San Gorgonio Pass Water Agency

DATE: January 23, 2023

TO: Board of Directors Meeting

FROM: Lance Eckhart, General Manager

BY: Emmett Campbell, Sr. Water Resources Planner

SUBJECT: CHANGE ORDER FOR ADDITIONAL WORK FOR THE BACKBONE WATER SYSTEM FEASIBILITY STUDY BY ALBERT A. WEBB AND ASSOCIATES

RECOMMENDATION

Approve the proposal for additional consulting services by Albert A. Webb and Associates for the Backbone Water System Feasibility Study.

PREVIOUS CONSIDERATION

- Board Workshop – January 17, 2023: Board of Directors approved a motion to move the change order for the Backbone Water System Feasibility Study by Albert A. Webb and Associates to the January 23, 2023 Board of Directors Meeting.

- Board of Directors – November 8, 2021: Board of Directors approved a contract award to Albert A. Webb and Associates for the Backbone Water System Feasibility Study

- Board of Directors – June 21. 2021: Board of Directors adopted the Fiscal Year 2021-22 General Fund budget, including funds for Backbone Pipeline planning work

- Board of Directors – Various: The Agency has been performing multiple planning-level tasks on the Backbone Pipeline project since the 2000s

BACKGROUND

On November 8, 2021, the Board authorized a Contract with Albert A. Webb and Associates to conduct a study regarding the feasibility of constructing a pipeline and associated recharge facilities (Attachment 1). This effort has been ongoing, with a good amount of work being done on various pipeline alignments with associated recharge facilities.

As the project has progressed, additional efforts have been identified that the Agency would be interested in having evaluated as a part of this effort. These efforts include:

1. An I-10 bypass to Cabazon
2. An existing utility easement evaluation
3. A Cherry Valley Pump Station bypass at Danny Thomas Ranch

ANALYSIS

Existing efforts have largely been focused on pipeline alignments, pipeline sizing, recharge site identification and evaluation, and groundwater modeling. As the project has developed, three additional efforts were identified and recommended as additional scope items to be added to this project (i.e., “change order”; Attachment 2).

The first additional task is evaluating the feasibility of participating in the County of Riverside I-10 bypass. This could allow for a more straightforward pipeline alignment to Cabazon.

The second additional task is analyzing the use of an existing utility easement. There is currently an existing utility easement that runs through our service area that may be of interest to the Agency. Some work has been done evaluating these easements, with findings showing that many of these easements and right-of-ways have expired or may need to be renewed/reconveyed. As a part of this task, Webb would analyze and incorporate these findings in the project as an alternative alignment for the pipeline.

The third additional task is analyzing a potential Cherry Valley Pump Station bypass at Danny Thomas Ranch. Recently, the Beaumont-Cherry Valley Recreation and Park District have acquired land along Cherry Valley Blvd. There has been interest in creating a joint-use facility with the Parks District to incorporate a water feature onsite that would allow for recharging water from SGPWA. The East Branch Extension passes right through this property, and a potential may exist to install a turnout with a pipeline connection at this location that could bypass Cherry Valley Pump Station.

FISCAL IMPACT

The original Feasibility Study was approved on a time and materials basis, not to exceed $186,000. The recommended change order would add an additional $22,070 to the contract.

ACTION

Approve the proposal for additional consulting services by Albert A. Webb and Associates for the Backbone Water System Feasibility Study.

ATTACHMENTS

1. Contract: Backbone Water System Feasibility Study – October 2021
2. SGPWA Backbone Water System Feasibility Study Authorization Request for Additional Efforts – December 22, 2022

ALBERT A. WEBB ASSOCIATES



BACKBONE WATER SYSTEM FEASIBILITY STUDY

Prepared for

SAN GORGONIO PASS WATER AGENCY
Established 1961

OCTOBER 2021

www.webbassociates.com

ALBERT A. WEBB ASSOCIATES

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WEBB Proposal: 014950

October 21, 2021

Lance Eckhart, PG, CHG
General Manager/Chief Hydrogeologist
SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Ave.
Beaumont, CA 92223

RE: Proposal for the Feasibility Study for San Gorgonio Pass Water Agency Backbone Water System

Dear Mr. Eckhart:

Enclosed is Albert A. Webb Associates (WEBB) response to begin work on the Feasibility Study portion of the San Gorgonio Pass Water Agency (the Agency) Backbone Water System. Per our previous discussions, this Scope of Work is intended to begin the necessary engineering research, alignment analysis, groundwater basin site evaluation, and environmental constraints review. WEBB has consistently provided engineering support services to public sector clients throughout California since 1945. WEBB will commit the level of resources and expertise to provide a quality, responsive, and effectively managed project to meet the Agency's expectations.

We have assembled a project team of highly experienced engineers and hydrogeologist selected for this project. The proposal includes our project understanding, detailed Scope of Work, project team, and manpower and fee estimate. We are confident that we can leverage our past experience and knowledge of the Backbone Water System, which will help us in meeting the Agency's needs.

If you need to talk to me at any time or have any questions or require additional information, please call me at 951-686-1070.

Sincerely,

ALBERT A. WEBB ASSOCIATES

Sam I. Gershon, RCE
Senior Vice President

Table of Contents

SECTION 1 - PROJECT UNDERSTANDING

San Gorgonio Pass Water Agency (the Agency) is proposing to construct a Backbone Water System (Figure 1-1) consisting of four reaches to convey imported water to potential recharge facilities within the Banning and Cabazon Groundwater Basins. The conceptual locations of recharge facilities are the site of the Robertson's Ready Mix gravel pit in the Cabazon Groundwater Basin and a 20-acre parcel at an area southwest of the intersection of Sunset Avenue and Westward Avenue in the Banning Recharge Basin. The following is a description of the proposed alignments, facilities and other considerations affecting this project.

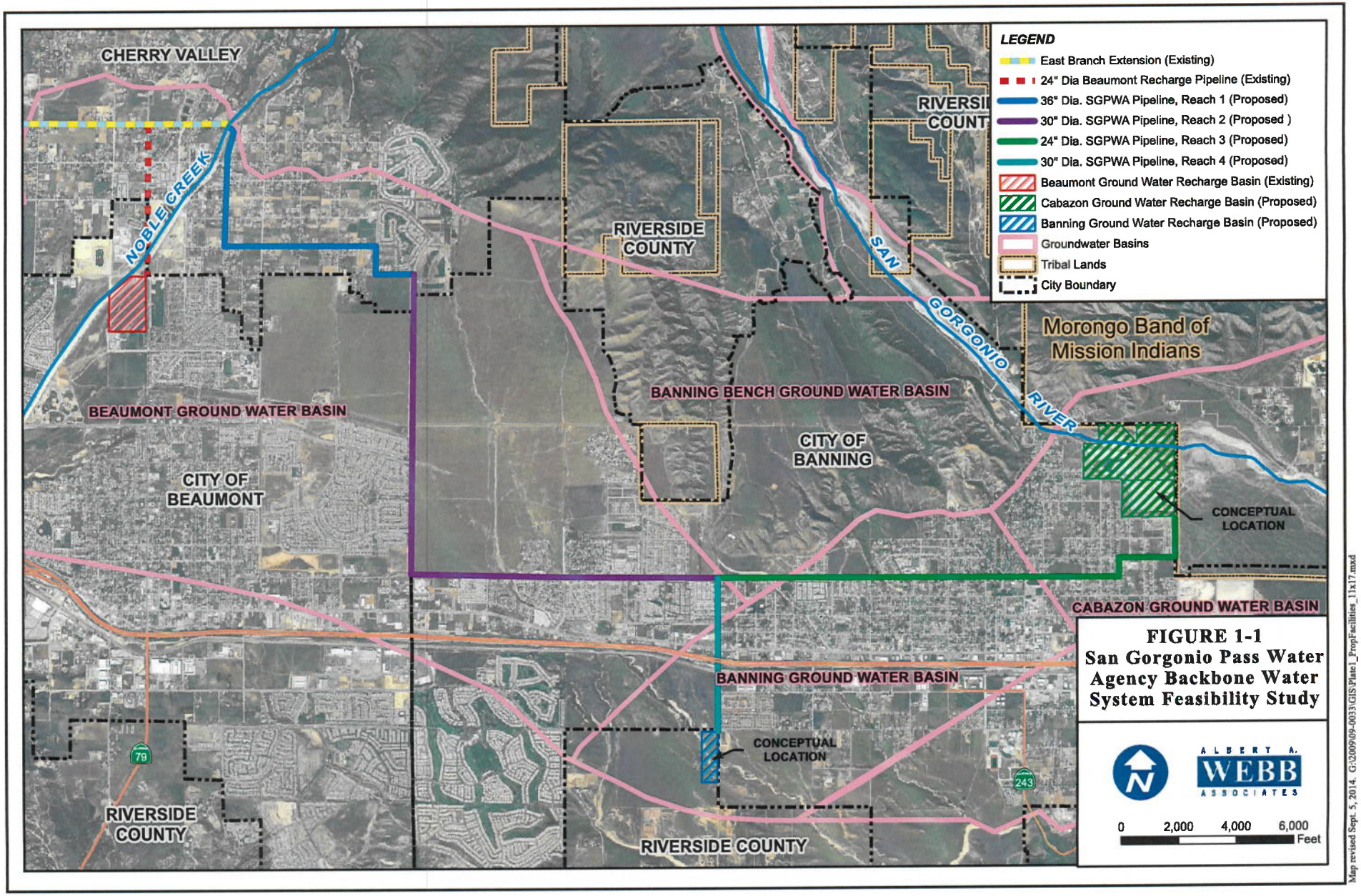
FACILITIES

Reach 1 Pipeline would be constructed entirely within the incorporated limits of Cherry Valley and consist of an approximately 12,000-feet, 36-inch pipeline to be connected to the existing East Branch Extension Pipeline at Orchard Street and Noble Street (west of Noble Creek). The pipeline would extend southward along Noble Street to Lincoln Street, and then eastward along Lincoln Street to Bellflower Avenue, where it would turn eastward to Brookside Avenue, where it turns eastward again to its terminus at N. Highland Springs Avenue.

