



## TECHNICAL MEMORANDUM

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**DATE:** March 2, 2026

**PROJECT #:** 9100.78

**TO:** Sarah Hardgrave, Salinas Valley Basin GSA

**FROM:** Derrik Williams, P.G., C.Hg.

**REVIEWED BY:** Abby Ostovar, Ph.D., Hanni Blair

**PROJECT:** Salinas Valley Brackish Groundwater Restoration Project Feasibility Study

**SUBJECT:** Alternative Water Supply Project Concept

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### INTRODUCTION

Montgomery & Associates (M&A) developed a project concept that provides a benefit equivalent to the Salinas Valley Basin GSA's (SVBGSA) Brackish Groundwater Restoration Project (BGRP) for mitigating seawater intrusion. This effort—referred to as the Alternative Water Supply (AWS) project—is a required component for completing a U.S. Bureau of Reclamation (USBR) feasibility study for the BGRP.

The preferred BGRP scenario is designed to meet the seawater intrusion minimum threshold requirement of holding the 500 milligrams per liter (mg/L) chloride isocontour at, or seaward of, the 2017 extent of seawater intrusion by 2040. The AWS is designed to achieve the same seawater intrusion minimum threshold requirement. Additionally, the AWS project provides a nearly identical amount of water supply to the 180/400-Foot Aquifer Subbasin as the BGRP: 44,000 acre-feet per year (AFY) for the AWS project compared to the preferred BGRP scenario's 47,000 AFY. Providing this equivalent water supply is a requirement for qualifying as an equivalent project in the USBR feasibility study.

### AWS PROJECT CONCEPTS

M&A considered 3 general approaches for meeting seawater intrusion minimum thresholds in the BGR and AWS projects:

1. Developing an extraction barrier near the coast that draws existing seawater intrusion back to the coastline and prevents further seawater intrusion

2. Developing an inland injection barrier that pushes existing seawater intrusion toward the coast
3. Reducing pumping by either providing in lieu supplies or permanent land fallowing, allowing groundwater levels to rise through natural recharge and eventually pushing existing seawater intrusion toward the coast

M&A modeled 7 scenarios that simulated various combinations of extraction barriers and inland injection to assess their relative benefits (M&A, 2025a). Each of the 7 scenarios was compared against a baseline scenario that maintained current conditions into the future. The preferred BGRP scenario identified in the 2025 memorandum relies on an extraction barrier near the coast, which provides water for desalination and ultimate inland injection. The preferred BGRP scenario does not directly serve water to any users.

The AWS project relies on an injection barrier inland of existing seawater intrusion. Water for the injection barrier is supplied by alternative water sources. This injection may be combined with reduced pumping or redistributing municipal pumping if needed.

An injection barrier was selected over providing in-lieu supplies because injection is more effective at halting the inland migration of seawater intrusion. Injection directly and immediately targets the areas of seawater intrusion; providing in-lieu supplies relies on the slower process of natural recharge and might not raise groundwater levels in the specific areas needed to meet seawater intrusion minimum thresholds. Therefore, any available alternative water supplies are used for injection in the AWS project, not in-lieu deliveries. Any demand management is in the form of either limits on municipal pumping or permanent land fallowing.

## **ALTERNATIVE INJECTION WATER SOURCES INCLUDED IN THE AWS**

M&A identified 4 alternative injection water sources for the AWS project. The quantities of water available for these sources were provided by Monterey County Water Resources Agency (MCWRA) and local stakeholders. The amounts of water and timing of availability for the AWS are described in the following sections and summarized in Table 1.

Table 1. Summary of Average Historical Monthly Recharge Water Availability

	Permit 11043	Agricultural Tile Drains	Salinas Industrial Wastewater	Water Passing the SRDF	Total
January	3,697	2,278	70	0	6,044
February	6,542	2,175	60	0	8,777
March	7,689	2,471	69	0	10,229
April	4,246	1,966	90	81	6,383
May	615	1,196	128	319	2,258
June	4	1,161	132	134	1,432
July	41	1,068	130	203	1,443
August	-	878	109	311	1,298
September	171	643	109	461	1,384
October	160	736	124	182	1,202
November	87	1,017	95	0	1,199
December	618	1,768	68	0	2,455
<b>Total</b>	<b>23,871</b>	<b>17,356</b>	<b>1184</b>	<b>1,692</b>	<b>44,104</b>

All values in acre-feet/month

## Water from the Salinas River under Permit 11043

MCWRA holds water right permit 11043 (Permit), which provides a conditional right to divert Salinas River water for irrigation and municipal use. The Permit allows MCWRA to divert up to 135,000 acre-feet (AF) of natural flow annually from the Salinas River for agricultural or domestic beneficial use within the Salinas Valley. Diversion rates are capped at 400 cubic feet per second (cfs). The permit requires specific flows bypass any 11043 diversion point to protect instream resources such as steelhead trout and limits diversions to periods of high river flows.

The current permit allows diversion at 2 locations. The first diversion point is south of Soledad near the confluence of the Arroyo Seco and is often referred to as the Eastside Canal Intake. The second diversion point is near Chualar and is often referred to as the Castroville Canal Intake.

In 2025, MCWRA estimated the historical volumes of water that would have been available for diversion under the current Permit 11043 if a 400 cfs diversion structure had existed (MCWRA, 2025). Between 2010 and 2024, approximately 24,940 AFY were available on an average annual basis. This number is slightly different than the totals shown in the *Historical Salinas River Flow Analysis* (M&A, 2025b), largely due to different averaging time periods. This number is also slightly different than the 23,871 AFY shown in Table 1 because the daily data provided by MCWRA and used in Table 1 span a longer period than the 2010 to 2024 period used in

MCWRA’s estimate. Table 2 lists MCWRA’s estimates of the historical annual amounts of water available for diversion. Table 2 demonstrates the significant annual variability of available water and the need to divert large quantities of water in some years to achieve the long-term average of 24,940 AFY.

Table 2. Estimated Annual Water Available for Diversion Under Permit 11043

Year	Available 11043 Water (AF)	Year	Available 11043 Water (AF)
2010	55,628	2018	3,891
2011	86,321	2019	46,816
2012	1,477	2020	1,877
2013	145	2021	3,617
2014	200	2022	0
2015	0	2023	84,232
2016	0	2024	56,694
2017	33,165		

Permit 11043 currently does not allow diverted water to be stored over 30 days. Therefore, maintaining a steady injection rate requires a portion of the Permit 11043 water be stored for multiple years. M&A assumed MCWRA would petition the State Water Resources Control Board (SWRCB) to allow both above ground and subsurface storage of diverted water. No other modifications to the permit were assumed.

### **Agricultural Tile Drain Water**

Agricultural tile drains remove excess irrigation and rainfall in a portion of the 180/400-Foot Aquifer Subbasin (180/400 Subbasin). To address discharge requirements imposed by the Central Coast Regional Water Quality Control Board (CCRWQCB), growers have proposed collecting tile drain water and treating it at a centralized facility. This water would be available year-round and could potentially be available for injection.

Initial studies provided to SVBGSA by the Salinas Basin Water Alliance suggest approximately 17,000 AFY would be available from the treated tile drain water collection system (Alsop & Muller, 2025). Table 1 shows the monthly estimates of agricultural tile drain water available for injection. These estimates of tile drain water availability will need to be verified and refined in future project phases.

## **Treated Industrial Wastewater from the City of Salinas**

In 2025, MCWRA estimated the historical volumes of City of Salinas industrial wastewater that could be treated for reuse. Between 2010 and 2024, approximately 2,340 AFY were available on an average annual basis. Table 1 shows the monthly estimates of treated industrial wastewater available for injection.

## **Excess Water Passing the Salinas River Diversion Facility**

The Salinas River Diversion Facility (SRDF) does not divert all available water, primarily due to a lack of storage space. In 2025, MCWRA estimated the historical volumes of water passing the SRDF that could be diverted for other uses (MCWRA, 2025). Between 2010 and 2024, approximately 1,692 AFY was available on an average annual basis. Table 1 shows the monthly estimates of water passing the SRDF that could be available for injection.

## **Timing of Water Source Availability**

Table 1 and Table 2 show that water availability varies between years and within a single year. Using MCWRA's estimates of historical daily water available under Permit 11043, M&A estimated historical daily water availability from all 4 alternative sources. The historical daily water volumes available for injection are shown with the blue line on Figure 1. As shown in Table 1, the average annual amount of water available for injection is 44,100 AF. Assuming this 44,100 AF is injected at a constant daily rate throughout the year, the maximum injection rate is 121 acre-feet per day (AF/day), shown with the dashed orange line on Figure 1. This figure shows that on most days, less water is available for injection than the maximum injection rate. However, on some days, significantly more water is available for injection than the maximum injection rate. The excess water diverted on these days must be stored in a reservoir.

M&A calculated the necessary reservoir size by summing the daily water available for injection and subtracting 121 AF every day. The resulting amount of water in storage is shown on Figure 2. The maximum storage needed is 110,000 AF.

