Edwards Aquifer Habitat Conservation Plan

Report of the 2020 Budget Work Group
To: Edwards Aquifer Habitat Conservation Plan Implementing Committee
From: Edwards Aquifer Habitat Conservation Plan Budget Work Group
Date: August 19, 2020

**Overview:**

On August 19, 2020, a meeting of the Edwards Aquifer Habitat Conservation Plan (EAHCP) Budget Work Group was held to review and discuss the Edwards Aquifer Authority 2021 budget process to monitor the management of EAHCP revenue and expenses. Specifically, the EAHCP Implementing Committee charged the Budget Work Group to “collaborate with and inform the EAA budget process, as it relates to the EAHCP, EAHCP Reserve and EAHCP Aquifer Management Fee and to address fiscal issues.”

Members of this Work Group include:

- Tom Taggart, Implementing Committee (IC) Member (serving as Chair - City of San Marcos)
- Brock Curry, Edwards Aquifer Authority (EAA) designee
- Myron Hess, EAHCP Stakeholder member
- Mary Bailey, San Antonio Water System (SAWS) designee
- Adam Yablonski, Member-at-Large, Medina County Farm Bureau

**Work Group Discussions:**

During the meeting, EAA staff presented information on the following items:

- EAHCP Table 7.1A Analysis and Forecast
- Updated Drought of Record probabilities
- Aquifer Storage Recovery and Voluntary Irrigation Suspension Program Option updates
- EAHCP 2021 Proposed Budget
- EAA Aquifer Management Fee and EAHCP Reserve Fund Forecast

The discussion of these topics is described below. The meeting presentation (Appendix A), agenda (Appendix B), and minutes (Appendix C) are included.
**EAHCP Table 7.1A Analysis and Forecast.** EAA staff gave a refresher on the 7.1 Budget, detailing the projected expenses for all EAHCP activities for the duration of the current Incidental Take Permit (ITP), which runs 2013-2027 and totals $261,907,955. A detailed illustration was given of how this compares to actual expenses (7.1 Adjusted or Table 7.1A) thus far and projected through 2027. The current projections show the EAHCP being about $50 million under-budget during that timeframe ($210,947,494). This projection assumes no triggering events for VISPO or ASR recovery before 2027.

**Updated Drought of Record probabilities.** EAA staff presented the updated Drought of Record probabilities to the Work Group. Based on the historical J-17 data and current aquifer levels, there is a 0% chance that ASR forbearance will trigger in 2021 or 2022; a near zero probability of triggering 2023-2025; and a 20% probability of the 10-year recharge trigger for the ASR forbearance program occurring between 2026 and 2030. This strongest likelihood of this occurring is in 2029/2030.

Between 2021 and 2028, EAA staff projects there is a 43% chance that VISPO forbearance will trigger in one or more years (3% higher than the 2019 forecast), a 10% chance it will trigger in two or more years (1.9% higher than 2019), a 1.3% chance it will trigger in three or more years (0.3% higher than 2019), and a 0.12% chance of it triggering four or more times (0.5% higher than 2019).

**Aquifer Storage Recovery (ASR) and Voluntary Irrigation Suspension Program Option (VISPO) updates.** EAA staff provided an update and overview of ASR and VISPO. The primary EAHCP goal of the ASR, to store 126,000 acre-feet to off-set pumping during the Drought of Record (DOR), will be met in 2020. The EAHCP also calls for an additional 50,000 acre-feet of withdrawal rights to remain unused during the DOR, which is the ASR lease acquisition goal for 2021. Thus far, there is approximately 14,562 acre-feet in ASR leases and approximately 35,333 acre-feet in ASR forbearance agreements for 2021. New agreements are being made through the end of the ITP.

The primary goal of VISPO is to secure 41,795 acre-feet of water in forbearance agreements. For 2021, there is approximately 40,342 acre-feet secured in VISPO agreements. All new agreements will be 5-years through the end of the current ITP. The length of the agreements will shorten as we reach the end of the ITP.

**EAA Aquifer Management Fee and EAHCP Reserve Fund Forecast.** EAA staff presented the proposed 2021 EAA Budget as well as expense projections through 2025. There is a significant drop in projected expenses starting in 2020 largely due to the conclusion of the Regional Water Conservation Program. The final payment was paid to SAWS in 2020.

EAA staff provided detailed charts to the Work Group that illustrated various projections associated with the EAA General Fund and the EAHCP Reserve Fund. The EAHCP Reserve Fund is projected to be $27.7 million at the end of 2020 and is expected to decrease to $26.9 million in 2021, about $500 thousand above the previously agreed Reserve Floor of $26.4 million. Based on current projections, the EAHCP Reserve Fund would remain relatively flat each forecasted year through 2025.
To maintain the EAHCP Reserve Fund and the $84 combined AMF rate, the EAA is proposing to postpone an AMF rate increase until 2022. An adjusted rate of $88 would be in place from 2022 to 2024 when another AMF rate adjustment for $95 per acre-foot (in 2025) would be proposed. An illustration of the alternative Reserve Fund, for both the HCP and EAA General Operations, was given with the projected AMF rates through 2025.

**Considerations for the Implementing Committee.** The Work Group recommends the following items for the Implementing Committee to consider in their deliberations related to EAHCP funding and possible comment to the EAA Board as they review the budget for FY 2021.

- The current financial projections and cost estimates presented to the Budget Work Group indicate an overall fiscally stable and adequate budget for the EAHCP program for fiscal year 2021.

