| | |
|---|---|
| **From:** | Robinson, Eric |
| **To:** | Azhderian, Ara; Gonzales, Eva |
| **Cc:** | Donlon, Kelly L.; kobrien@downeybrand.com; Woodrow, Amy; Nancy Isakson (nisakson@mbay.net) |
| **Subject:** | RE: Comments on MCWRA HBA Update and Draft ILT Engineer"s Report |
| **Date:** | Wednesday, September 3, 2025 12:06:33 PM |
| **Attachments:** | 2025-09-02 FINAL SVWC Ltr 2 MCWRA re comments on Draft Historic Benefits Analysis Update 4905-4513-2901 v.2.pdf |

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All:

Our comment letter submitted yesterday refers to its attached memo as being dated August 29, when the memo in fact was dated September 2.

To avoid the potential for confusion, the enclosed letter corrects all date references to the September 2 memo, which is attached. There are no other changes.

Please accept this corrected letter for use in lieu of the version we sent yesterday.

Sincerely,

--Eric Robinson
Counsel, Salinas Valley Water Coalition

**Eric Robinson** | Attorney
Kronick Moskovitz Tiedemann & Girard | kmtg.com
916.321.4500



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**From:** Robinson, Eric <erobinson@kmtg.com>
**Sent:** Tuesday, September 2, 2025 5:55 PM
**To:** Azhderian, Ara <azhderiana@countyofmonterey.gov>; cob@co.monterey.ca.us.
**Cc:** DonlonKL@co.monterey.ca.us; kobrien@downeybrand.com; Nancy Isakson (nisakson@mbay.net) <nisakson@mbay.net>
**Subject:** Comments on MCWRA HBA Update and Draft ILT Engineer's Report

Dear Mr. Azhderian and Clerk of the Monterey County Water Resources Agency's Board of Directors:

Please accept the enclosed comment letter and attached technical memorandum as the Salinas Valley Water Coalition's written comments on MCWRA's Historic Benefits Analysis Update and Draft Interlake Tunnel Project Engineers Report.

Sincerely,

KRONICK

KRONICK
MOSKOVITZ
TIEDEMANN
& GIRARD

**ERIC N. ROBINSON**
erobinson@kmtg.com

September 2, 2025

**VIA ELECTRONIC MAIL**

Ara Azhderian, General Manager
Board of Supervisors
Monterey County Water Resources Agency
1441 Schilling Place
Salinas, CA 93901
azhderiana@countyofmonterey.gov
cob@co.monterey.ca.us

Re: Comments on April 2025 Salinas Valley Historical Benefits Analysis Update and May 29, 2025, Draft Interlake Tunnel and San Antonio Spillway Modification Assessment Engineers Report

Dear Mr. Azhderian and Board of Supervisors:

This letter is submitted on behalf of the Salinas Valley Water Coalition (Coalition) to provide comments on the April 2025 Salinas Valley Historical Benefits Analysis Update (HBA Update) and May 29, 2025, Draft Interlake Tunnel and San Antonio Spillway Modification Assessment Engineers Report (Draft ILT Engineer's Report). These comments incorporate the attached September 2, 2025, Memorandum from UES providing Technical Review Comments on the MCWRA Historical Benefits Analysis and Draft Interlake Tunnel Engineers Report (September 2025 UES Memo).

The Coalition submits that the water resources of the Salinas River Basin should be managed properly in a manner that promotes fairness and equity to all landowners within the basin, and that the management of these resources should have a scientific basis, comply with all laws and regulations, and promote the accountability of the governing agencies.

To that end, the Coalition appreciates MCWRA's request for comments on the HBA Update and Draft ILT Engineer's Report. The Coalition submitted verbal comments during the July 9, 2025, workshop conducted by MCWRA's Board of Directors on the two reports and now submits these additional written comments.

MCWRA describes the purpose of the HBA Update as "to develop an updated analysis of hydrologic, flood control, and economic benefits resulting from the existing suite of Agency projects and present-day operation of those projects, using best available data and modeling tools." (April 2, 2025, MCWRA Staff Report re "Overview of the Salinas Valley Historical Benefits Analysis Update" [April 2025 Staff Report].) The Draft ILT Engineer's Report relies on the HBA Update, (April 2025 Staff Report), which estimates the extent and degree of special hydrologic benefits to landowners arising from the combined operation of the Nacimiento and San Antonio reservoirs, the Salinas Valley Recycling Project (SVRP), the Castroville Seawater Intrusion Project (CSIP), and the Salinas Valley Water Project (SVWP), including

its Salinas River Diversion Facility (SRDF). (*See* Draft ELT Engineer's Report at p. 15 [citing HBA Update's modeled change in groundwater storage as basis for estimating special benefits for Draft ILT Engineer's Report].)

The 2025 HBA Update follows MCWRA's completion of the original Historic Benefits Analysis in 1998 (1998 HBA). To estimate special benefits, the 1998 HBA used a well-vetted version of the Salina Valley Integrated Groundwater Surfacewater Model (SVIGSM) to calculate groundwater elevation changes arising from MCWRA's construction and operation of Nacimiento and San Antonio reservoirs. (HBA Update at p. 1-5 to 1-6; 1998 HBA Appendix A SVIGSM Model Extension and Verification.)[1]

**The HBA Update Significantly Understates Actual Groundwater Recharge Special Benefits Because it Relies Upon a Superseded Groundwater Flow Model Suffering From Fundamental Flaws**

When the HBA Update was prepared, it relied upon a 2023 "provisional" version of a new groundwater flow model recently developed by the U.S. Geological Survey (USGS). Internal peer review of the 2023 provisional model showed a poor fit between model-estimated groundwater pumping amounts and metered pumping data and a poor fit between modeled Salinas River surface flows and its interaction with groundwater and measured data for these parameters. (September 2025 UES Memo at 2.)