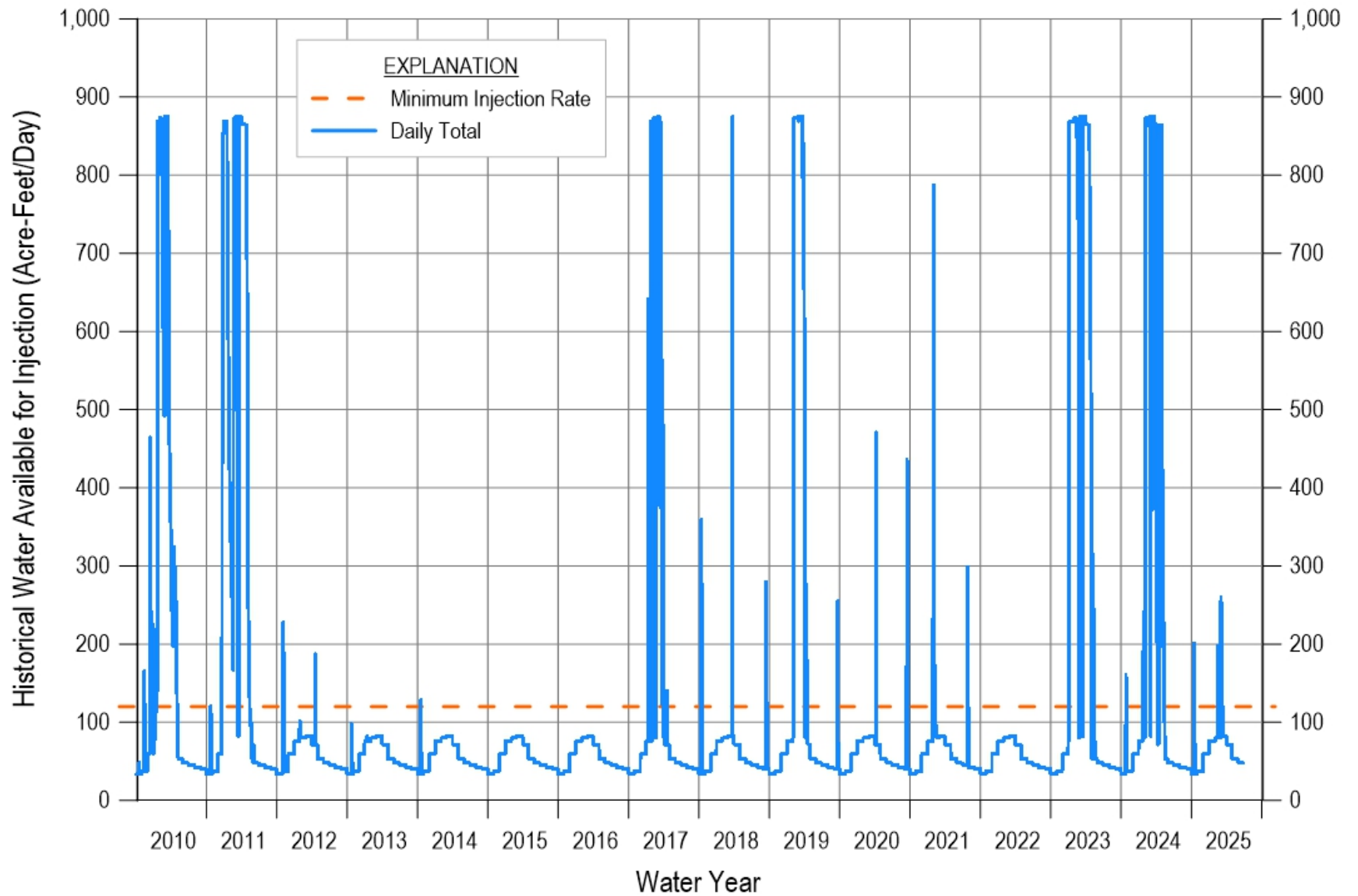


Figure 1. Historical Daily Water Volumes Available for Injection

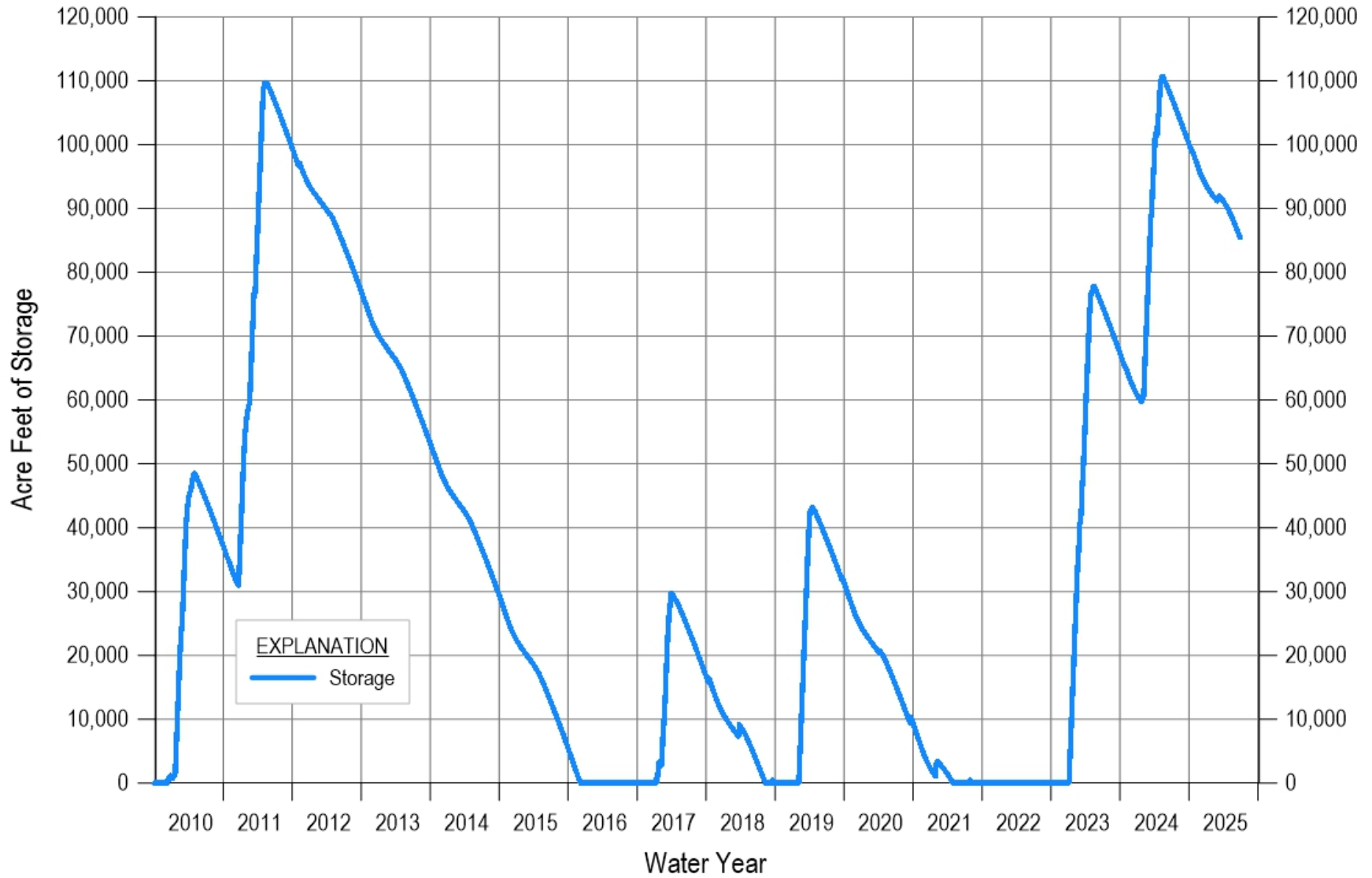


Figure 2. Calculated Storage Needed for Injection Water

## **WATER SOURCES CONSIDERED BUT NOT INCLUDED IN THE AWS**

Four potential water sources were considered but not included as viable sources for the AWS project.

### **Forebay Wellfield**

This water source involves installing a wellfield in the Forebay Subbasin and moving water from the Forebay Subbasin to the 180/400 Subbasin. This proposal takes advantage of the high river infiltration rates in the Forebay Subbasin. The concept was not included based on recent analyses of Forebay Subbasin groundwater levels and water budgets.

In 2024, members of the Sustainable Management Criteria Technical Advisory Committee (SMC TAC) analyzed historical Forebay Subbasin groundwater levels. This analysis showed that 34 of the 38 wells they analyzed had statistically significant downward groundwater level trends between 1993 and 2024 (Smith, 2024). No wells showed statistically significant upward groundwater level trends. Groundwater level trends ranged between -0.15 foot per year (ft/yr) and -1.5 ft/yr.

The persistent lowering of groundwater levels is supported by the calibrated Salinas Valley Integrated Hydrologic Model (SVIHM). The calibrated Forebay Subbasin water budget shows an annual average storage loss of 9,800 AFY in the Forebay Subbasin between 2003 and 2022 (M&A, 2025c). The downward groundwater level trends combined with the loss of groundwater storage suggests the Forebay Subbasin could be in overdraft. Exporting water from an overdrafted subbasin could exacerbate the overdraft, and therefore exporting water from the Forebay Subbasin was not included as a viable water source.

### **Blanco Drain and Reclamation Ditch Diversions**

Treating and injecting the agricultural tile drain water will diminish flows to the Blanco Drain and Reclamation Ditch. Because the AWS project reduces flow to the Blanco Drain and Reclamation Ditch, M&A assumed no additional diversions are available from either of these sources.

### **Water from the Salinas River Under a New Water Rights Permit**

MBK Engineering evaluated opportunities and constraints for developing a new water rights permit (MBK, 2025). MBK identified 2 types of new permanent permits: a streamlined permit and a standard permit.

The streamlined permit limits the permit holder to water diversions between December 1 and March 3, unless the proposed diversion meets 1 of 2 criteria:

- When the streamflow at the point of diversion is above the 90<sup>th</sup> percentile calculated from gage data during the period of record and the diversion rate is limited to 20% of the total streamflow (90/20 Method)
- When flows in the source waterbody at or near the point of diversion exceed thresholds that trigger flood control actions necessary to mitigate threats to human health and safety according to established written flood management protocols adopted by a flood control agency (Threat of Flood Conditions Method)

Both conditions appear to effectively limit diversions to times when Permit 11043 could be used. The AWS project already diverts water under Permit 11043; therefore, pursuing a new streamlined standard permit does not add appreciable amounts of new water for injection.

The standard permit would take 5 to 10 years to obtain and requires a Water Availability Analysis (WAA) to support the determination that water is available for diversion. It is unknown how much water might be available for diversion, if any; therefore, obtaining water through a new standard permit was not investigated further.

### **Additional Water Resulting from the Interlake Tunnel**

MCWRA has proposed building a tunnel between Nacimiento and San Antonio Reservoirs and modifying the San Antonio Spillway to increase available surface water supply, reduce volume of flood control releases, and provide operational flexibility for the reservoirs. Storing more water in these 2 reservoirs could result in additional water available for injection. However, MCWRA has stated that the additional stored water would be used for the existing projects and programs associated with the Nacimiento and San Antonio water rights licenses and permits and will not add additional water for other uses. Therefore, the additional stored water was not investigated further.

### **NEEDED INFRASTRUCTURE**

Wallace Group developed a conceptual infrastructure layout and cost for collecting, treating, and injecting the AWS project water (Wallace Group, 2026). Diverting, treating, storing, and delivering water derived from Permit 11043 will require the following:

- A 400 cfs diversion structure with fish screen
- A sedimentation basin to remove the high turbidity of winter river flows
- A pump station and conveyance piping to transfer water to the reservoir

- A new 110,000 AF reservoir
- A 21 million gallon per day (MGD) surface water treatment plant to treat the Permit 11043 water

The other 3 water sources will share new infrastructure including the following:

- Collection and conveyance piping
- New water tanks and storage ponds
- A 20 MGD brackish water RO plant to remove salt from the agricultural tile drain and Salinas Industrial Waste Pond sources

Stored and treated water from all 4 water sources will require distribution piping and 27 injection wells to inject the water into the 180-Foot and 400-Foot Aquifers. Details about the infrastructure needed are in the Alternative Water Supply (AWS) Project Description Technical Memorandum (Wallace Group, 2026).