- The Work Group acknowledges the ASR and VISPO trends and no likelihood of triggering events for either program in 2021. However, the Work Group does acknowledge the increased probability of VISPO triggering throughout the remainder of the permit term.

- The Work Group noted that proposed aquifer management fees (AMF) diverged from previous forecasts for 2021 with a $1 reduction in the amount of funding devoted to the EAHCP with increasing amounts of the total AMF funding EAA operations.

- Although the EAHCP Reserve is projected to remain above the established Reserve Floor of $26.4 million, the Budget Work Group reiterated prior concerns regarding the continuing downward trend of the EAHCP Reserve and the possible fiscal implications should drought conditions trigger ASR or VISPO forbearance, especially in light of increased probability. The Work Group recommends the Implementing Committee, EAA Board, and staff continue to monitor the potential Droughts of Record (DOR) and the impact of a DOR on the EAHCP Reserve Funds to ensure the continued confidence with the U.S. Fish and Wildlife Service and the EAHCP guarantee of financial security to cover program activities. The group encourages the EAHCP Implementing Committee and EAA to understand that decisions on program funding and reserve amounts may dramatically affect the financial footing of the program approaching the renewal date of the Incidental Take Permit.
APPENDIX A
SLIDE PRESENTATIONS
EAHCP BUDGET WORK GROUP

August 19, 2020
**Charge of the EAHCP Budget Work Group**

- Collaborate with and inform the EAA Budget Process, as it relates to the EAHCP, EAHCP reserve and EAHCP aquifer management fee.

- Address fiscal issues as they arise and are referred by the Implementing Committee.
EAHCP 7.1A Analysis and Forecast
EAHCP Table 7.1
"BIG PICTURE"
2013-2027

Aquifer Storage & Recovery, $104,295,000 - 40%
Regional Water Conservation, $19,730,000 - 8%
VISPO, $62,580,000 - 24%
Comal Springs, $16,030,000 - 6%
San Marcos Springs, $16,394,000 - 6%
Modeling & Research, $6,450,000 - 2%
Refugia, $25,178,955 - 10%
Program Management, $11,250,000 - 4%

$261,907,955
## 7.1 Adjusted

**“Table 7.1A”**

*Tracks actuals for closed years and forecasted periods through the end of the ITP.*
Table 7.1 and Table 7.1A Comparison

Table 7.1

Table 7.1A

$20,416,847
$21,045,470
$21,478,332
$21,865,390
$22,160,366
$22,364,150
$22,566,950
$22,768,860
$22,969,880
$23,170,910
$23,371,950
$23,573,000
$23,774,060
$23,975,130
$24,176,210
$24,377,300
$24,578,400
$24,779,510
$24,980,620
$25,181,740
$25,382,870
$25,584,010
$25,785,150
$25,986,300
$26,187,460
$26,388,620
$26,589,790
$26,790,960
$26,992,130
$27,193,300
$27,394,470
$27,595,640
$27,796,810
$27,997,980
$28,199,150
$28,390,320
$28,591,490
$28,792,660
$28,993,830
$29,195,000
$29,396,170
$29,597,340
$29,798,510
$29,999,680

Table 7.1A

$5,716,943
$6,482,110
$7,265,735
$8,174,541
$9,127,534
$10,127,534
$11,177,534
$12,277,534
$13,427,534
$14,637,534
$15,927,534
$17,297,534
$18,757,534
$20,327,534
$21,997,534
$23,777,534
$25,677,534
$27,697,534
$29,847,534
$32,137,534
$34,587,534
$37,207,534
$39,997,534
$42,997,534
$46,207,534
$49,637,534
$53,207,534
$57,007,534
$61,007,534
$65,207,534
$69,637,534
$74,207,534
$79,007,534
$84,007,534
$89,207,534
$94,637,534
$100,207,534


$50.9m

$261,907,955

$210,947,494
## TABLE 7.1 AND TABLE 7.1A COMPARISON

### PROGRAM TOTALS

#### EAHCP Measure

<table>
<thead>
<tr>
<th>EAHCP Measure</th>
<th>Table 7.1 Totals</th>
<th>Table 7.1A Projected Totals</th>
<th>Between Table 7.1 to 7.1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Administration</td>
<td>$11,250,000</td>
<td>$15,760,650</td>
<td>($4,510,650)</td>
</tr>
<tr>
<td>ASR - Leasing/Forbearance</td>
<td>71,385,000</td>
<td>71,223,947</td>
<td>161,053</td>
</tr>
<tr>
<td>ASR - O &amp; M</td>
<td>32,910,000</td>
<td>4,709,262</td>
<td>28,200,738</td>
</tr>
<tr>
<td>Regional Water Conservation</td>
<td>19,730,000</td>
<td>19,414,103</td>
<td>315,897</td>
</tr>
<tr>
<td>VISPO</td>
<td>62,580,000</td>
<td>37,870,934</td>
<td>24,709,066</td>
</tr>
<tr>
<td>San Marcos Springs</td>
<td>16,394,000</td>
<td>18,915,299</td>
<td>(2,521,299)</td>
</tr>
<tr>
<td>Comal Springs</td>
<td>16,030,000</td>
<td>17,037,409</td>
<td>(1,007,409)</td>
</tr>
<tr>
<td>Modeling &amp; Research</td>
<td>6,450,000</td>
<td>6,704,469</td>
<td>(254,469)</td>
</tr>
<tr>
<td>Refugia</td>
<td>25,178,955</td>
<td>19,311,420</td>
<td>5,867,535</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$261,907,955</strong></td>
<td><strong>$210,947,494</strong></td>
<td><strong>$50,960,461</strong></td>
</tr>
</tbody>
</table>

