



December 28, 2022

TO: Commissioner Newsha Ajami, President
 Commissioner Sophie Maxwell, Vice President
 Commissioner Tim Paulson
 Commissioner Tony Rivera
 Commissioner Kate Stacy

THROUGH: Dennis J. Herrera, General Manager 
 FROM: Steven R. Ritchie, Assistant General Manager, Water
 RE: Water Supply Assessment for the 395 3rd Street Project

Summary

Introduction

The California Water Code (Sections 10910 through 10915) requires urban water suppliers like the San Francisco Public Utilities Commission (SFPUC) to furnish a Water Supply Assessment (WSA) to the city or county that has jurisdiction to approve the environmental documentation for certain qualifying projects (as defined in Water Code Section 10912(a)) subject to the California Environmental Quality Act (CEQA). The WSA process typically relies on information contained in a water supplier’s Urban Water Management Plan (UWMP) and involves answering specific questions related to the estimated water demand of the proposed project. This memo serves as the WSA for the proposed 395 3rd Street Project (proposed project), for use in the support of a Community Plan Evaluation to be filed by the San Francisco Planning Department (case no. 2021-003762ENV, San Francisco Planning Department).

1.1.1 2020 Urban Water Management Plan

The Commission, by Resolution No. 21-0100, adopted the SFPUC’s current 2020 UWMP. The water demand projections in the UWMP incorporated housing unit growth projections from the Housing Element 2022 Update objective and employment growth projections from the 2017 Land Use Allocation (LUA 2017); San Francisco Planning Department provided both projections. The water demand projections are presented in five-year increments through 2045, meeting Water Code requirements. Growth associated with the proposed project was encompassed within these projections, and water demand associated with the proposed project was encompassed within the 2020 UWMP water demand projections. In other words, **the proposed project has already been accounted for in SFPUC’s water supply planning.**

The WSA for a qualifying project within the SFPUC’s retail service area¹ may use information from the UWMP. Therefore, ***the 2020 UWMP is incorporated by reference throughout this WSA, as shown in bold, italicized text.*** The UWMP may be accessed at www.sfpuc.org/uwmp.

¹ SFPUC’s “retail service area” refers to water customers inside the City and County of San Francisco (City), as well as select areas outside of the City.

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 Mayor

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As described in detail in **Section 7.3.1** of the UWMP, in December 2018, the State Water Resources Control Board (SWRCB) adopted amendments to the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment). The City, along with multiple other water agencies, filed suit in early 2019 challenging the validity of the Bay-Delta Plan Amendment. That lawsuit, which is consolidated with other legal challenges, is currently pending in Sacramento Superior Court. In January 2021, the SWRCB moved to implement the Bay-Delta Plan Amendment on the Tuolumne River by issuing a water quality certification under Section 401 of the Clean Water Act in the Federal Energy Regulatory Commission (FERC) licensing proceedings for the hydropower projects associated with the New Don Pedro and La Grange dams. The City and other water users on the Tuolumne River have filed pending legal and administrative challenges to these SWRCB actions. FERC has not yet reissued a license for the New Don Pedro Hydropower Project, and the legal challenges to the water quality certification are pending and remain unresolved. Alongside the water quality certification, on August 8, 2022, the SWRCB issued a CEQA Notice of Preparation for an alternative means of implementing the Bay-Delta Plan Amendment.

Recognizing the obstacles to implementing the Bay-Delta Plan Amendment, the SWRCB, by Resolution No. 2018-0059 adopting the Bay-Delta Plan Amendment, directed staff to help complete a “Delta watershed-wide agreement, including potential flow measures for the Tuolumne River” by March 1, 2019, and to incorporate such agreements as an “alternative” for a future amendment to the Bay-Delta Plan to be presented to the SWRCB “as early as possible after December 1, 2019.” In accordance with the SWRCB’s instruction, on March 1, 2019, the SFPUC, in partnership with other key stakeholders, submitted a proposed project description for the Tuolumne River that could be the basis for a voluntary substitute agreement with the SWRCB (Proposed Voluntary Agreement). Since 2019, SFPUC has participated in negotiations with the State and other stakeholders regarding the Proposed Voluntary Agreement. On November 9, 2022, SFPUC signed a non-binding Memorandum of Understanding with various representatives of the State environmental and resource agencies, outlining conceptual deal points for a Tuolumne River Voluntary Agreement. As of the date of the issuance of this Water Supply Assessment, those negotiations remain ongoing.

