

## Report of the Stakeholder ASR Sub-Work Group

To: EAHCP Stakeholder Committee

From: ASR Sub-Work Group

At their May 28, 2014 meeting, the Edwards Aquifer Habitat Conservation Plan (EAHCP) Stakeholder Committee formed an Aquifer Storage and Recovery (ASR) and Voluntary Irrigation Suspension Program (VISPO) Work Group. This Work Group, Chaired by Myron Hess, was split into two separate Sub-Work Groups in order to provide independent recommendations to the specific programs.

The ASR/VISPO Work Group first met on June 17, 2014 and the Sub-Work Groups met every two-weeks from July 1<sup>st</sup> thru July 31<sup>st</sup>. The full Work Group reconvened and held the final meeting on August 12, 2014.

At the first meeting, all work group members stated their involvement and affiliation to outside water leasing and marketing initiatives and programs. Such statements, were not considered as a disqualifier for participation but rather noted to the full group as a transparent disclosure. The membership of the ASR Work Group, consisted of Steve Raabe (Vice-Chair), Earl Parker, Buck Benson, Patrick Shriver, Gena Leathers, Doris Cooksey, Jim Bower, and Julia Velez.

The Edwards Aquifer Habitat Conservation Plan (EAHCP) calls for the acquisition of 50,000 acre-feet (ac-ft) of Edwards Permits, to be used in order to provide water for ASR storage and to reduce pumping at key times. The purpose of the 2014 Stakeholder Committee ASR Sub-Work Group is to make recommendations on achievable methods to lease the remaining  $\approx$  44,000 acre-feet (EAHCP calls for Tier 1 = 16,667 ac-ft of leases, Tier 2 = 16,667 ac-ft of lease options, and Tier 3 = 16,667 ac-ft of lease options with currently a total of only about 6,000 ac-ft of leases in place). Their goal was to secure additional ASR leases in time to reach needed storage levels and implement the ASR as contemplated in the EAHCP.

These recommendations will be presented to the Stakeholder Committee on the morning of August 21, 2014. Upon approval, the recommendations will then be considered by the Implementing Committee. Ultimately, after appropriate committee approval, the recommendation report developed by the Work Group will be provided to the Edwards Aquifer Authority for final approval.

**Recommendation #1: July-November 1-year Lease Option - when SAWS is in Recovery**  
Short-Term Strategy to fill ASR

Purpose:

- Prohibition on 1 year leases after June 30<sup>th</sup>.
- Utilization of remaining permit at the end of the year.
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Rationale:

- This lease option would allow permit holders to enroll water in the 4<sup>th</sup> quarter, after they identify surplus.
- EAA would lease water to be provided to SAWS in lieu of Recovery.
- The lease amount then would be credited to the Regional ASR.
- Not a NOA, but a sublease.
- Maximum amount of AC-FT feasible is based on the limitations of the SAWS infrastructure capacity. But, the maximum capacity of 60 MGD is not achievable in the 4<sup>th</sup> quarter.

Funding:

- This program should result in a cost savings as it is anticipated these leases would be at a reduced rate over current lease options.
  - Lease Rate and Term: \$75/AC-FT for 1 year and waiver of AMF
  - Possible discounted fee plus the AMF rebate.

**Commented [NP1]:** Should this water actually be cheaper. If water is leased between permit holders, there is no reduction in price based on time of year.

Relation to other Recommendations:

- N/A

Pros:

- Allows Permittees to lease water to the ASR program late in the year after surplus water is identified.
- Lease price should be less than existing pricing.

Cons:

- There are logistics for both SAWS and EAA for this late year option.
- Would be limited to some amount based on capacity of pipeline and amount of time remaining in the year.
- Requires an amendment to the current EAA/SAWS contract. Or an additional MOA/MOU.
- Is a short-term solution, does not address overall storage goals.

