



CITY COUNCIL STAFF REPORT

TO: Honorable Mayor and City Council **DATE:** January 21, 2020
FROM: Matthew Bronson, City Manager
PREPARED BY: Greg Ray, Public Works Director/City Engineer
SUBJECT: Central Coast Blue Memorandum of Agreement Framework

RECOMMENDATION

Review the draft Memorandum of Agreement cost-sharing framework for Central Coast Blue and provide direction to staff.

BACKGROUND

On January 6, 2020, the Council received an update on the City's water supply along with proposed changes to the water conservation program. As conveyed to the Council, the City relies on two sources of allotted water supply: groundwater (1,407 acre feet per year or afy) and Lopez Lake surface water (800 afy) for a total of 2,207 afy. During years of normal rainfall, the City should have sufficient water supplies to adequately serve projected development and population increases well into the future. However, during the most recent extended drought from 2013 through 2015, municipal groundwater users in the Northern Cities Management Area (NCMA) needed to reduce groundwater pumping by approximately 80 percent in order to balance inflow and outflow from the groundwater basin and protect against the threat of seawater intrusion into the groundwater aquifer. Extended droughts are a growing long-term risk given climate change and the City's water supplies are projected to be consistently below projected demands with multiple dry year conditions. Under these conditions, the City would not have sufficient supplies to meet existing needs along with future needs tied to projected population growth.

The City has considered a number of options to improve water supply reliability including conservation, raising the Lopez Lake spillway, supplemental state water, desalinated water, and recycled wastewater. Of these options recycled wastewater has been determined to be the most feasible and has the ability to produce the most reliable source of supply. The City of Pismo Beach, the South San Luis Obispo County Sanitation District (SSLOCSD), and the cities of Arroyo Grande and Grover Beach have been participating in the preliminary phases of development of a project that would include a wastewater treatment facility and recycled water distribution system known as the Central Coast Blue project. The Council received an update on Central Coast Blue at the August 19, 2019 Council meeting. The project could potentially provide up to 3,500 afy of additional water supply for groundwater recharge or agriculture irrigation and help ensure the resiliency and security of the groundwater basin. The agencies are currently completing environmental review and preliminary engineering for the project and have developed a draft cost-sharing Memorandum of Agreement for consideration by each of the participating agencies to provide a policy commitment to continue this project and allocate costs appropriately.

The City of Pismo Beach has served as the lead agency for the Central Coast Blue project since its inception in 2016. The proposed project will purify wastewater effluent and inject it into the groundwater basin at select sites in Grover Beach and Arroyo Grande. Phase I of the project will consist of wastewater effluent from the Pismo Beach wastewater treatment plant (WWTP) and will provide supplemental groundwater to participating agencies. If determined necessary at some future time, an additional phase of the project would allow Central Coast Blue to purify the effluent from the SSLOCSD's WWTP and inject it into the groundwater basin for a greater acre-

foot yield. The partner agencies, which consist of the cities of Grover Beach, Arroyo Grande, and Pismo Beach along with SSLOCSD formed a cost and benefit sharing subcommittee at the staff level to draft a framework which outlines how costs and benefits for the project will be distributed. The result of these efforts is the draft Memorandum of Agreement (MOA) framework included as Attachment 1 to this report. The Oceano Community Services District participated in initial development of the project but has recently indicated that it will not benefit from the project as it does not need the additional water produced and thus does not intend to continue participating.

The draft MOA proposes that participating agencies divide project costs and benefits based on their current share of groundwater allocations and provides a mechanism for reimbursing the City of Pismo Beach for excess funds that Pismo Beach advanced to begin the project. Under this methodology, the City's proposed cost allocation for the project would be 41% compared with an allocation of 39% for Arroyo Grande and 20% for Pismo Beach. The MOA also provides a mechanism for non-participating agencies to "buy" into the project at a later date in order to receive benefits from the project and identifies how participating agencies will share in grant funds and contributions from SSLOCSD.

In addition to outlining costs and benefits, the MOA indicates how non-participating agencies will manage their groundwater resources without impacting the benefits from Central Coast Blue. In particular, the MOA indicates that all NCMA agencies, whether participating in the project or not, limit their groundwater pumping to an amount that maintains a barrier against seawater intrusion without groundwater injection from the project. The MOA defines the amount of NCMA municipal pumping that could be achieved year-over-year without violating the seawater intrusion criteria as the "Natural Yield" and water produced solely by the project as "Project Water." The MOA provides a reimbursement method for any agency that pumps groundwater in excess of their allocation of Natural Yield plus Project Water.

