Range 11 East, and continuing thence Westerly and parallel to the East and West center line of said Section 1, to a point on the East one-sixteenth line of said Section 1; thence Northerly along the said East one-sixteenth line of Section 1, a distance of approximately 35 feet to a point; thence Westerly and parallel to the East and West center line of said Section 1, to the intersection with the North and South center line of said Section 1.
KNOW ALL MEN BY THESE PRESENTS:

That CORTARO FARMS COMPANY, a corporation organized and existing under and by virtue of the laws of the State of Arizona, with its principal place of business at Marana, Arizona, and CORTARO WATER USERS' ASSOCIATION, a corporation organized and existing under and by virtue of the laws of the State of Arizona, with its principal place of business at Marana, Arizona, for and in consideration of the sum of Two Thousand, Eight Hundred and Ninety-six Dollars and No/100 ($2,896.00) Dollars in hand paid by the State of Arizona to the said Cortaro Farms Company, the receipt whereof is hereby acknowledged, and the sum of One Dollar ($1.00) and other good and valuable consideration in hand paid by the State of Arizona to the said Cortaro Water Users' Association, the receipt whereof is hereby acknowledged, have granted, sold and conveyed, and by these presents do GRAT, SELL AND CONVEY unto the said STATE OF ARIZONA, all those certain premises situated in PIMA COUNTY, STATE OF ARIZONA, described as follows, to wit:

All that portion of the following described parcels of land, together with all improvements thereon lying within the boundaries of the Tucson-Pipecreek Highway, Pima County, Project PI 94 (16), according to the map thereof, filed for record in the office of the County Recorder of Pima County, Arizona, on January 5, 1961, as Instrument No. 504, a copy of which is attached hereto and made a part hereof.

EXCEPT those improvements hereinafter specifically reserved:

CORTARO CANAL: A strip of land 25 feet in width, the center line of which is described as follows: Beginning at a stake which is 862.8 feet South and 682.6 feet West of the East one-quarter corner of Section 1, Township 10 South, Range 16 East, and running thence in a North...
No. 1.

Also, beginning at a point on the North line of the said Northwest Quarter of the Southeast Quarter of Section 1, said section lying in a Northwest direction 72.8 feet Southwesterly from the South line of said section and being coincident with the center line of the Southwesterly end of that certain 25-foot strip of land running through the said Northwest Quarter of the said section, as shown in Book 42 of Deeds, Page 316 in Pima County, Arizona.

No. 2.

Also, beginning at a point on the North line of the said Northwest Quarter of the Southeast Quarter of Section 1, said section lying in a Northwest direction 72.8 feet Southwesterly from and parallel to the Southwest right of way line of the Southern Pacific Railroad, to a point on the East line of the Northwest Quarter of the Northwest Quarter of said section, said point being coincident with the center line of the Southwesterly end of that certain 25-foot strip of land running through the said Northwest Quarter of the Northwest quarter of Section 22, conveyed by deed of record from Rason Valencia to Pima Farms Co., on June 5, 1922, and recorded July 24, 1922, in Book 89 of Deeds, Page 315 in Pima County, Arizona, and continuing thence Northwesterly and embracing that certain 25-foot strip of land running through the West one-half of the Northwest Quarter of Section 15, Township 12 South, Range 12 East, conveyed by deed of record from Francisco Pena to Pima Farms Company on June 5, 1922, and recorded July 24, 1922, in Book 89, of Deeds, Page 313 in Pima County, Arizona.

No. 3.

Also, beginning at a point on the East section line of Section 15, Township 12 South, Range 12 East and continuing thence in a Northwesterly direction 72.8 feet Southwesterly from and parallel to the Southwesterly end of that certain 25-foot strip of land running through the Northeastern Quarter of said Section 16, said point being coincident with the center line of the Southwesterly end of that certain 25-foot strip of land running through the Northeast Quarter of said Section 16, conveyed by Grant of Right of Way from the State Land Department of the State of Arizona to Cortaro Farms Company on December 14, 1944, and recorded June 5, 1946, in Book 89 of Miscellaneous Records, Page 314 in Pima County, Arizona.
Beginning at a point on the north and south center line of said Section 26, thence west 800 feet northerly from the south east quarter corner of said Section 26, thence northerly along the north and south center line of Section 26, 800 feet to a point,

Thence easterly 956 feet from and parallel to the south one-sixteenth line of said Section 26, 956 feet to a point,

Thence southerly 256 feet from and parallel to the north and south center line of said Section 26, 200 feet to a point,

Thence westerly 956 feet from and parallel to the south one-sixteenth line of said Section 26, 200 feet to the point of beginning.