Timeline

July 1	If SAWS in recovery – open enrollment
July 1 – Dec 31	Continually work with SAWS to reassess conditions
November 1	Cut off enrollment

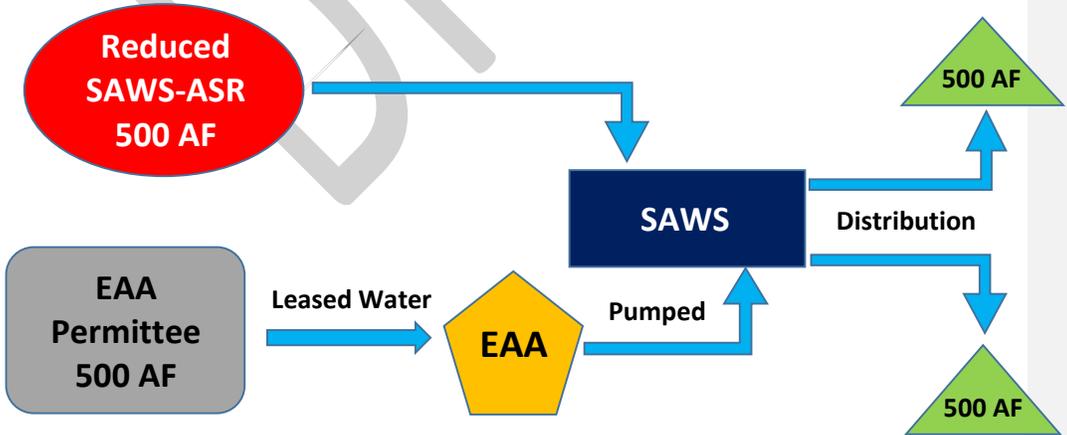
**Commented [NP2]:** Need to establish if this is the right cut off; taking in to account EAA procedure and SAWS operations

Maximum Amount of Water Feasible in Program

Month	GPD	Monthly Total AC-FT
July	30,000,000	2,769
August	30,000,000	2,769
September	30,000,000	2,769
October	20,000,000	1,846
November	10,000,000	923
December	10,000,000	923
<b>Total</b>		<b>12,000</b>

Year	Dominant Mode - Last 6	Dominant mode - 4Q
2004	Storage	Storage
2005	Storage	Storage
2006	Recovery	Recovery
2007	Storage	Storage
2008	Storage	Storage
2009	Storage	Storage
2010	Storage	Storage
2011	Recovery	Storage
2012	Storage	Storage
2013	Recovery	Storage
2014	TBD	TBD

Note:  
Storage = Recharge into ASR; Recovery = Withdrawal from



**Recommendation #2: July-November 1-year Lease Option - when SAWS is Injecting**  
Short-Term Strategy to fill ASR

EAA is currently accepting leases passed June 30 in 2014; operating like normal leasing program with full funding.

Purpose:

- Prohibition on 1 year leases after June 30<sup>th</sup>.
- Utilization of remaining permit at the end of the year.

Rationale:

- This lease option would allow permit holders to enroll water in the 4<sup>th</sup> quarter after they identify surplus.
- Consider making this a 5 year or longer program only. Maximum amount of ac-ft feasible is based the limitations of the SAWS infrastructure capacity. But, SAWS may be able to handle more when injecting than in recovery.

Funding:

- This program should result in a cost savings as it is anticipated these leases would be at a reduced rate over current lease options.
  - Lease Rate and Term: \$75/ac-ft for 1 year and waiver of AMF

**Commented [NP3]:** Should this water actually be cheaper. If water is leased between permit holders, there is no reduction in price based on time of year.

Relation to other Recommendations:

- N/A

Pros:

- Allows Permittees to lease water to the ASR program late in the year after surplus water is identified.
- Lease price should be less than existing pricing.
- SAWS would be able handle more in injection mode.