A peer review of the provisional and subsequent versions of the USGS model and use of it to conduct certain hydrologic planning revealed more errors, including understatement of low-flow conditions in the Salinas River, extensive reliance on hypothetical "drains" and water level elevation constraints in vast areas where no such drains or limits physically exist, and Salinas River bed elevations that fail to match measured land surface elevations. (September 2025 UES Memo at 2.)

Almost any groundwater model could be critiqued for being imperfect, but the 2023 provisional Salinas Valley Integrated Hydrologic Model (SVIHM) model version used to prepare the HBA Update is so deeply flawed and misleading that it cannot reasonably be used to estimate the groundwater recharge benefits arising from construction and operation of local water management infrastructure, including Nacimiento and San Antonio reservoirs, the SVRP, the CSIP, and the SVWP (including its SRDF). (September 2025 UES Memo at p. 2-6.)

For example, the HBA Update's groundwater modeling says 177,000 acre-feet per year (AFY) of groundwater flows out of hypothetical drains in the Upper Valley, Forebay, and Arroyo Seco—when no such drains actually exist. (September 2025 UES Memo at p. 4 [excerpting and evaluating HBA Update Table 3-6].) Essentially, the 2023 provisional model was not ready for use to support any policy evaluation or decisionmaking, because it still used hypothetical groundwater elevation constraints that pushed groundwater through hypothetical drains in order to try to get modeled groundwater elevations to match measured groundwater elevations throughout the valley:

[1] The 1998 HBA documents are available on MCWRA's website at: https://www.countyofmonterey.gov/government/government-links/water-resources-agency/documents/historic-benefits-analysis (last accessed September 2, 2025).

> Use of the SVIHM model version with the unacceptable use of "fictitious" drains extensively over the model domain to resolve or mask water budget errors or water elevation errors in the model renders the simulated scenario differences useless for the intended purpose.

(September 2025 UES Memo at p. 3.) In other words:

> [T]he use of fictitious drains in the 2023 provisional SVIHM model presents a severe and nonrectifiable deficiency in the HBA Update work renders the results of the modeling unusable for quantifying groundwater elevation changes over the valley as a result of historically implemented projects, especially the effects of the reservoirs in the southern Pressure Subbasin and the entire Forebay and Upper Valley Subbasins.

(September 2025 UES Memo at p. 4.)

The unacceptable use of hypothetical water-level constraints and drains in the SVIHM model version used for the HBA Update analysis helps to explain the very different model outcomes for predicted groundwater elevation changes with and without the reservoirs in the original 1998 HBA and the 2025 HBA Update. (September 2025 UES Memo at 3.) The 1998 HBA described recharge and related groundwater elevation benefits in a way that generally reflected observed reality. Rather than showing that the 1998 HBA Update overstated groundwater recharge/elevation benefits from the reservoirs, the 2025 HBA Update provides useless information that cannot meaningfully be compared to the 1998 HBA Update to learn anything about the benefits of MCWRA's reservoirs and related projects.

Given the widely varying views of stakeholders about who receives what water supply benefits from MCWRA's reservoirs and related projects, the HBA Update is a like a head-fake that misleads and confuses the players rather than pointing the way toward consensus. In that respect, it is notable that the Salinas Basin Water Alliance (SBWA) says "[t]he HBA Update contains a variety of modeling issues that must be addressed." (July 3, 2025, SBWA Comment Letter re Concerns Regarding Monterey County Water Resources Agency's April 2025 Update to Historic Benefits Assessment of Water Infrastructure Projects for Salinas Valley at p. 6.) The Coalition agrees.

**MCWRA Should Re-do The HBA Update Using Updated Models**

MCWRA should re-do the HBA Update using an updated version of the 2025 SVIHM that corrects the fundamental flaws described above, in the attached September 2025 UES Memo, and which already are being addressed by the Salinas Valley Basin Groundwater Sustainability Agency's (SVBGSA) modeling team. When it does so, MCWRA should convene qualified stakeholder experts to confirm consensus on use of the then-current version of the SVIHM and of the SVBGSA's Seawater Intrusion Model developed in 2023 by consultant Montgomery & Associates (SWI Model). That SWI Model should be used to evaluate the extent of seawater intrusion with and without MCWRA's reservoirs and projects. Just as with the 2025 HBA Update's significant understatement of groundwater elevation benefits, the HBA Update also significantly understates the reduction in seawater intrusion compared to 1998 HBA (1,000 AFY of avoided seawater intrusion versus 7,000 AFY documented in 1998 HBA). (September 2025 UES Memo

at 5-6.) Use of a corrected SVIHM together with an up-to-date SWI Model should produce the best estimates of groundwater recharge and water level benefits and avoided seawater intrusion).