Reach 2 Pipeline would be an approximately 22,000-feet, 30-inch pipeline that would be connected to the proposed Reach 1 at Brookside Avenue and N. Highland Springs Avenue. Reach 2 would extend southerly along N. Highland Springs Avenue to Wilson Street, then easterly along Wilson Street to its terminus at Sunset Avenue. The north-south alignment was assumed to be on southbound Highland Springs Avenue, which would place in in the City of Beaumont. If northbound Highland Springs Avenue were to be selected, the alignment would be placed in the City of Banning. There is a potential for a recharge facility in the City of Banning south of Interstate 10 southerly on Sunset Avenue within the Banning Groundwater Basin that could be supplied by Reach 2 through an extension southerly along Sunset Avenue (Reach 4 Pipeline).

Reach 3 Pipeline would be an approximately 19,000-feet, 24-inch pipeline that would be constructed mostly within the City of Banning and would extend from the eastern end of Reach 2 along Wilson Street at Sunset Avenue, and continue easterly along Wilson Street, then on Blanchard Street, Hoffer Street, and Hathaway Street. The portion of Hathaway Street appears to be within private property, which leads northerly onto the existing gravel pit, proposed to be Cabazon Recharge Facility.

Reach 4 Pipeline would be an approximately 5,300-feet, 24-inch pipeline that would be constructed within the City of Banning and would extend from the southern end of Reach 2 along Sunset Avenue at Wilson Street and continue southerly along Sunset Avenue to its terminus at Westward Avenue at a conceptual recharge basin.


CHERRY VALLEY
NOBLE CREEK
RIVERSIDE COUNTY
SAN GORGONIO RIVER
Morongo Band of Mission Indians
BANNING BENCH GROUND WATER BASIN
BEAUMONT GROUND WATER BASIN
CITY OF BANNING
CITY OF BEAUMONT
CONCEPTUAL LOCATION
CABAZON GROUND WATER BASIN
BANNING GROUND WATER BASIN
CONCEPTUAL LOCATION
RIVERSIDE COUNTY
RIVERSIDE COUNTY
79
243
LEGEND
East Branch Extension (Existing)
24" Dia Beaumont Recharge Pipeline (Existing)
36" Dia. SGPWA Pipeline, Reach 1 (Proposed)
30" Dia. SGPWA Pipeline, Reach 2 (Proposed)
24" Dia. SGPWA Pipeline, Reach 3 (Proposed)
30" Dia. SGPWA Pipeline, Reach 4 (Proposed)
Beaumont Ground Water Recharge Basin (Existing)
Cabazon Ground Water Recharge Basin (Proposed)
Banning Ground Water Recharge Basin (Proposed)
Groundwater Basins
Tribal Lands
City Boundary
FIGURE 1-1
San Gorgonio Pass Water Agency Backbone Water System Feasibility Study
ALBERT A. WEBB ASSOCIATES
0 2,000 4,000 6,000 Feet
Map revised Sept. 5, 2014. G:\2009\09-0033\GIS\Plate1_PropFacilities_11x17.mxd

RECHARGE FACILITIES

The Cabazon Basin Recharge Facility concept was based on the SGPWA March 2005 "Cabazon Groundwater Recharge Project Feasibility Investigation Draft Report" prepared by Boyle Engineering. The "proposed developed" area is 54-acres or about 30 percent of the total excavated site. The gravel pit has been significantly excavated during the materials mining process, so nominal earth work would be required. Proposed improvements would include separation berms, site access roads, onsite piping, and onsite facilities. As this facility and location is conceptual, further hydrogeological evaluation will be performed.

The Banning Basin Recharge Facility concept was developed by Provost & Pritchard Consulting Group. For planning purposes, the recharge facility was conceptually located within a 20-acre undeveloped parcel located at the southwest area of the intersection of Sunset Avenue and Westward Avenue. Proposed improvements would include earthwork, separation berms, site access roads, onsite piping, and onsite facilities. Other factors, such as Montgomery Creek, which runs through the area, will need to be considered. If this area is not feasible due to Montgomery Creek, areas farther to the west should be considered. As this facility and location is conceptual, further hydrogeological evaluation will be performed.

HYDRAULICS

With pipeline reaches as far as Cabazon, proper water conveyance capacity is critical to the success of this project. Through the East Branch Extension (EBX), State Water Project (SWP) water is delivered to the Cherry Valley Pump Station, which then distributes the water to various turnout and recharge facilities (Figure 1-2). As this conveyance system terminates at the Noble Creek Turnout at Orchard Street and Noble Street, the Agency envisions constructing a 2- to 3-million-gallon tank east of Little San Gorgonio Ponds to allow the Agency operational flexibility, improved hydraulic control, more efficient operations of the Cherry Valley Pump Station, and to provide constant pressure at the turnout and future line extension, such as the "Backbone Water System." Therefore, a hydraulic understanding of the Agency's existing and planned systems is a key component to ensure the system has the proper conveyance capacities.