Staff recommends that the Council review and provide feedback on the draft MOA framework. The Pismo Beach City Council reviewed this draft on December 3, 2019 and the Arroyo Grande City Council will review it on January 28, 2020. It is estimated that a final document would be brought back to each respective Council for approval within the next 2-3 months in order to maintain project eligibility for upcoming State and Federal grant opportunities for construction which require application submittal in summer 2020. The City of Pismo Beach was awarded a State Proposition 1 grant for the project in the amount of \$2 million and a Federal Title XVI grant in the amount of \$800,000 both for planning and design work. The City of Pismo Beach and participating agencies will continue to pursue additional grant funds that could fund a significant portion of construction work.

FISCAL IMPACT

There is no immediate fiscal impact from providing direction on the draft MOA framework. However, participation in the Central Coast Blue project will require a substantial financial commitment from the City along with other partner agencies. Each agency's cost is based on the proportionate share of benefits tied to the established groundwater allocation and if the project is successful in receiving additional grant funding, each city's cost share would be proportionately reduced. Most of the costs beyond the pre-construction phase are expected to be financed which would spread out the cost burden over a multi-year period. To date, the City of Pismo Beach has funded a disproportionate share of the costs during the pre-construction phase and the cost sharing framework provides for reimbursement from the other participating agencies until the costs are balanced based on participation and benefit levels. Water Systems Consulting (WSC),

the project design consultant, has provided cost estimates for the three main categories of costs related to the project (pre-construction, construction and ongoing operations and maintenance) which are described further on the following page.

Below in Table 1 is a summary of these costs and the City's projected share prior to the project receiving additional grant funding:

Table 1: Total Project Costs and Grover Beach's Estimated Share

Cost Type	Cost	Grover Beach Share
Pre-Construction (one-time)	\$6,183,445	\$2,535,212
Construction (one-time)	\$35,432,845	\$14,527,466
Operations and Maintenance (ongoing)	\$2,260,000	\$926,600

The preconstruction costs include preliminary design work, program management, regulatory agency permitting, grant applications, environmental compliance (CEQA) and final design work. To date, the City of Pismo Beach has advanced \$2,168,725 toward these efforts and has received \$680,955 from other agencies in reimbursement given the regional nature of this project (see Table 2 below). An additional \$4,014,720 is projected to be spent on pre-construction costs from FY 2019-20 through FY 2021-22 for a total estimated pre-construction cost of \$6,183,445.

Table 2. Agency Contributions

Agency	Amount
South County Sanitation District SEP Funds	\$221,963
City of Arroyo Grande	\$144,811
SSLOCS D Cost Share in EIR	\$110,565
County Zone 3 Grant	\$59,214
SSLOCS D Planning Study	\$34,311
City of Grover Beach	\$110,000
Total	\$680,955

In order to reimburse the City of Pismo Beach for funds advanced, the draft MOA provides that the remaining pre-construction costs be shared evenly by the other participating cities (Grover Beach and Arroyo Grande) until Pismo Beach is repaid up to each agency's contribution amount. Table 3 below shows the calculation of remaining reimbursement amounts from each city toward the remaining estimated pre-construction costs. The City's share of reimbursing these costs is \$779,177 which would be paid back over the next two years.

Table 3. Agency Pre-Construction Cost Allocation and Reimbursements

Agency	Allocation	Allocated Cost	Less Previous Contributions	Remaining Contribution
Grover Beach	41%	\$889,177	\$110,000	\$779,177
Arroyo Grande	39%	\$845,803	\$144,811	\$700,992
Pismo Beach	20%	\$433,745	\$1,913,914	(\$1,480,169)
Total	100%	\$2,168,725	\$2,168,725	0

The estimated construction phase costs to complete Phase 1 include \$31,356,500 for construction, \$3,135,650 for construction management and \$940,695 for construction phase engineering for a total of \$35,432,845 with \$14,527,466 (41%) as the Grover Beach share. Assuming the partner agencies would finance construction costs, the estimated total annual debt service is \$1.6 million per year based on a 30-year loan with \$656,000 as the Grover Beach share. Ongoing operation and maintenance costs are estimated to be \$2,260,000 per year with \$926,600 as the Grover Beach share. Construction is expected to begin in 2022 with annual debt service payments not beginning until construction was completed in 2024 with ongoing operation and maintenance costs also beginning at that point.