When MCWRA re-does the HBA Update analysis using current model versions, it should clearly document all the assumptions used as inputs for modeling the without projects/no reservoirs scenarios. That includes documenting how MCWRA estimated the native/no-reservoirs inflow to the model. The native no-reservoir inflow estimates are used to create the baseline conditions from which the HBA Update's hydrologic benefits are identified and evaluated. For example, use of gaged stream data from surface streams entering MCWRA's reservoirs excludes surface flows from a significant portion of the relevant watersheds, which would understate native or natural inflow as a model input for calculating downstream hydrologic conditions, like groundwater elevations, without the reservoirs and related projects. (September 2025 UES Memo at p. 6.)

When MCWRA re-does the HBA Update, it should assign an economic value to avoidance of seawater intrusion that goes beyond relative crop benefit to include the benefit to domestic, municipal and industrial water use in the vicinity of the seawater intruded area. (September 2025 UES Memo at pp. 6-7.) Implementation of the Sustainable Groundwater Management Act (SGMA) in the Salinas Valley is highlighting the cost of responding to seawater intrusion, and any HBA Update should acknowledge and assign value to MCWRA project benefits that avoid seawater intrusion that otherwise would occur.

When MCWRA re-does the HBA Update, it should address all the issues detailed in the attached September 2025 UES Memo.

**MCWRA Should Re-do The Draft ILT Engineer's Report That Relies Upon the Flawed HBA Update**

The Draft ILT Engineer's Report relies on the HBA Update and its flawed modeling of special benefits, so it suffers from the same foundational problems that are detailed in our comments on the HBA Update. All the preceding modeling and valuation problems require the Draft ILT Engineer's Report to be re-done before MCWRA or anyone else may rely upon it to inform policymaking or other decisions. (September 2025 UES Memo at pp. 7-9.)

First, any Engineer's Report published to support financing of major proposed infrastructure, like the Interlake Tunnel Project (ILT), must detail the anticipated new special benefits of the proposed infrastructure separately from the special benefits provided by operations of existing infrastructure. (September 2025 UES Memo at p. 7.) Only that approach would enable compliance with Proposition 218's substantive limitations on new assessments, including its limiting an assessment to paying the proportional cost of special benefits provided by a project. (*See* Cal. Const., art. XIII D, § 4 ["No assessment shall be imposed on any parcel which exceeds the reasonable cost of the proportional special benefit conferred on that parcel. Only special benefits are assessable, and an agency shall separate the general benefits from the special benefits conferred on a parcel."].)

Second, the Engineer's Report should be re-done to use the Salinas Valley Operations Model (SVOM), which was specifically developed to provide an appropriate modeling tool to predict future reservoir reoperation scenarios. The Draft ILT Engineer's Report failed to rely upon the SVOM and instead assumed that future reservoir operations with the ILT constructed and operating would cause the same geographical and temporal distribution of special recharge benefits as estimated by the backwards-

looking SVIHM. That approach reflects an inaccurate assumption that past operations will be repeated in the future, even though the whole point of the ILT is to change future reservoir operations. (September 2025 UES Memo at p. 8.)

Third, just as with the HBA Update, the Draft ILT Engineer's report should assign economic value to the special benefits of avoided seawater intrusion and SGMA compliance. (September 2025 UES Memo at p. 9.) That special benefit goes above and beyond increased groundwater elevations, which reduce pump lifts or avoid the need to deepen wells. Any Engineer's Report for a project to increase groundwater recharge and reduce seawater intrusion must put a value on avoided seawater intrusion. (*Ibid.*)

Finally, the Draft ILT Engineer's Report describes changes in groundwater storage amounts that seem to conflict with the values in the HBA Update. The Engineer's Report refers to the HBA Update's Table 3-8 for reported changes in storage values by subarea, but these values should be derived from the SVOM modeling described above—not from the SVIHM's modeling of past project operations. (*Ibid.*) Of course, the storage changes estimated by the HBA Update's use of the superseded 2023 provisional SVIHM are inaccurate and cannot be used because of the widespread use of groundwater elevation constraints and fictitious drains. (*Ibid.*)

**Conclusion**

The Coalition thanks MCWRA for soliciting stakeholder input on the 2025 HBA Update and Draft ILT Engineer's Report. Updating the 1998 HBA could help stakeholders develop consensus on who receives what level of special benefits from MCWRA reservoir and related project operations. Unfortunately, the deep foundational problems with the 2023 provisional groundwater flow model used to prepare the HBA Update make its results inaccurate and misleading. The Coalition respectfully requests that MCWRA collaborate with qualified technical experts of the Coalition and others to ensure that a re-do of the HBA Update reflects consensus on the underlying groundwater modeling. Resolving this problem with the HBA Update would help MCWRA re-do its Draft ILT Engineer's Report, if it ever seeks to impose a new special assessment for this project.

Sincerely,

KRONICK, MOSKOVITZ, TIEDEMANN & GIRARD
A Professional Corporation

ERIC N. ROBINSON

ENR

Enclosure

cc: Kelly Donlon, County Counsel's Office (donlonkl@co.monterey.ca.us)
Kevin O'Brien, Special Water Counsel to MCWRA (kobrien@downeybrand.com)
Nancy Isakson, SVWC President (nisakson@mbay.net)

# MEMORANDUM

| | |
|---|---|
| **To:** | Nancy Isakson, President, Salinas Valley Water Coalition |
| **CC:** | Eric Robinson, Kronick Moskovitz Tiedemann & Girard |
| **From:** | Dwight L. Smith, PG, CHg, Principal Hydrogeologist |
| **Date:** | September 2, 2025 |
| **Subject:** | **Technical Review Comments on the MCWRA Historical Benefits Analysis and Draft Interlake Tunnel Engineers Report** |

## 1.0 INTRODUCTION

This memorandum summarizes my technical review comments made on behalf of the Salinas Valley Water Coalition. The documents reviewed are listed below, and these comments focus on hydrologic and hydrogeologic aspects of the reports.

