Pinal Active Management Area
Water Management Assistance Grant No. 2020-3126
Leak Detection Project Deliverable No. 8
Fifth Semi-Annual Report
January 2025 Through June of 2025

Grant Award Recipient:
Arizona Water Company
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Background:

In December 2022, Arizona Water Company (AWC) finalized the receipt of equipment and training associated with the Water Management Assistance Grant No. 2020-3126. Per the conditions of the grant, semi-annual reports of findings are required to be submitted to the Arizona Department of Water Resources (ADWR). This report is the fifth semi-annual report of findings in the series.

This report of findings provides information on the administration of the approved leak detection program, provides data related to leak detection efforts in the Pinal AMA service areas, and shows the impact of the use of the equipment related to groundwater pumping in the service areas, overall.

Leak Detection Program:

Arizona Water Company has had a leak detection program in place since 2011. The program was developed to comply with the Modified Non-Per Capita Best Management Practice program laid out in the Third Management Plan and continues into the Fifth Management Plan which is in effect today. Through time, the leak detection program has identified equipment and practices that improve the overall well-being of the distribution systems and provides a structured way to monitor and respond to pipe failures.

While the discussion of the program in this report is limited to the grant recipients in the Pinal Active Management Area (AMA), AWC administers the leak detection program for all its systems regardless of location. AWC purchased equipment based on the grant award for the Pinal AMA and is listed below:

Equipment Purchased	Quantity
Ecohologic Leakfinder ST Correlator	2
FCS S30 Geophone	4
Z-Corr Correlating Logger w/8 loggers	1
Dell Latitude Rugged Laptops	2

Table 1 - Equipment Purchased

The equipment is being used in the Pinal Valley system, Stanfield system, Tierra Grande system, Casa Grande West system, Casa Grande South system, and Coolidge Airport system. The table below shows the leak detection activity for the systems from January 2025 through June 2025. The data indicates that the labor effort of leak detection and pipe surveyed is beginning to be implemented. The new equipment has given leak detection staff the tools they

needed to expand the reach of the leak detection program in their service areas.

Data	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25	Jun-25	Jul to Dec	Jan to June	Total
Length of Pipe Surveyed	21,250	8,500	13,586	2,500	0	0	22,300	13,800	3,000	25,500	20,526	8,700	45,836	93,826	45,836
Leak Detection Man Hours	22	13.5	19	5	0	0	14	4	3	26	15.5	8	60	71	60
Number of Leaks Found	2	1	0	0	0	0	0	0	0	14	2	0	3	16	3
Estimated Loss of Gallons	180,000	55,000	0	0	0	0	0	0	0	175,000	72,000	0	235,000	247,000	235,000

Table 2 - Leak Detection Summary Results

AWC staff was able to dedicate more man hours in this reporting period than in the last, which resulted in more leaks detected. Overall, AWC has continued staffing changes, paired with high growth in new service connections resulting in fewer opportunities to survey. While the leak detection program has not yielded many leaks relative to the size of the system, field staff have responded to approximately two hundred main and service line leaks that were reported by customers and staff in the first half of 2025.

Leak Detection Impact:

The overall goal of the Water Management Assistance Grant is to prove a reduction in groundwater pumping due to the use of the equipment and the leak detection program overall. In the following charts, AWC highlights the production of each system by month, the groundwater production by month, and the number of customers.

Pinal Valley System:

The Pinal Valley water system is in an area with a fast-growing population. The growth in customers is shown in the blue line. The Pinal Valley system ended 2024 with just over 39,000 connections. In June of 2025, the connections are trending toward 40,000 connections by the end of the year.

The gray columns show the overall production/delivery from all sources of water to the Pinal Valley system. The light blue columns show the groundwater only production for each of the months in the reporting periods. AWC has a Central Arizona Project (CAP) Municipal and Industrial (M&I) Subcontract and participates in annual storage and recovery for a portion of the 10,884 AF allocation.

Overall water use has gone up in part due to the continued growth in the area. The groundwater use has begun to trend upward with the increase in population now exceeding the Company's storage and recovery efforts. However, with increased water use in the area, the jurisdictions and the

Company remain very conservation focused. Industrial users in the Pinal Valley service area have made improvements in their conservation efforts and have been utilizing reclaimed water in lieu of CAP direct delivery. In addition to transitioning to a renewable water source, many industrial users have been participating in AWC's commercial audit program to further expand on ways to cut back on their water use.