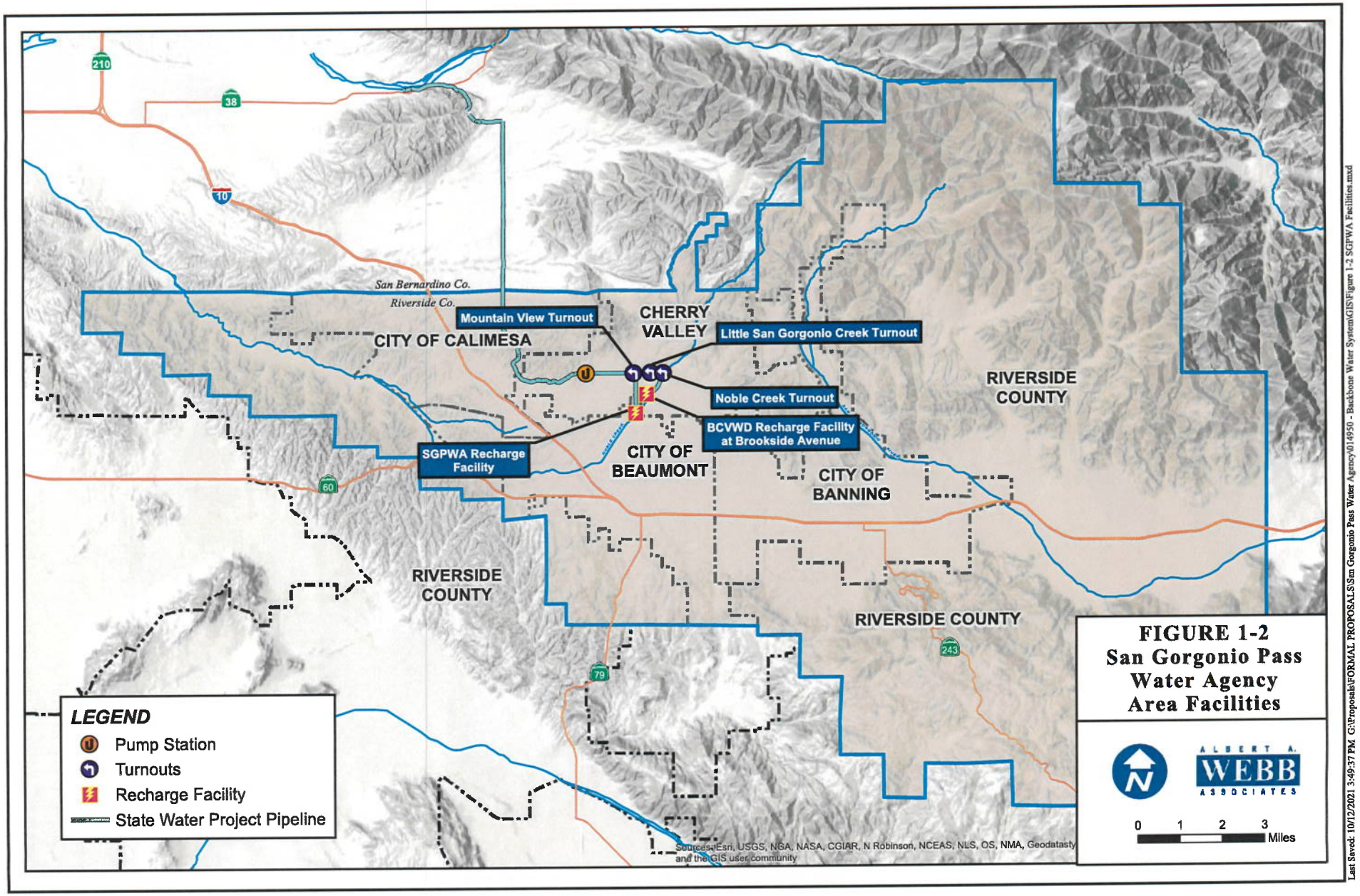


FIGURE 1-2
San Gorgonio Pass Water Agency Area Facilities

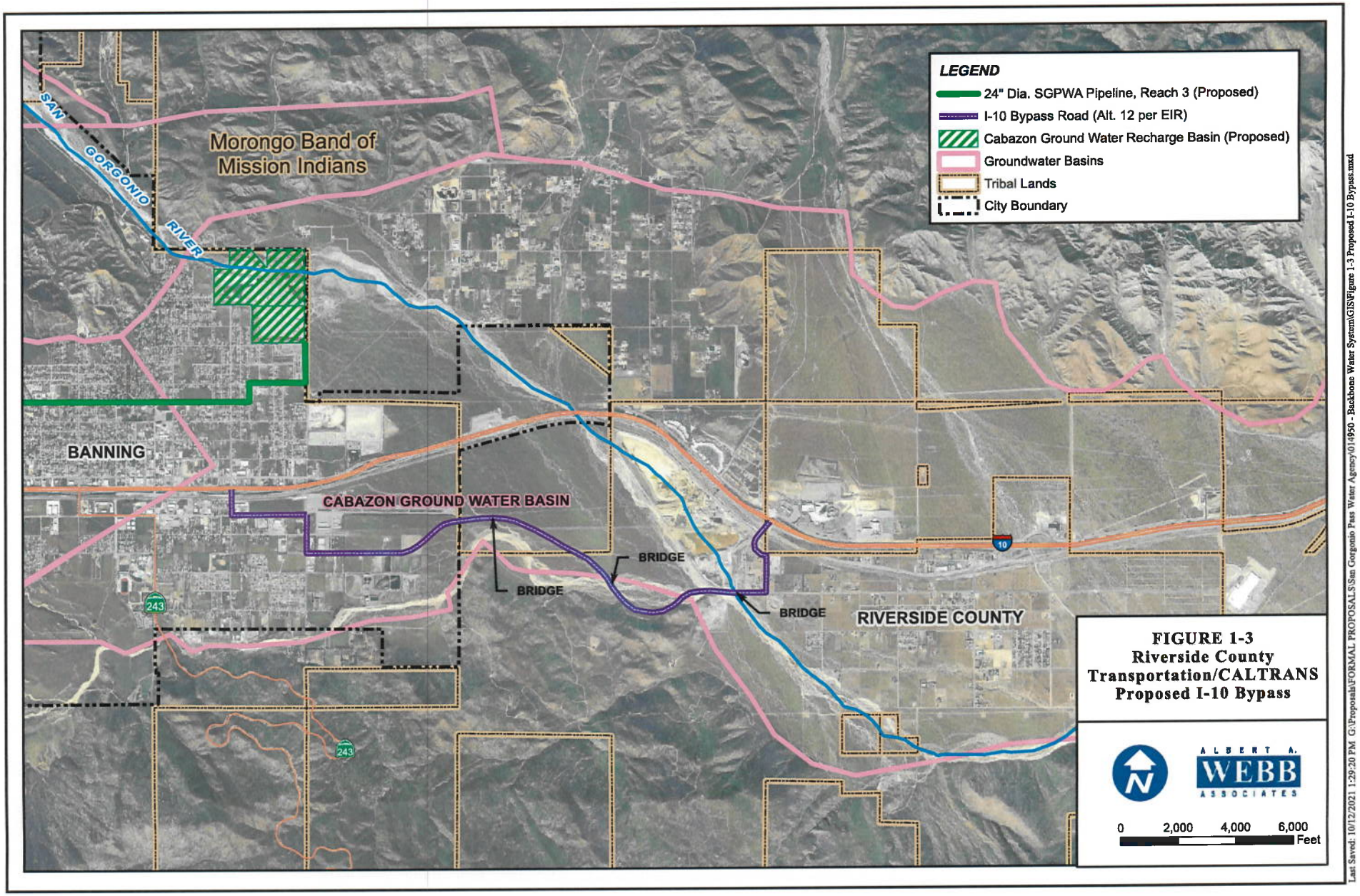
Last Saved: 10/12/2021 3:49:37 PM G:\Proposals\FORMAL PROPOSALS\San Gorgonio Pass Water Agency\014950 - Backbone Water System\GIS\Figure 1-2 SGPWA Facilities.mxd

INTERSTATE 10 BYPASS

At the request of the Agency WEBB conducted a cursory review of the Riverside County Transportation/Caltrans Interstate 10 (I-10) Bypass Project. Caltrans and the County of Riverside (County) proposed to construct a new two-lane roadway extending approximately 3.3 miles from the intersection of Hathaway Street and Westward Avenue in the City of Banning (City) east to the intersection of Bonita Avenue and Apache Trail in the unincorporated community of Cabazon, California (Figure 1-3). The Proposed I-10 Bypass is located partially within the jurisdiction of the County, the City, and the Tribal Lands. The new roadway and bridges would cross undeveloped land south of Interstate 10. Two alternative alignments (5 and 12) were under consideration, along with a No Action/No Project Alternative. The designation of a Locally Preferred Alternative is intended to convey the County's preferred alternative based on the information available prior to public review, including consideration of potential impacts and reasonable mitigation measures. After comparing and weighing the benefits and impacts of all feasible alternatives, the Lead Agency for CEQA (the County of Riverside) has identified Alternative 12 as the Locally Preferred Alternative. This project is much farther east of Reach 3 and the Cabazon Recharge Basin and provides little benefit to the Agency; therefore, the Agency should consider foregoing participation in the I-10 Bypass Project.

REPURPOSING EXISTING GAS MAINS

There may be potential conveyance facilities owned by energy companies that are in the abandonment or liquidation stage within the study area. An example of such a facility is a reported abandoned 12-inch diameter steel gas main within the Interstate 10 (I-10) and Oak Valley Parkway area. There may be an opportunity for the Agency to acquire this facility for a minimal cost and repurpose it for water transmission. Additionally, there are other potential pipeline facilities of similar characteristics that may be acquired and repurposed by the Agency. The advantages of repurposing, if feasible and strategic to the Agency's needs, are reducing environmental and construction impact, cost savings, as well as potential sustainable reuse of existing facilities which would have otherwise remained unused.



Last Saved: 10/12/2021 1:29:20 PM G:\Proposals\FORMAL PROPOSALS\San Gorgonio Pass Water Agency\014950 - Backbone Water System\GIS\Figure 1-3 Proposed I-10 Bypass.mxd

SECTION 2 - SCOPE OF WORK

GENERAL

The purpose of this first Scope of Work, hereafter referred to as Feasibility Study for the Backbone Water System, is to begin the necessary engineering research, alignment analysis, groundwater basin site evaluation and environmental constraints analysis for the Backbone Water System. The ultimate aim of the Feasibility Study is to provide rationale to position the project for future Federal and State grant funding within a two- to five-year timeframe. Webb Associates (WEBB) and Provost & Pritchard will leverage and build on their previous work product on the project produced over more than a decade to ensure accurate and timely preparation of the Feasibility Study.

The Backbone Feasibility Study will focus on the initial tasks that need to begin right away in order for the project to be completed on time. This Feasibility Study Scope of Work is not intended to produce final deliverables but rather is intended to get certain project tasks moving while the final Preliminary Design scope and budget are worked out and approved. The proposed Preliminary Design Report will build off the work completed as part of this Feasibility Study and will produce a future Preliminary Design Report (PDR) and 20-30% design plans. The Scope of Work for the Feasibility Study is as follows:

PROJECT TASKS

The initial phase of the project will consist of commencement of the project and performing the preliminary design including review of the Agency's planning documents, hydraulic review, necessary utility research, easement and right-of-way research, field survey, and most importantly the practical construction methodology alternatives evaluation and establishment of the project design parameters.

Task 1. Coordination and Meetings

WEBB has budgeted time for meetings for the project with the Agency as well as coordination with other public entities affected by the project. WEBB will coordinate with City of Beaumont and Banning regarding pipeline placement within their respective right-of-ways. Caltrans and Union Pacific Railroad (UPRR) crossings will be identified and addressed. Additionally, WEBB will work with the Morongo Band of Mission Indians and Cabazon Water District for potential benefit of this project. In unincorporated areas, WEBB will coordinate with Riverside County. We have budgeted eight (8), two-hour meetings and additional meetings would require an increase in the budget.

Task 2. Utility Research and Survey

Project is a Backbone Water System consisting of four reaches, totaling approximately 58,300 feet of pipeline to convey imported water from the existing East Branch Extension Pipeline at Orchard Street and Noble Street (west of Noble Creek) to potential recharge facilities within the Banning and Cabazon Groundwater Basins. The conceptual locations of recharge facilities are the site of the Robertson's Ready Mix gravel pit in the Cabazon Groundwater Basin and a 20-acre parcel at an area southwest of the intersection of Sunset Avenue and Westward Avenue in the Banning Recharge Basin. Reach 1 (12,000 feet) will be constructed of 36-inch diameter pipe, Reach 1 (22,000 feet) will be constructed of 30-inch diameter pipe, Reach 3 (19,000 feet) will be constructed of 24-inch diameter pipe, and Reach 4 (5,300 feet) will be constructed of 24-inch diameter pipe.

The initial phase of the project will consist of commencement of the project and performing the necessary utility and right-of-way research and field survey within the project boundaries and most importantly establishment of the project design parameters.

a. **Utility Research** – WEBB will perform utility research in the project area to ascertain and summarize the various utilities and facilities potentially impacting the project. This data will be utilized for utility strip mapping for a future PDR; however, utilities will be plotted on typical street cross sections of key pipe segments for alignment evaluation purposes. WEBB will contact Underground Service Alert (USA) for a list of utility companies with facilities in the general project area through WEBB's internet connection with USA.

   In addition to utility companies, WEBB will contact public agencies to obtain their atlas maps of their facilities, locations, size and depth within the project area. WEBB will review the project area in detail looking for additional evidence of underground utilities, such as pavement cuts and risers. Though not within the scope of the feasibility study, field verification and potholing of the utilities to verify the alignment corridor and confirm the final alignment will be conducted in the future Preliminary Design Report. Additionally, for the future construction phase, the contractor will be required to field verify utilities prior to trenching so that any conflict resolutions can be developed.

b. **Field Survey to Confirm Critical Crossings** – The survey will involve obtaining cross-section configurations at critical locations of crossings for determining the horizontal and vertical constraints of the pipeline reaches within the public right-of-way and or easements. Our survey team will provide field survey at critical locations of possible crossings, horizontal and vertical configurations. For this feasibility phase of the project, we have assumed 16 hours of field survey effort and associated office time. Additional survey will be

performed in the preliminary design phase for the PDR, which is beyond the Scope of Work of this proposal.

c. **Site Visit** – WEBB will perform a combination of Google Earth search and field visit to identify critical visible site features, such as utilities, streetlights, utilities, storm drains, catch basins, etc. that would impact pipeline design and construction. WEBB will document our findings with a photographic log.

d. **Coordination and Permitting** – WEBB will begin coordination efforts with agencies impacted regarding the requirements for encroachment permits for the applicable alignments. WEBB will get preliminary conditions such that cost estimates can be prepared. WEBB will list the anticipated permits necessary for the project.