Cons:

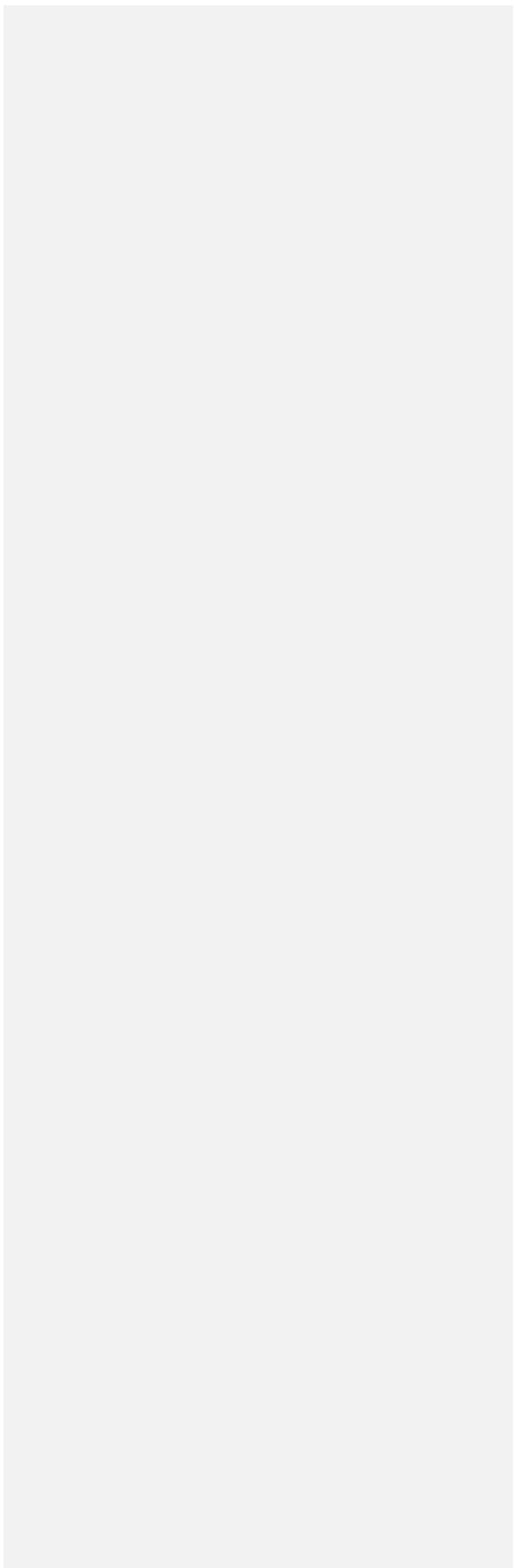
- There are logistics for both SAWS and EAA for this late year option.
- This program would be limited to some amount based on capacity of pipeline and amount of time remaining in the year.

Timeline – EAA is currently operating under normal permit guidelines and is accepting leases based on a case by case basis (month of year, amount of water, CPM, etc). Once a lease is denied, no others will be accepted.

Maximum Amount of Water Feasible in Program

Month	GPD	Monthly Total ac-ft
July	30,000,000	2,769
August	30,000,000	2,769
September	30,000,000	2,769
October	30,000,000	2,769
November	30,000,000	2,769
December	30,000,000	2,769
Total		16,614

DRAFT



**Recommendation #3: Pooling Un-Pumped Withdrawal Rights**  
Short-Term Strategy to fill ASR

Problem/Issue Addressed:

- Utilizes remaining water from multiple permits collectively at the end of the year

Rationale:

- EAA enrolls permit holders to participate through annual, auto-renewing lease agreements, to authorize the EAA to utilize remaining and un-pumped GWRs for ASR contribution purposes.
- EAA makes available, through Program NOAs to SAWS, specified amount of groundwater to be pumped into the ASR by this program.
- Note: These NOAs are separate and apart from those fixed term/amount lease agreements filed under currently available lease options.
- At the end of the calendar year, program participants file Annual Use Reports with the EAA who then determine the amount of GWR remaining un-pumped from their annual authorization. Those amounts are pooled together with all program participants to determine the total authorization available for the year.
- The amounts pumped in Program NOAs are reconciled with GWR pumping authorization accumulated in the pool, accounting for CPM reductions.
- To reconcile and compensate program participants, a 'reimbursement ratio' is developed between the Program ASR contribution (amount of water pumped) vs. the amount of GWR available in the pool. This ratio is used to determine an 'equivalent' contribution percentage for each participant, which is then applied to the amounts that each individual participant contributed to the pool. This ensures that all program participants contributes some proportional amount of GWR to the ASR.
- All participants are compensated based on their individual contribution amounts. AMFs paid on that portion of GWR used may be directly reimbursed or credited towards future AMF obligations.

2014/2015 Operations

- Remainder of 2014 is used to enroll ASR Program participants for 2015 contributions.
- January 31, 2015 – all program participants file 2014 Annual Use Reports with the EAA. EAA staff determines what the 'Program Availability Pool' would have accumulated for 2014 authorization.
- March 31, 2015 – working through the EAA/SAWS ASR Staff Work Group, EAA files a Program ASR NOA with SAWS to authorize 2015 Program contributions to the ASR.
- June 30, 2015 – EAA files, if desired, additional Program ASR NOA to meet obligation deadlines within the Interlocal Contract.
- September 30, 2015 – Last Day for participants to terminate auto-renew for 2016 participation.
- December 31, 2015 – End of the year, all groundwater pumped by SAWS for Program contributions to the ASR must be reconciled with 2015 un-pumped authorization, to be determined.

- January 31, 2016 – all program participants file 2015 Annual Use Reports with the EAA. Note: If complying with this filing deadline determines eligibility to participate for that year, this would strongly encourage compliance with the reporting deadline. EAA staff determines what the ‘Program Availability Pool’ is for 2015 withdrawals.
- March 1, 2016 – EAA determined individual participant contributions to the ASR for 2015 withdrawals and sends compensation to participants.
- March 31, 2016 – working through the EAA/SAWS ASR Staff Work Group, EAA files a Program ASR NOA with SAWS to authorize 2016 Program contributions to the ASR.

Funding:

- The EAHCP currently has funding for ASR for full enrollment of ASR leases.
  - Lease Rate and Term:\$50/ac-ft for X years and waiver of AMF's

Relation to other Recommendations:

- N/A

Pros:

- Allows an opportunity for permit holders to contribute to the ASR without a commitment of a specified amount of GWRs.
- Permit holders participating in fixed term/amount leases can participate in this program, also.
- Allows permit holders to achieve financial benefit from at least a portion of their un-pumped GWRs that under current rules, completely lose value.
- May encourage additional conservation to increase the amount of GWRs available to the pool at the end of the year.
- With the cancellation of AMF rebates to M&I users, this program allows an option NOT to sign a Groundwater Use Contract (“contract down”) with the EAA for GWRs that the permit holder may not plan to pump, but is not confident enough to sign a fixed term/amount ASR lease.
- Minimal disruption or impact on existing market since this makes no commitment to an amount and allows the permit holder to conduct business as usual.
- Encourages timely filing of Annual Use Reports to facilitate their payments.
- Would be attractive to municipalities.
- Would appeal to permittees that are not aware of the amount of water they have available for a more traditional ASR lease.

Cons:

- The program takes RISK when determining how much to authorize in NOAs to SAWS for program pumping into the ASR, since the amounts authorized are not immediately backed up with known and identified availabilities. Actual availability is not known until individual availabilities are pooled after the end of the calendar year.
- Permit holders have no guarantee on the amounts of their available GWRs at the end of the year will be actually utilized by the ASR program, from which they would receive

compensation. However, if ASR contributions are made, each participant will receive proportional benefit.