The City's estimated costs for the project are \$237,800 for the current year FY 2019-20 and \$746,200 for next year FY 2020-21 with future costs to be finalized with the final project design and potential receipt of additional grant funding. There is sufficient funding allocated in the Water Fund for this year's costs and carryover funds from this year along with projected Water Fund revenue will provide sufficient funding for next fiscal year. The City is conducting a multi-year utility rate study this year to assess water and wastewater system needs and related utility rates which will incorporate the City's future costs for Central Coast Blue pending Council adoption of the cost-sharing MOA. Staff will soon begin an RFP process for this rate study and bring a contract to the Council for approval by the end of the fiscal year with the completed rate study presented to Council in early 2021.

ALTERNATIVES

The Council has the following alternatives to consider:

1. Review the draft Memorandum of Agreement cost-sharing framework for Central Coast Blue and provide direction to staff; or
2. Provide alternate direction to staff.

PUBLIC NOTIFICATION

The agenda was posted in accordance with the Brown Act.

ATTACHMENTS

1. Draft Central Coast Blue Memorandum of Agreement

Draft NCMA Agency and SSLOCS D Terms

[Publish Date]

[Keywords]

SUBJECT: CENTRAL COAST BLUE – GROUNDWATER MANAGEMENT & COST SHARING TERMS

1. Purpose
 - a. The purpose of this MOA is to identify and agree upon the groundwater pumping and cost sharing frameworks for Central Coast Blue, Phase 1 (“PROJECT”).
2. Background
 - a. The NCMA agencies have worked collaboratively to manage groundwater pumping in their portion of the SMGB since development of the 1983 Gentlemen’s Agreement, which allocated the estimated available groundwater amongst the municipal and agricultural pumpers in the NCMA.
 - b. The Gentlemen’s Agreement was further formalized in the 2002 Management Agreement and incorporated into the SMGB Adjudication in the 2005 Stipulation. The NCMA Municipal Pumping Allocations from the Management Agreement are outlined in Table 1.

Table 1. NCMA Municipal Pumping Allocations

NCMA Agencies	Groundwater Allocation (AFY)	Ag Conversion Credits (AFY)	Current Groundwater Allocation (AFY)	Fraction of Groundwater Allocation
Arroyo Grande	1,202	121	1,323	0.31
Grover Beach	1,198	209	1,407	0.32
OCSD	900		900	0.21
Pismo Beach	700		700	0.16
Total	4,000	330	4,330	1.00

- c. Seawater intrusion was identified as a threat to SMGB in the 1960s and was one of the driving factors for the construction of Lopez Dam and connection to the State Water Project.
- d. Evidence of seawater intrusion was detected in 2009 in NCMA Sentry Well 32S/13E-30N02 and the Oceano Blue Well (32S/13E-31H11).
- e. In response to the detection of seawater intrusion, the NCMA agencies dramatically reduced their groundwater pumping and began investigating supplemental supply opportunities to improve water supply reliability and groundwater protection.
- f. Through numerous supplemental supply alternative studies, outlined below, the PROJECT was identified as the preferred alternative for protecting NCMA groundwater and improving water supply reliability for the region.
 - i. SSSLOCS D Desalination Feasibility Study – prepared by Arroyo Grande, Grover Beach and OCSD
 - ii. Lopez Spillway Raise Project Report – NCMA Technical Group
 - iii. Regional Recycled Water Strategic Plan – San Luis Obispo County
 - iv. Recycled Water Facilities Planning Study – Pismo Beach

- v. Recycled Water Facilities Planning Study - South San Luis Obispo County Sanitation District
3. Central Coast Blue Overview
- a. Regional, multi-phase groundwater protection project that will allow capture of water currently discharged to the ocean and put it to beneficial use as a seawater intrusion barrier.
 - i. Phase 1 – advanced treatment and injection of Pismo Beach flows
 - a. The “PROJECT” refers to Phase 1
 - ii. Phase 2 – add advanced treatment and injection of SSLOCSD flows
 - b. Key Project Components
 - i. Advanced treatment facility (ATF)
 - ii. Recycled water distribution infrastructure
 - iii. Injection wells
 - iv. Monitoring wells
 - v. Potential new extraction wells
 - c. Values and Benefits
 - i. Provides protection from seawater intrusion
 - ii. Improves groundwater basin quality
 - iii. Reduces ocean discharge of treated wastewater effluent
 - iv. Provides a new, local, sustainable water supply
 - v. Offsets demand for State and Lopez surface water supplies
 - d. Participating Agencies
 - i. City of Arroyo Grande (Arroyo Grande)
 - ii. City of Grover Beach (Grover Beach)
 - iii. Oceano Community Services District (OCSD)
 - iv. City of Pismo Beach (Pismo Beach)
 - v. South San Luis County Sanitation District (SSLOCSD)
 - e. Contributing Agencies
 - i. Three Contributing Water Purveyors have financially committed to implementing PROJECT: Arroyo Grande, Grover Beach, and Pismo Beach.
 - ii. OCSD has chosen not to contribute funds to the PROJECT.
 - iii. SSLOCSD has committed to funding Construction Costs associated with expanding Central Coast Blue from Phase 1 to Phase 2.
4. Groundwater Management without PROJECT
- a. To protect the groundwater basin from seawater intrusion, the NCMA agencies agree to manage municipal pumping to prevent seawater intrusion from occurring in the NCMA.
 - b. Using the NCMA Groundwater Model (GW Model), specific criteria, outlined below, were developed to assist the NCMA agencies in identifying conditions that could induce seawater intrusion.
 - i. Seawater Intrusion Criteria
 - a. Deep Well Index – Average water level in three NCMA Sentry/Monitoring wells (i.e. 32S/12E-24B03, 32S/13E-30F03 and 32S13E30N02), screened in the lower Paso Robles and upper Careaga formations, to represent the primary municipal production zones of the municipal pumpers in the NCMA. Extended periods where the Deep Well index falls below 7.5 ft have been identified as creating the potential for seawater intrusion. Maintaining the Deep Well Index at or