- Salinas Valley Historical Benefits Analysis Update, Final Report, dated April 2025, prepared by West Yost, and referred to in this memorandum as the HBA Update report.
- Economic Benefits of MCWRA's Investments in Water Infrastructure Projects for Salinas Valley, Final Report, April 2025, prepared by One Water Econ.
- Interlake Tunnel and San Antonio Spillway Modification Assessment Engineers Report, Draft, May 29, 2025, prepared by Bartle Wells Associates, and referred to in the memorandum as the ILT Engineers Report.

## 2.0 CONCLUDING RECOMMENDATIONS

### 2.1 HBA

Use of a superseded model, which at the time contained wide-spread use of fictitious drain cells to moderate (constrain) shallow water level elevations and potentially address water balance inaccuracies, has created significant inaccuracies in the model results for the HBA Update. Principally, historical water level changes (increases) associated with implementation of the reservoirs cannot be accurately simulated. The issue is clearly evident in the HBA Update results, which produced little to no significant water level changes that can be associated with implementation of the reservoirs, a notable difference from the 1998 HBA work, in which the modeling predicted an average 5-10 ft higher water level elevations under reservoir operations that is wide-spread through the valley, and up to 25 ft of water level elevation increases in the southern Pressure Subbasin and northern Forebay Subbasin. The HBA Update analysis will need to be redone using either the USGS (2025) published SVIHM model version, or preferably, an upcoming update to the 2025 published SVIHM. The USGS (2025) published model version partially addresses the use of wide-spread drain cells by returning the captured shallow groundwater by the drains to the Salinas River, but this adjustment does not address the fictitious constraint of water levels to set elevations by the cell drains. It is our understanding that the fictitious drain cells are currently being addressed (removed from the model) in an ongoing model update being implemented by the SVBGSA.

### 2.2 ILT Engineers Report

In my opinion, this body of work falls short of meeting professional standards for an Engineers Report, including utilization of incorrect modeling tools (relying on the SVIHM rather than the SVOM), numerous inaccurate or incomplete assumptions, and reliance on the HBA Update modeling results which has serious inaccuracies. My recommendation, if this draft body of work is to progress, is to re-engage and redo the ILT Engineers Report, in an approach similar to that described for the Engineers Report conducted for the SVWP in 2003, which includes technical peer reviews by qualified professionals and representatives of key stakeholders in the valley.

## 3.0 TECHNICAL EVALUATION POINTS

### 3.1 Salinas Valley Historical Benefits Analysis Update, Final Report, April 2025

#### 3.1.1 Use of a Superseded Version of the SVIHM Model

The HBA Update needs to be conducted using the most current available version of the numerical flow model. The 2023 "provisional" model version that has been used in the analysis underwent important modifications and additional model calibration to address deficiencies revealed during internally conducted peer review by the USGS. Only the USGS and cooperating agencies understand the full spectrum of model adjustments made during the 2023 and 2024 timeframe and prior to the publication of the model in 2025, but some corrected issues that we are aware of include important modeling attributes associated with:

a. Representation of agricultural pumping and fit of the model simulated pumping to actual metered agricultural pumping.
b. Representation of Salinas River flows and water balances reporting to the river.

Peer review of the 2025 USGS published model along with ongoing use of the model for other hydrological and planning purposes has revealed some additional model shortfalls that can and should be addressed through additional model adjustments and calibration, including:

a. Under-simulation of low flow conditions in the Salinas River,
b. Conceptual use of drains for water balance and water level elevation constraints in areas for which drains do not physically exist (see Section 3.1.2 below), and
c. River bed elevations that do not accurately represent actual land surface elevations.

Furthermore, there have been additional scientific evaluations that improve the understanding of the hydrogeologic framework of Salinas Valley, including the deep aquifers, and to provide more advanced modeling tools for representation of seawater intrusion. The HBA Update modeling analysis needs to be updated to benefit from this work.

It is our understanding that the SVBGSA is advancing development of an updated SVIHM model version (v2) to address issues identified above. In order to gain credibility and confidence in the HBA Update work, it will be important for MCWRA to use the most-up-to-update numerical flow models available.

### 3.1.2 Notable Apparent Issue Related to Use of Fictitious Drain Cells in the Provisional SVIHM Model Version

It is notable in the HBA Update water balance tables and schematics that a large portion of the water budget in the SVIHM model version is allocated to drain discharge, in subbasins in which agricultural subdrains are not physically present (see HBA Update Table 3-6, copy provided below, highlight added). This use of "fictitious" drains in the 2023 provisional SVIHM model version regulated water level elevations from encroaching to land surface, thus enforcing maximum water level elevations to be maintained at or below the drain elevations. In areas where physical subsurface drains are present to maintain shallow groundwater elevations beneath agricultural lands (portions of the Pressure – 180/400 Subbasin), the use of the drains in the model is appropriate and represents a physical condition. But in areas where subsurface drains do not exist (Forebay, Upper Valley, and Eastside Subbasins), the use of drains is concealing unresolved water balance and groundwater elevation issues in the model. In the published version of the SVIHM (2025), water collected by the drains was routed to the Salinas River, which may partially correct water balance concerns, but the drains are still present, and function to artificially suppress shallow groundwater elevations. It is our understanding the SVBGSA is presently working on correcting this issue in the model by removing drains at locations where they do not exist and recalibrating the model to achieve reasonable match to measured groundwater elevations (SVBGSA Groundwater Technical Advisory Committee presentation, 2025).

