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Underground Storage of Central Arizona Project Water
Presentation to the City of Casa Grande City Council
April 20, 2015

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• CAP Water Background
    • 8,884 acre-feet for Arizona Water’s Casa Grande service area
    • 2,000 acre-feet for Arizona Water’s Coolidge service area
  – In 2005, Arizona Water purchased a 66-acre site to construct a surface water treatment plant.
  – Plan recommended constructing a 10 million gallon per day surface water treatment plant.
  – 2006 estimated construction cost ranged from $34 million to $66 million.
  – After further refinements to design specifications and general construction costs, that estimate increased to $104 million.
    • Construction cost increase due to increases in equipment, materials and general increases in construction costs.
• Arizona Water’s Efforts to Find a More Cost Effective Way to use CAP Water
  – Arizona Water began evaluating more cost effective solutions to use its CAP water.
  – In 2013, Arizona Water started planning to recharge its CAP water allocations and recover stored CAP water from recovery wells.
  – Arizona Water explores repurposing its 66-acre site to construct an Underground Storage Facility (“USF”).
  – The initial evaluation determined Arizona Water’s 66-acre site could be used to construct an Underground Storage Facility to recharge 12,000 acre-feet of water per year.
    • Recharge facility construction cost is estimated at less than $6 million
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• USF Field Activities Completed
  – Surface soil sampling
    • Two locations in each basin
  – 30 feet deep, shallow soil borings
    • One boring in each basin
    • Collected 5-foot samples, logged cuttings
  – Deep Soil Borings
    • Drilled two Continuous Core soil borings 150 feet deep
    • Determined depth to water beneath site
    • Collected grab water samples at various depths
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• Testing Locations

- Surface Soil Samples
- Borings B-1 thru B-5
- Piezometers
- Continuous Core/ Water sampling
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BASIN 1
9.3 acres

BASIN 2
9.7 acres

BASIN 3
9.2 acres

BASIN 4
7.2 acres

BASIN 5
7.0 acres

BASIN 2
9.7 acres

BASIN 1
9.3 acres
• Underground Storage Facility Cost Estimate and Phasing Plan

<table>
<thead>
<tr>
<th>Phase</th>
<th>Basin Number</th>
<th>Basin Area (Acres)</th>
<th>Annual Recharge Capacity (AF per year)*</th>
<th>Cumulative Annual Recharge (max of 10,884 AF)[1]</th>
<th>Time Frame</th>
<th>USF Construction Cost by Phase</th>
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<tbody>
<tr>
<td>One</td>
<td>1</td>
<td>9.3</td>
<td>2,390</td>
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<td>2016</td>
<td>$2,743,000</td>
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<tr>
<td>Two</td>
<td>2</td>
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<td>2,490</td>
<td>4,880</td>
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<tr>
<td>Three</td>
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<td>9.2</td>
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<tr>
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<tr>
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<td>Total</td>
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[1] During full build out of the USF, CAP water will be delivered to a GSF.
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• Pinal AMA Water Supplies and Uses
Why Renewable Resources are Necessary

- Mining of groundwater is not a viable long-term water solution.
- State Regulations require the use of renewable water resources.
- In 2014, Arizona Water produced 18,215 acre-feet of water supplies with groundwater making up 90% of those supplies.
- CAWCD plans to reduce deliveries of CAP Water to Agriculture starting in 2017 with no planned deliveries of CAP water in 2030.
- Arizona Water’s Recharge and Recovery plan will reduce its groundwater pumping by 50%.
- Initially, Arizona Water will recover stored CAP water from 41 existing service area wells permitted as recovery wells.
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• Recovery Wells
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• Arizona Water’s Plan to Use CAP Water
  – In 2014, Arizona Water delivered untreated CAP water to:
    • SRP Desert Basin power generating station
    • Francisco Grande golf course
    • City of Casa Grande soccer fields
  – By 2020, Arizona Water plans to fully use its CAP water allocations in Pinal Valley
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• Using CAP Water Reduces Groundwater Pumping
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• Status of Arizona Water’s Efforts to Implement its CAP Use Plan
  – In December 2014, Arizona Water applied to the Arizona Department of Water Resources for:
    • Application to construct an Underground Storage Facility
    • Application for a Water Storage Permit
    • Application to permit 41 of Arizona Water’s existing wells as recovery wells
  – Arizona Water plans to start construction of the USF in 2016
  – Interim Plan Until USF is Constructed
    • Store CAP water in Groundwater Savings Facilities (GSFs)
    • Permits received to store water in MSIDD, CAIDD and HIDD
    • Arizona Water plans to store 5,000 acre-feet in GSFs in 2015
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• In Summary
  – Arizona Water has 10,884 acre-feet per year of CAP water for its Casa Grande and Coolidge areas.
  – Use of CAP water reduces groundwater pumping.
  – Recharge and recovery is a cost effective way to use CAP water.
  – Construction of the USF will occur in phases.
  – Arizona Water’s existing wells will be used as recovery wells
  – By 2020, Arizona Water plans to use its full allocations of CAP Water.
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• Arizona Water’s 2015 CAP Use Plan identifies and addresses the water supply challenges facing Arizona Water’s Pinal Valley service area
• Arizona Water will work closely with City of Casa Grande staff to plan for future water supplies
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Thank you.