## **SEAWATER INTRUSION MITIGATION EFFECTIVENESS**

M&A simulated the AWS project's effectiveness at meeting the seawater intrusion minimum threshold using version 3 of the SVBGSA's Seawater Intrusion Model (SWIM). The SWIM is a variable density regional groundwater flow and solute transport model that simulates chloride concentration changes (M&A, 2023a, 2023b, 2024, and 2025d). The SWIM simulates groundwater conditions on a regional scale and may not reflect specific conditions in any specific location.

The SWIM simulates potential seawater intrusion from Water Year (WY) 2023 through WY 2072. M&A compared results of the AWS simulations against both the seawater intrusion minimum threshold line and the projected 2040 500 mg/L chloride isocontour if no project is implemented, referred to as the Baseline Scenario. Three AWS simulations were run:

- AWS with injection only
- AWS with injection and land fallowing
- AWS with injection and municipal pumping redistribution

The project scenarios were developed by modifying the Baseline Scenario. These modifications included diverting water from the Salinas River at the Castroville Canal Intake and adding injection wells in the 180-Foot and 400-Foot Aquifers. Additionally, depending on the scenario, agricultural and/or municipal pumping rates and locations were modified from the Baseline

Scenario. The modeling assumptions and model results of the Baseline Scenario and AWS project scenarios are described in the following sections.

## **Baseline Scenario Model Assumptions**

The Baseline Scenario included the following assumptions:

- Water inflows and outflows such as precipitation, potential evapotranspiration, and stream inflows along the valley margins were derived from a historical 25-year climate cycle. This 25-year climate cycle was selected to be representative of recent historical climate.
- Land use remained constant. The land use in the Salinas Valley Operations Model (SVOM) is identical to the 2022 land use used in SVIHM.
- Agricultural pumping rates and irrigation return flows to groundwater were estimated by SVOM and copied into SWIM.
- Groundwater recharge from precipitation was estimated by SVOM and copied into SWIM.
- Salinas River inflows at Chualar were estimated by SVOM and copied into SWIM. These river inflows include projected reservoir operations.
- Municipal pumping was based on Association of Monterey Bay Area Governments (AMBAG) population estimates and growth projections.
- Sea level was estimated to rise 1.2 feet between 2022 and 2072, based on the intermediate scenario in the State of California Sea Level Rise Guidance (California Ocean Protection Council, *et al.*, 2024).

## **AWS with Injection Only Simulation**

The SWIM simulated injection of the available 44,100 AFY into wells in both the 180-Foot and 400-Foot Aquifers. Figure 3 shows the locations of the simulated injection wells. These are the same injection well locations used in the preferred BGRP scenario. Water was injected at a constant rate of 121 AF/day. Each 180-Foot Aquifer well maintained an injection rate of 1,450 gallons per minute (gpm). Each 400-Foot Aquifer well maintained an injection rate of 1,140 gpm.

Figure 4 shows the extent of the simulated 500 mg/L chloride isocontour in the 180-Foot Aquifer for the AWS simulation as a dashed blue line. This line is compared with the black minimum threshold line and the red dashed Baseline Scenario extent of the simulated 500 mg/L chloride isocontour. Figure 5 shows the extent of the simulated 500 mg/L chloride isocontour, the

minimum threshold line, and the extent of the simulated 500 mg/L chloride isocontour under the Baseline Scenario in the 400-Foot Aquifer.

These 2 figures show that the injection effectively meets the seawater intrusion minimum threshold requirement of holding the 500 milligrams per liter (mg/L) chloride isocontour at, or seaward of, the 2017 extent of seawater intrusion by 2040. In limited areas, the projected 500 mg/L chloride isocontour exceeds the minimum threshold in 2040, particularly near the community of Castroville.