#### Entity

<table>
<thead>
<tr>
<th>Entity</th>
<th>Table 7.1 Totals</th>
<th>Table 7.1A Projected Totals</th>
<th>Between Table 7.1 to 7.1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edwards Aquifer Authority</td>
<td>$238,483,955</td>
<td>$186,984,770</td>
<td>$51,499,185</td>
</tr>
<tr>
<td>City of San Marcos - TSU</td>
<td>11,894,000</td>
<td>12,953,256</td>
<td>(1,059,256)</td>
</tr>
<tr>
<td>City of New Braunfels</td>
<td>11,530,000</td>
<td>11,009,469</td>
<td>520,531</td>
</tr>
<tr>
<td><strong>Program Totals</strong></td>
<td><strong>$261,907,955</strong></td>
<td><strong>$210,947,494</strong></td>
<td><strong>$50,960,461</strong></td>
</tr>
</tbody>
</table>
### Table 7.1 and Table 7.1A Comparison

**Edwards Aquifer Authority**

<table>
<thead>
<tr>
<th>EAHCP Measure</th>
<th>Table 7.1 Totals</th>
<th>Table 7.1A Projected Totals</th>
<th>Between Table 7.1 to 7.1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASR - Leasing/Forbearance</td>
<td>$71,385,000</td>
<td>$71,223,947</td>
<td>$161,053</td>
</tr>
<tr>
<td>ASR - O &amp; M</td>
<td>32,910,000</td>
<td>4,709,262</td>
<td>28,200,738</td>
</tr>
<tr>
<td>Regional Municipal Water Conservation</td>
<td>19,730,000</td>
<td>19,414,103</td>
<td>315,897</td>
</tr>
<tr>
<td>VISPO</td>
<td>62,580,000</td>
<td>37,870,934</td>
<td>24,709,066</td>
</tr>
<tr>
<td>Biological Monitoring</td>
<td>6,000,000</td>
<td>8,954,388</td>
<td>(2,954,388)</td>
</tr>
<tr>
<td>Water Quality Monitoring</td>
<td>3,000,000</td>
<td>3,035,597</td>
<td>(35,597)</td>
</tr>
<tr>
<td>Ecological Modeling</td>
<td>1,150,000</td>
<td>1,151,758</td>
<td>(1,758)</td>
</tr>
<tr>
<td>Applied Research (Research &amp; Facility)</td>
<td>4,750,000</td>
<td>4,194,199</td>
<td>555,801</td>
</tr>
<tr>
<td>Refugia</td>
<td>25,178,955</td>
<td>19,311,420</td>
<td>5,867,535</td>
</tr>
<tr>
<td>Program Management</td>
<td>11,250,000</td>
<td>15,760,650</td>
<td>(4,510,650)</td>
</tr>
<tr>
<td>Science Review Panel</td>
<td>550,000</td>
<td>1,358,513</td>
<td>(808,513)</td>
</tr>
<tr>
<td><strong>Program Total</strong></td>
<td><strong>$238,483,955</strong></td>
<td><strong>$186,984,770</strong></td>
<td><strong>$51,499,185</strong></td>
</tr>
</tbody>
</table>
## TABLE 7.1 AND TABLE 7.1A COMPARISON

**City of San Marcos/Texas State University**

<table>
<thead>
<tr>
<th>EAHCP Measure</th>
<th>Table 7.1 Totals</th>
<th>Table 7.1A Projected Totals</th>
<th>Between Table 7.1 to 7.1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX Wild Rice Enhancement/Restoration</td>
<td>$1,850,000</td>
<td>$1,301,168</td>
<td>$548,832</td>
</tr>
<tr>
<td>Sediment Removal</td>
<td>850,000</td>
<td>744,292</td>
<td>105,708</td>
</tr>
<tr>
<td>Non-Native Plant Species Control</td>
<td>1,375,000</td>
<td>3,028,705</td>
<td>(1,653,705)</td>
</tr>
<tr>
<td>Litter Control/Floating Vegetation</td>
<td>1,200,000</td>
<td>662,669</td>
<td>537,331</td>
</tr>
<tr>
<td>Non-Native Animal Species Control</td>
<td>525,000</td>
<td>402,156</td>
<td>122,844</td>
</tr>
<tr>
<td>Bank Stabilization/Perm Access Points</td>
<td>780,000</td>
<td>1,293,492</td>
<td>(513,492)</td>
</tr>
<tr>
<td>Restoration - Riparian Zones</td>
<td>380,000</td>
<td>666,986</td>
<td>(286,986)</td>
</tr>
<tr>
<td>Management - Key Public Rec Areas</td>
<td>784,000</td>
<td>846,781</td>
<td>(62,781)</td>
</tr>
<tr>
<td>LID/BMP Management</td>
<td>3,600,000</td>
<td>3,476,502</td>
<td>123,498</td>
</tr>
<tr>
<td>Household Hazardous Waste Program</td>
<td>450,000</td>
<td>415,157</td>
<td>34,843</td>
</tr>
<tr>
<td>Sessom Creek Sand Bar</td>
<td>100,000</td>
<td>100,000</td>
<td>0</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
<td>15,349</td>
<td>(15,349)</td>
</tr>
<tr>
<td><strong>Program Total</strong></td>
<td><strong>$11,894,000</strong></td>
<td><strong>12,953,256</strong></td>
<td><strong>($1,059,256)</strong></td>
</tr>
</tbody>
</table>
# Table 7.1 and Table 7.1A Comparison

