MEMORANDUM

Montgomery & Associates
Castroville & Eastside Canals and Alternatives Study
Wallace Group Project No. 1447-0005

Date: March 24, 2026

To: Salinas Valley Basin Groundwater Sustainability Agency

From: Greg Hulburd, P.E., Travis Vazquez, P.E.
Wallace Group

Subject: Alternative Water Supply Project: Conceptual Project Description

This Alternative Water Supply (AWS) project includes the collection, storage, treatment, distribution, and injection of water originating from four sources:

1. Salinas River Diversion – proposed diversion, conveyance, and storage infrastructure which utilizes an existing water right held by Monterey County (Permit 11043).
2. Agricultural Tile Drains – proposed collection and conveyance infrastructure to capture tile drainage water which is currently being discharged into local surface drainage systems.
3. City of Salinas Industrial Waste Treatment Facility (IWTF) Effluent – captures existing effluent which is currently disposed of through percolation ponds.
4. Salinas River Diversion Facility (SRDF) Bypass Water – extra water available at the existing SRDF that is currently not used due to lack of demand/storage.

Table 1 provides the estimated average annual yield from each water source, based on a historical data analysis from 2010-2025.

Table 1. Estimated average annual yield from each water source.

Source	**Estimated Average Annual Yield, afy**
Salinas River Diversion (Water Right Permit 11043)	23,877
Agricultural Tile Drains	17,492
Salinas IWTF	2,837
Water Bypassing the SRDF	1,657
Total	45,863

The project includes collection of the raw water, storage, treatment, and injection of the treated water via 21 injection wells.

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The following sections provide a description of the conceptual infrastructure proposed under the AWS project. An overview exhibit, provided as Attachment A, indicates the assumed locations of each of these proposed facilities.

Salinas River Diversion (Water Right Permit 11043)

The existing water right permit 11043 authorizes a maximum diversion rate of 400 cubic feet per second (cfs) and a total annual diversion volume of 135,000 acre-feet per year (afy). A historical flow analysis analyzing the Salinas River natural flow, reservoir releases, and bypass flow requirements indicated that diversion flows are primarily only available from January to April, with high variability from year to year.

To capture these diversion flows, significant storage is needed due to the unpredictability and seasonality of these eligible diversion flows. It should be noted that modifications are needed to the existing water right permit 11043 including but not limited to a "Petition for Extension of Time" and "Petition for Change" to account for a reasonable project completion timeline, add a permit term allowing for surface storage, and potentially changing the purpose of use.

Diversion Structure

A new diversion structure would be constructed on the bank of the Salinas River at the permitted location, "Castroville Canal Intake." The diversion structure would consist of the following:

- Fish screen meeting all environmental requirements from NOAA/NMFS, CDFW, and USFW (approach velocity, sweeping velocity, screen slot opening size, screen porosity, etc.)
- Forebay area upstream of the pump station
- Pump station, preliminary specifications summarized in Table 2

Table 2. Preliminary pump station specifications for the river diversion.

Pump Station	Number of Pumps	Total Flow Capacity, cfs	Approximate Pump Lift, feet	Estimated Total Power, hp
River Diversion	8 vertical turbine	400	40	2,500

hp = horsepower

The pump station would discharge into a short section of open channel, conveying the river water a short distance to the nearby sedimentation basin.

Sedimentation Basin

It is expected the river water will be high in turbidity and suspended solids, particularly due to the fact that the diversion will be active during the winter. The sedimentation basin has been sized for 40 acres and will be designed to provide enough hydraulic residence time to allow for the sediment to settle out of the river water prior to conveyance to the reservoir.

Pump Station to Reservoir

A secondary pump station (transfer pump station) will be needed to lift the water from the sedimentation basin to the proposed surface reservoir. Due to the large static head difference to overcome, this will be the largest pump station in the system in terms of horsepower. Note that future design efforts should include an evaluation on the cost/benefit of incorporating intermediate regulating tanks/booster stations to reduce the lift requirement of the single pump station currently proposed. The preliminary specifications for the transfer pump station are provided in Table 3.

Table 3. Preliminary pump station specifications for the transfer pump station.

Pump Station	Number of Pumps	Total Flow Capacity, cfs	Approximate Pump Lift, feet	Estimated Total Power, hp
Sedimentation basin to Reservoir	8 vertical turbine	400	750	45,000

hp = horsepower

Conveyance

The pump station will discharge into two parallel 96" pipes. To mitigate against the potential transient pressures associated with a high pressure waterline and to reduce pumping costs, velocity was kept to 4 feet per second. Based on the maximum static lift scenario and friction loss at full flow, maximum pressure in the pipeline would be approximately 320 psi. As previously noted, future design phases should include an analysis on splitting this conveyance into two or more pump stations, to allow for lower pipeline pressures as well as reduced horsepower requirements at each pump station.