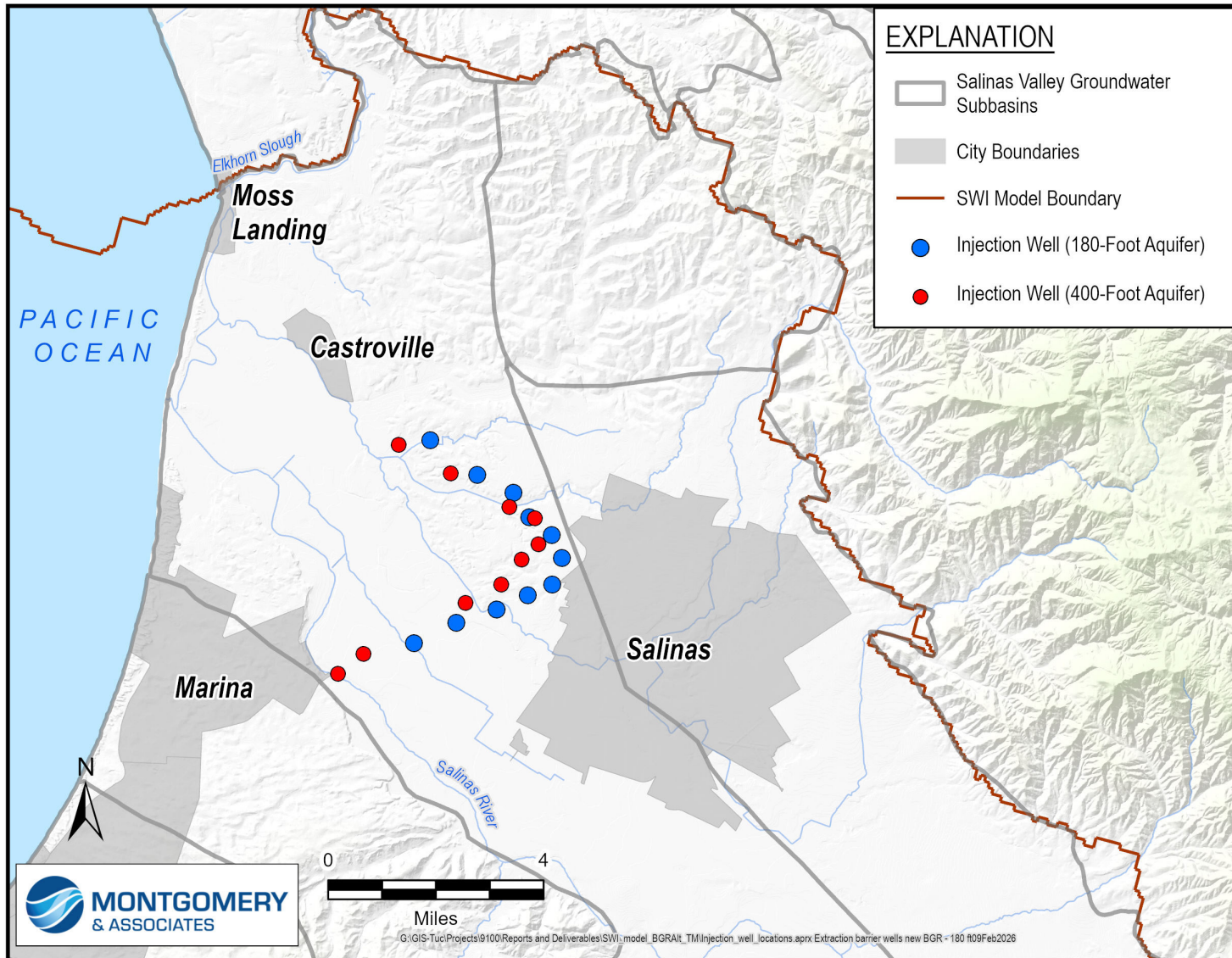


Figure 3. Simulated Injection Well Locations

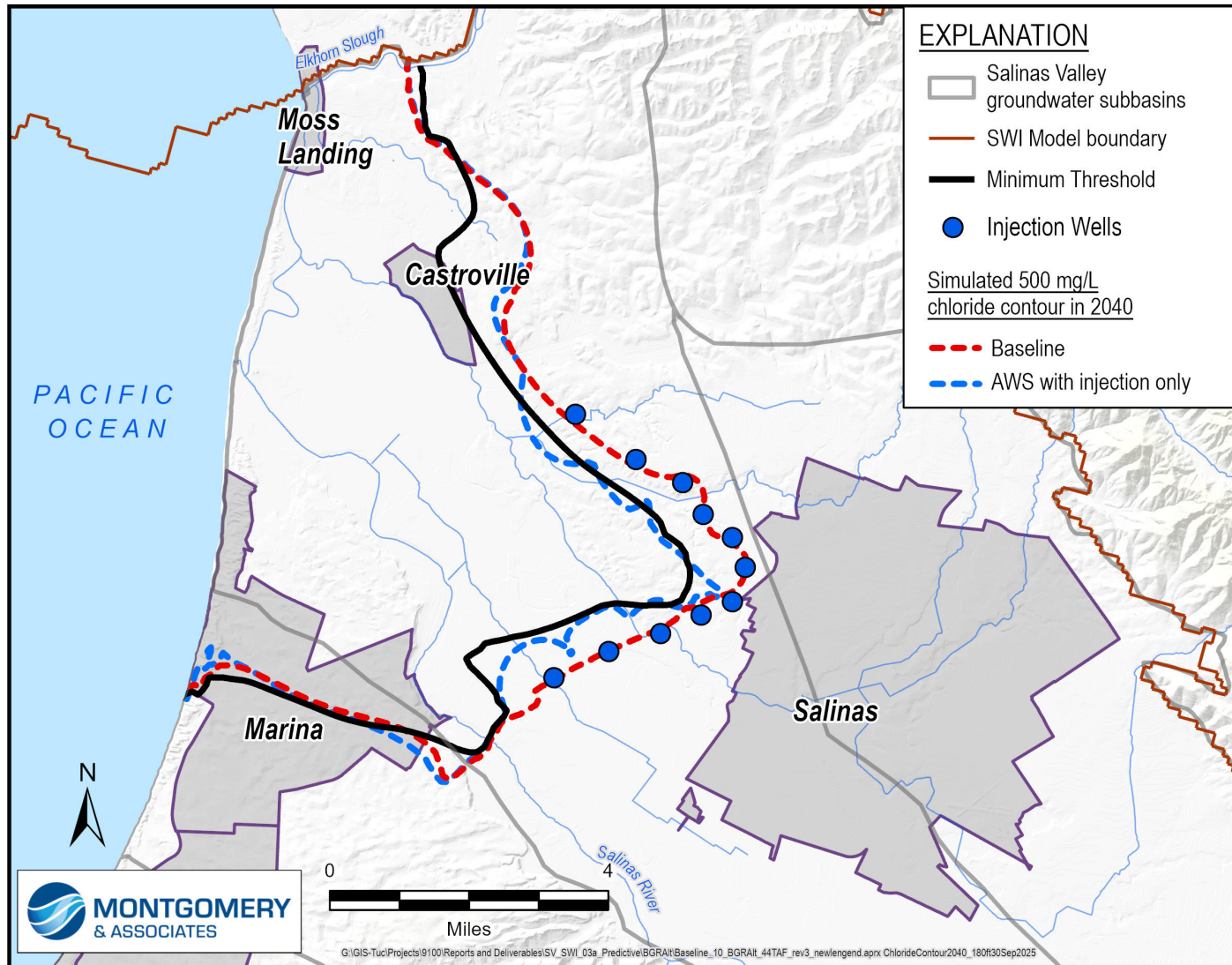


Figure 4. Simulated 2040 Extent of Seawater Intrusion in the 180-Foot Aquifer

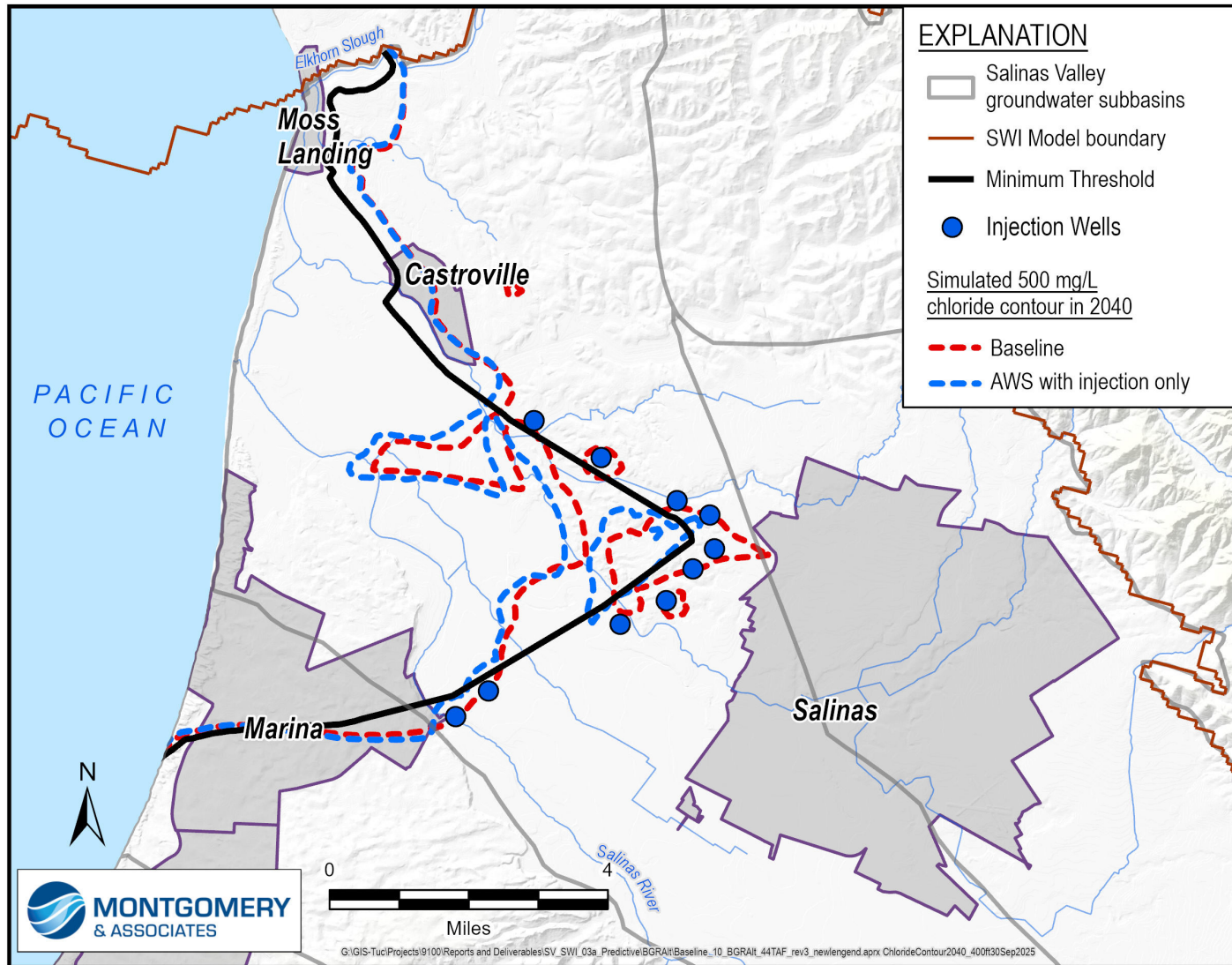


Figure 5. Simulated 2040 Extent of Seawater Intrusion in the 400-Foot Aquifer

## **AWS with Injection and Land Fallowing**

A second simulation assessed the effectiveness of demand management as a supplementary measure for meeting the seawater intrusion minimum thresholds by adding land fallowing to the injection. Land fallowing was first simulated with SVOM, and the resulting pumping and recharge were applied to SWIM.

To simulate land fallowing, crop evapotranspiration was reduced by 40% in the green area shown on Figure 6. This does not equate to complete land fallowing in the green area shown on this figure, and no specific fields were fallowed. The 40% cut in evapotranspiration reduced pumping by approximately 31,500 AFY. Land was not fallowed in areas underlain by tile drains because return flow from irrigation in these areas supply water to the AWS project. The area underlain by tile drains is estimated with the purple area on Figure 6. This purple area is a modeled Water Budget Area in the SVOM and does not exactly correspond with the tile drain area. However, the purple area on Figure 6 is a good approximation of the tile drain area.

Figure 7 shows the extent of the simulated 500 mg/L chloride isocontour in the 180-Foot Aquifer as a dashed blue line. This line is compared with the black minimum threshold line and the red dashed Baseline Scenario extent of the simulated 500 mg/L chloride isocontour. Figure 8 shows the extent of the simulated 500 mg/L chloride isocontour, the minimum threshold line, and the extent of the simulated 500 mg/L chloride isocontour under the Baseline Scenario in the 400-Foot Aquifer.

Comparing these 2 figures with Figure 4 and Figure 5 shows that this amount of land fallowing has an insignificant impact on meeting the seawater intrusion minimum threshold by 2040. However, the benefit of land fallowing might be more pronounced at later times.