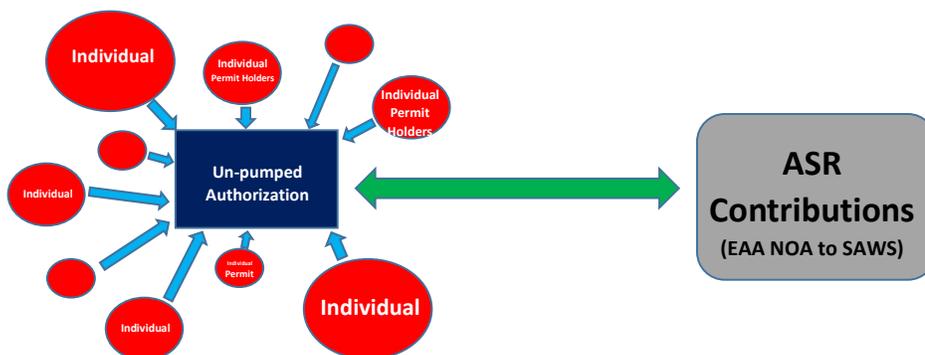
- Problems with existing processes required under the EAHCP Interlocal Contract between the EAA and SAWS (“Interlocal Contract”). Current agreement did not envision contributions of this type (see first CON bullet).
- How to mitigate RISK of water AUTHORIZED when AVAILABILITY is not immediately known, while attempting to maximize use of what will become AVAILABLE. Permit holders may expect the maximum use (compensation) of their un-pumped GWRs. Program expectations need to be clear.
- What happens, despite our best efforts, if the pool cannot cover all the withdrawals?
- How to handle ‘third party’ leases that may contribute to a participant’s year-end availability. Some leases include prohibitions to further sub-lease that water to a ‘third party’. EAA logistically will need to address these scenarios.

Maximum Amount of Water Feasible in Program

Year	CPM Reduction		Permitted	CPM Authorized	Pumped	Un-Pumped
	SA Pool	UV Pool				
2008	1.64%	0%	571,600	564,097	408,178	155,919
2009	11.80%	0%	571,600	514,803	377,255	137,548
2010	0%	0%	571,600	571,600	354,081	217,519
2011	19.20%	2.60%	571,600	476,852	408,628	68,224
2012	22.40%	17.40%	571,600	448,136	370,993	77,143
2013	28.90%	41.80%	571,600	394,826	336,634	58,192*

\*This number includes BIG which cannot be utilized in the ASR program.

119,090 acre-feet = Total Maximum amount of water feasible in program based on average un-pumped over past 6 years. A more conservative approach would be to use the year with the minimum amount available and set that amount as the maximum feasible water in the program, 2013 – 58,192 ac-ft.



**Recommendation #4: Approach SAWS for enrollment of SAWS water into the ASR**

Short-Term Strategy to fill ASR

Long-Term Strategy to fill ASR and Forbear

Problem/Issue Addressed:

- N/A

Rationale:

- As the largest single permit holder.
- SAWS has historically not used their full permit.

Funding:

- No Impact. The EAHCP currently has funding for ASR for full enrollment of ASR leases.

Relation to other Recommendations:

- If SAWS was a security for ASR Recommendation #3, then it is likely that SAWS would not be able to participate both in ASR Recommendation #3 and #4 simultaneously.

Pros:

- Increased water into the program by an EAHCP Permittee.

Cons:

- SAWS has already donated 8,000 ac-ft to the RWCP, which has reduced their flexibility, and has recently been trying to utilize its full permit for injection of the SAWS ASR and therefore may not have surplus water to enroll.

**Recommendation #5: Long Term Water**  
Long-Term Strategy to fill ASR and Forbear

Problem/Issue Addressed:

- Full enrollment of the ASR program over the 15-years of the ITP.