**City of New Braunfels**

<table>
<thead>
<tr>
<th>EAHCP Measure</th>
<th>Table 7.1 Totals</th>
<th>Table 7.1A Projected Totals</th>
<th>Between Table 7.1 to 7.1A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Channel Restoration</td>
<td>$2,000,000</td>
<td>$1,859,036</td>
<td>$140,964</td>
</tr>
<tr>
<td>Flow Split Management</td>
<td>270,000</td>
<td>382,878</td>
<td>(112,878)</td>
</tr>
<tr>
<td>Aquatic Vegetation Restoration</td>
<td>1,245,000</td>
<td>1,321,631</td>
<td>(76,631)</td>
</tr>
<tr>
<td>Non-Native Animal Species Control</td>
<td>1,245,000</td>
<td>1,039,842</td>
<td>205,158</td>
</tr>
<tr>
<td>Decaying Vegetation Removal</td>
<td>960,000</td>
<td>420,518</td>
<td>539,482</td>
</tr>
<tr>
<td>Riparian Imp - Riffle Beetle</td>
<td>525,000</td>
<td>500,845</td>
<td>24,155</td>
</tr>
<tr>
<td>Gill Parasite Control</td>
<td>1,325,000</td>
<td>944,836</td>
<td>380,164</td>
</tr>
<tr>
<td>Restoration - Riparian Zones</td>
<td>1,600,000</td>
<td>2,142,810</td>
<td>(542,810)</td>
</tr>
<tr>
<td>LID/BMP Management</td>
<td>1,900,000</td>
<td>1,634,744</td>
<td>265,256</td>
</tr>
<tr>
<td>Household Hazardous Waste Program</td>
<td>450,000</td>
<td>550,871</td>
<td>(100,871)</td>
</tr>
<tr>
<td>Litter Control/ Floating Vegetation</td>
<td>0</td>
<td>208,108</td>
<td>(208,108)</td>
</tr>
<tr>
<td>Prohibition - Hazardous Materials</td>
<td>10,000</td>
<td>0</td>
<td>10,000</td>
</tr>
<tr>
<td>Education</td>
<td>0</td>
<td>3,349</td>
<td>(3,349)</td>
</tr>
<tr>
<td><strong>Program Total</strong></td>
<td><strong>$11,530,000</strong></td>
<td><strong>$11,009,469</strong></td>
<td><strong>$520,531</strong></td>
</tr>
</tbody>
</table>
Drought of Record Probabilities
ASR FORBEARANCE TRIGGERING PROBABILITIES

- 2021, 2022: 0% each year
- 2023, 2024, 2025: near 0% each year
- 2026: < 1%
- 2027, 2028: ~ 7% each year
- Overall chance of triggering at least once during 2026 – 2030: ~ 20% with probability weighted toward 2029/2030
Based on historical J-17 data and current levels, the probability of VISPO triggering in:

- **2020**: 0%

- **2021 – 2028**, each year is independent from the previous year:
  - In any individual year = 6.81%
  - 1 or more VISPO trigger years = 43%
  - 2 or more = 10%
  - 3 or more = 1.3%
  - 4 or more = 0.12%

**Note**: These probabilities are for the number of possible occurrences of VISPO years for period 2020-2028. They are **not** necessarily consecutive years.
EAHCP Drought Scenario Reserve Impacts
EAHCP Reserve Forecast: Drought Scenario 1

VISPO Forbearance: 2022
Probability: 6.81% any given year
EAHCP Reserve Forecast: Drought Scenario 2

VISPO Forbearance: 2022, 2023
Probability: 10% 2 or more times
EAHCP Reserve Forecast: Drought Scenario 3

VISPO Forbearance: 2022, 2023
Probability: 10% 2 or more times
ASR Recovery: 2027 (46,300AF/max/yr)
Probability: 7%
Aquifer Storage and Recovery (ASR)

&

Voluntary Irrigation Suspension Program Option (VISPO)
**AQUIFER STORAGE AND RECOVERY (ASR)**

**Requirements**

- Deliver 126,000 acre-feet to off-set pumping during the Drought of Record (DOR). *Storage Complete.*

- Acquire an additional 50,000 acre-feet of withdrawal rights to remain unused during DOR.

**Objective for 2021**

- Continue to manage near 300 ASR contracts.
ASR Storage Complete

<table>
<thead>
<tr>
<th>Year</th>
<th>ASR Water Noticed To SAWS (acre-feet)</th>
<th>Cumulative Balance (acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>1,868.325</td>
<td>1,868.325</td>
</tr>
<tr>
<td>2014</td>
<td>4,031.402</td>
<td>5,899.727</td>
</tr>
<tr>
<td>2015</td>
<td>12,075.016</td>
<td>17,974.743</td>
</tr>
<tr>
<td>2016</td>
<td>33,258.630</td>
<td>51,233.373</td>
</tr>
<tr>
<td>2017</td>
<td>31,475.188</td>
<td>82,708.561</td>
</tr>
<tr>
<td>2018</td>
<td>16,667.000</td>
<td>99,375.561</td>
</tr>
<tr>
<td>2019</td>
<td>16,667.000</td>
<td>116,042.561</td>
</tr>
<tr>
<td>2020</td>
<td>9,957.439</td>
<td><strong>126,000.000</strong></td>
</tr>
</tbody>
</table>