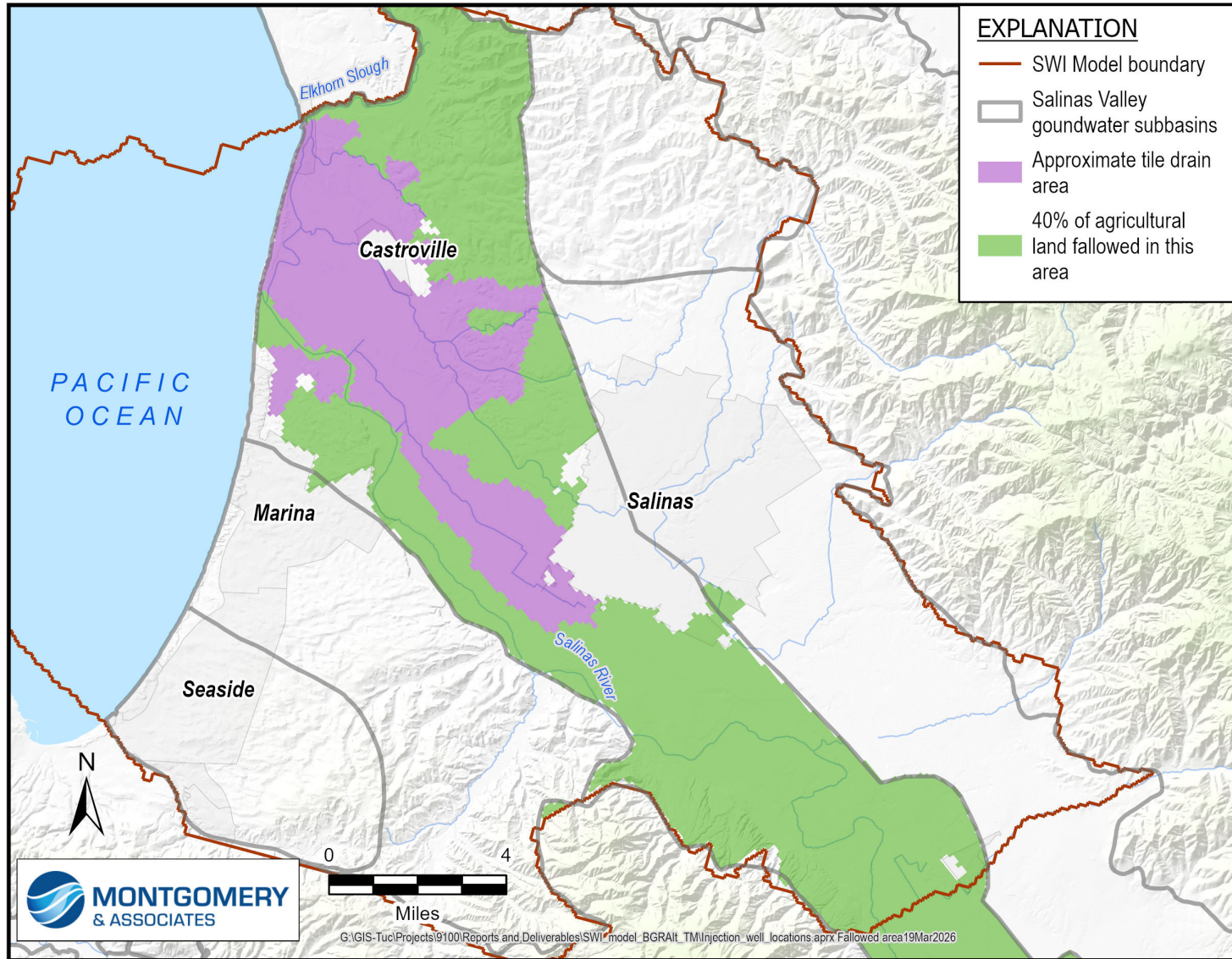


Figure 6. Location of Simulated Land Following

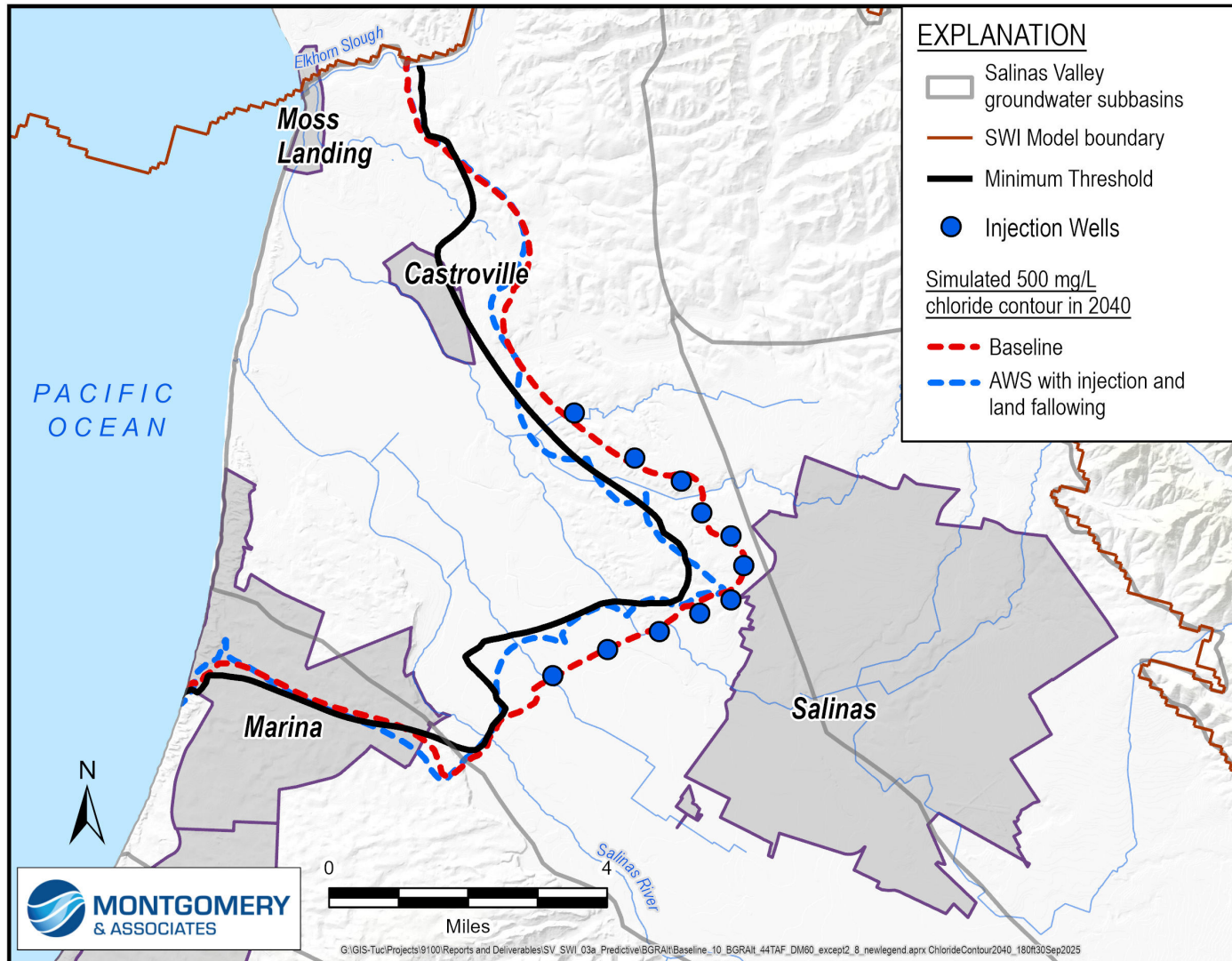


Figure 7. Simulated 2040 Extent of Seawater Intrusion in the 180-Footer Aquifer with Land Following

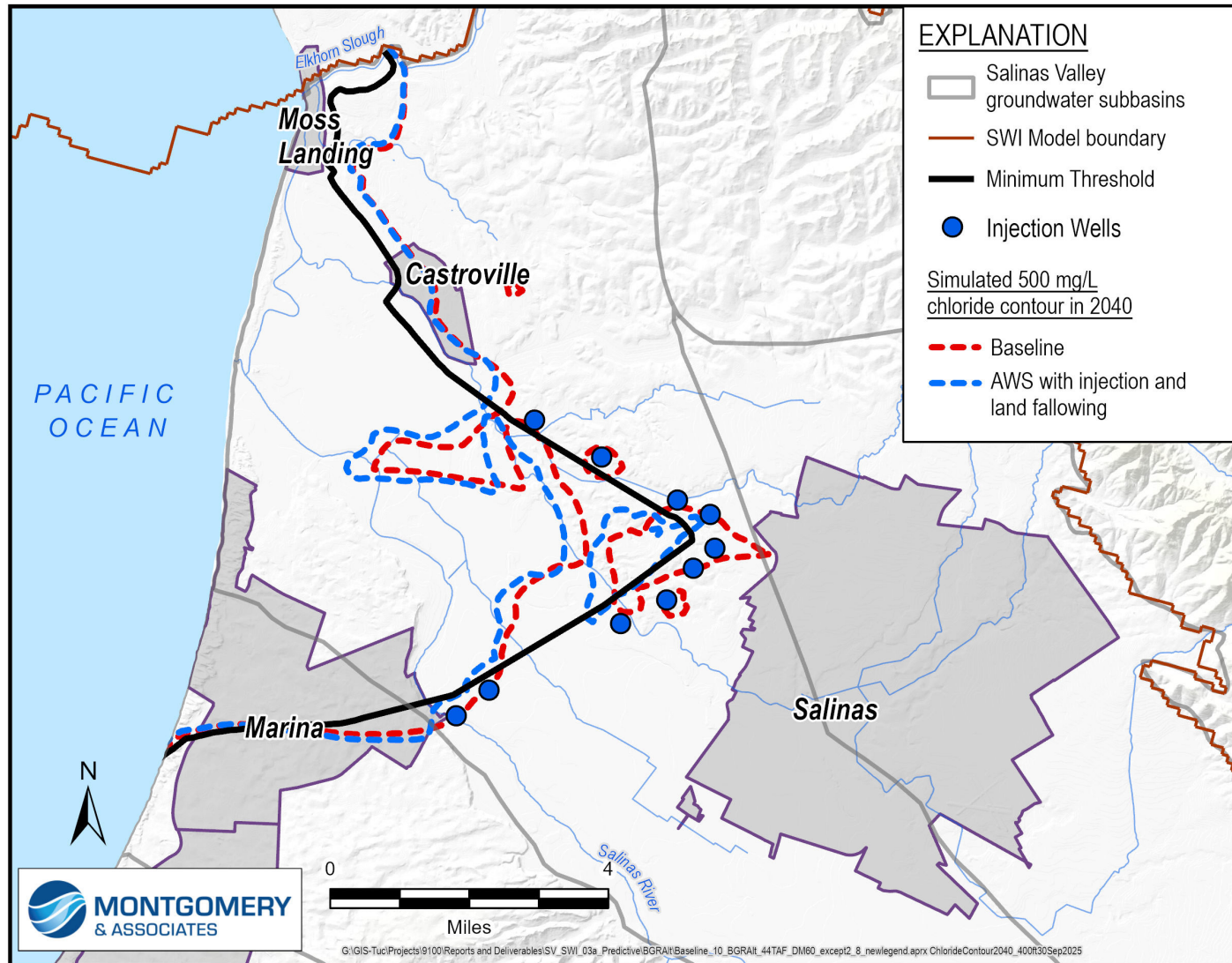


Figure 8. Simulated 2040 Extent of Seawater Intrusion in the 400-Foot Aquifer with Land Following

## **AWS with Injection and Municipal Well Pumping Redistribution**

A third simulation selectively moved municipal well pumping away from the seawater intrusion front. This simulation tests the relative influence of drawdown from nearby municipal pumping on seawater intrusion. No land fallowing was included in this simulation.

The blue dots on Figure 9 show the municipal wells where approximately 5,000 AFY of pumping was reduced to zero in 2035. These are the wells closest to the seawater intrusion in the 400-Foot Aquifer, as represented by the crosshatched area on this figure. The red dots on Figure 9 show where municipal pumping was increased to compensate for the reduced pumping in other wells.

Figure 10 shows the extent of the simulated 500 mg/L chloride isocontour in the 180-Foot Aquifer as a dashed blue line. This line is compared with the black minimum threshold line and the red dashed Baseline Scenario extent of the simulated 500 mg/L chloride isocontour. Figure 11 shows the extent of the simulated 500 mg/L chloride isocontour, the minimum threshold line, and the extent of the simulated 500 mg/L chloride isocontour under the Baseline Scenario in the 400-Foot Aquifer.

Comparing these 2 figures with Figure 4 and Figure 5 shows that redistributing municipal pumping from these wells that are closest to the existing seawater intrusion has an insignificant impact on our ability to avoid seawater intrusion undesirable results by 2040.