Rationale:

- Add a 2.5% escalator to the 5, 7 and 10 year lease terms
- Insert analysis by SARA – related to the compensation with escalator at no time exceeds the compensation for the next longer term.

Funding:

- This recommendation would increase the budget for ASR leasing.
  - Total Impact with 2% escalator = ????
  - Additional funding would come from ????

Relation to other Recommendations:

- N/A

Pros:

- Enrollment of leases for the full duration of the ITP.  
Escalator could attract enrollees to stay in the program longer.

Cons:

- Would need to be retroactive for previously executed leases.
- Would cause the funding to exceed the previously set standard of \$125 average/ac-ft in the original ASR workplan.

**Recommendation #6: Lease with opt-out clause**  
Long-Term Strategy to fill ASR and Forbear

Problem/Issue Addressed:

- Would allow permit holders who are unsure about the amount of water they may need this year or in future years to enroll in the ASR Program and then withdraw if the water is needed.
- The goal of this concept is to provide a process to finalize a recommendation to provide permit holders an “Opt-Out” clause to ASR leases.

Rationale:

- Offered as an option to ASR Lease agreements of 5, 7, or 10 years
- Payment would not be distributed until after the Opt-out date.
- “Opt-Out” must be declared before the authorization is provided in an NOA (date); this can mean even in the same calendar year, if we delay the NOA till closer to June 30, but I would not want to delay large NOAs until June. I would recommend an “opt out” with no conditions be declared NO LATER THAN March 1, ideally even before the year starts.
- “Opt-Out” is by terminating the lease. Easiest way..., they would be allowed to sign a new ‘opt-out’ lease the next year. Fundamentally in conflict with the concept of allowing only for 5, 7 and 10 year leases. Allowing “opt-out years” within an on-going lease agreement could quickly complicate contract language and pay schedules.
- No Conditions for Opt Out vs there should be conditions for opt out such as human safety and welfare. (You should not be able to opt out to fill a swimming pool.)
- No Penalty for Opt Out vs a penalty for Opt Out. (penalty 2X the payment)

Funding:

- This program should result in a cost savings as it is anticipated these leases would be at a reduced rate over current lease options.
- Payment would not be distributed until after the opt out date.
  - Lease Rate and Term: \$50/ac-ft for 5,7 or 10 years

Relation to other Recommendations:

- N/A

Pros:

- Allows permit holders who are unsure about their future water needs or who are on the edge of using their full permit in some years to enroll in the ASR Program.
- Lease price should be less than existing pricing.
- Provided as an OPTION to the Lessee, may make longer term leases more attractive.

Cons:

- Reasons for Opt Out should be developed. i.e. human, safety, and welfare
- Consider development of monetary penalty if Opt Out.
- Consider not allowing Opt Out after NOA submitted to SAWS
- Provides LESS risk to the Lessee, but provides LESS certainty to the EAA.

**Recommendation #7: Manipulation of Tiered Leases and Potential Incorporation of  
Straight Forbearance Options for ASR - establishment of Tier 2 leases  
Long-Term Strategy to Forbear**

Problem/Issue Addressed:

- After the Regional ASR is full, the primary function of lease held if forbearance.
- By having some amount of ASR water as only forbearance, the ASR program should be able to save money and attract a diverse pool of permit holders.

Rationale:

- Move the 3 tiered approach to a 2 tiered approach
  - Tier 1: 25,000 ac-ft for filling and forbearance
  - Tier 2: 25,000 ac-ft of Forbearance Agreements
- If the full 25,500 ac-ft per year is leased, it would take 4 years to get to the amount of water necessary to forbear during the drought of record.

Funding:

- No Impact: The EAHCP currently has funding for ASR for full enrollment of ASR leases.
- However it is possible this recommendation could result in cost savings as forbearance leases would be cheaper than straight leases.

Relation to other Recommendations:

- N/A

Pros:

- Simplifies the program – all of the tiers do not need a pumping component.

Cons:

- Could requires an Amendment to the HCP.

