



MEMORANDUM

TO: HCP IMPLEMENTING & STAKEHOLDER COMMITTEES
FROM: ROLAND RUIZ EAA GENERAL MANAGER
SUBJECT: AN OPPORTUNITY FOR ASR IMPROVEMENT
DATE: JANUARY 12, 2017

An Opportunity for ASR Improvement

Observation: after four years of operation, the Aquifer Storage and Recovery (ASR) program has become very successful. However, during the last two years of significant accomplishments, it appears the ASR Program, as detailed in the Habitat Conservation Program (HCP), can be modified to improve the operational and financial efficiency, while still providing the same benefit to Springflow protection.

Goal: To ensure compliance with the HCP and Incidental Take Permit, while addressing issues such as: efficiencies, market conditions, program costs and savings, lease terms, forbearance, and triggers.

ASR Description in the HCP

The goal is to control 50,000 acre-feet (AF) of Edwards Aquifer Permits through acquisition of three Tiers of approximately 16,666 AF each and have stored 80,000 AF in the SAWS Twin Oaks facility.

- Tier I – always used as a lease to fill;
- Tier II – works somewhat like the Voluntary Irrigation Suspension Program Option (VISPO) as it incorporates two types of payments: a smaller standby provided at all times when the 10-year annual recharge average is greater than 572,000 AF and, a higher option payment provided when the 10-year annual recharge average is less than 572,000 AF. If a Tier II condition is in effect and the ASR is not full, the water will be injected. However, if the ASR is full and no further storage is required or drought conditions do not allow for additional injections, the contracted water will be forborne;
- Tier III – works exactly like Tier II; except the 10-year recharge threshold is 472,000 AF. Also, Tier III will only be needed during the deepest part of a repeat of the drought of record (DOR). And therefore will be more likely forborne rather than injected into the ASR.

Issues

1. Only unrestricted water rights are eligible for enrollment into ASR; agriculture permits tied to the land could be used for forbearance in ASR if appropriate modifications were made.
2. Triggers for Tier II and Tier III (10-year rolling average recharge) are unfamiliar to permit holders; the program will be more successful if it uses a familiar and comfortable trigger (i.e. J-17).
3. The current Tiered system is not fiscally efficient; lease rates, rather than forbearance rates, are paid for water that will, in some cases, more than likely, never be injected.
4. The ASR is almost full; therefore, maintaining an account of 50,000 AF of unrestricted water rights, eligible for injection, is unnecessary and fiscally inefficient.
5. The current ASR program anticipates continued filling/injecting during the early years of the DOR, which is likely to create conflict perception issues in the region (i.e. SAWS pumping from the aquifer at the request of the EAA while other permit holders are required to cut back withdrawals), and filling/injecting during this time runs counter to the overall objective of sustaining aquifer levels to ensure continuous minimum spring flows. The same or, more likely, greater benefit could be achieved if the full amount required for storage was injected prior to the drought such that no injection had to occur after the onset of the DOR.
6. The current ASR program was constructed utilizing academic assumptions, we now have real world data and experiences to inform the modification of the ASR program.
7. Current standby and forbearance payments used for financial projections in the HCP are not in line with the current market or the VISPO program.
8. Modeling conducted by HDR indicates that, once ASR is full (80,000 AF), utilizing a VISPO-like forbearance option achieves nearly the same spring flow results as the Tier II and III leases described in the HCP.
9. Current ASR Tier triggers result in a delay and lag time between when the benefit is needed and when deeper more conservative Tiers actually come on line.

Conceptual Path Forward:

- Continue an aggressive leasing program in 2017 and 2018, built on the successes of 2015 and 2016, to accumulate a comfortable ASR storage volume of at least 95,000 AF (identified in the ASR Interlocal Contract), preferably the total amount of water necessary to recover for a DOR sequence.
- Consolidate the current three-tiered leasing approach into a simplified two-pronged program: 1) leases for filling the ASR prior to the DOR and for forbearance during the DOR (currently Tier 1) and 2) lease option agreements for forbearance during the DOR (similar to VISPO, current Tier 2 and Tier 3).
- Use the updated Edwards Aquifer groundwater model to determine the mix or ratio of lease versus forbearance contracts, and a more recognizable trigger such as J-17 and/ or Comal Springs spring flow that will provide the same benefit as the current ASR program.
- Initially, utilize the ASR Staff Workgroup and ASR Regional Advisory Group to vet technical ideas and concepts.
- If the initial technical analysis results in programmatic modifications of significance or it is necessary for informational/buy-in purposes, utilize the Adaptive Management Process (AMP) to formalize modifications and inform.

Timeline for AMP Information Development and Timeline:

January February 2017

1. Review the National Academies of Science Report #2 to utilize any input from the Academies.
2. Have initial conversations with SAWS.
3. Convene the ASR Regional Advisory Group to inform them of the process and potential AMP.

Jan 2017 – June 2017

Develop technical information and scenarios for consideration. This would be accomplished through a collaborative effort between EAA and SAWS.

June 2017 – August 2017

1. Evaluation by HCP staff if scope or magnitude of proposed change requires:
 - a. Adaptive Management (would follow Submerged Aquatic Vegetation template)
 - b. Requires outside review or further development (3rd party technical review)
 - c. In the event it does not trigger adaptive management, establish a process for communicating proposed changes to all Committees, prior to final decisions
2. Present technical information and proposed modifications to the ASR Regional Advisory Group for input and potential modifications. Ultimately the group would be asked to endorse or recommend to the EAHCP Committees during the AMP process.

August 2017 – December 2017

Adaptive Management Process / Communication

2018

Implementation - Clarification/Amendment; Leasing/Forbearance
Contract Amendment w/ SAWS