No. 24. - PARCEL No. 64. That part of the southeast quarter of the northeast quarter of Section 6, Township 13 South of Range 13 East, G. & S. & R. R. N. & N., Pima County, Arizona, designated as Well 6-F and described as follows, to-wit:

Beginning at a point on the west line of the southeast quarter of the northwest quarter of Section 6, Township 13 South, Range 13 East, which point is 25 feet north of the southeast corner of the southwest quarter of the northeast quarter of Section 6, and running thence northerly along the west boundary of the southwest quarter of the northwest quarter of Section 6, a distance of 308.0 feet to a point on the southwest right of way line of the State Highway No. 84,

Thence south 42 degrees and 18 minutes east along the said southwest right of way of State Highway No. 84 a distance of 374.8 feet to a point 25 feet north of the south boundary of the southeast quarter of the northwest quarter of Section 6; thence westerly, 25 feet from and parallel to the south boundary of the said southeast quarter of the northwest quarter of Section 6, 250.2 feet to the point of beginning.

RESERVING the following specific rights in the granted premises to the Grantor Cortaro Water Users' Association, its successors and assigns, against the Grantee, its successors and assigns:
The right to use and maintain at expense of Grantor Cortaro Water Users' Association that portion of the hereinbefore granted premises heretofore and now being used for the purpose of producing, carrying and delivering irrigation water to the land of members of Grantor Association from and through the canal, laterals, conduits and flumes on said granted premises as is more particularly shown on the map or plat annexed hereto and made a part hereof and marked Exhibit "A", together with sufficient land on either side of said canal, laterals, conduits and flumes for the purpose of operating and maintaining the same; provided, however, that said
State Historic Preservation Office
(SHPO) Review Form
STATE HISTORIC PRESERVATION OFFICE
Review Form

In accordance with the State Historic Preservation Act (SHPO), A.R.S. 41-861 et seq, effective July 24, 1982, each State agency must consider the potential of activities or projects to impact significant cultural resources. Also, each State agency is required to consult with the State Historic Preservation Officer with regard to those activities or projects that may impact cultural resources. Therefore, it is understood that **recipients of state funds are required to comply with this law** throughout the project period. All projects that affect the ground-surface that are funded by AWPF require SHPO clearance, **including those on private and federal lands**.

The State Historic Preservation Office (SHPO) must review each grant application recommended for funding in order to determine the effect, if any, a proposed project may have on archaeological or cultural resources. To assist the SHPO in this review, the following information MUST be submitted with each application for funding assistance:

- A completed copy of this form, and
- A United States Geological Survey (USGS) 7.5-minute map
- A copy of the cultural resources survey report if a survey of the property has been conducted, and
- A copy of any comments of the land managing agency/landowner (i.e., state, federal, county, municipal) on potential impacts of the project on historic properties.

**NOTE:** If a federal agency is involved, the agency must consult with SHPO pursuant to the National Historic Preservation Act (NHPA); a state agency must consult with SHPO pursuant to the State Historic Preservation Act (SHPA),

**OR**

- A copy of SHPO comments if the survey report has already been reviewed by SHPO.

Please answer the following questions:

1. **Grant Program:** ADWR, Water Management Assistance Program, Groundwater Conservation Grant.
2. **Project Title:** Automated Gate for Marana Road Canal
3. **Applicant Name and Address:** Cortaro Water Users’ Association as Agents for Cortaro-Marana Irrigation District
4. **Current Landowner/Manager(s):** Cortaro-Marana Irrigation District/Doug Greenland
5. **Project Location, including Township, Range, Section:** Township 11 South Range 11 East Section 22
6. **Total Project Area in Acres (or total miles if trail):** 0.003 Acres
7. Does the proposed project have the potential to disturb the surface and/or subsurface of the ground?  
   □ YES  □ NO

8. Please provide a brief description of the proposed project and specifically identify any surface or subsurface impacts that are expected: **The proposed project will place an automated gate in the existing headbox in place of the current wooden weir boards. It will use the existing structure and little if any changes to the structure will be needed.**
9. Describe the condition of the current ground surface within the entire project boundary area (for example, is the ground in a natural undisturbed condition, or has it been bladed, paved, graded, etc.). Estimate horizontal and vertical extent of existing disturbance. Also, attach photographs of project area to document condition: The current ground surface is cement

10. Are there any known prehistoric and/or historic archaeological sites in or near the project area? ☐ YES ☒ NO

11. Has the project area been previously surveyed for cultural resources by a qualified archaeologist? ☐ YES ☒ NO ☐ UNKNOWN
   
   **If YES, submit a copy of the survey report. Please attach any comments on the survey report made by the managing agency and/or SHPO**

12. Are there any buildings or structures (including mines, bridges, dams, canals, etc.), which are 50-years or older in or adjacent to the project area? ☒ YES ☐ NO
   
   **If YES, complete an Arizona Historic Property Inventory Form for each building or structure, attach it to this form and submit it with your application.**

13. Is your project area within or near a historic district? ☐ YES ☒ NO

   **If YES, name of the district:**

   Please sign on the line below certifying all information provided for this application is accurate to the best of your knowledge.

