# Cover Letter for Transmitting CBP Feasibility Study and Economic Analysis Technical Memo to IEUA Board Members, Member Agencies, and other Stakeholders

IEUA provided a Chino Basin Program Feasibility Study to the California Water Commission (CWC) on October 20, 2021. This will allow the CWC to make a determination in the coming weeks that the Chino Basin Program is feasible and maintain IEUA’s eligibility for Proposition 1 Water Supply Investment Program in compliance with Water Code Section 79757 (a)(1). This feasibility study includes an economic analysis that includes estimates of project construction costs, total life-cycle project costs that include financing, replacement costs, operations and maintenance, and other annual costs, and total life-cycle project benefits that include water quality, water supply reliability, emergency water supply, and ecosystem benefits.

The feasibility study considers a Baseline Compliance Plan alternative, a Regional Water Quality and Reliability Plan alternative, and the Chino Basin Program alternative, defined as follows:

* The Baseline Compliance Plan alternative includes construction of a 9 thousand acre-feet per year (TAFY) capacity Advanced Water Purification Facility (AWPF) by 2030, the minimum required action to maintain water quality compliance in the Chino Basin through 2040. To maintain comparability among alternatives, additional actions projected to be necessary to maintain compliance beyond 2040 are also included in this alternative. These actions include expanding AWPF capacity to 15 TAFY and importing 6 TAFY of imported recycled water supplies to provide adequate AWPF influent by 2040. No new water supplies are developed through this alternative.
* The Regional Water Quality and Reliability Plan alternative includes the AWPF facilities considered in the Baseline Compliance alternative, all implemented by 2030. In addition, this alternative includes groundwater injection facilities, groundwater extraction facilities, and conveyance facilities that would provide 15 TAFY of new water supplies to the region.
* The Chino Basin Program includes all of the facilities included the Regional Water Quality and Reliability Plan, with capacity of groundwater extraction facilities expanded to 40 TAFY and an interconnection to Metropolitan’s distribution system included. The Chino Basin Program includes both eligibility for $212 million of Proposition 1 funds and a commitment to exchange existing imported supplies from Metropolitan with new AWPF supplies for 25 years, to produce ecosystem benefits in the Bay-Delta watershed.

It is important to note that the feasibility study and economic evaluation provided to the CWC has been prepared to comply with that agency’s regulations and direction. To that end, the total life cycle costs and benefits are considered from the perspective of the entire State of California and are not limited or inclusive of all costs and benefits that would accrue to IEUA and its member agencies.

Specifically, the costs and benefits estimated from a statewide perspective in the feasibility study differ from cost and benefits that would accrue to IEUA include:

* A valuation of existing internal recycled water supplies that are currently released to the Santa Ana River and may be used by downstream entities is included in the feasibility study. IEUA would not be financially responsible for these costs.
* The cost offset to IEUA provided by the $212 million of Proposition 1 Water Supply Investment Program funds are not deducted from project capital costs.
* The benefits of in lieu use of CBP water supply in place of deliveries from Metropolitan are limited to the State Water Project energy costs savings that would accrue to Metropolitan, instead of the full Metropolitan Tier 1 Rate that IEUA would realize as a cost savings.

The cumulative effect of these differences in economic perspective are summarized in the table below. In comparison to the statewide perspective, IEUA’s perspective loan costs are lower due to the Proposition 1 investment that offsets construction costs, water supply benefits are higher due to not paying Metropolitan Tier 1 rates for exchanged in lieu water supplies, and recycled water costs are lower due to not incurring financial responsibility for the value of internal recycled water supplies to downstream entities. Additionally, ecosystem benefits that accrue in the Bay-Delta watershed do not directly affect IUEA and those benefits are not included from IEUA’s perspective. All considered, the benefit–cost ratio of the Chino Basin Program from IEUA’s perspective increases relative to the statewide perspective and is comparable to the benefit-cost ratio of the Regional Water Quality and Reliability Plan alternative.

The conclusions of the feasibility study and economic evaluation stand regardless of economic perspective. All alternatives are feasible and provide return for the required investment. The Regional Water Quality and Reliability Plan and Chino Basin Program offer greater return by leveraging investments in baseline water quality compliance to produce new water supplies. If the supplemental water supply provided by the Regional Water Quality and Reliability Plan for the first 25 years of the project life is not required to meet growing demands, then both alternatives offer similar water supply benefits due to their ability to help avoid regional water shortages over that period. During the second 25 years of project life, the CBP offers a lower cost approach to IEUA to securing an equivalent level of water supply benefit as the Regional Water Quality and Reliability Plan, while providing greater flexibility for groundwater management due to the increased groundwater extraction capacity and water system interconnection infrastructure provided by the alternative.

Capital Costs and Life Cycle Present Value Benefits and Costs of Alternatives  
($ million)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Statewide Perspective for Feasibility Study | | | IEUA Perspective | | |
|  | Baseline Compliance Plan | Regional Water Quality and Reliability Plan | Chino Basin Program | Baseline Compliance Plan | Regional Water Quality and Reliability Plan | Chino Basin Program |
| Total Capital Cost  (2019 $ million) | **$355.8** | **$538.9** | **$665.9** | **$355.8** | **$538.9** | **$665.9** |
| PV Cost | **$593.8** | **$972.2** | **$1,171.0** | **$539.8** | **$917.4** | **$944.0** |
| *Capital and Replacement Cost* | *$246.2* | *$441.2* | *$589.2* | *$246.2* | *$441.2* | *$419.8* |
| - Loan Payment | $191.6 | $349.8 | $469.0 | $191.6 | $349.8 | $299.6 |
| - Replacement Cost | $54.6 | $91.4 | $120.2 | $54.6 | $91.4 | $120.2 |
| *PV of Annual Costs* | *$196.4* | *$351.8* | *$393.5* | *$196.4* | *$351.8* | *$393.5* |
| - O&M Cost | $171.1 | $324.1 | $364.4 | $171.1 | $324.1 | $364.4 |
| - NRW Cost | $25.3 | $27.7 | $29.1 | $25.3 | $27.7 | $29.1 |
| *Recycled Water Cost* | *$151.2* | *$179.2* | *$188.3* | *$97.2* | *$124.4* | *$130.7* |
| PV Benefit | **$593.8** | **$1,182.9** | **$1,259.8** | **$539.9** | **$1,128.9** | **$1,165.4** |
| Water Supply Benefits | *-* | *$529.1* | *$380.8* | *-* | *$529.1* | *$460.1* |
| Water Quality Benefits | *$593.8* | *$593.8* | *$593.8* | *$539.9* | *$539.9* | *$539.9* |
| Emergency Supply Benefits | *-* | *$59.9* | *$165.4* | *-* | *$59.9* | *$165.4* |
| Ecosystem Benefits | *-* | *-* | *$119.7* | *-* | *-* | *-* |
| Net Present Value | **-** | **$210.7** | **$88.7** | **-** | **$211.5** | **$221.4** |
| Benefit – Cost Ratio | **1.00** | **1.22** | **1.08** | **1.00** | **1.23** | **1.23** |