It is anticipated that the pipeline material will be welded steel, which is commonly used for high pressure, large-diameter water transmission lines. Table 4 summarizes the pipeline details.

Table 4. Pipeline design details.

Number of Pipelines	Diameter, inches	Length, feet	Max. Design Flow Rate, cfs	Velocity at Max Flow, feet/sec
2	96	58,700 each	400	4.0

Storage

An earthen dam is proposed across Alisal Creek in the Gabilan Range. The storage requirement is driven by the difference in timing and flow rate from the eligible Salinas River diversions compared to a consistent year-round flow rate to the injection wells. The reservoir is designed to accommodate the seasonality of the diversion flows as well as provide carry-over storage from year to year. To estimate the amount of storage needed, a water balance was conducted based on historical Salinas River flows at the Soledad gauge that would have been eligible for 11043 diversions from 2010-2025. The water balance calculates the daily accumulation of storage by subtracting the daily treatment volume from the diversion volume. The treatment plants and injection wells are assumed to operate continuously year-round and sized for the long-term average annual yield based on the water balance (21 MGD). Figure 1 displays a graph of the theoretical cumulative storage requirement based on the water balance.

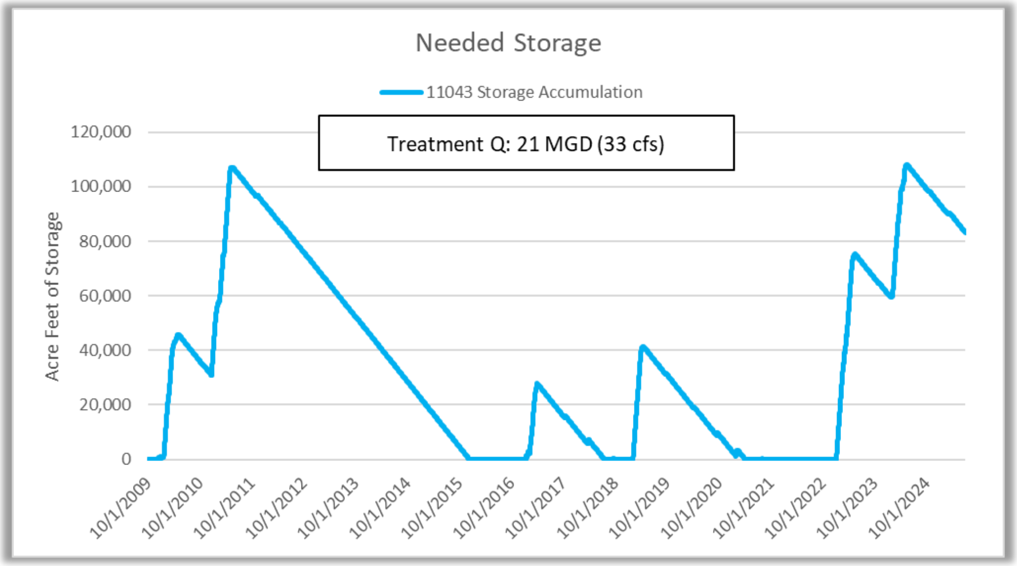

Figure 1. Theoretical cumulative storage required based on historical Salinas River flows from 2010-2025 available for diversion.

Table 5 summarizes the preliminary design details for the proposed reservoir and dam.

Table 5. Proposed reservoir and dam details.

Dam Type	Dam Crest Elevation, feet AMSL	Dam Height, feet	Dam Crest Length, feet	Dam Volume, cubic yards (CY)	Storage Capacity, AF
Earthen w/ 2.5:1 embankment	760’	405	3,000	22,319,000	110,000

AMSL = above mean sea level

The reservoir site was chosen solely based on the topography needed to store 110,000 acre-feet (AF). Further investigation is needed as to the site suitability regarding geology (foundation, faults, seepage), suitable soils and borrow areas for the dam fill, hydrology (flood flows, watershed capture), constructability, safety, environmental constraints, and other considerations. A high-level desktop analysis of the geological site suitability is summarized in Table 6[1].

[1] Montgomery & Associates email correspondence, January 16, 2026.

Table 6. Preliminary desktop analysis for potential geological hazards at the reservoir site.

Fault Hazard (Alquist-Priolo Zone)	Other Faults	Landslide Hazard	Liquefaction Hazard
No	Yes, the pre-quaternary Gabilan Creek Fault, including inferred and concealed sections (Dibblee 1974[2]), passes through the proposed reservoir according to Dibblee 1973c. This fault is considered inactive.	No (Low susceptibility)	Yes (15.3% of reservoir area with high susceptibility, remaining area with low susceptibility)

Water Treatment Plant

Due to the proposed use of injection wells, raw Permit 11043 source waters will require treatment to drinking water standards. A conventional surface water treatment plant (WTP) is proposed with a capacity of 21 MGD (33 cfs) assuming injection throughout the year. The capacity of the WTP is based on the maximum diversion size allowed under Permit 11043 (i.e., 400 cfs) and the resulting long-term average annual yield for this size diversion facility. An average annual yield was assumed to be delivered at a constant rate over the course of the year and the treatment capacity was assumed to match this rate such that the volume available in the surface water reservoir (i.e., 110,000 AF) would be sufficient to accommodate diverted volumes over the range of river flows observed in years modeled (see Figure 1). The WTP was sited adjacent to and west of the storage reservoir in the Gabilan Range.