The drain issue in the 2023 provisional version of the SVIHM used for the HBA Update has particular relevance to objectives of the modeling and the HBA Update, because the analysis relies heavily on groundwater elevation differences simulated by the model with and without the reservoirs along with CSIP and SVWP to quantify benefits. I believe that the use of the SVIHM model version with the unacceptable use of "fictious" drains extensively over the model domain to resolve or mask water budget errors or water elevation errors in the model renders the simulated scenario differences useless for the intended purpose. For note, one of the largest water budget parameter changes observed in the HBA Update modeling is the change in drain outflows (see Table 3-2 from the HBA Update, copy provided below, highlight added)

The unacceptable use of the drains in the SVIHM model version used for the HBA Update analysis is also a likely explanatory reason for the noticeably different model outcomes for predicted water level elevation changes with and without the reservoirs in the 1998 versus 2025 HBA modeling. Predicted groundwater elevation changes as a result of historical reservoir operations were notable in the southern Pressure Subbasin and north Forebay Subbasin in the 1998 SVIGSM modeling, with average water level elevation increases of 10-25 ft (see Figure 1-6 from the 1998 HBA report, included below). Over most of the Salinas Valley, the 1998 modeling indicated a 5-10 ft average water level increase. By comparison, the 2025 HBA Update modeling predicts essentially no average annual water level increase as a result of the reservoirs, with only modest increase directly along the river, and more substantial water level increases in the northern Pressure subbasin as a direct result of CSIP/SRDF. In review of available historical water level elevation data, it appears that a historical rise in water level elevations post-reservoirs (1958 for Nacimiento) as represented in the 1998 modeling is supported by the data, but perhaps of a more modest magnitude of approximately 5-15 ft (reference is made to hydrographs of water level elevations for 1948-1994 in the Appendix A to the HBA, Montgomery Watson, 1998).

The lack of predicted water level elevation responses from the reservoir operations and inconsistency with the prior body of work from the 1998 HBA modeling, which was a significantly peer reviewed effort, should have led to questioning of the validity of the results being observed in the HBA Updated modeling.

In summary, the use of fictitious drains in the 2023 provisional SVIHM model presents a severe and non-rectifiable deficiency in the HBA Update work, renders the results of the modeling unusable for quantifying groundwater elevation changes over the valley as a result of historically implemented projects, especially the effects of the reservoirs in the southern Pressure Subbasin and the entire Forebay and Upper Valley Subbasins.

**Table 3-6. Average Annual Groundwater Budget by Subarea, Historical Scenario (in afy)**

| | Groundwater Budget Component | Pressure | East Side | Arroyo Seco | Forebay | Upper Valley | Below Dam | Paso Robles Basin | Offshore | Other Non-Zone 2C Area |
|---|---|---|---|---|---|---|---|---|---|---|
| Inflows | Net Recharge | 18,000 | 29,000 | 8,000 | -5,000 | -36,000 | -4,000 | 1,000 | 0 | 13,000 |
| | GW/SW Flux | 133,000 | 16,000 | 14,000 | 171,000 | 279,000 | 6,000 | 1,000 | 0 | 7,000 |
| | Seawater Intrusion | 9,000 | < 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | 5,000 |
| | GW Inflow from Other Subareas | 11,000 | 32,000 | 9,000 | 1,000 | 4,000 | < 1,000 | 1,000 | 0 | 2,000 |
| | GW Inflow from Ocean | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15,000 | 0 |
| | **Total In** | **172,000** | **76,000** | **32,000** | **167,000** | **247,000** | **2,000** | **3,000** | **15,000** | **27,000** |
| Outflows | M&I Pumping | 24,000 | 12,000 | 2,000 | 5,000 | 4,000 | < 1,000 | < 1,000 | 0 | 2,000 |
| | Ag Pumping | 99,000 | 68,000 | 35,000 | 88,000 | 119,000 | 1,000 | < 1,000 | 0 | 8,000 |
| | Drains | 31,000 | < 1,000 | 3,000 | 49,000 | 125,000 | 1,000 | 0 | 0 | < 1,000 |
| | GW Exchange with Pajaro Basin | 0 | < 1,000 | 0 | 0 | 0 | 0 | 0 | 0 | < 1,000 |
| | GW Exchange with Paso Robles Basin | 0 | 0 | 0 | 0 | 0 | 0 | 4,000 | 0 | 1,000 |
| | GW Outflow to Other Subareas | 25,000 | 0 | 0 | 19,000 | 2,000 | 2,000 | < 1,000 | 15,000 | 12,000 |
| | **Total Out** | **178,000** | **81,000** | **40,000** | **161,000** | **250,000** | **4,000** | **4,000** | **15,000** | **23,000** |
| **Change in Storage** | | **-4,000** | **-4,000** | **-8,000** | **+7,000** | **-2,000** | **-2,000** | **-1,000** | **< 1,000** | **+4,000** |
| **Mass Balance Difference** | | **-1,000** | **< 1,000** | **< 1,000** | **-1,000** | **+1,000** | **< 1,000** | **< 1,000** | **< 1,000** | **< 1,000** |