No additional O&M costs until withdrawals during a DOR.
### 2021 ASR Leases

<table>
<thead>
<tr>
<th>Lease Terms</th>
<th>Acre-feet</th>
<th>Rates/AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Year</td>
<td>1,724.170</td>
<td>$140</td>
</tr>
<tr>
<td>10 Year</td>
<td>10,585.422</td>
<td>$160</td>
</tr>
<tr>
<td>15 Year</td>
<td>2,252.205</td>
<td>$160</td>
</tr>
<tr>
<td><strong>Totals:</strong></td>
<td><strong>14,561.797</strong></td>
<td></td>
</tr>
</tbody>
</table>
## 2021 ASR Program Balance

<table>
<thead>
<tr>
<th>ASR Program Contracts</th>
<th>Acre-feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leases</td>
<td>14,561.797</td>
</tr>
<tr>
<td>Forbearance Agreements</td>
<td>35,333.003</td>
</tr>
<tr>
<td><strong>Current ASR Leasing/Forbearance Total:</strong></td>
<td><strong>49,894.800</strong></td>
</tr>
<tr>
<td>Forbearance Agreements Needed</td>
<td>105.200</td>
</tr>
<tr>
<td><strong>Total Expected:</strong></td>
<td><strong>50,000.000</strong></td>
</tr>
</tbody>
</table>
### Expiring ASR Leases

<table>
<thead>
<tr>
<th>Year</th>
<th>ASR Leases (Acre-ft.)</th>
<th>Expiring Amounts (Acre-ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>16,890.753</td>
<td>23,003.171</td>
</tr>
<tr>
<td>2020</td>
<td>15,924.077</td>
<td>966.676</td>
</tr>
<tr>
<td>2021</td>
<td>14,561.797</td>
<td>1,362.280</td>
</tr>
<tr>
<td>2022</td>
<td>12,837.627</td>
<td>1,724.170</td>
</tr>
<tr>
<td>2023</td>
<td>12,754.164</td>
<td>83.463</td>
</tr>
<tr>
<td>2024</td>
<td>12,753.164</td>
<td>1.000</td>
</tr>
<tr>
<td>2025</td>
<td>11,486.018</td>
<td>1,267.146</td>
</tr>
<tr>
<td>2026</td>
<td>10,864.898</td>
<td>621.120</td>
</tr>
<tr>
<td>2027</td>
<td>10,263.498</td>
<td>601.400</td>
</tr>
<tr>
<td>2028</td>
<td>0.000</td>
<td>10,263.498</td>
</tr>
</tbody>
</table>
## Cumulative ASR Forbearance Agreements

<table>
<thead>
<tr>
<th>Year</th>
<th>ASR Leases</th>
<th>ASR Forbearance Agreements</th>
<th>Totals</th>
<th>Shortage of 50,000 AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>15,924.077</td>
<td>33,745.923</td>
<td>49,670.000</td>
<td>330.000</td>
</tr>
<tr>
<td>2021</td>
<td>14,561.797</td>
<td>35,333.003</td>
<td>49,894.800</td>
<td>105.200</td>
</tr>
<tr>
<td>2022</td>
<td>12,837.627</td>
<td>35,893.003</td>
<td>48,730.630</td>
<td>1,269.370</td>
</tr>
<tr>
<td>2023</td>
<td>12,754.164</td>
<td>35,893.003</td>
<td>48,647.167</td>
<td>1,352.833</td>
</tr>
<tr>
<td>2024</td>
<td>12,753.164</td>
<td>35,893.003</td>
<td>48,646.167</td>
<td>1,353.833</td>
</tr>
<tr>
<td>2025</td>
<td>11,486.018</td>
<td>35,893.003</td>
<td>47,379.021</td>
<td>2,620.979</td>
</tr>
<tr>
<td>2026</td>
<td>10,864.898</td>
<td>35,893.003</td>
<td>46,757.901</td>
<td>3,242.099</td>
</tr>
<tr>
<td>2027</td>
<td>10,263.498</td>
<td>35,893.003</td>
<td>46,156.501</td>
<td>3,843.499</td>
</tr>
<tr>
<td>2028</td>
<td>0.000</td>
<td>35,893.003</td>
<td>35,893.003</td>
<td>14,106.997</td>
</tr>
</tbody>
</table>
Voluntary Irrigation Suspension Program Option (VISPO)

Requirements:

- Secure 41,795 acre-feet of forbearance agreements.

Target for 2021:

- Continue to manage near 200 VISPO agreements.
## VISPO

### Rates per Acre-foot:

<table>
<thead>
<tr>
<th>Years</th>
<th>Year</th>
<th>Beginning Rate</th>
<th>Rate Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Year</td>
<td>Standby</td>
<td>$57.50 (years 1-5)</td>
<td>$70.20 (years 6-10)</td>
</tr>
<tr>
<td></td>
<td>Suspension</td>
<td>$172.50 (years 1-5)</td>
<td>$210.60 (years 6-10)</td>
</tr>
<tr>
<td>5-Year</td>
<td>Standby</td>
<td>$54</td>
<td>None</td>
</tr>
<tr>
<td>Agreements</td>
<td>Suspension</td>
<td>$160</td>
<td>None</td>
</tr>
</tbody>
</table>

J-17 Index Well Reading is expected to be above 635 ft. msl on October 1st therefore permit holders will be paid the standby rate.
**VISPO**