**Recommendation #8: Compensation alternatives**  
Long-Term Strategy to fill ASR and Forbear

Problem/Issue Addressed:

- Might attract estates and utilities not interested in monetary compensation but rather tax breaks, public relations opportunities or Aquifer Management Fee waivers.

Rationale:

- Program may not be implemented until non-profit for EAA is created.

Funding:

- This program should result in a cost savings as monetary compensation would not be required for leases. However, a waiver of the AMF results in less revenue collected for both EAA operations and the HCP.

Relation to other Recommendations:

- N/A

Pros:

- Tax Break
- Waiver of Aquifer Management Fee
- Positive Public Relations
- EAA is currently in the process of establishing a non-profit that is anticipated to be in place by 2015 and would play a role in this recommendation. Donations could be made in 2014 but would not be eligible for tax deduction.

Cons:

- Impact to AMF for EAA operations and HCP

**Recommendation #9: Prohibition of UIG in the VISPO Program**  
Long-Term Strategy to fill ASR and Forbear

Problem/Issue Addressed:

- Encouragement of UIG utilization in ASR rather than VISPO

Rationale:

- Currently UIG is available for enrollment in ASR and VISPO. Since VISPO is over half full, it is possible that better utilization of the UIG would be in ASR.
- Currently, about 25% of the total volume enrolled in VISPO is UIG. This can be extrapolated to assume a total of 10,000 acre-feet of the fully enrolled 40,000 acre-foot goal can be expected to be UIG.
- There is a total of approximately 65,000 ac-ft of UIG
- UIG enrolled in VISPO is still eligible for short term leases in ASR.
- Additionally M&I water is available for ASR. If Tier 2 is changed to a forbearance agreement, it could attract additional M&I.

Funding:

- No Impact. The EAHCP currently has funding for ASR for full enrollment of ASR leases.

Relation to other Recommendations:

- Could impact the VISPO recommendations. If the VISPO workgroup perceives that a source of water is being removed from the VISPO program, they may respond with additional recommendations or a reprioritization of existing recommendations.

Pros:

- Enrollment of leases into the ASR.
- Push water from the VISPO program to ASR

Cons:

- Push water from the VISPO program to ASR
- If UIG is not allowed in VISPO, there is no guarantee that water would be enrolled in ASR
- Changing the VISPO program, when terms have been agreed to by the EAA and agriculture community. Would require an amendment to the Habitat Conservation Plan, which specifically states in Section 5.1.2.1 that “all permitted irrigation water rights (base and unrestricted) will be accepted in the program.”
- Would require a change to Section 5.1.2.4 of the Habitat Conservation Plan, which declares VISPO as reasonably certain to occur based on expressions of interest and calculations that specifically include UIG in table 5-2.

VISPO Workgroup Comments from 7/15/2014

- Would handicap the VISPO program
- Agreement with USFWS includes UIG in VISPO

- Is fundamental piece of original VISPO program
- Will lose credibility with agriculture community if VISPO is changed
- Permit holders desire for UIG and BIG be allowed in VISPO, so that a permit does not have to be split
- If UIG is not allowed in VISPO, it is not a given that it will be placed in ASR
- There are great ideas being developed by the ASR workgroup, utilize those before this one.

County	BIG	UIG	Total Irrigation
Atascosa	1,624.900	693.200	2,318.100
Bexar	12,100.232	13,699.284	25,799.516
Comal	619.500	161.290	780.790
Hays	422.300	193.000	615.300
Medina	40,311.540	22,510.412	62,821.952
Uvalde	55,068.433	27,714.794	82,783.227
	110,146.905	64,971.980	175,118.885

VISPO Status as of June 12, 2014

	Total acre-feet	
	BIG	UIG
5-year	9,908	3,739
Total	13,647	
10-year	8,837	2,277
Total	11,114	
Enrolled	18,745	6,015
Total	24,761	