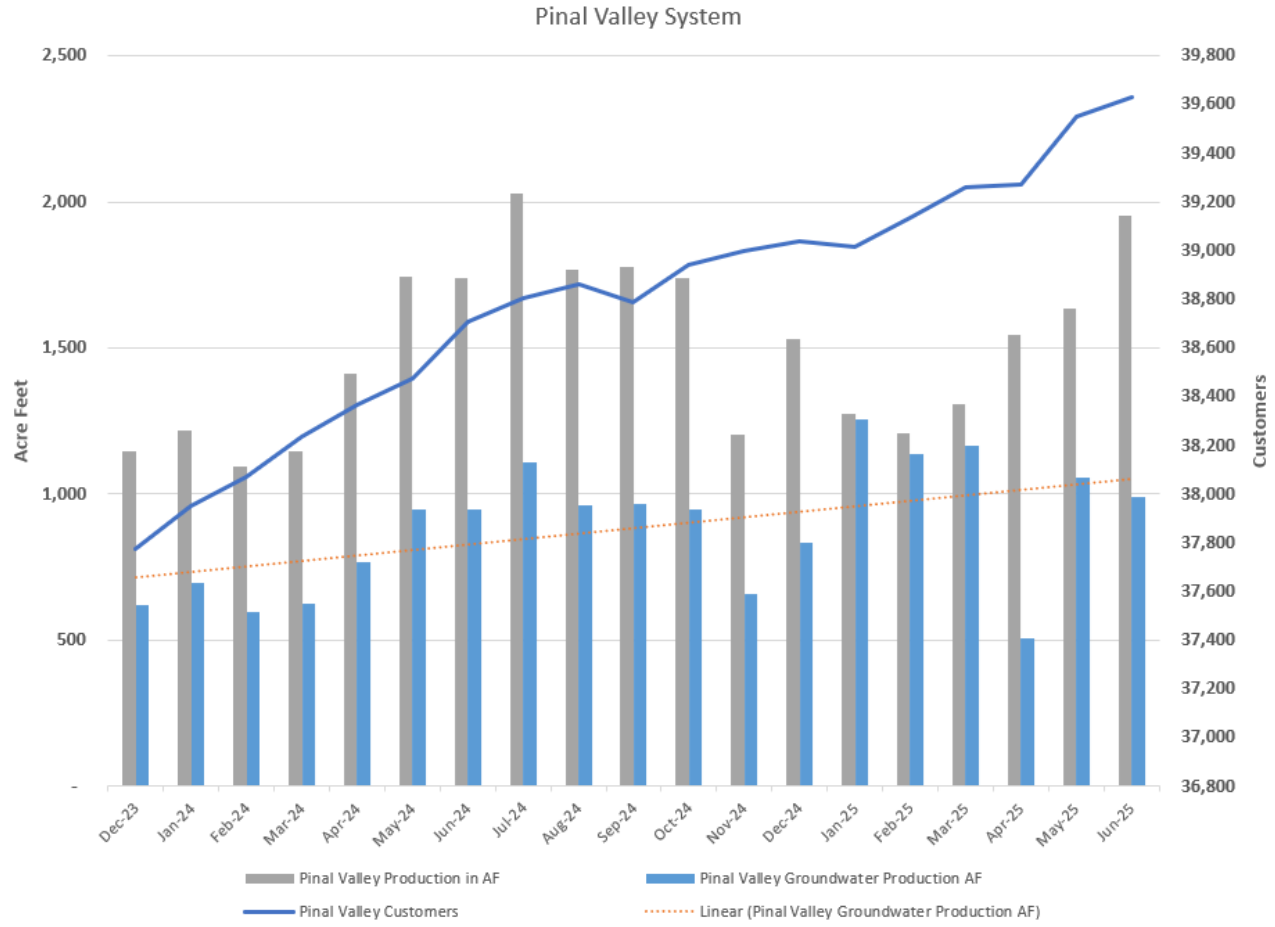

Table 3 – Pinal Valley Production Data

Stanfield, Tierra Grande, Coolidge Airport, Casa Grande West, Casa Grande South Systems:

There are several small communities that Arizona Water Company serves within the Pinal AMA. Stanfield, Tierra Grande, Coolidge Airport, Casa Grande West, and Casa Grande South are small service areas and are not part of the annual storage and recovery program that is applied to the larger Pinal Valley system. The charts below highlight the number of customers and the groundwater pumping in each of the service areas. The customers in these service areas tend to be more mature and the number of connections fluctuates due to move ins

and move outs instead of new growth. The groundwater volume pumped is much lower than what is seen in the Pinal Valley service area.

As we continue to add data, we see that the trend for small and mature systems has started trending from flat to a slight increase. Groundwater production in the first half of 2025 has increased for all systems with the exception of Casa Grande South. The spring months saw an increase in service connections, presumably part time residents enjoying the Arizona spring temperatures which ultimately resulted in increased groundwater production.

Small systems that produce less than two hundred acre-feet per year often benefit from surveys in part because a small leak on the system disproportionately affects perception of growing groundwater pumping trends.

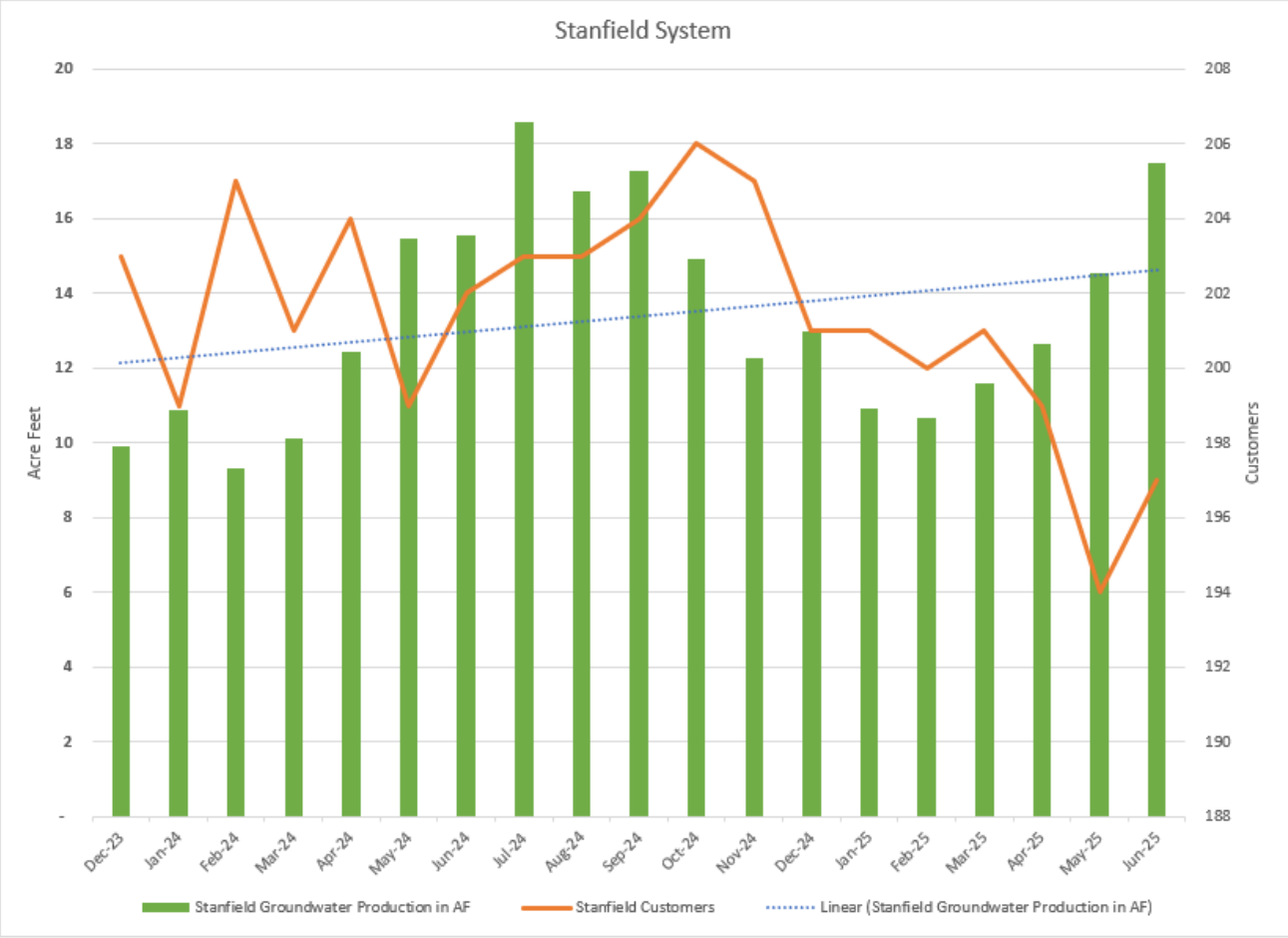

Table 4 - Stanfield Production Data

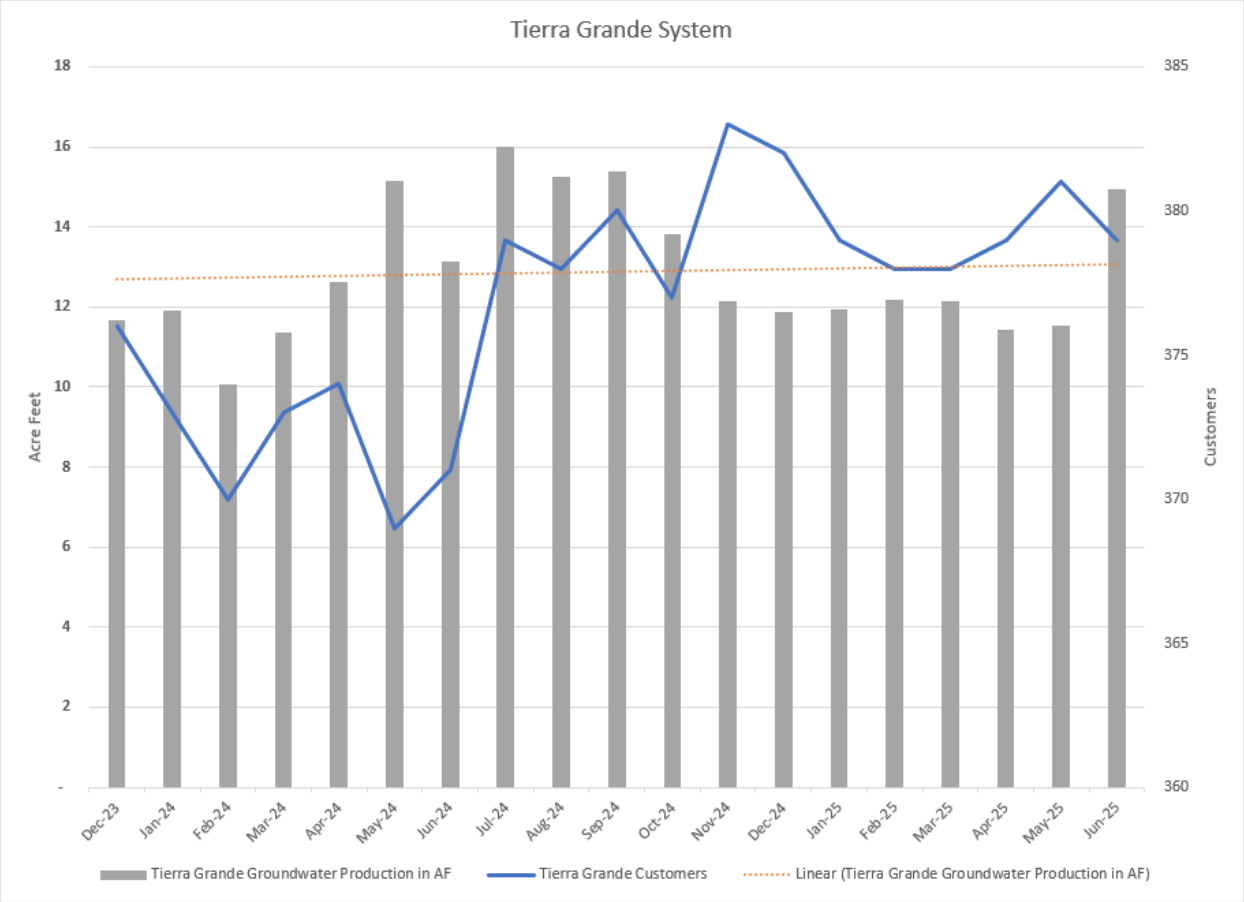

Table 5 - Tierra Grande Production Data