The AWS project concept assumes the need to treat diverted water prior to injection, as typically required for conventional aquifer storage and recovery (ASR) projects relying on use of recycled water. Ultimately, the Central Coast Regional Water Quality Control Board (Regional Water Board) will determine the level of treatment required following source water characterization and development of project-specific water quality objectives. It is assumed that the same injected water limitations from the State Water Resources Control Board's Water Quality Order 2012-0010 *General Waste Discharge Requirements for Aquifer Storage and Recovery Projects that Inject Drinking Water into Groundwater* (ASR General Order) would likely apply to the AWS alternative project concept; however, the project would likely not be regulated under this Order since the project would not be part of a drinking water project and domestic water supply permit. However, this General Order can be used as a guide, indicating that the injected water would have to meet primary and secondary maximum contaminant levels (MCLs) and Basin Plan water quality objectives for the 180-Foot and 400-Foot Aquifers dependent on the aquifers' beneficial uses

[2] Dibblee, T.W., 1974*, Geologic maps of the Monterey, Salinas, Gonzales, Point Sur, Jamesburg, Soledad, and Junipero Serra 15' quadrangles, Monterey County, California: U.S. Geological Survey Open-File Report 74-1021, 7 Plates: 21.96 x 30.00 inches or smaller*, https://doi.org/10.3133/ofr741021

(both of which include drinking water supply as a beneficial use); the General Order does allow projects to meet background groundwater quality in cases where the aquifer's water reflects concentrations in exceedance of drinking water MCLs.

A water quality evaluation performed as part of the 2025 *ASR Feasibility Study*,[3] was reviewed to identify data that could represent the expected water quality of Permit 11043 diversion water under the proposed project. A summary of water quality observations from that study includes the following:

- Average nitrate and nitrite concentrations do not exceed Title 22 standards (10 mg/L) upstream of Salinas near Chualar
- Average nitrate and nitrite concentrations at Davis Road exceed Title 22 standards seasonally
- Average nitrate and nitrite concentrations at the SRDF exceed Title 22 standards consistently throughout the year
- Total dissolved solids (TDS) concentrations reflect a similar pattern to those of nitrate/nitrite with upstream concentrations near Chualar consistently below the Title 22 standard (1,000 mg/L) ranging approximately 200 to 400 mg/L, downstream concentrations at the SRDF consistently exceed the standard near 2,000 mg/L, and those at Davis Road vary widely (300 – 3,000 mg/L) with exceedances generally during the dry season. Results from the Spreckels Gage location between Chualar and Davis Road also indicate stable concentrations of TDS between 100 to 350 mg/L.
- The SRDF sampling location also exhibited the greatest number of heavy metal constituents with concentrations exceeding the MCL.

Overall, TDS and nitrate concentrations tend to increase downstream near Salinas, potentially indicating cumulative water quality impacts from upgradient discharges from agricultural, industrial, and municipal sources. A summary of these Salinas River sampling locations is provided in Table 7.

Table 7. Range and Average Concentration of Nitrate and TDS in Salinas River Water[1]

Sampling Location	NO3 as N (mg/L)	TDS (mg/L)
Near Chualar	0.2 - 2.0 (1.1)	234-399 (312)
Davis Road	4.9 - 26 (13.1)	571-1078 (811)
SRDF	57 – 71 (63.6)	1859 - 2005 (1926)

1. Concentrations as reported in 2025 ASR Feasibility Study, Technical Memorandum 3.

The water quality data reviewed did not relate constituent concentrations with flows in the river. While samples were collected and analyzed throughout the year, the flow rate of the river at the time of sample collection is unknown. Higher flow rates associated with Permit 11043 eligible diversion conditions could potentially create a diluting effect which would lower concentrations beyond those observed; however, this assumption would have to be validated through additional investigation.

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[3] Salinas Valley Groundwater Sustainability Agency and Montgomery & Associates, 2025, *Preliminary Feasibility Study Aquifer Storage and Recovery Project Concepts to Address Seawater Intrusion*, January.