Task 3. Alignment Study and Technical Memorandum

WEBB will assemble available plans and collected data along the alternative alignment. WEBB will begin evaluating the alternative alignments focusing on the critical crossings such as freeways, railroad, channels, and major street crossings. WEBB will be evaluating each practical construction corridor. The critical issues to be addressed during the Feasibility Study and construction are:

a. **Preliminary Alignment** – This task will focus on determining the alignment of the raw water pipeline reaches. WEBB will evaluate a few alternative alignments with criteria such as estimated construction costs, traffic impacts, major crossings, and permitting etc.

b. **Cost Estimates and Assessment Matrix** – WEBB will prepare a construction cost estimate for each reach of the alignment. WEBB will prepare an assessment matrix for other issues associated with each segment, such as traffic control, ROW acquisition, impact to the public, etc. Costs for each possible alignment will be totaled and a recommended alignment will be determined based on constructability and lowest cost. The cost of acquiring the proposed recharge basins is not part of this study however, preliminary cost basis of property will be estimated based on prior property acquisitions for recharge facilities as well as current Riverside County property assessments. The project's cost estimation efforts will be developed for a feasibility level review pursuant to AACE Recommended Practices, 56R-08, Cost Estimation Classification Matrix for Building and General Construction Industries, Estimate Class 4, which recommends 1% to 15% maturity level of project definition deliverables and a -20% (low) to +30% (high) expected accuracy range.

Task 4. Conveyance System Hydraulic Evaluation

WEBB will review and assemble available Agency record drawings and planning documents as they relate to the facilities' capacities as well as the Agency's delivery goals. WEBB will evaluate existing and future pumping capacity and head conditions, system hydraulic grades of the current and future system, site review of the tank site, as well as analysis of the need for future facilities and upgrades to existing facilities. The critical issues to be addressed are:

a. **Cherry Valley Pump Station** – This task will focus on evaluating the pump station's hydraulics for adequate capacity, hydraulic head conditions, and determining whether additional pumping capacity is needed

b. **Hydraulic Grade Line** – This task will focus on developing Backbone Water System preliminary pipeline grades, and compressed pipeline profile based on available data such as Google Earth. This data will be utilized to establish the hydraulic grade line of the Backbone Water System under various delivery scenarios, thus establishing the necessary hydraulic grade at the connection at Noble Creek (Reach 1).

c. **Tank Site Location** – To provide for constant pressure for the Agency's various turnout and recharge facilities, the Agency envisioned a 2- to 3-million-gallon storage tank close to the Noble Creek turnout. WEBB will review and reference available prior studies prepared by the Agency and incorporate the findings into this project.

Task 5. Project Formulation Assistance (Provost & Pritchard)

To assist in formulating project facilities, Provost & Pritchard (P&P) will provide advice on project needs and facility locations. This effort will include remote meetings with SGPWA, City of Banning and Cabazon Water District staff to discuss potential groundwater rechange basin development. Additionally, a field trip with SGPWA and USGS staff will be conducted to consider hydrogeologic factors that would affect future groundwater supplies. The assumptions identified will be reviewed with WEBB and SGPWA and documented in a technical report. The efforts by P&P will be on a time and material basis based on the project findings and direction. Critical issues to be addressed by P&P include:

a. **Project Sizing** – The Project sizing will depend on the quantities of additional demands forecast and facilities available for their use. General locations for additional supplies will be derived from available UWMP water demand projections and discussions with local retail water agencies. Local agency plans for additional facilities will be reviewed and the general locations of water supply shortfalls identified. The primary known potential local pinch-point is the Banning Storage Unit; however, the Cabazon Storage Unit is the

largest local area of potential development. Although no development was identified in recent UWMPs, the potential for future development will be discussed with local water agencies. In addition, this analysis will be conducted to evaluate sizing and lengths of pipeline reaches with the understanding that logical breaks may affect the analysis and findings.

b. **Climate Change Sensitivity** – The sensitivity of local groundwater sustainable yield to climate change will be considered along with the quantity of additional demand potentially required to offset any supply shortfalls.

c. **Effectiveness of Groundwater Recharge** – Data on soil characteristics will be reviewed to identify areas that are capable of effective groundwater recharge. Both conservative and more optimistic water demand projections will be developed that will indicate potential use beyond the current UWMP 2045 planning horizon.

d. **Hydrogeologic Evaluation** – Based on the needs evaluation performed by P&P, groundwater model projections will be prepared for multiple assumptions of facility location and future water use. It is assumed that eight groundwater model projections will be prepared that project the changes to groundwater from different project formulations at different locations. The projections will be based on additional water supplies from the East Branch Extension, that will be assumed to be available based on SWP operations studies or other studies (e.g., Sites Reservoir) of other supply sources. The projections will also consider the benefits of different amounts of recharge at different locations. It is expected that recharge from a new facility would occur at sites previously identified in reconnaissance studies (Banning Storage Unit and Robertson Gravel operation adjacent to the San Gorgonio River), along with other potential locations farther east in the Cabazon Storage Unit. The benefits of recharge at a more westerly versus a more easterly location in the Cabazon Storage Unit will be evaluated. Additionally, recharge from the Colorado River Aqueduct adjacent to the San Jacinto Tunnel East Portal will be considered for evaluation. The groundwater model projections will indicate projected groundwater levels relative to SGMA sustainable management criteria and identify their overall SGMA sustainability. The results of these studies will be presented to SGPWA and WEBB Associates for review and documented in a technical report.

Task 6. Groundwater Modeling

INTERA Geoscience & Engineering Solutions (INTERA) will be performing the following Groundwater Modeling Scope of Work in support of Provost & Pritchard in evaluating project alternatives for the San Gorgonio Pass Water Agency

Backbone Water System. INTERA has previously developed predictive scenarios for the San Gorgonio Pass Groundwater Sustainability Plan, that included a 2030s baseline scenario. Projected recharge volumes at the Noble Creek recharge facility for 2030s were provided by P&P which were used to estimate underflows from the model western boundary. Return flows and pumping data were updated based on data provided by P&P accordingly. Head values for boundary condition at the eastern boundary were estimated using the correlation between boundary heads and measured heads at the Whitewater River Recharge Facility. For the new project alternatives, all the packages except WEL and MNW will remain same as 2030s baseline scenario. The efforts by INTERA will be on a time and material basis based on the project findings and direction. Critical issues to be addressed by INTERA include:

a. **PMA-1: Noble Creek Additional Recharge** – This task will entail simulating additional recharge at the Noble Creek Facility and computing the model water budget and groundwater levels. Data provided by P&P will be processed for input to the MODFLOW WEL package and used to update the underflow boundary condition with the Beaumont Basin. For this task it is assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

b. **PMA2: Additional MBMI Pumping and Recharge** – This task will entail simulating additional Morongo Band of Mission Indians (MBMI) pumping and recharge and computing the model water budget and groundwater levels. Data provided by P&P will be processed for input to the MODFLOW MNW and WEL package. If needed, adjustment for underflow boundary condition with the Beaumont Basin will be made in WEL package as well. For this task it is assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

c. **PMA 3: New Banning Basin Recharge** – This task will entail simulating additional recharge at new Banning Basin Recharge Facility and computing the model water budget and groundwater levels. Data provided by P&P will be processed for input to the MODFLOW WEL package. If needed, adjustment for underflow boundary condition with the Beaumont Basin will be made in WEL package as well. For this task it is assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

d. **Cabazon Storage Unit Recharge from Colorado River Aqueduct** – This task will entail simulating additional Cabazon Storage Unit recharge off of Colorado River Aqueduct and computing the model water budget and groundwater levels. Data provided by P&P will be processed for input to the MODFLOW WEL package. If needed, adjustment for underflow boundary condition with the Beaumont Basin will be made in WEL package as well. For this task it is

assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

e. **Additional Cabazon Storage Unit Development and New Recharge** – This task will entail simulating additional Cabazon Storage Unit development and new recharge and computing the model water budget and groundwater levels. Data provided by P&P will be processed for input to the MODFLOW WEL package. If needed, adjustment for underflow boundary condition with the Beaumont Basin will be made in WEL package as well. For this task it is assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

f. **Additional Scenarios** – This task includes up to three additional scenarios, which may be modifications of the scenarios in Tasks 1-5. For each additional scenarios data which will provided by P&P will be processed for input to the MODFLOW WEL/MNW package. If needed, adjustment for underflow boundary condition with the Beaumont Basin will be made in WEL package as well. For this task it is assumed that all other MODFLOW packages will not change and remain the same as 2030s Baseline Scenario.

g. **Technical Memorandum** – Modeling approach and results for INTERA's Tasks above will be documented in a Technical Memorandum. INTERA will provide a draft technical memorandum for review and incorporate one round of review/revisions.

Task 7. Groundwater Modeling by Area Wastermaster

The Banning Area Watermaster has their own groundwater model. As there are potential recharge locations within the Banning Ground Water Basin, it is recommended to coordinate with the Banning Watermaster's consulting engineer to request modeling a recharge basin within the Banning Groundwater Basin. The cost associated with the additional modeling efforts by the Banning Area Wastermaster is not included in this proposal and would be directly contracted with the Agency.

Task 8. Repurposing Gas Mains

WEBB will coordinate with the owner of the 12-inch diameter steel gas main at the I-10 and Oak Valley Parkway area for the potential acquisition by the Agency and evaluate the feasibility to repurpose this pipeline for use by the Agency for water transmission. Additionally, WEBB will review CalGEM (California Geologic Energy Management Division, formerly DOGGR) for other facilities for potential reuse by the Agency. The critical issues to be addressed are:

a. **Strategic Facilities** – This task will focus on locating facilities strategically located and sized to benefit the Agency's needs for water transmission within their service area.

b. **Conversion to Water Transmission Pipeline** – WEBB will evaluate the feasibility and methodology for repurposing these facilities for water transmission such as cleaning, disinfection, lining, etc.

c. **Reconnaissance Level Project Summary** – WEBB will summarize the findings and potential project costs and feasibility at a reconnaissance level report for the Agency's review and consideration. The availability of these pipeline facilities is unknown, and the facilities, if identified, will be in varying states of salvageability. The efforts and budget for this task of the proposal is limited to a reconnaissance level review and further detailed evaluation may be required to attain a proof-of-concept level, which is beyond the scope of this proposal.