Notes:
- Groundwater budget components are rounded to the nearest 1,000 acre-feet per year; totals may not sum due to rounding

**Table 3-2. Average Annual Groundwater Budget for Historical and No Projects Scenario, and Difference Between Scenarios (in afy)**

| | Groundwater Budget Component | Historical Scenario | No Projects Scenario | Difference |
|---|---|---|---|---|
| Inflows | Net Recharge | 24,000 | 38,000 | -14,000 |
| | GW/SW Flux | 627,000 | 556,000 | +72,000 |
| | GW Exchange with Ocean | 15,000 | 16,000 | -1,000 |
| | **Total In** | **666,000** | **610,000** | **+56,000** |
| Outflows | M&I Pumping | 48,000 | 48,000 | < 1,000 |
| | Ag Pumping | 419,000 | 429,000 | -10,000 |
| | Drains | 209,000 | 164,000 | +45,000 |
| | GW Exchange with Pajaro Basin | < 1,000 | < 1,000 | < 1,000 |
| | GW Exchange with Paso Robles Basin | 4,000 | 4,000 | < 1,000 |
| | **Total Out** | **680,000** | **645,000** | **+35,000** |
| **Change in Storage** | | **-11,000** | **-31,000** | **+20,000** |
| **Mass Balance Difference** | | **-4,000** | **-5,000** | **+1,000** |

Notes:
- Groundwater budget components are rounded to the nearest 1,000 acre-feet per year; totals may not sum due to rounding
- Difference between scenarios is calculated as Historical Scenario minus No Projects Scenario

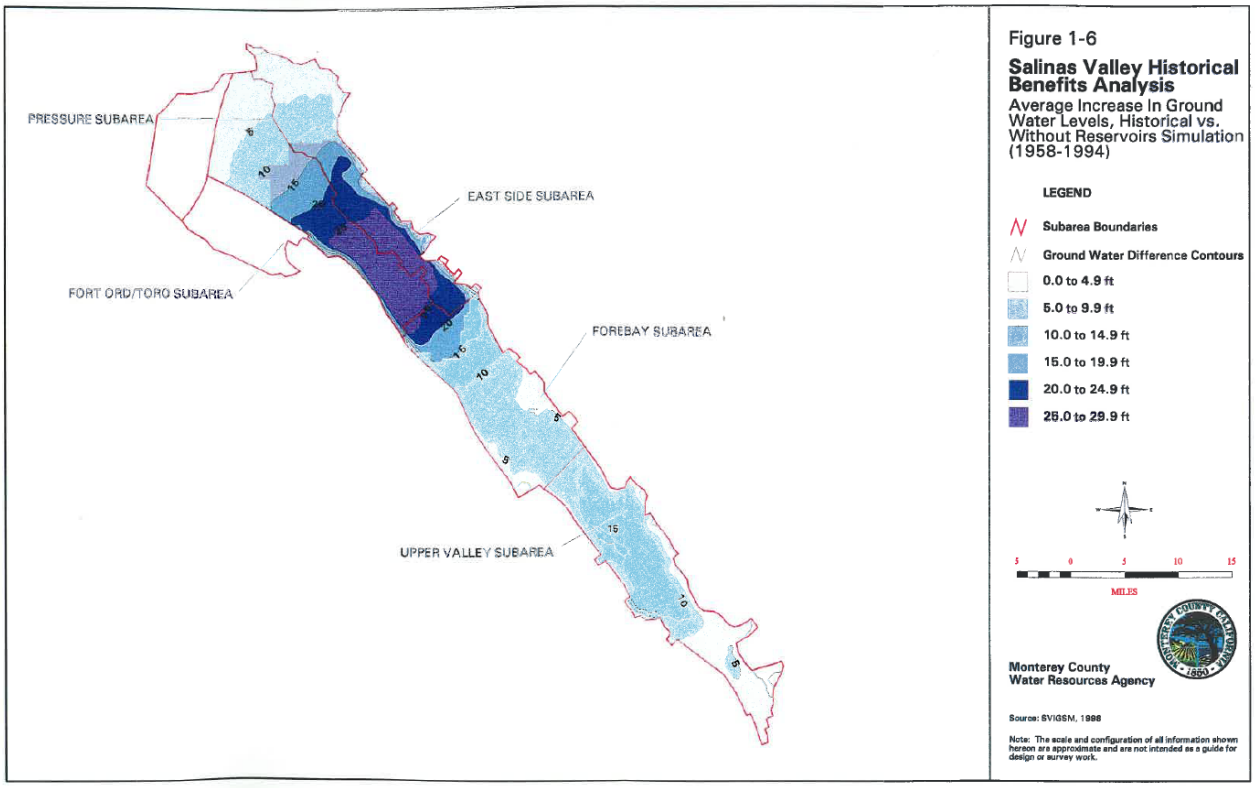


**Figure 1-6 (HBA, 1998) of average increase in water levels elevations resulting from reservoir options from the 1998 HBA modeling.**