For the 11043 diversion location near Chualar, it is assumed that conventional surface water treatment would be needed to meet water quality objectives. Treatment unit processes may include:

- Screening
- Pre-treatment (pH adjustment and pre-oxidation)
- Clarification (coagulation/rapid mix, flocculation/sedimentation)
- Filtration (e.g., sand or multimedia)
- Disinfection
- Treated water storage
- Solids management and wash water recovery system
- Ancillary systems including chemical storage and feed, electrical power, instrumentation, and controls

Water from the reservoir will flow by gravity, where it will be treated and then conveyed to the injection wells. Based on the location of the WTP, it is expected that gravity flow from the WTP clearwell to the injection well distribution system will be sufficient to achieve the pressures needed for injection at the well sites.

Additional Water Sources: SRDF, Agricultural Tile Drains, IWTF

The three remaining water sources (SRDF, agricultural tile drains, IWTF) will be collected and then stored and treated at a common location.

Water Bypassing the SRDF

The existing diversion structure and pump station will be utilized to collect additional water that is currently bypassed due to lack of demand or storage. To convey this water, a new pipeline will be required, connecting to the existing pump discharge line and routing to a new raw water tank installed as part of the agricultural tile drain collection system. From this tank the water would be conveyed to new storage ponds at the Salinas IWTF. Based on the head requirements of the existing SRDF pumps, no new pumps will be needed for this pipeline section.

Tile Water Collection and Conveyance

Throughout the lower Salinas Valley, north of Salinas, many of the agricultural fields utilize buried perforated drain pipe (tile drains) to collect and convey excess water from the fields and improve drainage conditions. These tile drains discharge to existing drainage ditches either via gravity or at common sump collection points with lift pumps. To utilize this water, a collection system will be required to tie in each of the tile drain outlet points and sump pumps prior to discharge into an open channel.

Note that this project description and cost estimate does not include the collection piping and pump stations that will be required from each individual field to get to the tanks as shown in the exhibit (i.e., the collection and conveyance systems required for each private, agricultural parcel). Rather, this project description and cost estimate includes the main transmission lines, tanks, and pump stations as laid out in a conceptual infrastructure map developed by the Salinas Basin Water Alliance[4]. The flow rates from individual, private tile drain collection sumps, aggregate annual yield, and predicted flow rates for the main transmission lines and pump stations were also provided by the Salinas Basin Water Alliance.

The infrastructure required for the tile drain source is summarized in Table 8; refer also to the exhibit in Attachment A. Each tile collection "zone" discharges into a common tank. In addition to being a collection point for the local drains, the tanks will also serve as a regulation tank for the upstream section of mainline; the tank level will serve as the control target for the upstream pump station. Each tank site will include a pump station to pump water to the next tank. Pipeline sizes vary from 12" to 54", with an estimated total pipeline network length of 99,600 linear feet.

[4]Salinas Basin Water Alliance, 2025, *Infrastructure Map - Tile Drain Sumps, Ditch Outlets, Lift Pump Stations, Potential Storage Reservoirs with Transfer Pumps & Distribution Mainlines*. April 7, 2025.

Table 8. Pipeline summary for the tile drain collection system.

Ag Tile Drain Collection Infrastructure									
Tank at start point, gallons	**Start Point**	**End Point**	**Length, LF**	**Original Q, gpm**	**Original Q, cfs**	**Q with SRDF, cfs**	**Dia, in**	***Velocity, ft/sec***	**Pump Station at Start Point Q, cfs**
A Alignment									
100,000	A1	A2	15,144	2,000	4.5	4.5	12	5.7	4.5
500,000	A2	A3	907	18,000	40.1	40.1	36	5.7	40.1
100,000	A3	A4	2,209	18,000	40.1	40.1	36	5.7	40.1
	A4	A5	4,584	18,000	40.1	40.1	36	5.7	
200,000	A5	A6	9,000	25,000	55.7	55.7	42	5.8	55.7
200,000	A6	A7	6,542			7.7			
200,000	A7	A8	8,012	26,000	57.9	65.7	48	5.2	65.7
200,000	A8	A9	10,818	33,000	73.5	81.3	54	5.1	81.3
200,000	A9	WTP	6,186	40,000	89.1	96.9	54	6.1	96.9
B Alignment									
100,000	B1	B2	5,985	2,000	4.5	4.5	12	5.7	4.5
100,000	B2	B3	15,068	5,000	11.1	11.1	18	6.3	11.1
200,000	B3	A8	3,824	7,000	15.6	15.6	24	5.0	15.6
C Alignment									
100,000	C1	A4	6,038	2,000	4.5	4.5	12	5.7	4.5
D Alignment									
100,000	D1	A7	2,997	2,000	4.5	4.5	12	5.7	4.5
E Alignment									
200,000	E1	B2	2,297	3,000	6.7	6.7	16	4.8	6.7
		Total:	**99,611**						

Notes:

cfs = cubic feet per second	ft/sec = feet per second	LF = linear feet
Dia = diameter	In = inch	Q = flow

Salinas Industrial Waste Treatment Facility (IWTF)

The IWTF processes industrial wastewater and consists of:

- Headworks/ preliminary treatment: bar screen for solids removal with 12.0 mgd influent pump station
- Emergency Storage Basin: to store peak flows for equalization.
- Facultative aeration lagoon: 13-acre aeration lagoon, 10-foot depth, 130 AF volume, 4.0 mgd capacity. Designed for 90% biochemical oxygen demand (BOD) removal efficiency using 12 50-HP surface aerators.