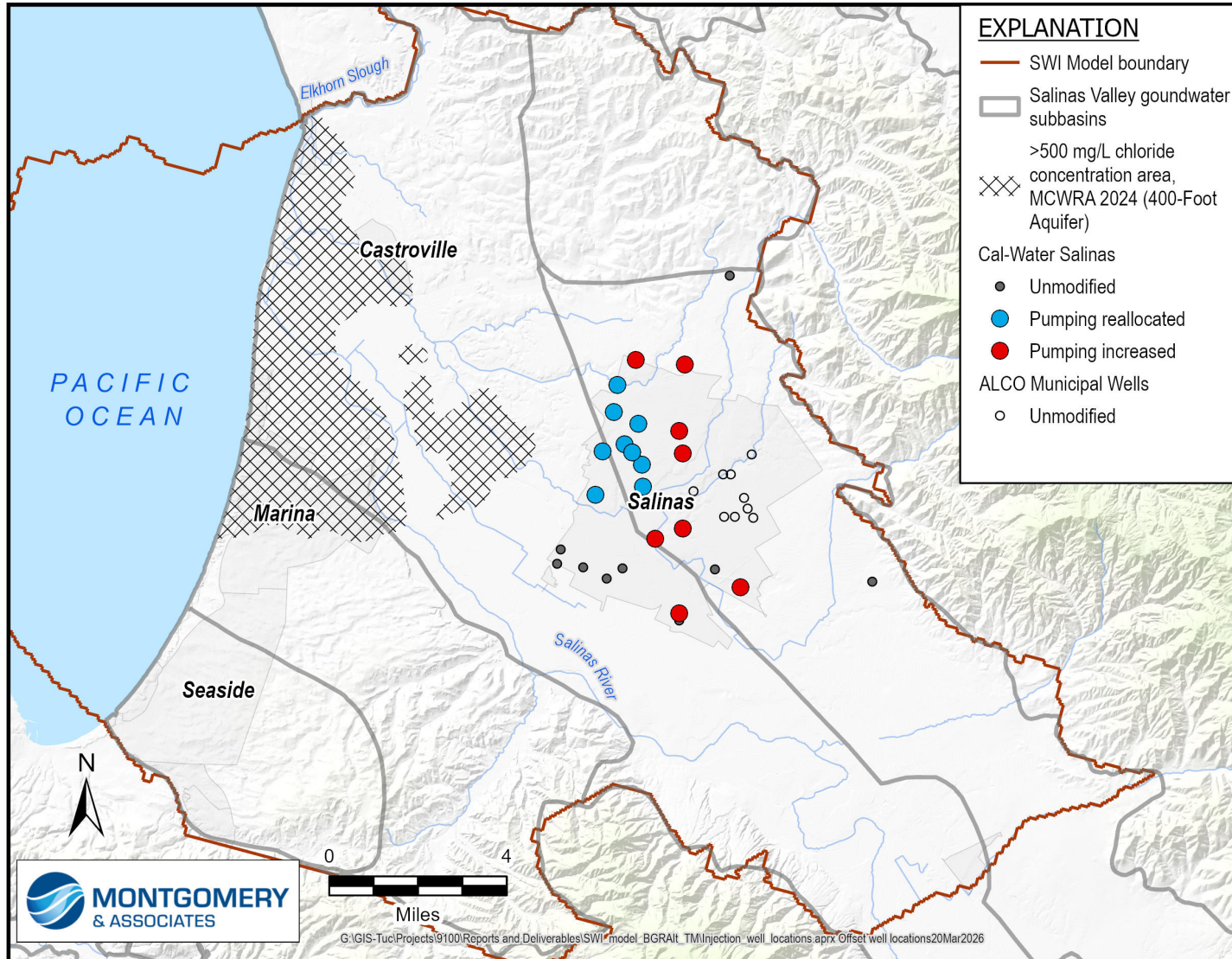


Figure 9. Municipal Well Locations with Redistributed Pumping

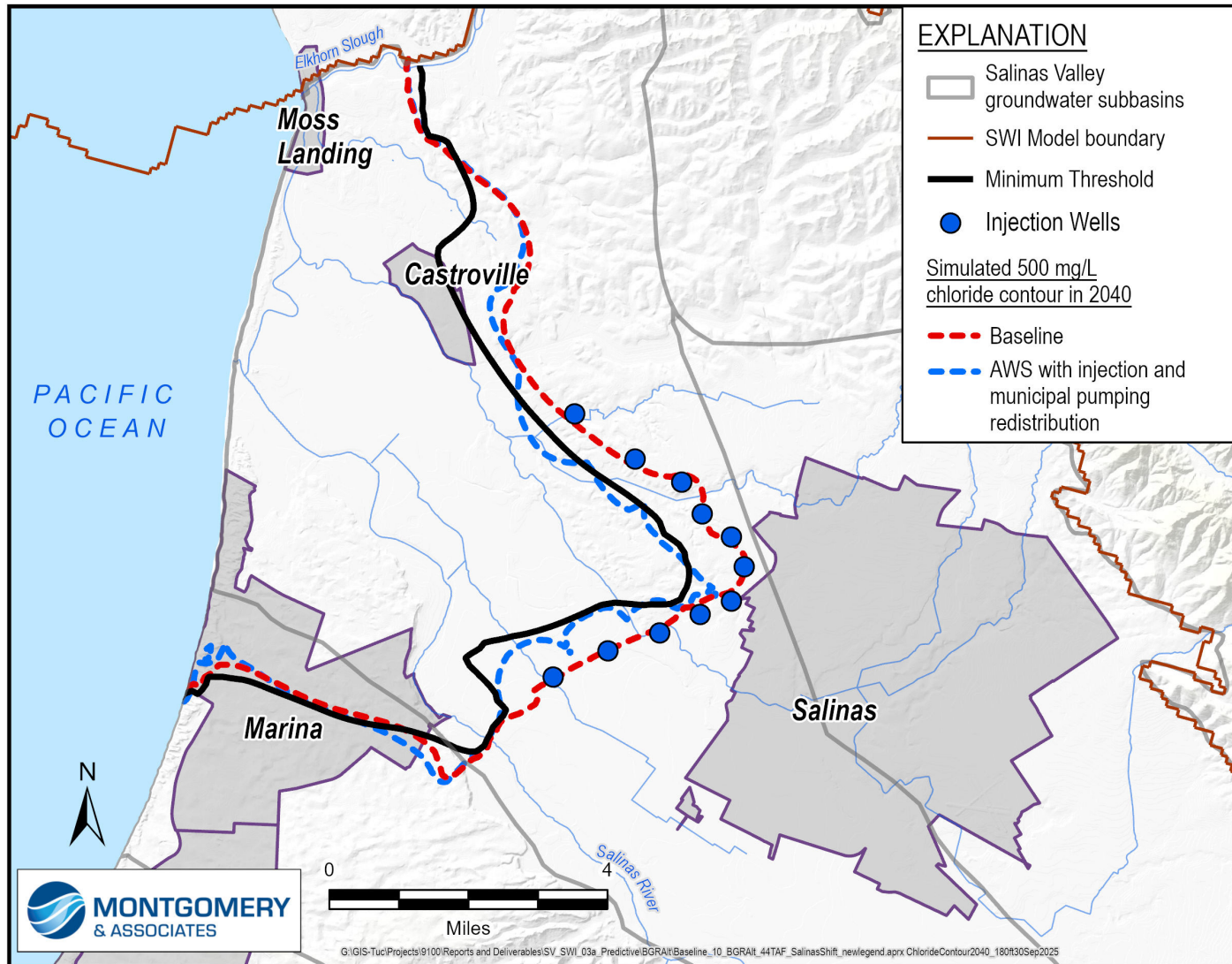


Figure 10. Simulated 2040 Extent of Seawater Intrusion in the 180-Foot Aquifer with Municipal Pumping Redistribution

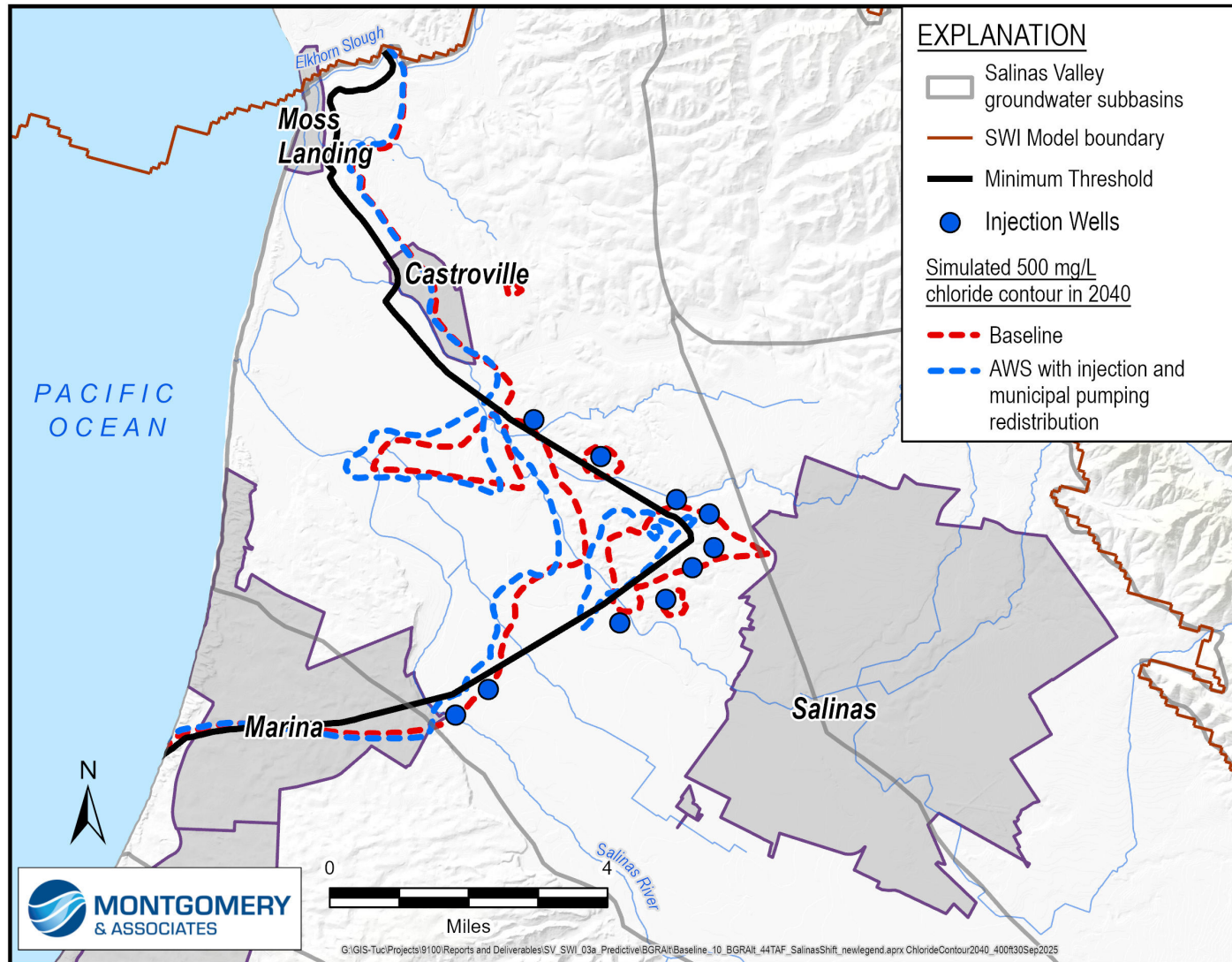


Figure 11. Simulated 2040 Extent of Seawater Intrusion in the 400-Foot Aquifer with Municipal Pumping Redistribution

## Groundwater Quality and Impacted Area

Figure 12 compares the 2040 simulated concentration of chloride in the 180-Foot Aquifer between the preferred BGRP scenario and the AWS project. Figure 13 compares the 2040 simulated concentration of chloride in the 400-Foot Aquifer between the preferred BGRP scenario and the AWS project. Both these figures show the influence of the extraction barrier on chloride concentrations in the 2 principal aquifers. Both scenarios meet the seawater intrusion minimum threshold; however, areas seaward of the 500 mg/L isocontour show increasing chloride concentrations in the AWS project. This could lead to existing wells becoming unusable, resulting in either a loss of agricultural production or more wells being drilled into the Deep Aquifers under the AWS scenario.