Task 9. Environmental Constraints Overview

WEBB's Planning and Environmental Services (PES) staff will prepare an environmental constraints overview to identify potential issues that may inform the location and design of the water pipeline.

a. **Review of Potential Areas of Concern** – PES staff will review existing references, including the General Plans and General Plan environmental impact reports (EIRs) for the cities of Beaumont, Banning, and County of Riverside, the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) survey area maps, National Wetlands Inventory, and California Department of Toxic Substances Control EnviroStor database to identify and map potential areas of environmental concern.

b. **Field Investigation** – PES staff will work collaboratively with the Design Team and SGPWA to help determine the most feasible alignment for this project. They will drive/walk the desired alignments to look for potential problems that could affect project construction, permitting, and cost.

c. **Report and Recommendations** – Based on the PES Team findings, WEBB will make a recommendation regarding the likely CEQA document for the project. The results of this effort will be summarized with accompanying maps and included as part of the feasibility study.

d. **Limitations** – This scope does not include preparation of any technical studies, cultural resources records searches, surveys for biological or cultural resources, or preparation of a CEQA document.

SECTION 3 - PROJECT TEAM

The WEBB project team is anticipated to be as follows:

NAME	PROJECT ROLE
Sam Gershon, R.C.E	Principal-in-Charge
Sinnaro Yos, P.E.	Project Manager
Stephanie Standerfer	Environmental Constraints
Michael Johnson, LLS	Land Survey & Mapping

SUBCONSULTANT	
Provost & Pritchard	Hydrogeologic Evaluation
INTERA Geoscience & Engineering	Groundwater Flow Modeling

SECTION 4 - MANPOWER AND FEE ESTIMATE

FEE SUMMARY

WEBB is committed to providing the highest quality service to the Agency and to provide quality engineering services for the Agency's Backbone Water System Feasibility Study. After preparing a detailed Scope of Work for this project, we have included all the necessary items required to successfully complete it and believe our team experience will generate an efficient processing of the project deliverables. Based upon the project's Scope of Work a summary of our engineering services budget is as follows:

ENGINEERING SERVICES TASK	TOTAL ESTIMATED[1] SERVICES BUDGET
Task 1 – Coordination and Meetings	$ 14,140
Task 2 – Utility Research and Survey	$ 25,036
Task 3 – Alignment Study	$ 15,620
Task 4 – Conveyance System Hydraulics	$ 9,060
Task 5 – Hydrogeologic Evaluation	$ 36,295
Task 6 – Groundwater Modeling	$ 43,793
Task 7 – Banning Watermaster Groundwater Modeling	$ 0[2]
Task 8 – Repurposing Gas Mains	$ 9,210
Task 9 – Environmental Constraints Overview	$ 9,510
Task 10 – Feasibility Report	$ 19,620
Task 11 – Expenses	$ 3,716
Total Fee Engineering Services	**$ 186,000**

A detailed man-hour breakdown of the engineering services budget is included.

[1] Tasks 1 through 11 will be on a time and material basis.

[2] San Gorgonio Pass Water Agency will contract directly with the Banning Watermaster with regards to Task 7.

ALBERT A. WEBB ASSOCIATES

Backbone Water System Feasibility Study
San Gorgonio Pass Water Agency

Item	Description	Sam Gershon	Joseph Caldwell	Bradley Sackett	Sinnaro Yos	Sean Chotikasatien	William Stewart	Teresa DeShazer	Stephanie Standerfer	Cheryl DeGano	Autumn DeWoody	Chandler Drachslin	Michael Johnson	Jon Ros	Jordan Moretti	Matthew Sievers	Total Hours	Subtotal - Labor	Sub-consultant budget	Expenses	Total/task[1]
Task 1 - Coordination and Meetings		16	8	4	20	4		8									60	$ 14,140	$ -	$ -	$ 14,140
1.1	Coordination and Meetings	16	8	4	20	4		8									60	$ 14,140	$ -		$ 14,140
Task 2 - Utility Research and Survey		14	4	4	28	16	8	18					2	2	6	16	118	$ 25,036	$ -	$ -	$ 25,036
2.1	Utility Research & Data Collection	2			4	8	8	8									30	$ 4,880	$ -		$ 4,880
2.2	Field Survey and Mapping	2			4			2					2	2	6	16	34	$ 8,236	$ -		$ 8,236
2.3	Preliminary Field Walk	2			8	8											18	$ 3,700	$ -		$ 3,700
2.4	Coordination and Permitting	8	4	4	12			8									36	$ 8,220	$ -		$ 8,220
Task 3 - Alignment Study		8	6	8	18	12	16	8									76	$ 15,620	$ -	$ -	$ 15,620
3.1	Preliminary Alignment	4	3	4	10	6	16	4									47	$ 9,285	$ -		$ 9,285
3.2	Cost Estimate and Assessment Matrix	4	3	4	8	6		4									29	$ 6,335	$ -		$ 6,335
Task 4 - Conveyance System Hydraulics		3		6	12	12	12										45	$ 9,060	$ -	$ -	$ 9,060
4.1	Cherry Valley Pump Station Capacity	1		2	4	4											11	$ 2,400	$ -		$ 2,400
4.2	Hydraulic Grade Evaluation	1		2	4	8	12										27	$ 4,880	$ -		$ 4,880
4.3	Tank Site Evaluation	1		2	4												7	$ 1,780	$ -		$ 1,780
Task 5 - Hydrogeologic Evaluation			1		4				2								7	$ 1,795	$ 34,500	$ -	$ 36,295
5.1	Hydrogeolgy by Provosit & Pritchard																	$ -	$ 34,500		$ 34,500
5.2	Oversee Consultant		1		4				2								7	$ 1,795	$ -		$ 1,795
Task 6 - Groundwater Modeling			1		4				2								7	$ 1,795	$ 41,998	$ -	$ 43,793
6.1	Modeling by Intera Geoscience																	$ -	$ 41,998	$ -	$ 41,998
6.2	Oversee Consultant		1		4				2								7	$ 1,795	$ -		$ 1,795
Task 7 - Area Watermaster Modeling																		$ -	$ -	$ -	$ -
7.1	Area Watermaster Groundwater Modeling																	$ -	$ -	$ -	$ -
Task 8 - Repurposing Gas Mains		2	2	4	12	16	8	4									48	$ 9,210	$ -	$ -	$ 9,210
8.1	Repurposing Gas Mains	2	2	4	12	16	8	4									48	$ 9,210	$ -	$ -	$ 9,210
Task 9 - Environmental Constraints Overview		2			2				8	4	16	12					44	$ 9,510	$ -	$ -	$ 9,510
9.1	Environmental Constraints Overview	2			2				8	4	16	12					44	$ 9,510	$ -		$ 9,510
Task 10 - Feasibility Report		8	4	12	16	24	12	20				8					104	$ 19,620	$ -	$ -	$ 19,620
10.1	Feasibility Report	8	4	12	16	24	12	20				8					104	$ 19,620	$ -		$ 19,620
Task 11 - Expenses																		$ -	$ -	$ 3,716	$ 3,716
11.1	Expenses																	$ -	$ -	$ 3,716	$ 3,716
Total		53	26	38	116	84	56	58	12	4	16	20	2	2	6	16	509	$ 105,786	$ 76,498	$ 3,716	$ 186,000

1. Rounded to the nearest $1.

SECTION 5 - PROJECT SCHEDULE
BACKBONE WATER SYSTEM FEASIBILITY STUDY

ID	Task Name	Duration	Start	Finish
1	**SGPWA Backbone Water System Feasibility**	**20 wks**	**12/1/21**	**4/19/22**
2	**Project Authorization**	**0 wks**	**12/1/21**	**12/1/21**
3	**Coordination and Meetings**	**4 wks**	**12/1/21**	**12/28/21**
4	**Pipeline Reach Alignment Study**	**9 wks**	**12/1/21**	**2/1/22**
5	Utility Research and Data Collection	7 wks	12/1/21	1/18/22
6	Alignment Review and Field Visit	1 wk	12/29/21	1/4/22
7	Field Survey and Mapping	2 wks	1/5/22	1/18/22
8	Preliminary Alignment and Cost Estimate	2 wks	1/19/22	2/1/22
9	**Conveyance System Hydraulics**	**3 wks**	**1/5/22**	**1/25/22**
10	Hydraulic and Capacity Evaluation	2 wks	1/5/22	1/18/22
11	Tank Site Evaluation	1 wk	1/19/22	1/25/22
12	**Hydrogeologic Evaluation**	**6 wks**	**12/1/21**	**1/11/22**
13	Recharge Basing Site Evaluation	3 wks	12/1/21	12/21/21
14	Groundwater Modeling	3 wks	12/22/21	1/11/22
15	Area Watermaster Groundwater Modeling	3 wks	12/22/21	1/11/22
16	**Repurposing Gas Mains Evaluation**	**6 wks**	**12/1/21**	**1/11/22**
17	12-inch Gas Main Evaulation	2 wks	12/1/21	12/14/21
18	Identify Potentical Facilities CalGEM	2 wks	12/15/21	12/28/21
19	Reconnaissance Level Summary	2 wks	12/29/21	1/11/22
20	**Environmental Constraints Overview**	**4 wks**	**1/5/22**	**2/1/22**
21	Constraints Analysis	4 wks	1/5/22	2/1/22
22	**Feasiblity Report**	**11 wks**	**2/2/22**	**4/19/22**
23	Draft Report	6 wks	2/2/22	3/15/22
24	Agency Review	3 wks	3/16/22	4/5/22
25	Final Draft	2 wks	4/6/22	4/19/22