- Disposal/ Polishing Ponds: three percolation/evaporation ponds in series totaling 110 acres, with 7 to 10 foot water depth. Maximum disposal capacity of 2.7 mgd.
- Percolation “Drying” Beds: 54 percolation or drying beds across 67 acres, five to eight foot water depth and a disposal capacity of 1.7 mgd.
- Emergency Disposal: Three rapid infiltration basins allowed for use only under Regional Water Board approval
- Solids Production and Handling: facultative lagoon sludge is stored and dried onsite for landfill disposal
- Offsite Wastewater Recycling: An existing pump station at the third disposal/polishing pond can convey flow to the M1W Regional Treatment Plant.

This project concept assumes that the IWTF continues to provide organics treatment via the aeration lagoon, maintaining the supporting emergency storage basin for flow equalization, and solids handling facilities for sludge drying. However, rather than disposing of the effluent via the disposal/polishing ponds and percolation drying beds, this water will be stored on site and blended with the other source waters (i.e., SRDF uncaptured flow and ag tile drain water) and further treated, prior to conveyance to the injection well field.

Storage

Storage is needed to balance the water availability from the three sources and provide a steady feed to the water treatment plant and injection well distribution network. Because these flows have less variation throughout the year than the Permit 11043 diversion, the volume of storage is much lower, at 2,600 AF.

It is assumed that the existing IWTF percolation ponds will be lined and re-purposed to provide part of the needed storage This will provide an estimated 800 AF; for the additional 1,800 AF required it is assumed a new reservoir will be constructed adjacent to the existing IWTF facility.

Water Treatment Plant

Source waters from the IWTF, agricultural tile drains, and SRDF uncaptured flows are anticipated to have higher concentrations of salts and nitrates compared to upstream 11043 Salinas River water. As discussed earlier, Salinas River water quality near the SRDF is consistently elevated above MCLs for TDS and nitrates. IWTF effluent water quality indicates concentrations below MCLs for these constituents.[5] The agricultural tile drain source will be the most significant volume among these three sources and therefore contribute most to pollutant loading; water quality data is not available from this source. To approximate the water quality anticipated from the ag tile drain sources, data from the Pure Water Monterey’s source monitoring program was reviewed.[6] Three locations were reviewed to serve as potential surrogate sources: IWTF influent, Blanco Drain, and Tembladero Slough. Each of these sources is understood to receive discharges from agricultural sources;

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[5] 2024, City of Salinas, *Industrial Wastewater Treatment Facility Annual Report*.
[6] 2019, Pure Water Monterey, *Final Engineering Report Pure Water Monterey Groundwater Replenishment Project*, Volume II, Appendix E.

however, the IWTF data will reflect an agricultural industrial wastewater source (e.g., packing and processing).

Water quality data from these three sources indicate TDS concentrations above the MCL. The Blanco Drain and Tembladero Slough locations also indicate elevated nitrate concentrations; IWTF influent samples results show nitrate concentrations below the MCL, but this may be due to industrial pre-treatment requirements which would decrease concentrations below those of untreated discharges.

Table 9. Range and Average Concentration of Nitrate and TDS in IWTF Effluent[1]

Sampling Location	NO3 as N (mg/L)	TDS (mg/L)
IWTF Effluent	0.37 - 2.6 (1.44)	632 - 816 (726)

1. Concentrations as reported in 2024 IWTF Annual Report, WDR No. R3-2044-0066.

Table 10. Range and Median Concentration of Nitrate and TDS in Source Waters Influenced by Agricultural Discharges[1]

Sampling Location	NO3 as N (mg/L)	TDS (mg/L)
IWTF Influent	0.1 - 7.7 (6.2)	797- 1591 (1282)
Blanco Drain	63 - 77 (69.6)	1822 - 2066 (2003)
Tembladero Slough	58	1968

1. Concentrations as reported in 2019 Pure Water Monterey, Final Engineering Report, Volume II, Appendix E.

Based on review of these data, it is likely these source waters will require a higher level of water treatment to achieve Title 22 standards. A detailed source water quality analysis would be required to fully characterize the influent waters, but for the purposes of this AWS alternative concept, a brackish water reverse osmosis (BWRO) water treatment plant is assumed to be needed for treatment. This WTP would have a capacity of 20 mgd based on the assumption that injection is performed throughout the year at this average annual flow rate. At this treatment and injection rate, the 2,600 AF of storage will be sufficient to manage the source water incoming flow rates on an average annual basis. The WTP is assumed to be located at the site of the existing IWTF adjacent to the proposed storage facilities; a footprint of 10 acres is assumed.