   Applicant Signature ☑ 2/14/2020

   Applicant Printed Name: Doug Greenland

---

**FOR SHPO USE ONLY**

<table>
<thead>
<tr>
<th>SHPO Finding:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Funding this project will not affect historic properties.</td>
<td></td>
</tr>
<tr>
<td>☐ Survey necessary – further GRANTS/SHPO consultation required <em>(grant funds will not be released until consultation has been completed)</em></td>
<td></td>
</tr>
<tr>
<td>☐ Cultural resources present – further GRANTS/SHPO consultation required <em>(grant funds will not be released until consultation has been completed)</em></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHPO Comments:</th>
<th></th>
</tr>
</thead>
</table>

For State Historic Preservation Office: Date:
STATE OF ARIZONA
HISTORIC PROPERTY INVENTORY FORM

Please type or print clearly. Fill out each applicable space accurately and with as much information as is known about the property.

PROPERTY IDENTIFICATION
For properties identified through survey: Site No. None Survey Area: None

Historic Names (enter the name(s), if any that best reflect the property’s historic importance): Cortaro-Marana Irrigation District, Cortaro Water Users’ Association. [Twillinger et al. 2003 and Condit, 2004].

Address: Proposed work is .2 miles SE of the intersection of Sandario road and the west bound frontage road in the water control structure between the off ramp and frontage road.

City or Town: Marana □ Vicinity County: Pima Tax Parcel No.: _____

Township: 11S Range: 11E Section: 22 Quarters: North-South mid-section line Acreage: .003

Block: None Lot(s): None Plat (Addition): None Year of plat (addition): None

UTM Reference – Zone: _____ Easting: _____ Northing: _____

USGS 7.5’ quadrangle map: _____

ARCHITECT: _____ □ not determined □ known Source: _____

BUILDER: Cortaro-Marana Irrigation District □ not determined □ known Source: _____

CONSTRUCTION DATE: 1965 □ known □ estimated Source: _____

STRUCTURAL CONDITION
□ Good (well maintained; no serious problems apparent)
□ Fair (some problems apparent) Describe: _____
□ Poor (major problems; imminent threat) Describe: _____
□ Ruin/Uninhabitable

USES/FUNCTIONS
Describe how the property has been used over time, beginning with the original use: The property has always been and is currently used as an irrigation canal.

Sources: Cortaro-Marana Irrigation District

PHOTO INFORMATION
Date of photo: 4 February 2020
View Direction (looking towards): West

SIGNIFICANCE
To be eligible for the National Register, a property must represent an important part of the history or architecture of an area. The significance of a property is evaluated within its historic context, which are those patterns, themes, or trends in history by which a property occurred or gained importance. Describe the historic and architectural contexts of the property that may make it worthy of preservation.

A. HISTORIC EVENTS/TRENDS – Describe any historic events/trends associated with the property: None

B. PERSONS – List and describe persons with an important association with the building: Unknown

C. ARCHITECTURE – Style: _____ ☒ no style

Stories: NA ☐ Basement ☐ Roof Form: None

Describe other character-defining features of its massing, size and scale: Cement Structure for diverting water

INTEGRITY
To be eligible for the National Register, a property must have integrity (i.e. it must be able to visually convey its importance). The outline below lists some important aspects of integrity. Fill in the blanks with as detailed a description of the property as possible.

Location - ☐ Original Site ☒ Moved: Date: 1965 Original Site: ____

DESIGN
Describe alterations from the original design, including dates: Repairs have been made to the structure as needed since its original construction

MATERIALS
Describe the materials used in the following elements of the property:

Walls (structure): Cement

Walls (sheathing): None

Windows: None

Roof: None

Foundation: Cement

SETTING
Describe the natural and/or built environment around the property: Freeway off ramp and frontage road

How has the environment changed since the property was constructed? Unknown

WORKMANSHIP
Describe the distinctive elements, if any, of craftsmanship or method of construction: None

NATIONAL REGISTER STATUS (if listed, check the appropriate box)

☐ Individually Listed; ☐ Contributor; ☐ Non-contributor to ___ Historic District

Date Listed: _____ ☐ Determined eligible by Keeper of National Register (date: _____)

RECOMMENDATIONS ON NATIONAL REGISTER ELIGIBILITY (opinion of SHPO staff or survey consultant)

Property ☐ is ☐ is not eligible individually.

Property ☐ is ☐ is not eligible as a contributor to a listed or potential historic district.

☐ More information needed to evaluate.

If not considered eligible, state reason: _____
Application Checklist
ARIZONA DEPARTMENT OF WATER RESOURCES
WMAP Groundwater Conservation Grant Application Checklist

☑ Project Proposal
  ☑ Cover Letter
  ☑ Executive Summary
  ☑ Project Overview
  ☑ Scope of Work
  ☑ Budget Breakdown & Narrative
  ☑ Additional Contribution Breakdown (if applicable)
  ☑ Project Map
☑ Supplemental Information
  ☑ Evidence of physical and legal availability of water
  ☑ Evidence of Control and Tenure of Land
  ☑ State Historic Preservation Office Review Form