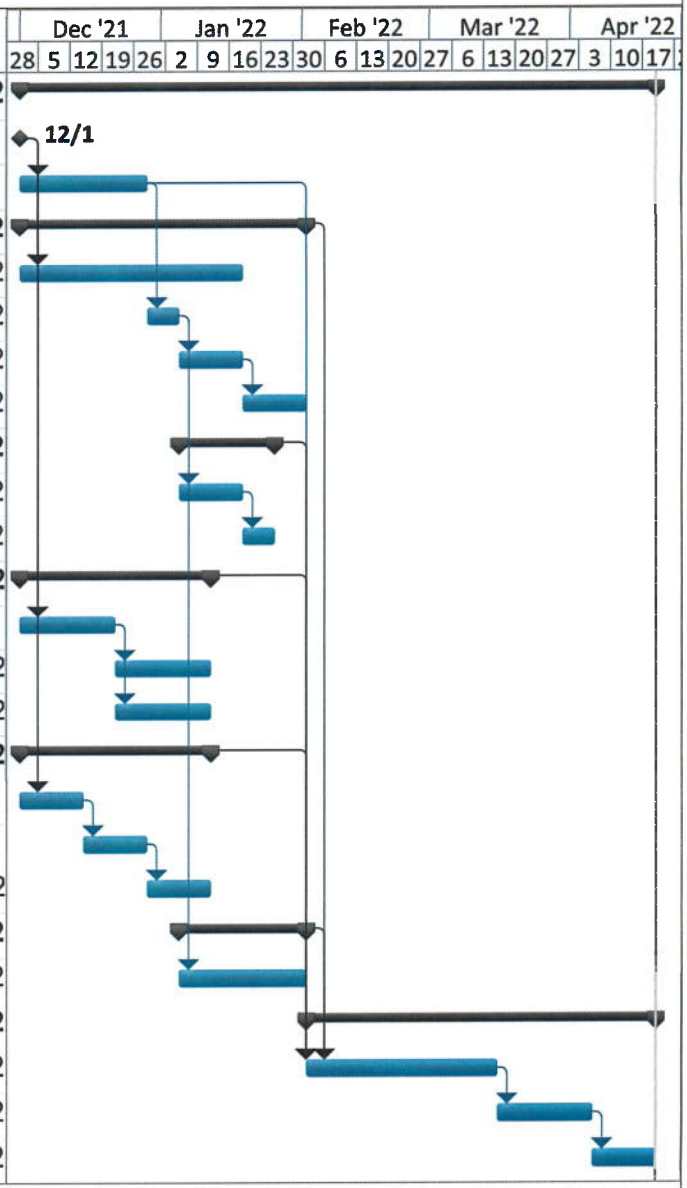


EXHIBIT B

Schedule of Charges/Payments

Consultant will invoice Agency on a monthly cycle. Consultant will include with each invoice a detailed progress report that indicates the amount of budget spent on each task. Consultant will inform Agency regarding any out-of-scope work being performed by Consultant. This is a time-and-materials contract.

ALBERT A. WEBB ASSOCIATES

Fee Schedule

CLASSIFICATION Engineers/Project Managers/Planners/Scientists/ Assessment/Special Tax Consultants/Landscape Architects/Designers	Rates $/Hour
Principal II	293.00
Principal I	279.00
Senior III	252.00
Senior II	240.00
Senior I	232.00
Associate III	208.00
Associate II	197.00
Associate I	191.00
Assistant V	173.00
Assistant IV	156.00
Assistant III	144.00
Assistant II	135.00
Assistant I	98.00
Survey Services	
2-Person Survey Party	302.00
1-Person Survey Party	208.00
Inspection Services	
Construction Manager II	245.00
Construction Manager I	185.00
Inspector (Non-Prevailing Wage)	141.00
Inspector Overtime (Non-Prevailing Wage)	190.00
Inspector (Prevailing Wage)	152.00
Inspector Overtime (Prevailing Wage)	200.00
Administrative Services	
Project Coordinator	115.00
Administrative Assistant III	102.00
Administrative Assistant II	91.00
Administrative Assistant I	72.00
Other Direct Expenses	
Incidental Charges	Cost + 15%
Postage	Cost
Subcontracted Services	Cost + 15%
Special Consultant	365.00
Survey/Inspection Per Diem	Prevailing Wage Rate
In-House Delivery Up to 1/2 hour	32.00
In-House Delivery 1/2 Hour up to 1 Hour	64.00
In-House Delivery Over 1 Hour up to 2 Hours	118.00
In-House Delivery Over 2 Hours	170.00
Survey/Inspection Vehicle	0.81/Mile
Mileage	0.72/Mile

Note: All rates are subject to change based on annual inflation and cost of living adjustments. Prevailing wages are dictated by the California Department of Industrial Relations (DIR). As such, the indicated rate will remain in effect until revised rates are published by the DIR. The rate shown shall be subject to renegotiation to remain in compliance with State requirements if prevailing wages are increased by the DIR.

** **A FINANCE CHARGE** of 1 ½ % per month (18% per year) will be added to any unpaid amount commencing thirty (30) days from invoice date. A mechanic's lien may be filed for any invoice remaining unpaid after thirty (30) days from invoice date.*

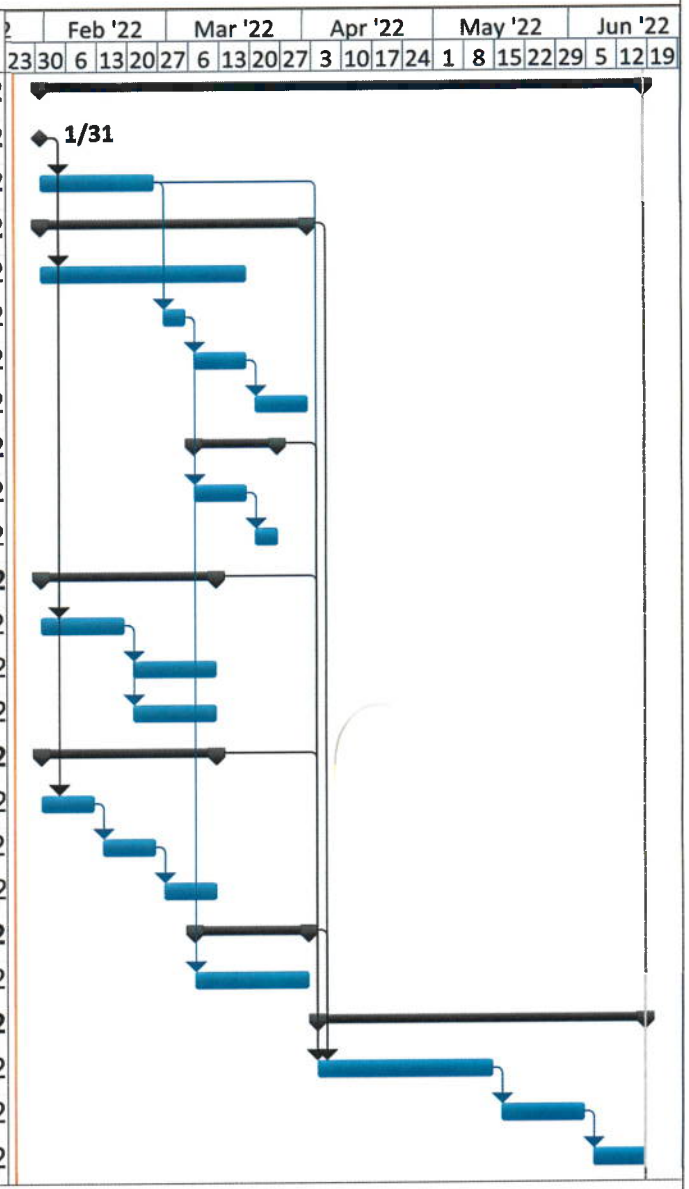
SCH 2021 (07/01/2021)

EXHIBIT C

Activity Schedule

SECTION 5 - PROJECT SCHEDULE
BACKBONE WATER SYSTEM FEASIBILITY STUDY

ID	Task Name	Duration	Start	Finish
1	**SGPWA Backbone Water System Feasibility**	**20 wks**	**1/31/22**	**6/17/22**
2	**Project Authorization**	**0 wks**	**1/31/22**	**1/31/22**
3	**Coordination and Meetings**	**4 wks**	**1/31/22**	**2/25/22**
4	**Pipeline Reach Alignment Study**	**9 wks**	**1/31/22**	**4/1/22**
5	Utility Research and Data Collection	7 wks	1/31/22	3/18/22
6	Alignment Review and Field Visit	1 wk	2/28/22	3/4/22
7	Field Survey and Mapping	2 wks	3/7/22	3/18/22
8	Preliminary Alignment and Cost Estimate	2 wks	3/21/22	4/1/22
9	**Conveyance System Hydraulics**	**3 wks**	**3/7/22**	**3/25/22**
10	Hydraulic and Capacity Evaluation	2 wks	3/7/22	3/18/22
11	Tank Site Evaluation	1 wk	3/21/22	3/25/22
12	**Hydrogeologic Evaluation**	**6 wks**	**1/31/22**	**3/11/22**
13	Recharge Basing Site Evaluation	3 wks	1/31/22	2/18/22
14	Groundwater Modeling	3 wks	2/21/22	3/11/22
15	Area Watermaster Groundwater Modeling	3 wks	2/21/22	3/11/22
16	**Repurposing Gas Mains Evaluation**	**6 wks**	**1/31/22**	**3/11/22**
17	12-inch Gas Main Evaulation	2 wks	1/31/22	2/11/22
18	Identify Potentical Facilities CalGEM	2 wks	2/14/22	2/25/22
19	Reconnaissance Level Summary	2 wks	2/28/22	3/11/22
20	**Environmental Constraints Overview**	**4 wks**	**3/7/22**	**4/1/22**
21	Constraints Analysis	4 wks	3/7/22	4/1/22
22	**Feasiblity Report**	**11 wks**	**4/4/22**	**6/17/22**
23	Draft Report	6 wks	4/4/22	5/13/22
24	Agency Review	3 wks	5/16/22	6/3/22
25	Final Draft	2 wks	6/6/22	6/17/22



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ALBERT A. WEBB ASSOCIATES

Corporate Headquarters
3788 McCray Street
Riverside, CA 92506
951.686.1070

Murrieta Office
41870 Kalmia Street #160
Murrieta, CA 92562
T: 951.686.1070

December 22, 2022

Lance Eckhart, PG, CHG
General Manager/Chief Hydrogeologist
SAN GORGONIO PASS WATER AGENCY
1210 Beaumont Avenue
Beaumont, CA 92223

RE: San Gorgonio Pass Water Agency (SGPWA)
Backbone Water System Feasibility Study
Authorization Request for Additional Efforts R2

Dear Mr. Eckhart:

WEBB is under contract with SGPWA for the Backbone Water Systems Feasibility Study, however, upon initial development of the Backbone Water System Feasibility Study, the project requirements have evolved and are now beyond the original anticipated scope and assumptions. As a result of the changes in the Scope of Work, an additional budget authorization is requested to address the following:

- Interstate 10 Bypass
- Additional Analysis of an existing Utility Easement
- Analysis for a Bypass off the East Branch Extension at Danny Thomas Ranch (Figure 1)

Item 1 – Interstate 10 Bypass

During the study of ground water recharge basin locations, it was determined that locating recharge basins closer to the Cabazon Water District (CWD) service area would be desirable in order to provide CWD direct access to imported ground water. The Robertson's Ready Mix gravel pit, north of Interstate 10, is several miles west of CWD service area and other agencies could have access to the ground water recharged in that basin prior to CWD. As a result, additional recharge basins, further east, were identified and evaluated. To convey water further east, close to CWD's service area, SGPWA should consider participation in the Interstate 10 Bypass (I-10 Bypass) road. Additional efforts include:

- WEBB in coordination with SGPWA will set up a meeting with the County of Riverside Transportation Department to discuss the I-10 Bypass Project and preferred alignment. The purpose of the meeting is to understand I-10 Bypass Project preferred alignment, the project's tentative schedule, phasing, constraints, environmental and permitting issues, additional right-of-way needs, and utility impacts.
- WEBB will request preliminary drawings for preferred alignment from the County of Riverside Transportation Department.