Reverse osmosis concentrate (ROC) would be generated at this WTP and would require appropriate disposal. This AWS assumes ROC would be conveyed to the M1W outfall (as under the Brackish Groundwater Restoration project[7]). Assuming a 70% RO recovery rate, approximately 30% of influent flow would be generated as ROC (approximately 6 mgd in under the AWS project concept). A ROC storage basin would be provided to provide one day's storage in the event of ROC outfall downtime. Sufficient dilution must be provided to ensure compliance with Ocean Plan objectives[8] and dilution modeling would be necessary in subsequent design phases for this AWS alternative project. It is assumed that outfall diffuser modifications required as part of the AWS project would also be required for the AWS alternative project.

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[7] Carollo Engineers, *Brackish Groundwater Restoration Project Feasibility Study, Phase 1 Report,* October 2025*.*

[8] California State Water Resources Control Board, 1972, *Water Quality Control Plan, Ocean Waters of California* (Ocean Plan), Revised 2019.

An alternative treatment configuration would be to combine the Permit 11043 source water with the SRDF, agricultural tile drains, and IWTF source waters. By blending sources, the higher quality Permit 11043 diverted water would help to improve overall water quality of water feeding the WTP. However, at this level of project concept development it is unclear whether water quality would be improved to a point where brackish water RO treatment would no longer be necessary. For the AWS project concept, we assume the two water treatment facilities are separate (i.e., conventional SWTP for the Permit 11043 water and BWRO facility for the other three sources), rather than assuming a single brackish water RO facility with twice the capacity; a single BWRO to treat all source water flows would introduce a higher level of capital and operations and maintenance costs than currently assumed for this AWS concept but could be explored in subsequent project phases.

Injection Wells

Under the AWS alternative, 21 injection wells are proposed, strategically located throughout the lower Salinas Valley. It is assumed that each injection well will inject at 1,350 gpm (3 cfs) based on the annual average yield and assuming continuous operation. Both water treatment plants will feed the distribution pipelines for the injection well network. It is anticipated that the WTP in the Gabilan Range will have sufficient elevation to supply the pressure needed at the injection wells by gravity alone. The WTP at the IWTF will require a pump station to boost the treated water into the injection well distribution network, matching the hydraulic grade from the Gabilan Range WTP.

Distribution Pipelines

Table 11 summarizes the pipeline layout for the injection well distribution network; refer also to the exhibit in Attachment A. In total, the distribution network would include nearly 122,000 linear feet of piping ranging in size from 10” to 36”.

Table 11. Pipeline summary for the injection well distribution network.

Injection Well Distribution Pipelines								
Start Point	**End Point**	**Length, LF**	**# of wells Downstream Start Point**	**Q, cfs**	**Dia, in**	***Velocity, ft/sec***	**Pipeline Unit cost, $/LF**	**Total Pipeline Cost**
A Alignment								
A1	A2	36,916		32.5	36	4.6	$725	$26,764,100
A2	A3	4,539	8	24.1	30	4.9	$550	$2,496,450
A3	A4	4,893	6	18.1	24	5.8	$375	$1,834,875
A4	A5	8,278	4	12.1	24	3.8	$375	$3,104,250
A5	A6	11,668	3	9.0	18	5.1	$250	$2,917,000
B Alignment								
A2	B1	3,639	13	39.2	36	5.5	$725	$2,638,275
B1	B2	3,447	11	33.2	36	4.7	$725	$2,499,075
B2	B3	3,916	9	27.1	30	5.5	$550	$2,153,800
B3	B4	2,278	6	18.1	24	5.8	$375	$854,250
B4	B5	6,623	4	12.1	24	3.8	$375	$2,483,625
B5	B6	8,283	2	6.0	16	4.3	$220	$1,822,260
C Alignment								
C1	A5	9,996		30.9	36	4.4	$725	$7,247,026
Laterals								
Lateral Pipelines to each well (total length)		17,303	1	3.0	10	5.5	$155	$2,681,965

Total length: 121,779 ft

Notes:

cfs = cubic feet per second	ft/sec = feet per second	LF = linear feet
Dia = diameter	in = inch	Q = flow

Preliminary Cost Estimate

Cost estimates presented in this report are categorized as Class 5 under the Association for the Advancement of Cost Engineering (AACE) framework. Class 5 estimates represent the lowest level of project definition and accuracy, while Class 1 reflects the highest. The estimates provided here reflect an early project definition level of approximately 0–2% and are intended for concept-screening purposes.

The preliminary estimates are largely based on developing unit costs for major project components – such as dollars per unit of flow capacity for a low-lift river pump station, including the intake structure, pumps, electrical systems, and associated facilities – using data from comparable projects with known construction costs. As the project advances and more detailed design information becomes available, the estimates can be refined using more specific unit costs, material quantities, and other detailed inputs.