**2021 VISPO Program Balance**

<table>
<thead>
<tr>
<th>VISPO Agreements</th>
<th>Acre-ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-Year</td>
<td>24,812.411</td>
</tr>
<tr>
<td>10-Year</td>
<td>15,620.069</td>
</tr>
<tr>
<td><strong>Current Total:</strong></td>
<td><strong>40,432.480</strong></td>
</tr>
<tr>
<td>VISPO Agreements Needed</td>
<td>1,362.520</td>
</tr>
<tr>
<td><strong>Total Expected:</strong></td>
<td><strong>41,795.000</strong></td>
</tr>
</tbody>
</table>
# VISPO

## Cumulative VISPO Agreements

<table>
<thead>
<tr>
<th>Year</th>
<th>10-Year</th>
<th>5-Year</th>
<th>Totals</th>
<th>Shortage of 41,795 AF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>15,620.069</td>
<td>22,940.580</td>
<td>38,560.649</td>
<td>3,234.351</td>
</tr>
<tr>
<td>2021</td>
<td>15,620.069</td>
<td>24,812.411</td>
<td>40,432.480</td>
<td>1,362.520</td>
</tr>
<tr>
<td>2022</td>
<td>15,620.069</td>
<td>24,812.411</td>
<td>40,432.480</td>
<td>1,362.520</td>
</tr>
<tr>
<td>2023</td>
<td>15,620.069</td>
<td>24,812.411</td>
<td>40,432.480</td>
<td>1,362.520</td>
</tr>
<tr>
<td>2024</td>
<td>4,626.297</td>
<td>16,441.028</td>
<td>21,067.325</td>
<td>20,727.675</td>
</tr>
<tr>
<td>2025</td>
<td>150.000</td>
<td>1,871.831</td>
<td>2,021.831</td>
<td>39,773.169</td>
</tr>
<tr>
<td>2026</td>
<td>150.000</td>
<td>0.000</td>
<td>150.000</td>
<td>41,645.000</td>
</tr>
<tr>
<td>2027</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>41,795.000</td>
</tr>
<tr>
<td>2028</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>41,795.000</td>
</tr>
</tbody>
</table>
2021 PROPOSED EAHCP BUDGET
EAHCP 2021 PROPOSED BUDGET

Total Budget: $14,142,559

Aquifer Storage & Recovery: $6,009,530 (42%)
VISPO: $2,509,975 (18%)
Program Management: $1,028,410 (7%)
Refugia: $1,178,357 (8%)
Modeling & Research: $250,000 (2%)
San Marcos Springs: $2,059,915 (15%)
Comal Springs: $1,106,372 (8%)
## EAHCP Expense Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>EAHCP</th>
<th>Table 7.1</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-A</td>
<td>$17,913</td>
<td>$17,609</td>
</tr>
<tr>
<td>2020-AB</td>
<td>$17,968</td>
<td>$14,471</td>
</tr>
<tr>
<td>2020-EST</td>
<td>$17,968</td>
<td>$14,471</td>
</tr>
<tr>
<td>2021-F</td>
<td>$17,338</td>
<td>$14,143</td>
</tr>
<tr>
<td>2022-F</td>
<td>$16,924</td>
<td>$13,208</td>
</tr>
<tr>
<td>2023-F</td>
<td>$16,351</td>
<td>$12,764</td>
</tr>
<tr>
<td>2024-F</td>
<td>$15,858</td>
<td>$12,832</td>
</tr>
<tr>
<td>2025-F</td>
<td>$15,938</td>
<td>$13,105</td>
</tr>
</tbody>
</table>

**Note:** The table above represents the projected expenses for EAHCP across various fiscal years, compared to estimated expenses from Table 7.1.
EXPENSE PROJECTIONS

Note: Percentages indicate year-to-year percentage change in budget/forecast.
Aquifer Management Fees and EAHCP Reserve Fund
AMF Rates - Forecast

Combined AMF/PAMF Rate --> $84

Actual: 2012 - 2020
Forecasted: 2021-2025

Aquifer Management Fee | Program Aquifer Management Fee | AMF - 2020 Forecast | Program AMF 2020 Forecast

<table>
<thead>
<tr>
<th>Year</th>
<th>AMF Rate per Acre-Foot</th>
<th>Program AMF Rate per Acre-Foot</th>
<th>Total Rate per Acre-Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>$37</td>
<td>$47</td>
<td>$84</td>
</tr>
<tr>
<td>2013</td>
<td>$37</td>
<td>$47</td>
<td>$84</td>
</tr>
<tr>
<td>2014</td>
<td>$47</td>
<td>$37</td>
<td>$84</td>
</tr>
<tr>
<td>2015</td>
<td>$47</td>
<td>$37</td>
<td>$84</td>
</tr>
<tr>
<td>2016</td>
<td>$44</td>
<td>$40</td>
<td>$84</td>
</tr>
<tr>
<td>2017</td>
<td>$42</td>
<td>$46</td>
<td>$88</td>
</tr>
<tr>
<td>2018-A</td>
<td>$38</td>
<td>$50</td>
<td>$88</td>
</tr>
<tr>
<td>2019-A</td>
<td>$34</td>
<td>$53</td>
<td>$87</td>
</tr>
<tr>
<td>2020-A</td>
<td>$35</td>
<td>$55</td>
<td>$89</td>
</tr>
<tr>
<td>2021-P</td>
<td>$33</td>
<td>$57</td>
<td>$90</td>
</tr>
<tr>
<td>2022-P</td>
<td>$33</td>
<td>$57</td>
<td>$90</td>
</tr>
<tr>
<td>2023-P</td>
<td>$35</td>
<td>$55</td>
<td>$90</td>
</tr>
<tr>
<td>2024-P</td>
<td>$35</td>
<td>$55</td>
<td>$90</td>
</tr>
<tr>
<td>2025-P</td>
<td>$31</td>
<td>$61</td>
<td>$95</td>
</tr>
</tbody>
</table>
2021 Proposed AMF Rates