- WEBB, in coordination with SGPWA coordinate with the County of Riverside, City of Banning, and other area potential partners on the proposed backbone water system.

Item 2 - Additional Analysis of an Existing Utility Easement

Property and right-of-way data for an existing utility easement was reviewed and evaluated for the potential use for a water conveyance pipeline. For a better correlation to SGPWA's Backbone project, the subject existing utility easement was evaluated in four priority reaches starting at Graham St. and Alessandro Blvd. in Moreno Valley, CA and ending at Chaparral Rd. and Sagebrush Ave. in Whitewater, CA. Additional efforts include:

- Reviewed GIS mapping easement alignment and data files.
- Developed priority reaches for analysis.
- Prepare a technical memorandum if requested.

Task 3 – Analysis for a Bypass off the East Branch Extension at Danny Thomas Ranch

SGPWA is in a unique position to partner with the Danny Thomas Ranch Park to provide for a recharge basin within the Park's water feature. A portion of the East Branch Extension (EBX) Pipeline (54-inch diameter) upstream of the Cherry Valley Pump Station runs through the Park's property providing SGPWA a possible location for a pipeline outlet to connect the EBX to the proposed Backbone project, therefore bypassing the Cherry Valley Pump Station. The conceptual alignment shown on Figure 1 of this proposal is the preferred alignment. Additional efforts include:

- Review potential delivery options to the ground water basin[1] within the Danny Thomas Ranch Park.
- Review hydraulic grade line of the EBX at the Danny Thomas Ranch Park and the downstream ground elevation profile to evaluate conveyance feasibility.
- Provided estimated sizing and cost for the proposed turnout and pipeline bypassing the Cherry Valley Pump Station.
- Incorporate this reach and associated turnout as an option within the Backbone Water System Feasibility Study.

[1] Cursory review for conceptual location only. Ground water recharge analysis and modeling is not included in this proposal however may be performed as a separate authorization.

The following breakdown is the proposed cost summary of additional items outlined in this request:

Tasks	**Budget**
Task 1 – Interstate 10 Bypass	$ 9,020
Task 2 – Additional Utility Easement Analysis	$ 4,770
Task 3 – Analysis for a Bypass off the East Branch Extension at Danny Thomas Ranch	$ 8,280
TOTAL	**$22,070**

Therefore, we are requesting authorization for the additional amount of $22,070. If you concur, please sign below and return to our office.

We appreciate this opportunity to be of service to the Agency and look forward to providing these services. If you have any questions or wish to meet to discuss any of the items herein, please contact me at (951) 686-1070

Sincerely,
ALBERT A. WEBB ASSOCIATES

Sam I. Gershon, R.C.E.
Senior Vice President

Accepted by:
SAN GORGONIO PASS WATER AGENCY

_____ _____
Lance Eckhart, PG, CHG Date
General Manager/Chief Hydrogeologist

Enclosures:
Figure 1 – Analysis for a Bypass off the East Branch Extension at Danny Thomas Ranch
Attachment A – Manhour Estimate
Attachment B – WEBB 2020 Fee Schedule

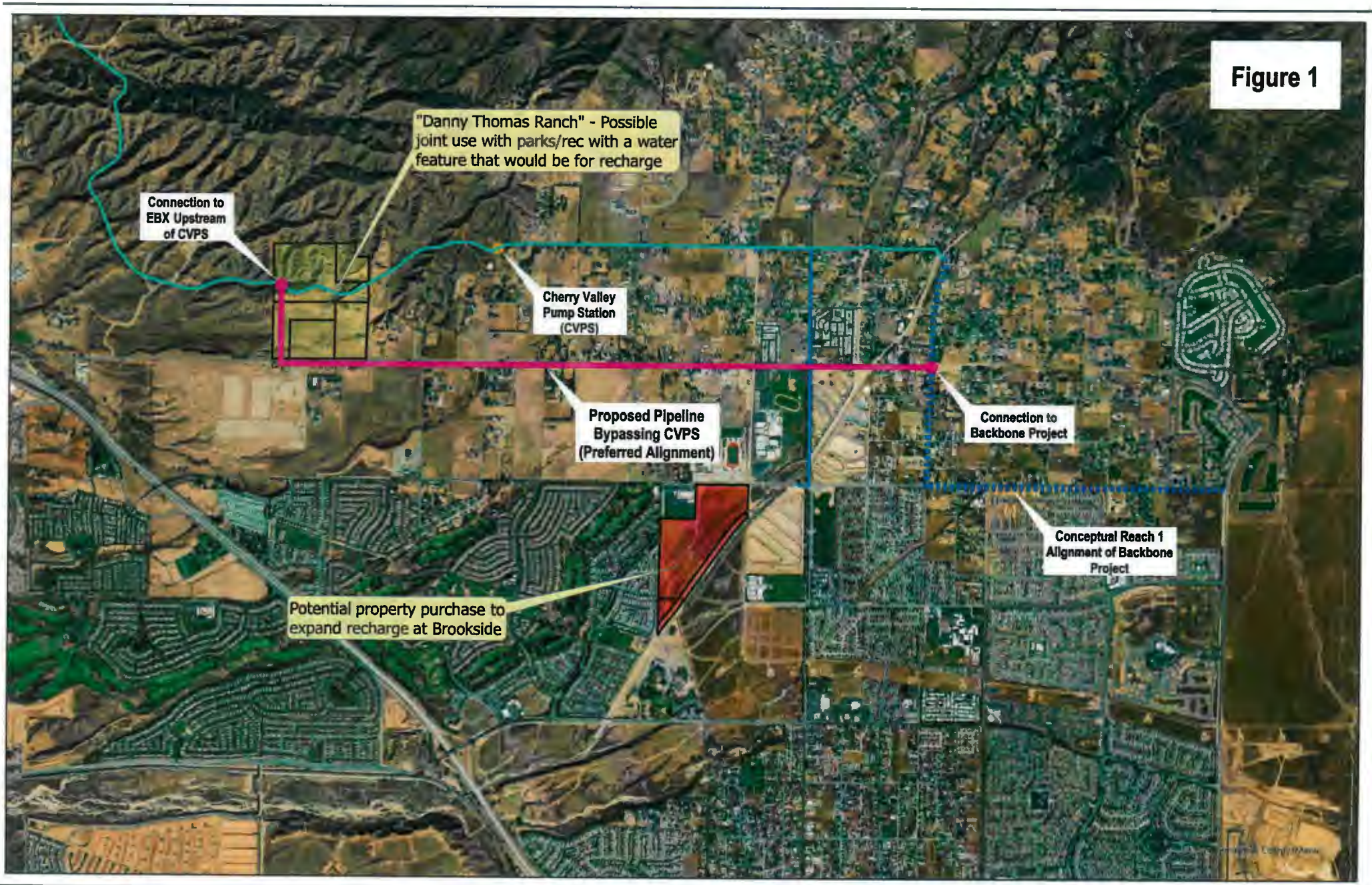
Figure 1
"Danny Thomas Ranch" - Possible joint use with parks/rec with a water feature that would be for recharge
Connection to EBX Upstream of CVPS
Cherry Valley Pump Station (CVPS)
Proposed Pipeline Bypassing CVPS (Preferred Alignment)
Connection to Backbone Project
Conceptual Reach 1 Alignment of Backbone Project
Potential property purchase to expand recharge at Brookside

Attachment A - Manhour Fee Estimate

ALBERT A. WEBB ASSOCIATES

Backbone Water System Feasibility Study
San Gorgonio Pass Water Agency

Item	Description	Sam Gershon	Dilesh Sheth	Sinnaro Yos	Eugene Abrego	Chandler Drachslin	Deborah Saulina	Michael Johnson	Total Hours	Total/task[1]
Task 1 - Interstate 10 Bypass		2	16	4	8	2	4		36	$ 9,020
Task 2 - Additional Utility Easement Analysis		4		8				6	18	$ 4,770
Task 3 - Analysis for Bypass off the East Branch Extension at Danny Thomas Ranch		8		16		12			36	$ 8,280
Total		14	16	28	8	14	4	6	90	$ 22,070

1. Rounded to the nearest $1.

Attachment B – WEBB 2020 Fee Schedule

ALBERT A. WEBB ASSOCIATES

Exhibit "C"

Fee Schedule

CLASSIFICATION

Engineers/Project Managers/Planners/Scientists/ Assessment/Special Tax Consultants/Landscape Architects/Designers	Rates $/Hour
Principal II	290.00
Principal I	275.00
Senior III	245.00
Senior II	235.00
Senior I	225.00
Associate III	210.00
Associate II	195.00
Associate I	185.00
Assistant V	170.00
Assistant IV	155.00
Assistant III	140.00
Assistant II	130.00
Assistant I	95.00

Survey Services

2-Person Survey Party	291.00
1-Person Survey Party	201.00

Inspection Services

Construction Manager	245.00
Inspector (Non-Prevailing Wage)	136.00
Inspector Overtime (Non-Prevailing Wage)	185.00
Inspector (Prevailing Wage)	147.00
Inspector Overtime (Prevailing Wage)	195.00

Administrative Services

Project Coordinator	110.00
Administrative Assistant III	99.00
Administrative Assistant II	88.00
Administrative Assistant I	70.00

Other Direct Expenses

Incidental Charges	Cost + 15%
Postage	Cost
Subcontracted Services	Cost + 15%
Special Consultant	355.00
Survey/Inspection Per Diem	Prevailing Wage Rate
In-House Delivery Up to 1/2 hour	31.00
In-House Delivery 1/2 Hour up to 1 Hour	62.00
In-House Delivery Over 1 Hour up to 2 Hours	114.00
In-House Delivery Over 2 Hours	165.00
Survey/Inspection Vehicle	0.81/Mile
Mileage	0.72/Mile

Note: All rates are subject to change based on annual inflation and cost of living adjustments. Prevailing wages are dictated by the California Department of Industrial Relations (DIR). As such, the indicated rate will remain in effect until revised rates are published by the DIR. The rate shown shall be subject to renegotiation to remain in compliance with State requirements if prevailing wages are increased by the DIR.