### 3.1.3 Seawater Intrusion Simulated Differences

While unclear if associated with the use of drains in the provisional model version used for the HBA Update, it is notable that simulated reservoir operations appear to have little effect on predicted seawater intrusion in the HBA Update modeling. The 1998 HBA modeling predicted that seawater intrusion over the 1958 to 1994 period had been curtailed by 7,000 AFA (reduced from 18,000 AFA to 11,000 AFA). The HBA Update model indicates seawater intrusion has been curtailed by only 1,000 AFA over the period of 1968-2018 (16,000 AFA to 15,000 AFA) by mutual operation of the reservoirs, CSIP and the SVWP. However, the HBA Update indicates very little difference in seawater intrusion occurred prior to implementation of CSIP (p. ES-12), a significant difference from the 1998 HBA modeling results. Further work is needed to adequately quantify seawater intrusion differences using the most up-to-date and robust modeling tools available. To date, the most robust seawater intrusion model is recent work published by the SVBGSA (2023) called the SWI Model (Montgomery & Associates, 2023) The SWI model predicts an average annual seawater intrusion of 22,000 AFA over the period of 1974-2020, which differs notably in magnitude of simulated seawater intrusion from the modeling SVIHM model. The SWI up-gradient boundary conditions are associated with the SVIHM / SVOM and will likely need to be updated at some future time but this probably does not significantly influence the seawater intrusion predictive results of the SWI.

Because of the significant economic costs associated with impacts from and future management of seawater intrusion, the HBA Update needs to be based on quantifications of seawater intrusion made using the best available model and technical work, which at this time is the SWI model.

### 3.1.4 Lack of Documentation for the Computations of No-Reservoir Native Flows in Nacimiento and San Antonio Rivers

Details and documentation of methodology are needed for how the no-reservoir native flows in Nacimiento and San Antonio Rivers have been computed for the period 1958 to present. The draft HBA report references data provided by MCWRA, without any explanation of how the native no-reservoir flow estimates have been computed. As there are several approaches that may have been utilized to make the computations, the methodology needs to be adequately documented.

Critical questions on the computed no-reservoir native flow estimates include:

a. Was the USGS rainfall-runoff model of the Salinas River watershed uplands model (Salinas Valley Watershed Model - SVWM) used to produce simulated the no-reservoirs river flows?
b. Was the computed no-reservoir native flow estimates based on up-stream gage data on Nacimiento and San Antonio Rivers (USGS 11148900 NACIMIENTO R BL SAPAQUE C NR BRYSON CA, period of record 1971-present; USGS 11149900 SAN ANTONIO R NR LOCKWOOD CA, 1965-present), and if so, how were the tributary areas below the gages accounted for in the river flow estimates, and how were any data gaps at the gage records addressed (for example 1958-1970 for Nacimiento)? For note, the tributary area to Nacimiento Reservoir below the Sapaque gage is 108,620 acres, which is greater than the up-stream watershed tributary to the gage of 99,940 acres; and the tributary area below the Lockwood gage is 68,190 acres, contrasted with 138,630 acres up-stream of the gage. Significant un-gaged watershed area produces runoff below the stream gages that reports to both reservoirs.
c. Was a water balance approach used, that factored into consideration historical evaporation losses from the reservoir, changes in reservoir storage volume, and both gaged and non-gaged runoff into the reservoir?
d. How was the gaged reservoir releases and outflow data used, or compared and contrasted with the computations of no-reservoir flows (USGS 11149400 NACIMIENTO R BL NACIMIENTO DAM NR BRADLEY CA, period of record 1957-present; MCWRA reservoir release records)?

Since the native no-reservoir flow estimates are used to create the baseline condition from which HBA Update hydrologic changes are interpreted, it is important that the assumptions imbedded in the baseline condition be presented, utilize best available data and methodologies, and be presented in a manner that can be sufficiently peer reviewed.

## 3.2 Economic Benefits of MCWRA's Investments in Water Infrastructure Projects for Salinas Valley Final Report April 2025

### 3.2.1 Seawater Intrusion Does Not Appear to be Adequately Valued

The economic value of seawater intrusion reduction is not adequately represented in the analysis. Only a relative crop value benefit is the basis for the assessed value. The value related of other components of

water supply is not included, such as provision of domestic, municipal and industrial water in the vicinity of the seawater intruded area. Seawater intrusion has driven up the cost to maintain municipal water supplies of suitable quality and has necessitated desalinization facilities and drilling of deep wells into the Deeper Aquifers. These are quantifiable expenses that need to adequately factored into consideration for the valuation of seawater intrusion benefits.

### 3.2.2 Lack of Consideration of SGMA Implementation Costs

The historical economic benefit is not applicable to a forward analyses in time and is not consistent with regulatory statutes implemented in the past decade. Notably, there is a very substantial cost directly associated with seawater intrusion mitigation and management resulting from the Sustainable Groundwater Management Act (SGMA). Use of the economic model to project potential benefits for existing infrastructure and future projects like the proposed Interlake Tunnel Project will not be accurate without inclusion of projected costs associated with SGMA implementation, especially as it relates to mandates for the seawater intrusion mitigation and management.

### 3.2.3 Inaccurate Allocation of Avoided Well Construction and Replacement Costs

The approach of assigning value as it relates to avoidance of well deepening does not make physical sense in some geographic areas, notably for the Upper Valley Subbasin and much of the Forebay Subbasin, because there does not exist a deeper aquifer from which drilling of deeper wells could benefit. This attribute of benefit is not applicable to geographic areas where no deeper aquifer system exists, and existing wells effectively penetrate the known productive thickness of the aquifer.