above the historic Deep Well Index (1977 - 2016) has been identified as one of criteria for preventing seawater intrusion.

- b. Onshore Flow – Analysis of historic observations of seawater intrusion in the NCMA and comparison with GW Model estimates of groundwater flow direction have identified a correlation between the detection of seawater intrusion in 2009 (in 32S13E30N02 and Oceano Blue Monitoring Wells) and the GW Model estimates of onshore flow into the lower Paso Robles and upper Careaga formations. GW Model predictions of onshore flow in the lower Paso Robles and upper Careaga formations in the portion of the NCMA north of Arroyo Grande Creek have been identified as an additional criterion indicating the potential for seawater intrusion.
 - c. The NCMA agencies analyzed multiple predictive municipal pumping scenarios using the GW Model to estimate the amount of NCMA municipal pumping that could be achieved year-over-year without violating the seawater intrusion criteria identified above.
 - d. The modeling scenarios identified that only a portion of the NCMA Municipal Allocations could be pumped without exceeding the criteria for inducing seawater intrusion. The amount of NCMA municipal pumping that could be achieved year-over-year without violating the seawater intrusion criteria shall be termed the “Natural Yield”.
 - e. The current estimate of the Natural Yield for the NCMA is defined in the “NCMA Natural Yield Management Agreement”.
 - f. The Natural Yield shall be divided amongst the NCMA agencies based on their groundwater allocation percentages, see Table 1.
 - g. Prior to the implementation of PROJECT, the NCMA agencies agree to limit their groundwater pumping to the Natural Yield.
 - h. As conditions change or as the NCMA agencies understanding of the groundwater basin changes, the NCMA agencies will re-evaluate the NCMA seawater intrusion criteria, the amount of municipal pumping allowable without violating the seawater intrusion criteria, and update the Natural Yield according to the current understanding without the PROJECT.
5. Groundwater Management with PROJECT
- a. The GW Model shall be utilized to estimate the additional amount of groundwater that the NCMA Municipal Agencies can pump without violating the seawater intrusion criteria with implementation of PROJECT. This additional groundwater shall be termed the “PROJECT Yield”.
 - b. The PROJECT Yield shall be allocated based on Water Purveyor Contribution Percentages, which is based on their percentage cost share to PROJECT, see Cost Share Terms section below.
 - c. The Contributing Water Purveyors will be able to pump their portion of the PROJECT Yield, in addition to their portion of the Natural Yield.
6. Excessive Groundwater Pumping
- a. If a NCMA Agency pumps more than their agreed upon portion of the Natural Yield in any given year, then they will reimburse the other NCMA Agencies for the cost of replacement water. The Replacement Water Cost shall be equivalent to the unit cost for PROJECT water. The Replacement Water Cost shall be distributed to the NCMA Agencies proportionally based on the NCMA Municipal Pumping Allocation percentages.

- b. If a Contributing Water Purveyor pumps more than their agreed upon portion of the Natural Yield and PROJECT Yield in any given year, then they will reimburse the other Contributing Water Purveyors for the cost of replacement water. The Replacement Water Cost shall be equivalent to the unit cost for PROJECT water. The Replacement Water Cost shall be distributed to the other Contributing Water Purveyors proportionally based on the other Water Purveyor Contribution Percentages.
- c. If a Contributing Water Agency reduces their pumping in response to another agency pumping more than their Natural Yield or PROJECT Yield, then that agency that reduced pumping shall receive the Replacement Water Cost directly proportional to the volume of groundwater that they pumped below their Natural Yield or PROJECT Yield allocation.