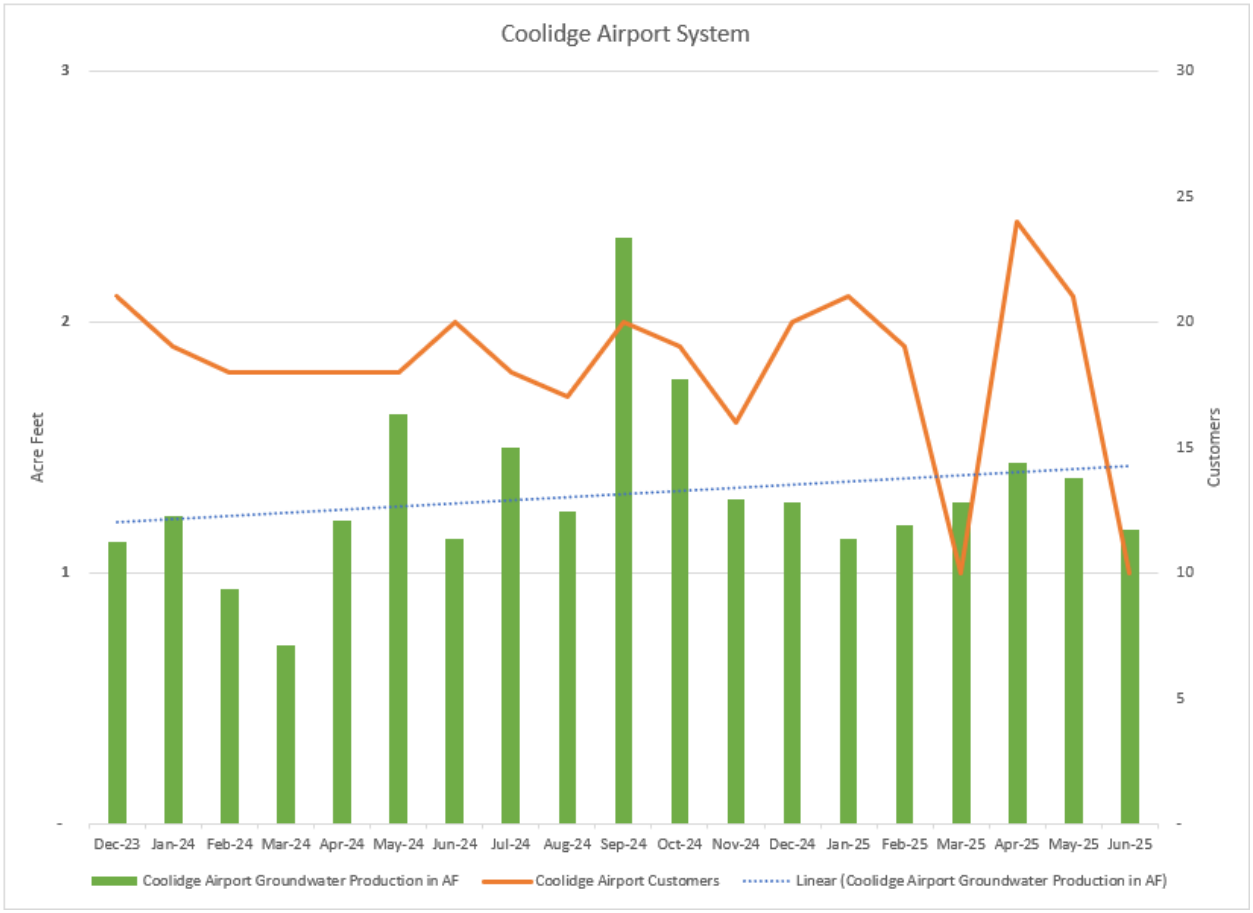

Table 6 - Coolidge Airport Production Data

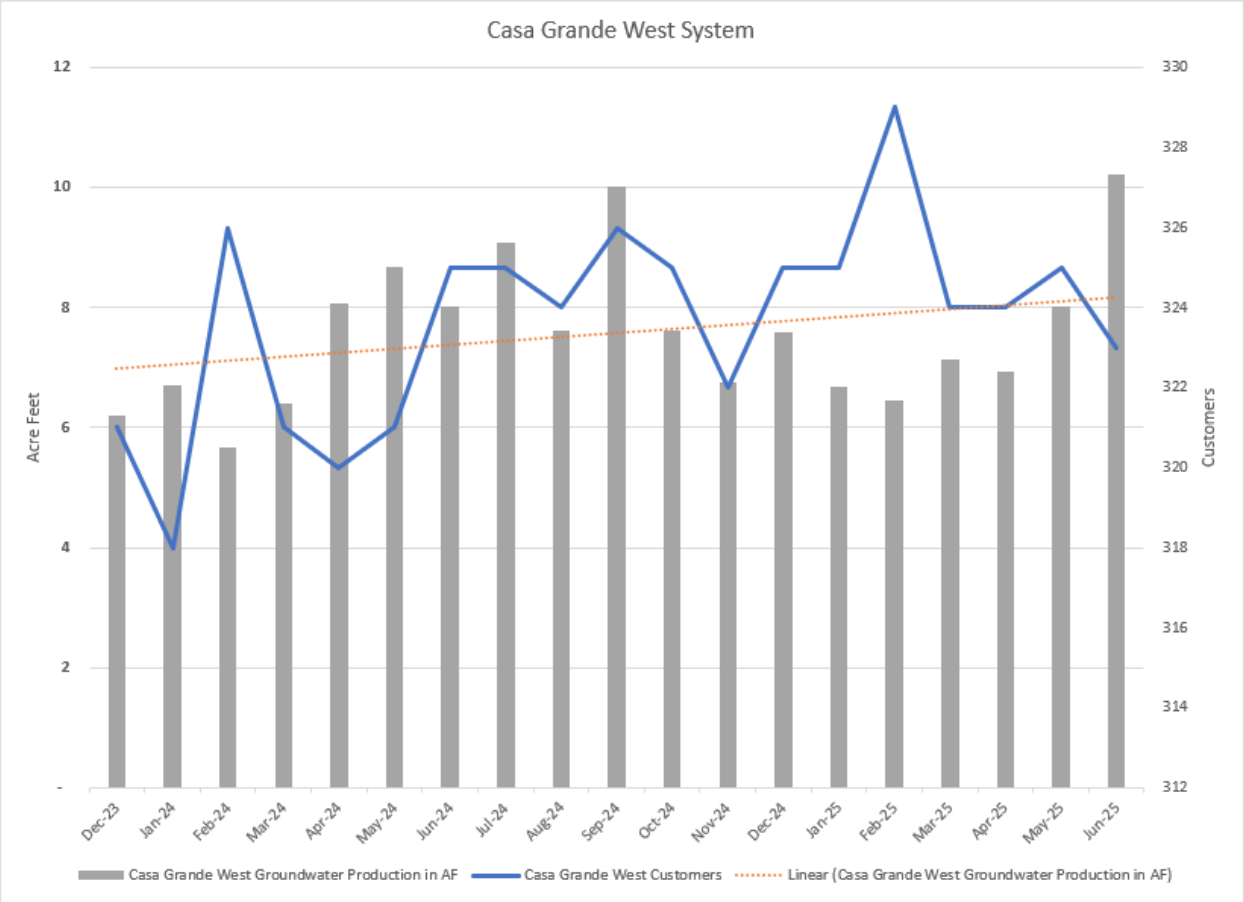

Table 7 - Casa Grande West Production Data

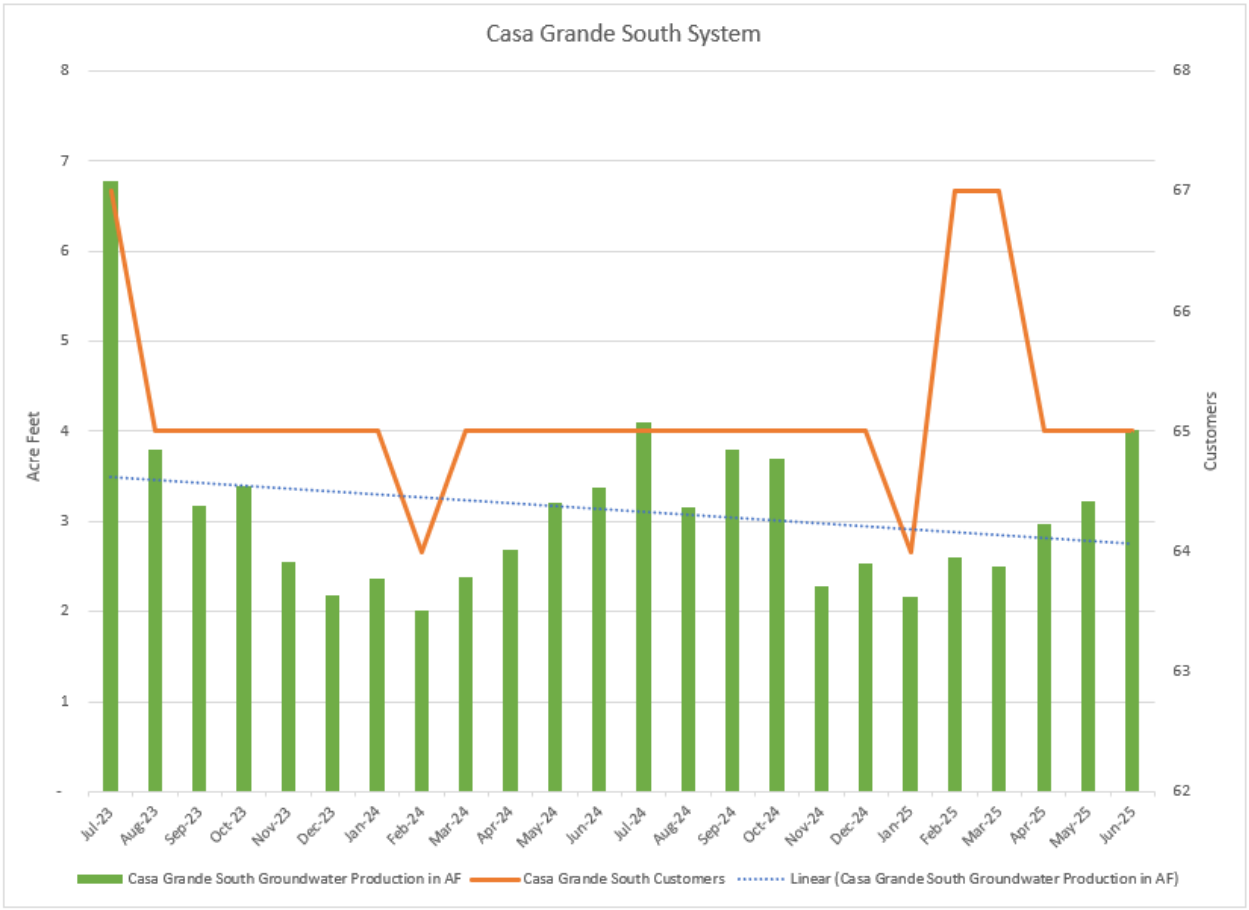

Table 8 - Casa Grande South Production Data

Conclusion:

In this fifth semi-annual report of findings, AWC has determined that the leak detection program is active, but there is an opportunity for an expansion of man hours and pipe lengths to be surveyed. Overall use in the first part of the year is trending upward to flat as data continues to be collected related to groundwater pumping. The Pinal Valley area continues to be an area eager to continue growing, and the groundwater production data is reflective of that. The goal continues to be able to affect a downward pumping trend due to the increased use of the equipment and finding leaks. AWC will continue to monitor the program and provide the semi-annual reports showing the progress through 2026.