Table 12 provides a summary of the project costs and average annual yield. The average project yield is based on the volume of water available from each source, not the groundwater benefit or water available for subsequent extraction, and do not consider losses through treatment processes, evaporation, distribution leaks, or others. A breakdown of the capital costs are provided in Attachment B.

Table 12. Preliminary Cost Estimate

Scenario	Capital Cost, Total	O&M, Annual Cost (Year 1, 2030)	Avg. Project Yield, AFY
AWS	$3,847,000,000	$83,697,000	45,863

Project Timeline

Table 13 provides a preliminary estimate of project schedule. Individual tasks may take more or less time than indicated depending on project-specific factors.

Table 13. Preliminary project timeline.

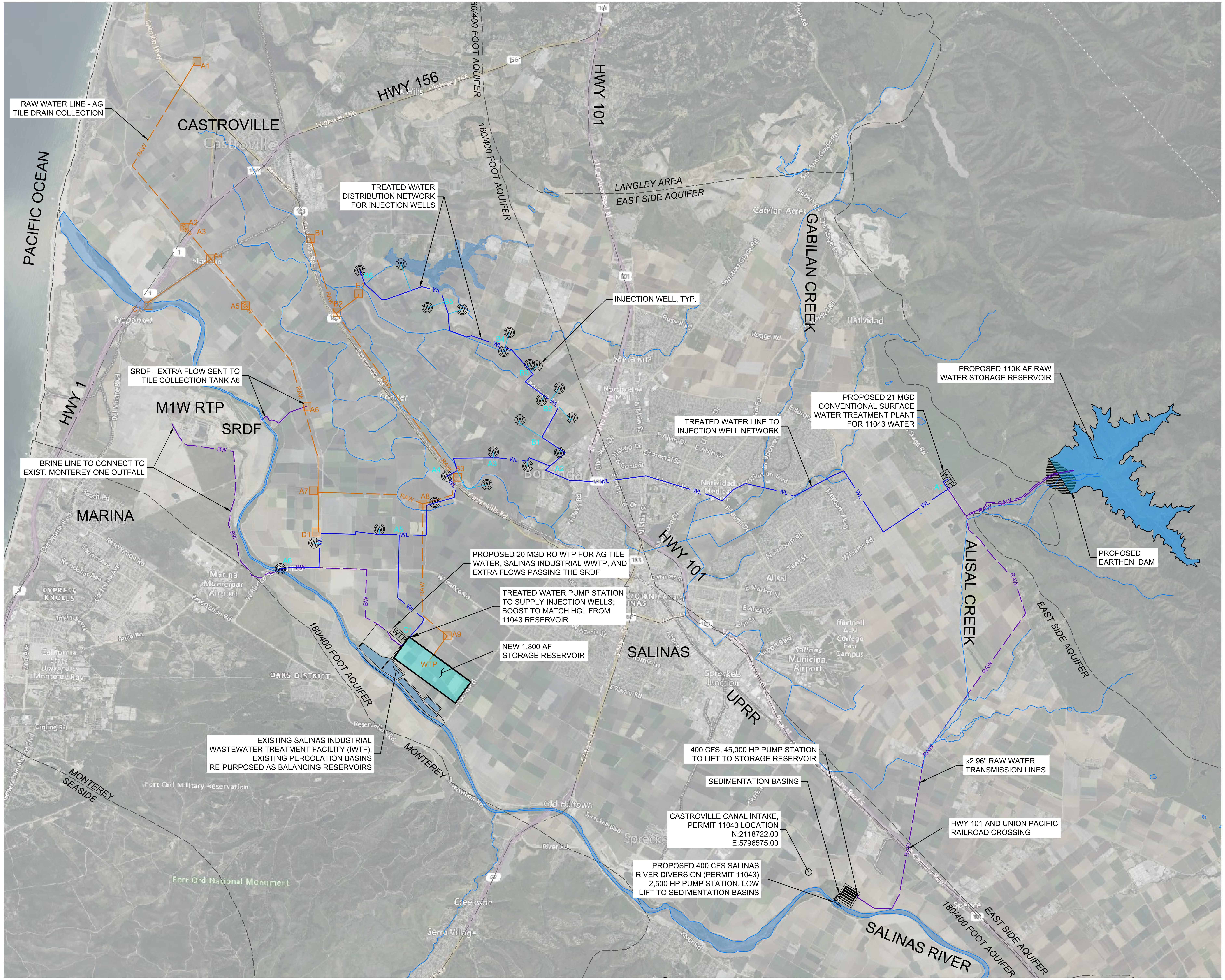
Task	Duration (Years)	Years											
		1	2	3	4	5	6	7	8	9	10	11	12
Preferred Project Selection	1												
Project descriptions and 30% design	1												
California Environmental Quality Act (CEQA) – Environmental Review	5												
Engineering Design and Construction Documents	3												
Water Rights – approved Petition for Extension of Time, Petition for Change[1]	4 - 6												
Land Acquisition	3												
Agency Permitting (CDFW, DSOD, RWQCB, USACE, etc.)	4 - 6												
Construction[2]	5												

[1]Further investigation needed as to whether CEQA and the water right modifications can be filed concurrently or if the water rights modification processing is contingent upon completion of CEQA environmental review.