Table 3 supports the conclusion from Figure 12 and Figure 13 by summarizing the mass of chloride and area of seawater intrusion changes between 2035 and 2040. Red cells in this table show areas where chloride mass and intruded area increases. Green cells in this table show areas where chloride mass and intruded areas decrease. Because the 180-Foot Aquifer is simulated by 3 model layers, the change in chloride mass in Table 3 sums the chloride mass in all 3 layers. The change in seawater intruded area is only for Layer 5, the lowest model layer with the farthest inland seawater intrusion.

Table 3. BGRP Modeling Results Summary Calculations

Model Run	180-Foot Aquifer		400-Foot Aquifer	
	2035-2040 Change in Chloride Mass (kg)	2035-2040 Change in Seawater Intruded Area (acres)	2035-2040 Change in Chloride Mass (kg)	2035-2040 Change in Seawater Intruded Area (acres)
Baseline Scenario	98,200	900	333,000	1,700
AWS	-97,300	-1,500	172,200	400
Preferred BGRP Scenario	-643,800	-3,800	-320,100	-1,000

Only addresses model areas east of the extraction barrier with >500 mg/L concentration.

kg = kilogram

Rounded to the nearest 100.

Table 3 demonstrates how the preferred BGRP scenario is more effective at reducing chloride mass and the seawater intruded area in both the 180-Foot and 400-Foot Aquifer compared to the AWS project. In the 400-Foot Aquifer, only the preferred BGRP scenario reduces chloride mass and intruded area; the AWS project results in more intruded area and more chloride in the 400-Foot Aquifer by 2040.

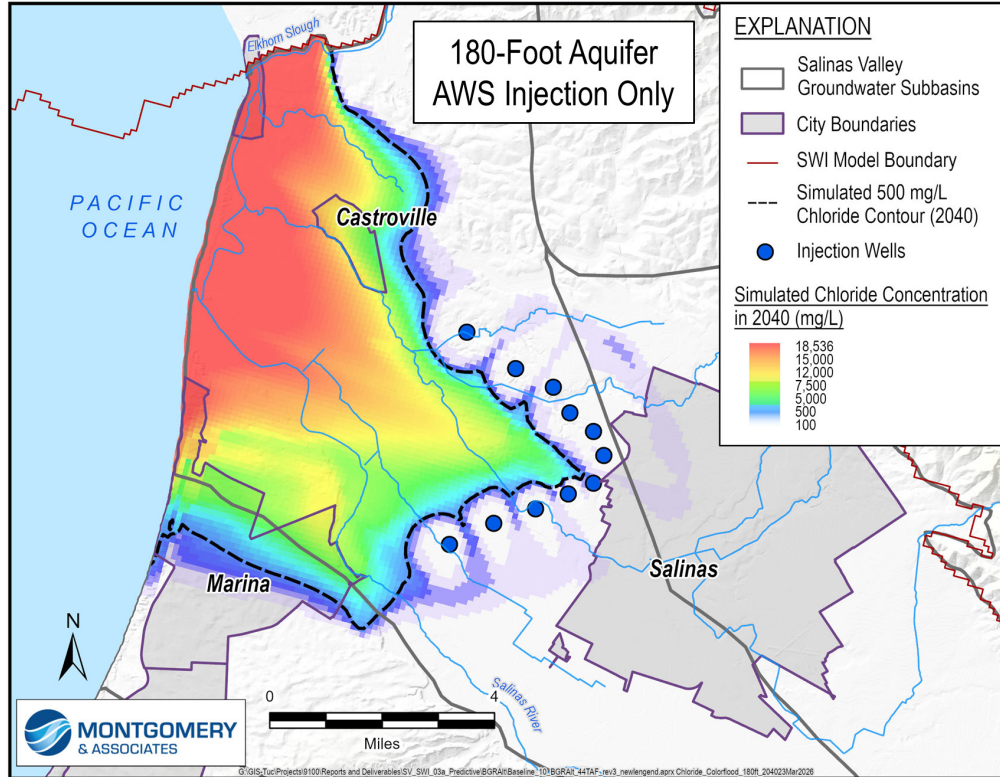
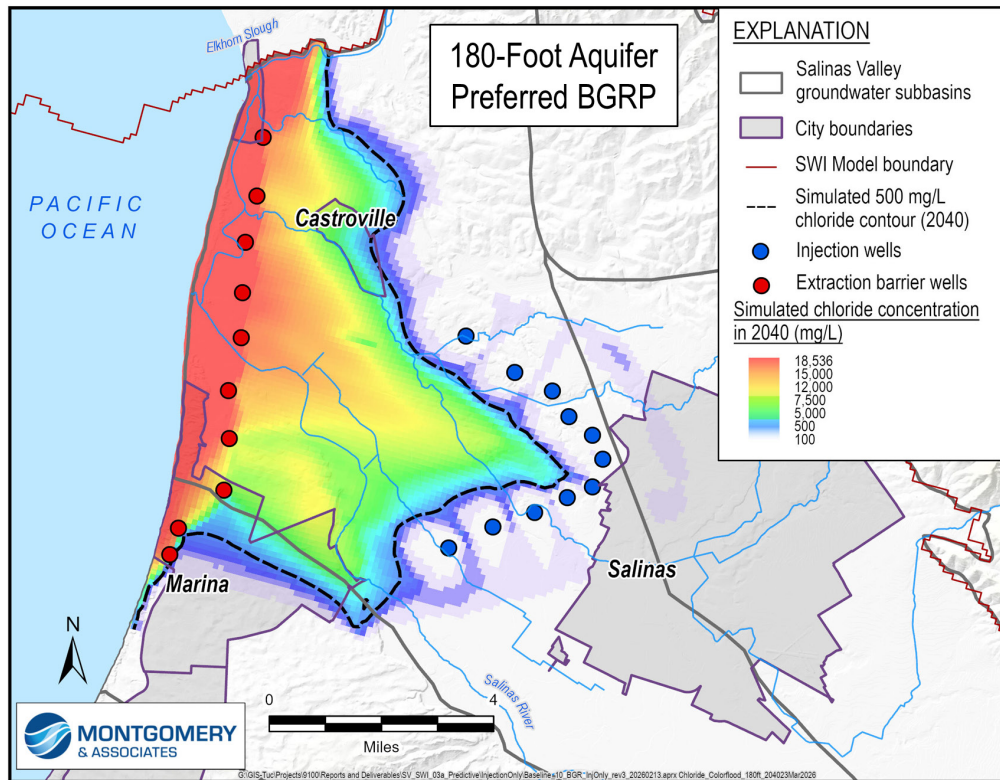


Figure 12. Comparison of Simulated 180-Footer Aquifer Chloride Concentrations in 2040

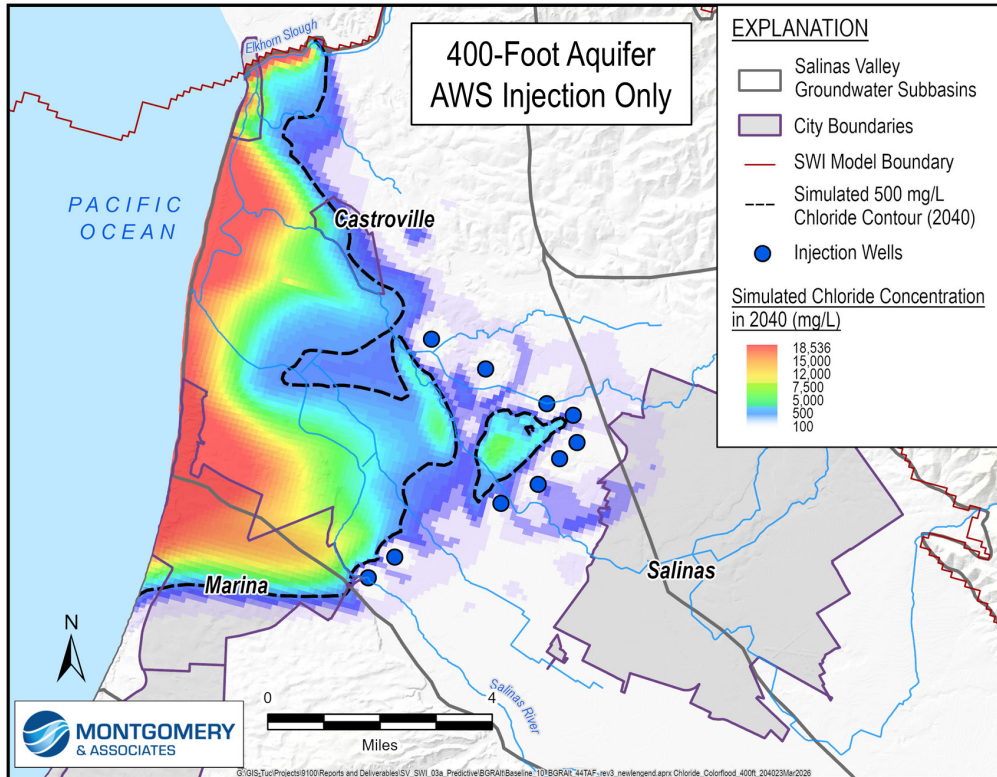
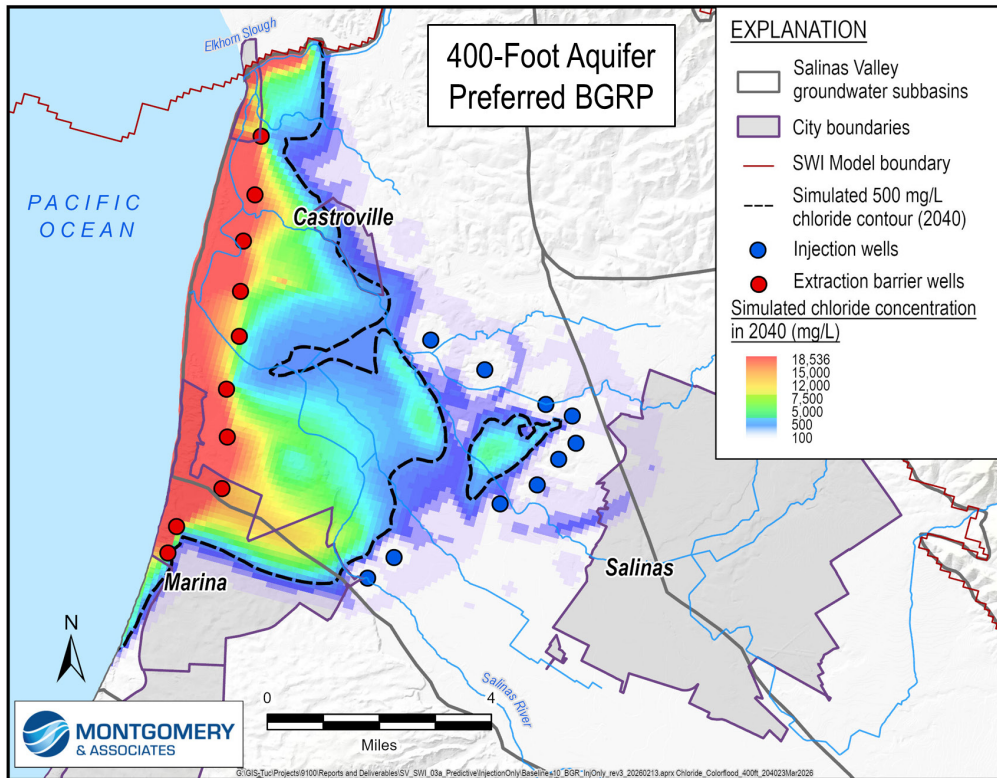


Figure 13. Comparison of Simulated 400-Footer Aquifer Chloride Concentrations in 2040

## **COST**

Detailed capital costs and Operations and Maintenance (O&M) costs are included in the Alternative Water Supply (AWS) Project Description Technical Memorandum (Wallace Group, 2026). The capital cost of design and construction is \$3.85 billion. These costs do not include costs of land fallowing, lost agricultural production due to wells becoming saline from continued seawater intrusion behind the 500 mg/L chloride isocontour, or municipal pumping redistribution.

