Hydrologic and Water Use Data For West Basins Strategic Planning Area

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Presented by

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Hydrology Division

La Paz County Centennial Park Community Center
Wenden, Arizona
## Physical and Hydrologic Characteristics of Groundwater Basins in the West Basins Planning Area

<table>
<thead>
<tr>
<th>Basin Characteristic</th>
<th>Unit</th>
<th>Butler Valley</th>
<th>Harquahala INA</th>
<th>McMullen Valley</th>
<th>Ranegras Plain</th>
<th>Tiger Wash</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basin Area</strong></td>
<td>Square Miles</td>
<td>288</td>
<td>766</td>
<td>649</td>
<td>912</td>
<td>74</td>
</tr>
<tr>
<td><strong>Estimated GW Storage</strong>*</td>
<td>Million Acre-Feet</td>
<td>6.4</td>
<td>15.5</td>
<td>15</td>
<td>9</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Estimated Natural Recharge</strong></td>
<td>Acre-Feet/Year</td>
<td>&lt;1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>&lt;1,000</td>
<td>&lt;1,000</td>
</tr>
<tr>
<td><strong>Estimated 2014 Irrigation Pumping</strong>*</td>
<td>Acre-Feet</td>
<td>11,500</td>
<td>93,500</td>
<td>47,500</td>
<td>23,500</td>
<td>0</td>
</tr>
<tr>
<td><strong>Estimated 2014 CAP Surface Water for Irrigation</strong>*</td>
<td>Acre-Feet</td>
<td>0</td>
<td>35,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Sources of Data:**
Predevelopment Groundwater Flow Patterns In the West Basins Strategic Planning Area

USGS Estimated Groundwater Withdrawals For Agricultural Irrigation In The West Basins Strategic Planning Area 1940 – 2014

- Butler Valley
- McMullen Valley
- Harquahala INA
- Ranegras Plain

Annual Pumpage x1000 AF

[Graph showing the annual pumpage for each area from 1940 to 2014]
Water Level Changes
In Arizona 2003 - 2013
Locations of Groundwater Site Inventory (GWSI) Index wells in the McMullen Valley Basin
### Water Level Change Statistics For GWSI Wells In McMullen Valley Basin

#### GWSI Water Level Change Data For The McMullen Valley Basin (1958 - 2015)
(Units of WL Change = Feet)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Count</td>
<td>33</td>
<td>33</td>
<td>84</td>
<td>4</td>
<td>80</td>
<td></td>
<td>15</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Average</td>
<td>-166.2</td>
<td>-166.2</td>
<td>-34.2</td>
<td>5.4</td>
<td>-36.2</td>
<td></td>
<td>-12.4</td>
<td>19.4</td>
<td>-23.9</td>
</tr>
<tr>
<td>Median</td>
<td>-184.0</td>
<td>-184.0</td>
<td>-32.6</td>
<td>5.1</td>
<td>-33.3</td>
<td></td>
<td>-11.9</td>
<td>3.3</td>
<td>-16.7</td>
</tr>
<tr>
<td>Min</td>
<td>-284.4</td>
<td>-284.4</td>
<td>-141.0</td>
<td>2.2</td>
<td>-141.0</td>
<td></td>
<td>-81.9</td>
<td>1.1</td>
<td>-81.9</td>
</tr>
<tr>
<td>Max</td>
<td>-2.3</td>
<td>-2.3</td>
<td>9.2</td>
<td>9.2</td>
<td>-0.2</td>
<td></td>
<td>69.8</td>
<td>69.8</td>
<td>-9.1</td>
</tr>
</tbody>
</table>
Perched Water Level

+ 122 feet
- 223 feet
Land Subsidence Rate in the McMullen Valley, La Paz and Maricopa Counties
Based on Radarsat-2 Satellite Interferometric Synthetic Aperture Radar (InSAR) Data

Time Period of Analysis: 1.0 Years 03/17/2014 To 04/05/2015

Explanation

<table>
<thead>
<tr>
<th>Subsidence Rate</th>
<th>Land Subsidence Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 - 0.5 cm/yr</td>
<td>Low</td>
</tr>
<tr>
<td>0.6 - 7 cm/yr</td>
<td>Moderate</td>
</tr>
<tr>
<td>8 - 7 cm/yr</td>
<td>High</td>
</tr>
<tr>
<td>&gt; 8 cm/yr</td>
<td>Very High</td>
</tr>
</tbody>
</table>

Decompression (white areas) are areas where the phase of the received satellite signal changed between satellite passes, causing the data to be unusable. This occurs in areas where the land surface has been disturbed (i.e., bodies of water, subsidence) or areas of development, etc.

Coordinate System: NAD 1983 UTM Zone 12N
Projection: Transverse Mercator
Units: Meter

Earth features were mapped by the Arizona Geological Survey. For information on earth features visit: www.agso.arizona.edu/epc

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ADWR Hydrologic Map Series Reports

#1
#6
#13
#17
#18

For More Information and Hydrologic Data for the West Basin Aquifers, Please Visit:

http://www.azwater.gov/AzDWR/Hydrology/Library/Library.htm
For More Information on the Water Quality of West Basin Aquifers, Please Visit:

QUESTIONS?

For Further Information Please Visit The ADWR Website at:  www.azwater.gov

Or Contact:

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or

Michelle Moreno (Public Information Office) mamoreno@azwater.gov