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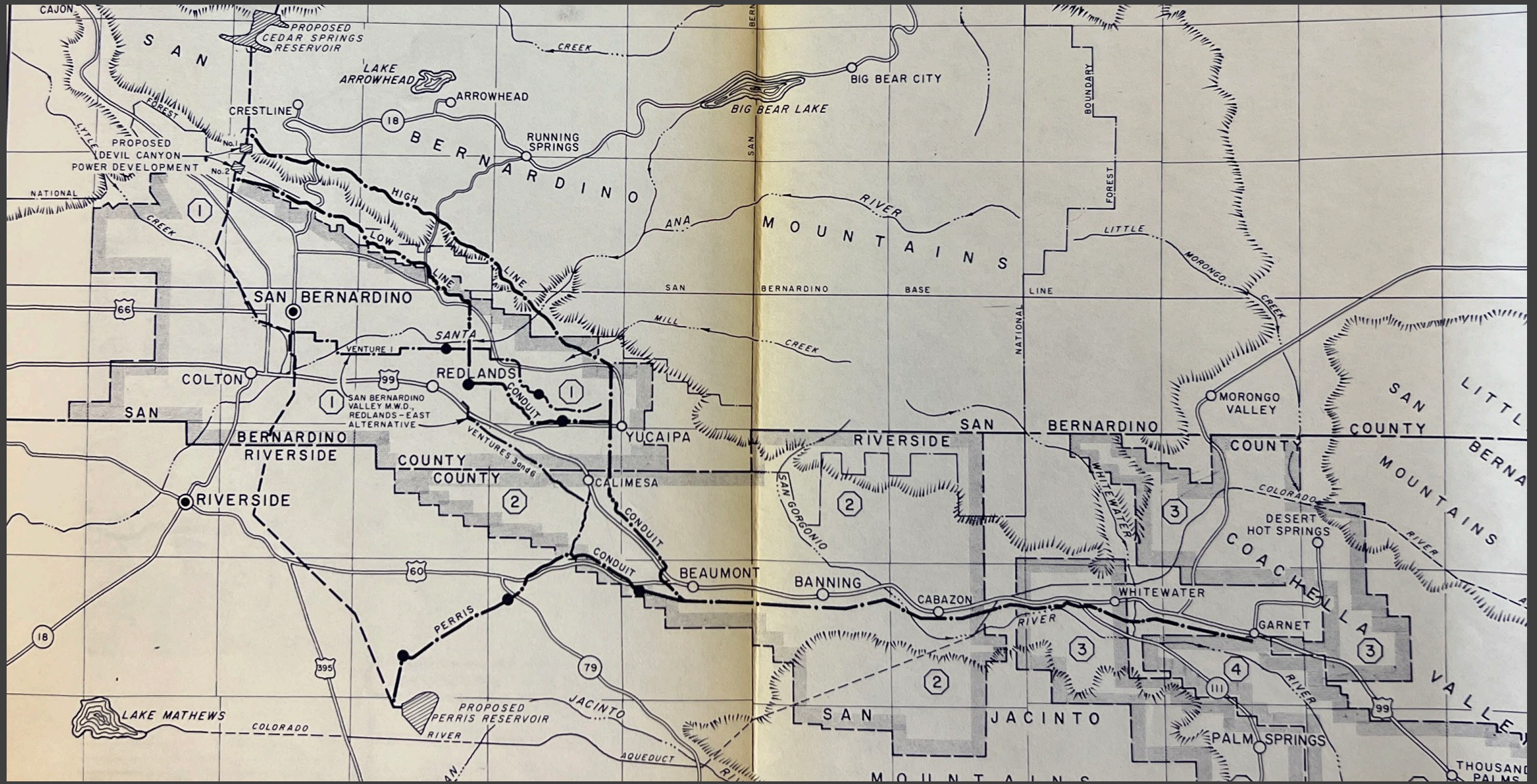
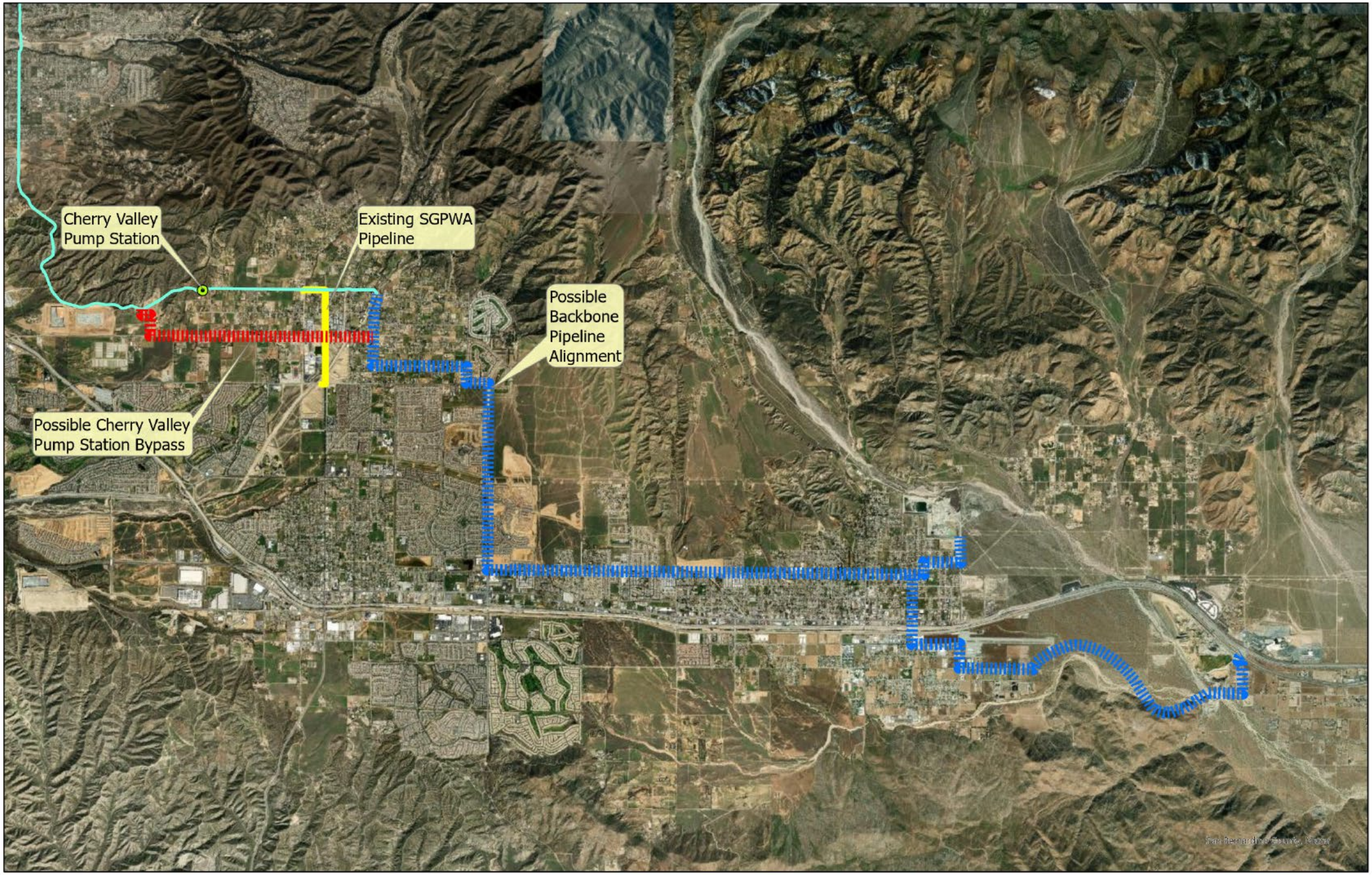

CAJON
SAN
PROPOSED CEDAR SPRINGS RESERVOIR
LAKE ARROWHEAD
ARROWHEAD
CRESTLINE
FOREST
LITTLE
PROPOSED DEVIL CANYON POWER DEVELOPMENT
No. 1
No. 2
NATIONAL
CREEK
HIGH LINE
LOW LINE
SAN BERNARDINO
BERNARDINO
RUNNING SPRINGS
BIG BEAR CITY
BIG BEAR LAKE
BOUNDARY
SAN BERNARDINO BASE LINE
ANA
RIVER
MOUNTAINS
MILL CREEK
SANTA
VENTURE I
COLTON
REDLANDS
SAN BERNARDINO VALLEY M.W.D., REDLANDS-EAST ALTERNATIVE
CONDUIT
YUCAIPA
SAN BERNARDINO
RIVERSIDE
COUNTY
VENTURES 3 and 6
CALIMESA
SAN GORGONIO
WHITEWATER
MORONGO VALLEY
MORONGO CREEK
DESERT HOT SPRINGS
COLORADO
RIVER
COACHELLA VALLEY
BEAUMONT
BANNING
CABAZON
WHITEWATER
GARNET
PERRIS
LAKE MATHEWS
PROPOSED PERRIS RESERVOIR
JACINTO
AQUEDUCT
SAN JACINTO
PALM SPRINGS
THOUSAND PALMS
66
99
60
395
79
18
111


Cherry Valley
Pump Station
Existing SGPWA
Pipeline
Possible
Backbone
Pipeline
Alignment
Possible Cherry Valley
Pump Station Bypass