Combined AMF/PAMF Rate  ----> $84  

Rate per Acre-Foot

$100  $90  $80  $70  $60  $50  $40  $30  $20  $10  $0


Actual: 2012 - 2020

Forecasted: 2021-2025

Aquifer Management Fee  Program Aquifer Management Fee  AMF - 2020 Forecast  Program AMF 2020 Forecast

$47  $47  $47  $47  $47  $42  $38  $34  $34  $50  $50  $55  $55  $55  $57  $61

$37  $40  $44  $42  $46

$33  $35  $33  $33  $31  $31  $34
2021 Potential Reserve Impacts

<table>
<thead>
<tr>
<th>Forecast Rates</th>
<th>2019-A</th>
<th>2020-A</th>
<th>2021-F</th>
<th>2022-F</th>
<th>2023-F</th>
<th>2024-F</th>
<th>2025-F</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAA General AMF</td>
<td>$46</td>
<td>$50</td>
<td>$53</td>
<td>$53</td>
<td>$53</td>
<td>$57</td>
<td>$61</td>
</tr>
<tr>
<td>HCP Program AMF</td>
<td>$38</td>
<td>$34</td>
<td>$35</td>
<td>$35</td>
<td>$31</td>
<td>$34</td>
<td>$34</td>
</tr>
<tr>
<td>Combined AMF</td>
<td>$84</td>
<td>$84</td>
<td>$88</td>
<td>$88</td>
<td>$88</td>
<td>$95</td>
<td>$95</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EAA General AMF</td>
<td>$46</td>
<td>$50</td>
<td>$53</td>
<td>$53</td>
<td>$53</td>
<td>$57</td>
<td>$61</td>
</tr>
<tr>
<td>HCP Program AMF</td>
<td>$38</td>
<td>$34</td>
<td>$35</td>
<td>$35</td>
<td>$31</td>
<td>$34</td>
<td>$34</td>
</tr>
<tr>
<td>Combined AMF</td>
<td>$84</td>
<td>$84</td>
<td>$88</td>
<td>$88</td>
<td>$88</td>
<td>$95</td>
<td>$95</td>
</tr>
</tbody>
</table>
QUESTIONS?
APPENDIX B
MEETING AGENDA
NOTICE OF OPEN MEETING
Available at eahcp.org

2020 EAHCP Budget Work Group
Wednesday, August 19, 2020 at 11:00am – 1:00pm
Click here to join Microsoft Teams Meeting
Or call: 1 210-729-0064  Conference ID: 397 631 01#

The EAHCP Budget Work Group reviews the EAHCP budget process and makes recommendations to the Implementing Committee regarding any substantive changes to ensure good stewardship of public dollars.

Members of this Work Group include Tom Taggart (Chair - City of San Marcos), Adam Yablonski (Medina County Farm Bureau), Myron Hess (Texas Living Waters Project), Brock Curry (EAA), and Mary Bailey (SAWS).

At this meeting, the following business may be considered and recommended for Budget Work Group action:

1. Call to order - Establish that all members are present or represented

2. Public Comment

3. Presentation and discussion of the EAHCP Table 7.1A Analysis and Forecast
   **Purpose:** To provide forecasted analysis of the EAHCP 7.1A Budget
   **Action:** No action required

4. Presentation and discussion of the updated Drought of Record probabilities within the remaining tenure of the current EAHCP
   **Purpose:** To provide an overview of the updated Drought of Record projected expenses
   **Action:** No action required

5. Presentation of the fiscal impacts of the Aquifer Storage Recovery (ASR) and Voluntary Irrigation Suspension Program Option (VISPO) programs as modified through previous adaptive management processes
   **Purpose:** To provide an update on the ASR and VISPO programs
   **Action:** No action required

6. Presentation and discussion of the 2021 EAHCP Budget
   **Purpose:** To provide an overview of the EAHCP 2021 Budget Forecast and Reserve Fund Projections
   **Action:** Consideration to make recommendations to the Implementing Committee

7. Consider future meetings, dates, locations, and agendas

8. Questions and comments from the public

9. Adjourn
Members of this Work Group include Tom Taggart (Chair - City of San Marcos), Adam Yablonski (Medina County Farm Bureau), Myron Hess (Texas Living Waters Project), Brock Curry (EAA), and Mary Bailey (SAWS).

1. **Call to order – 11:00 a.m.**
   Tom Taggart called roll for the Work Group. All Work Group members were present.

2. **Public Comment**
   No comment.

3. **Presentation and discussion of the EAHCP Table 7.1A Analysis and Forecast.**

   Shelly Hendrix, Edwards Aquifer Authority (EAA) Director/Controller Financial Services, presented an overview of EAHCP Table 7.1. Overall, Table 7.1 is budgeted at $261,907,955 for EAHCP activities from 2013-2027. Ms. Hendrix also presented Table 7.1A, which illustrates the actual amounts spent per conservation measure per year through 2019 and forecasts expenses through the end of the Incidental Take Permit (2028). A comparative look at the projections between Table 7.1 and Table 7.1A indicates a $50,960,461 difference in savings. Mr. Taggart clarified that these projections do not include any adjustments for the 2% annual increase that is technically allowed under the HCP Funding and Management agreement.