[2] BF Sisk Dam, which forms San Luis Reservoir, contains approximately 77,656,000 CY of material, and was constructed between 1963-1967. This works out to approximately 15 MCY per year of earthwork. The fill for the identified AWS Alt reservoir is estimated at 22 MCY.

Attachment A – Exhibit

FOR REDUCED PLANS
ORIGINAL SCALE IS IN INCHES
0 1 2 3



LEGEND

RAW	RAW WATER LINE
RAW	RAW WATER LINE - AG TILE DRAIN COLLECTION
BW	BRINE LINE - REVERSE OSMOSIS CONCENTRATE
	RAW WATER TANK AND PUMP STATION - AG TILE DRAIN COLLECTION
WL	TREATED WATER - TRANSMISSION MAIN
WL	TREATED WATER - LATERAL
Ⓦ	INJECTION WELL
	BULLETIN 118 GROUNDWATER BASINS
	WATER BODY
	EXISTING RAILROAD TRACKS
	EXISTING HIGHWAY

GRAPHIC SCALE
0 4,000' 8,000'
(IN FEET)
1 IN = 4,000 FT

SCALE: 1" = 4000'

OVERVIEW: ALTERNATIVE WATER SUPPLY (AWS) PROJECT

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SIGNATURE

DATE SIGNED

SALINAS VALLEY BASIN GSA
ALTERNATIVE WATER SUPPLY PROJECT (AWS)
OVERVIEW

JOB #: 1447-0005
DESIGNERS: GH/TBV
DRAWN BY: TBV
DATE: 03/20/26

DRAWING NO.
EX-AWS
1 OF 1 SHEETS

Attachment B – Capital Costs

ALTERNATIVE WATER SUPPLY (AWS) PROJECT					
Item #	**Description**	**Unit**	**Quantity**	**Unit Cost**	**Total Cost**
11043 Water - Diversion, Conveyance, Storage, Treatment					
1	400 CFS river diversion (fish screen, low lift pump station)	LS	1	$100,000,000	$100,000,000
2	Sedimentation Basin	LS	1	$8,000,000	$8,000,000
3	Pump Station to Reservoir: 45,000 hp	LS	1	$135,000,000	$135,000,000
4	11043 Transmission pipeline, x2, 96in	LF	58,700	$6,000	$352,200,000
5	110K AF Reservoir	LS	1	$1,010,000,000	$1,010,000,000
6	21 MGD Conventional Surface Water Treatment Plant	LS	1	$160,000,000	$160,000,000
SRDF, Ag Tile Drain, and IWTF Water - Conveyance, Storage, Treatment					
7	SRDF Transmission Pipeline, 18"	LF	4,250	$250	$1,063,000
8	Tile Water Conveyance - Pipelines	LS	1	$57,300,000	$57,300,000
9	Tile Water Conveyance - Tanks	LS	1	$12,500,000	$12,500,000
10	Tile Water Conveyance - Pump Stations	LS	1	$24,800,000	$24,800,000
11	Modifications to existing IWTF Perc. Ponds	LS	1	$19,170,000	$19,170,000
12	1,800 AF Storage Reservoir	LS	1	$72,010,000	$72,010,000
13	20 MGD RO Water Treatment Plant (BWRO)	LS	1	$230,000,000	$230,000,000
14	ROC Storage	LS	1	$930,000	$930,000
15	Outfall Modifications	LS	1	$6,250,000	$6,250,000
16	Brine Line to Exist. M1W Outfall, 18"	LF	31,550	$250	$7,888,000
17	Pump Station for RO Treated Water	LS	1	$3,000,000	$3,000,000
Injection - Conveyance and Injection Wells					
18	Injection Well Distribution Pipelines	LS	1	$59,500,000	$59,500,000
19	Injection Wells	EA	21	$1,700,000	$35,700,000
	SubTotal				**$2,295,311,000**
	Construction Contingency		**30%**		**$688,593,000**
	Escalation to Mid-Point (0.25% per month to July 2030)		**13.25%**		**$304,129,000**
	Construction Cost SubTotal				**$3,288,033,000**
	Engineering, Planning, and Design		**10%**		**$328,800,000**
	Environmental Planning and Permitting		**2%**		**$65,760,000**
	Administrative and Legal		**1%**		**$32,880,000**
	Construction Management		**4%**		**$131,520,000**
	Soft Costs SubTotal				**$558,960,000**
	Total Cost				**$3,847,000,000**