## 3.3 DRAFT Interlake Tunnel and San Antonio Spillway Modification Assessment Engineers Report, May 29, 2025

Technical comments in this review relate to *Option 2 – Historical Benefit Weighting Approach.*

### 3.3.1 Projects Have Unique Effects

There is a fundamental deficiency in assuming that benefits derived from a cumulative set of historically implemented projects will have the same proportional effects as a specific proposed project. The Draft EIR completed for the proposed Interlake Tunnel project utilized a project-specific evaluation completed using the USGS SVOM model version (provisional). This technical work was conducted in 2022 and 2023 to quantify the unique predicted outcomes to water supply availability and flood flow releases from the reservoirs associated with the proposed ILT project. A similar project-specific quantification approach should have been utilized by the ILT Engineers Report. Specifically, the technical analysis in the ILT Engineers Report should have relied upon project-specific modeling as conducted using the SVOM to determine geographic distributions and magnitudes in water level elevation changes and seawater intrusion flows, consistent with the DEIR, to quantify the unique benefits of the proposed project and determine allocation of benefits by special benefit areas. The geographic resolution might be more appropriately defined on the HBA economic subunit scale rather than the hydrographic subarea scale. The assumption that past distributions and allocations of benefits can represent a specific future project is both inconsistent with the technical work conducted for the EIR and is not consistent with professional standards for assessment of project-specific associated effects.

### 3.3.2 Incorrect Modeling Tool has been used to Quantify Hydrologic Benefits

The USGS Salinas Valley Operations Model (SVOM) has been *specifically* developed to provide an appropriate modeling tool for predication of future reservoir reoperation or modification scenarios yet the SVOM was not used to quantify the benefits in the Engineers Report. To the extent that modeling is going to inform future predicted benefits, the appropriate modeling tool, the SVOM needs to be used to determine (estimate) future changes in the aquifer water levels, storage, and seawater intrusion resulting from the proposed Interlake Tunnel and Spillway modification projects. This is completed by running future scenarios with and without the proposed projects and comparing the results, as approached in the Draft EIR for the project. The use of the historical modeling results from the SVIHM, comingles historically implemented projects that came on-line over various times in the modeling period, accompanied with reservoir operational changes. The proposed projects are presumed to result in reservoir operational changes. To assume that any future proposed reservoir change will enact the same geographical and temporal effects is simply an inaccurate assumption, especially in light of the appropriate modeling tool having been developed and published in 2025 to look at future reservoir operations including the Interlake Tunnel. It should be noted that the SVOM published by the USGS in 2025 also has the drain issues that requires addressing before reliable results can be derived.

### 3.3.3 Special Benefits are Not Adequately Defined and Integrated

Seawater intrusion management, recreation and other benefits do not appear to be adequately factored into consideration in the ILT Engineers Report. The 2025 Engineers report appears to simply apply special benefits for water supply (based on change in storage only) and flood control. Other special benefits are reviewed in the updated HBA, but do not appear to be integrated into the 2025 Engineers Report. For reference, see the 2003 Engineers Report for the SVWP (RMC, 2003, Table ES-3, copy provided below) applied a weighting factor approach to integrate all identified special benefits. Additional general public benefits related to environmental considerations and habitat conservation for steelhead trout needs to be included in the current analysis. Weighting factors also need to be considered in light of today's important issues and regulatory requirements.

**Table ES-3: Special Benefits (RMC, 2003)**

| Special Benefit | Weighting Factor |
|---|---|
| Control of Seawater Intrusion | 3 |
| Flood Control | 3 |
| Increased Recharge | 1 |
| Groundwater Quality | 1 |
| Timing and Location of Recharge | 1 |
| Drought Protection | 1 |
| Preservation of Aquifer Storage | 1 |
| Recreation | 1 |

### 3.3.4 SGMA Implementation as a Special Benefit

Today's reality is that significant efforts are required to meet the compliance with state regulations for the Sustainable Groundwater Management Act (SGMA). SGMA compliance should be viewed as a special benefit as characterized on an economic unit area scale. The critical overdraft designation for the 180/400 subarea and priority need to control seawater intrusion has significant financial implications for the Salinas Valley communities – focusing much greater weight on seawater intrusion than when the 2003 Engineers Report was completed for the SVWP. Any Engineers Report prepared today to assess future proposed projects in Salinas Valley needs to acknowledge and appropriately weight into the analysis the costs and hydrologic benefits that will help facilitate implementation of SGMA, notably for seawater intrusion mitigation and management that is confronting the community. The lack of recognition of SGMA and associated weighting relevant to SGMA implementation necessities for the community is unacceptable in the ILT 2025 Engineers Report.

### 3.3.5 Storage Change Inconsistencies and Accuracy

The change in storage values in the ILT Engineers Report do not appear to match the values reported in the HBA Update. Reference is made to HBA Update Table 3-8 for reported changes in storage by subarea. However, these values need to be derived from the SVOM modeling as explained above, and not the SVIHM from past projects operation. Also of note, the accuracy of the storage change attribute derived from the 2023 provisional SVIHM is also in question due to the wide-spread use of fictitious drains.

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