4. **Presentation and discussion of the updated Drought of Record Probabilities.**

   Jim Winterle, EAA Modeling Director, presented the updated Drought of Record probabilities. Based on modeling scenarios, there is a 0% chance that Aquifer Storage and Recovery (ASR) forbearance will trigger in 2021 and 2022 and a near negligible chance of triggering through 2025. There is an overall 20% chance of ASR forbearance triggering from 2026 through 2030. Based on historical data from J-17 and current aquifer levels, there is a 6.81% chance of a VISPO trigger during any individual year from 2021-2028. In specific, there is a 43% chance that it may trigger 1 or more times during that timeframe (3% higher than the 2019 forecast), a 10% chance of 2 or more trigger years (1.9% higher than 2019), a 1.3% chance of 3 or more trigger years (0.3% higher than 2019), and a 0.12% chance of 4 or more trigger years (0.5% higher than 2019).

5. **Presentation of the Aquifer Storage Recovery (ASR) and Voluntary Irrigation Suspension Program Option (VISPO) programs.**

Javier Hernandez, EAA Special Projects Liaison, provided an update and overview of the ASR and VISPO programs. The targeted ASR storage, 126,000 acre-feet, is expected to be met in 2020 so there should not be operations and maintenance injection costs going forward. The EAA will continue to seek ASR forbearance agreements as leases expire to maintain 50,000-acre-feet in withdrawal rights. Approximately 300 ASR contracts will be managed in 2021. VISPO agreements have been setup with either 5 or 10 year terms and the collective acre-feet goals for each will remain the same through 2023 but will begin to scale down dramatically after that. These agreements are currently being offered for only a 5-year period but will be structured with shorter terms the closer we get to the end of the current ITP permit in 2028.

6. Presentation and discussion of the 2021 EAHCP Budget.

Ms. Hendrix presented the 2021 proposed budget for the EAHCP program. For 2021, the estimated budget to implement EAHCP activities is $14,142,559, which is over $3 million less than the projected 2021 expense in Table 7.1. Ms. Hendrix reminded Work Group members that there is a significant decrease in expenditures from previous years due to the final Regional Water Conservation Program payment being made in 2020.

Ms. Hendrix presented the Aquifer Management Fees (AMF) progression since 2012 through projected rates in 2025. Last year the AMF rate was projected to increase 7% from $84/acre-foot to $88/acre-foot in 2021 but EAA staff plans to request the EAA Board postpone this increase until 2022.

Ms. Hendrix then presented the EAHCP reserve projections from 2012-2025 based on AMF rates. EAHCP budget estimates are projected to remain above the $26.4 million reserve floor. Roland Ruiz, EAA General Manager, commented that he recently went to the EAA Board about a new concept that the EAA would engage in a conservation-oriented program across the entire region similar to what the Edwards Aquifer Protection Program does. Mr. Ruiz also remarked that reserve floor flexibility would be crucial to executing that plan. He indicated that he would engage Work Group members at a later time to discuss the possibility of bringing down the reserve floor towards the end of the current ITP to allow for capacity in the overall budget.

Myron Hess expressed that he would like to have further discussions going forward about the implications of regarding the reserve funds as the HCP begins a new permit term. Mr. Ruiz reiterated the EAA’s commitment to continue to support the HCP. He went on to explain that the EAA’s challenge is the stress on the AMF. He indicated that this needs to be discussed in the weeks and months ahead. Mr. Taggart showed a willingness to explore this but expressed concern of the need to sustain a reserve for ASR and VISPO, the pillars of springflow protection. Mr. Taggart cautioned that approaching the end of the current permit term with a low reserve amount would not be wise. Mr. Ruiz assured Mr. Taggart that this would certainly be taken into consideration and has no intentions of bringing the reserve floor down to a nominal level that would jeopardize the overall program viability. Mr. Taggart welcomed this but also reminded that any discussion of the expansion
of the HCP program prior to a permit rollover will be done against the backdrop of the existing FMA language, which has specific language that prevents the funding of additional programs outside of the defined program activities.

At the conclusion of the Budget Work Group meeting, Mr. Taggart summarized key areas of consensus to provide to the Implementing Committee for discussion at their next meeting, which are listed below:

- The current financial projections and cost estimates presented to the Budget Work Group indicate an overall fiscally stable and adequate budget for the EAHCP program for fiscal year 2021.
- The Work Group acknowledges the ASR and VISPO trends and no likelihood of triggering events for either program in 2021. However, the Work Group does acknowledge the increased probability of VISPO triggering throughout the remainder of the permit term.
- The Work Group noted that proposed aquifer management fees (AMF) diverged from previous forecasts for 2021 with a $1 reduction in the amount of funding devoted to the EAHCP with increasing amounts of the total AMF funding EAA operations.
- Although the EAHCP Reserve is projected to remain above the established Reserve Floor of $26.4 million, the Budget Work Group reiterated prior concerns regarding the continuing downward trend of the EAHCP Reserve and the possible fiscal implications should drought conditions trigger ASR or VISPO forbearance, especially in light of increased probability. The Work Group recommends the Implementing Committee, EAA Board, and staff continue to monitor the potential Droughts of Record (DOR) and the impact of a DOR on the EAHCP Reserve Funds to ensure the continued confidence with the U.S. Fish and Wildlife Service and the EAHCP guarantee of financial security to cover program activities. The group encourages the EAHCP Implementing Committee and EAA to understand that decisions on program funding and reserve amounts may dramatically affect the financial footing of the program approaching the renewal date of the Incidental Take Permit.

7. **Consider future meetings, dates, locations, and agendas.**
   No comments.

8. **Questions and comments from the public.**
   No comments.

9. **Adjourn: 12:22 p.m.**