7. Cost Sharing Terms

a. PROJECT Yield Cost Sharing

- i. The PROJECT Yield shall be allocated to the Contributing Water Purveyors based on their percentage of the cost share for PROJECT. The Water Purveyor Contribution Percentage is to be based on the Groundwater Allocation of the Contributing Water Purveyors, see Table 2 below.

Table 2. PROJECT Water Purveyor Contribution Percentages

PROJECT Contributing Water Purveyors	Current Groundwater Allocation (AFY)	Fraction of Groundwater Allocation	Water Purveyor Contribution Percentages
Arroyo Grande	1,323	0.39	0.39
Grover Beach	1,407	0.41	0.41
Pismo Beach	700	0.20	0.20
Total	3,430	1.00	1.00

b. Pre-Construction Costs

- i. PROJECT Pre-Construction Costs are those costs paid by each Contributing Water Purveyor starting with the Pismo Beach Recycled Water Facilities Planning Study through award of the first construction contract for the full-scale PROJECT implementation.
- ii. To-date, Pismo Beach has funded the majority of pre-construction costs. To reconcile pre-construction cost allocation in line with Water Purveyor Contribution Percentages, Arroyo Grande and Grover Beach shall split (Arroyo Grande 50%, Grover Beach 50%) the remaining pre-construction costs until the cumulative contributions approximately match the Water Purveyor Contribution Percentages.
- iii. Once pre-construction cost contributions approximate Water Purveyor Contribution Percentages, the remaining pre-construction costs will be split at the Water Purveyor Contribution Percentages.
- iv. Reimbursement Structure
 - 1. The Pismo Beach will maintain primary contracts for PROJECT pre-construction activities. Pismo Beach will enter into cost share agreements with Arroyo Grande and Grover Beach to cover their portions of the pre-construction costs.

- ii. SSLOCS D Contributions to pre-construction costs shall be credited toward its Member Agencies' (i.e. Arroyo Grande, Grover Beach and OCSD) contributions proportionally to their revenue contribution to SSLOCS D.
 - c. Construction Cost Sharing
 - i. PROJECT construction costs are those costs that start with the first construction contract for the PROJECT through determination of construction Substantial Completion.
 - ii. PROJECT construction cost sharing will be split between the SSLOCS D and the Contributing Water Purveyors.
 - a. SSLOCS D Contributions
 - a. To provide for the opportunity to divert water from its ocean discharge in the future, SSLOCS D will contribute to the incremental capital costs to expand facilities necessary for PROJECT to accommodate Central Coast Blue Phase 2 in the future.
 - b. The framework for calculating the Phase 2 incremental costs will be developed through collaboration between SSLOCS D and the Contributing Water Purveyors.
 - c. In the event that new regulatory or legal requirements compel SSLOCS D to claim benefits in the PROJECT, SSLOCS D can "buy-in" to the PROJECT at an equivalent cost to the Contributing Water Purveyors to participate in the project. Equivalent costs shall account for the time-value of money and the depreciated value of the infrastructure at the time of purchase.
 - b. Contributing Water Purveyor Contributions
 - a. The Contributing Water Purveyors will pay for the remaining Construction Costs based on the Water Purveyor Contribution Percentages.
 - d. Operations Cost Sharing
 - i. PROJECT Operations Costs are those costs that start [after?] determination of Substantial Completion of PROJECT completion.
 - ii. PROJECT Operations Cost sharing will be split between the Contributing Water Purveyors based on Water Purveyor Contribution Percentages.
 - e. Buy-in Costs
 - i. Buy-in Agencies that want to "buy-in" to the project after project construction, shall be responsible for paying an equivalent cost to the Contributing Water Purveyors to participate in the project. Equivalent costs shall account for the time-value of money and the depreciated value of the infrastructure at the time of purchase.
 - ii. The Buy-in costs shall be negotiated between the Contributing Water Agencies and the Buy-in Agency.
 - f. Grant Funding
 - i. Grant funds obtained to offset PROJECT pre-construction or construction costs will reduce the total PROJECT pre-construction or construction costs to be shared by each of the Contributing Water Purveyors.
8. Cost Sharing Modifications

- a. Changes to cost sharing of pre-construction, construction, and operations costs may be re-considered if OCSD or SSLOCSD chooses to contribute more than determined herein. PROJECT Yield and/or benefits would be re-visited as well.

DRAFT