## **CONCLUSIONS**

The AWS Project is generally as effective as the preferred alternative at preventing seawater intrusion from progressing beyond the 2017 500 mg/L isocontour. Figure 14 and Figure 15 compare the 2040 extent of seawater intrusion for the AWS project with the 2040 extent of seawater intrusion for the preferred BGRP scenario and the minimum threshold line in the 180-Foot and 400-Foot Aquifers, respectively. These 2 figures show that the AWS project is generally as effective at meeting the seawater intrusion minimum thresholds as the preferred BGRP scenario, although the preferred BGRP scenario is slightly more effective near the community of Castroville. Both Figure 14 and Figure 15 show the results of the AWS project with injection only. Fallowing land and redistributing municipal pumping had an insignificant impact on the 2040 extent of seawater intrusion.

Although the AWS project is effective at meeting the seawater intrusion minimum threshold, it is not as effective as the preferred BGRP scenario at reducing the amount of chloride in the 180-Foot or 400-Foot Aquifers. Figure 12, Figure 13, and Table 3 demonstrate that the AWS project will allow chloride levels to increase in many areas of the 180/400-Foot Subbasin. This will likely lead to existing wells becoming unusable, resulting in either a loss of agricultural production or more wells being drilled into the Deep Aquifers.

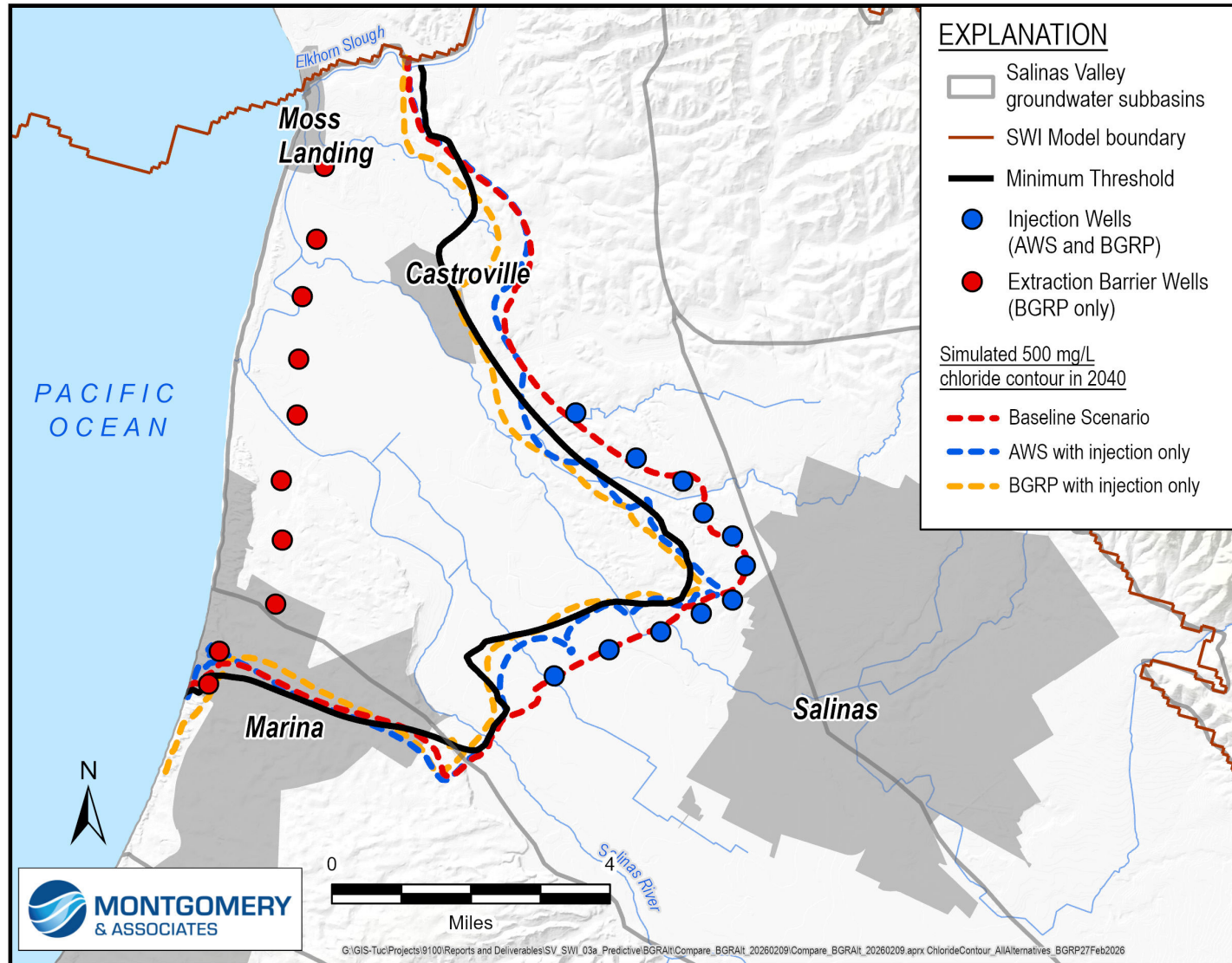


Figure 14. BGRP and AWS Project Predicted Extent of Seawater Intrusion at 2040 in the 180-Foot Aquifer

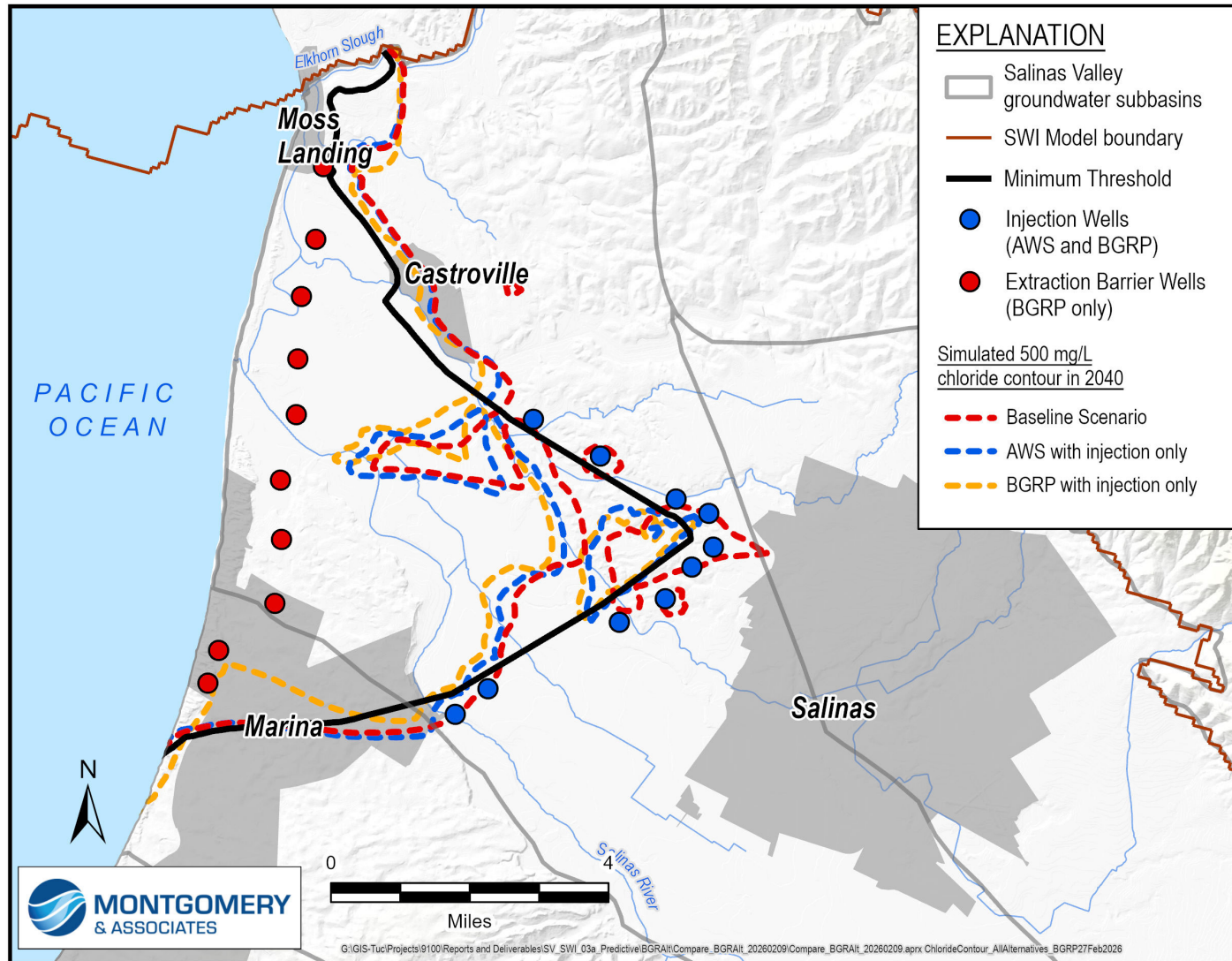


Figure 15. BGRP and AWS Project Predicted Extent of Seawater Intrusion at 2040 in the 400-Foot Aquifer

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