Implementation of the Bay-Delta Plan Amendment is uncertain given the ongoing negotiations, litigation, and regulatory proceedings; these are further described in **Section 7.3.1** of the UWMP. Given the current uncertainty regarding the extent and timing of the implementation of the Bay-Delta Plan Amendment, this WSA analyzes water supply and demand through 2045 under three scenarios: (1) No implementation of the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement (Scenario 1), (2) Implementation of the Proposed Voluntary Agreement (Scenario 2), and (3) Implementation of the Bay-Delta Plan Amendment (Scenario 3).

1.1.2 Basis for Requiring a WSA for the Proposed Project

The proposed project has not been the subject of a previous WSA, nor has it been part of a larger project for which a WSA was completed. However, water supply for the Central South of Market (SoMa) Plan, of which the proposed project is part, was analyzed in the Environmental Impact Report for the Central SoMa Plan. The water supply analysis determined that development under the area plan would not require expansion of the city’s water supply system and would not adversely affect the city’s water supply. This determination was based on the water supply and demand projections contained in the 2010 UWMP and a 2013 Water Availability Study prepared by the SFPUC to update demand projections for San Francisco. The information and

projections in these documents have since been superseded by those in the 2020 UWMP. Thus, this WSA for the proposed project is based on the latest available information and projections.

The proposed project qualifies for preparation of a WSA under Water Code Section 10912(a) because it is a residential development that includes more than 500 dwelling units. The proposed project is characterized further in Section 1.2.

1.2 Proposed Project Description

The project sponsor (395 Third Property, LLC) proposes to redevelop the approximately 0.5-acre site in the Central SoMa Plan area in San Francisco. The project site is occupied by an existing surface parking lot. The project would include approximately 524-unit multifamily tower; up to approximately 4,500 square feet of new retail or restaurant space at the ground floor; approximately 125 parking spaces; and significant improvements to the public realm at the ground floor fronting Harrison Street. Project construction of the tower would occur in a single phase starting approximately mid-2024 and finishing in 2027.

For additional details on the proposed project, see Attachment B.

2.0 Water Supply

This section reviews San Francisco's existing and planned water supplies.

2.1 Regional Water System

See **Section 3.1 of the UWMP** for descriptions of the San Francisco Regional Water System (RWS), **Section 6.1 of the UWMP** for water rights held by City and County of San Francisco, and **Section 7.1 of the UWMP** for the SFPUC Water System Improvement Program (WSIP).

2.2 Existing Retail Supplies

Retail water supplies from the RWS are described in **Section 6.1 of the UWMP**.

Local groundwater supplies, including the Westside Groundwater Basin, are described in **Section 6.2.1 of the UWMP**.

Local recycled water supplies, including the Harding Park Recycled Water Project and Pacifica Recycled Water Project, are described in **Section 6.2.1 of the UWMP**.

2.3 Planned Retail Water Supply Sources

The San Francisco Groundwater Supply Project is described in **Section 6.2.1.1 of the UWMP**.

The Westside and Treasure Island Recycled Water Projects are described in **Section 6.2.2 of the UWMP**.

2.4 Summary of Current and Future Retail Water Supplies

A breakdown of water supply sources for meeting SFPUC retail water demand through 2045 in normal years is provided in **Section 6.2.5 of the UWMP**. For dry years, see the next section.

2.5 Dry-Year Water Supplies

A description of dry-year supplies developed under WSIP is provided in **Section 7.2 of the UWMP**.

2.6 Additional Water Supplies

The SFPUC is increasing and accelerating its efforts to acquire additional water supplies and explore other projects that would increase overall water supply resilience through the Alternate Water Supply Program. A description of the Alternative Water Supply Program and the supplies being studied is provided in **Section 7.4 of the UWMP**.

3.0 Water Demand

This section reviews the projected retail water demands and the demand associated with the proposed project.

3.1 Projected Retail Water Demand

The projected retail water demand through 2045 is provided in **Section 4.1 of the UWMP**. This section also describes the methodology used for demand projections and the factors considered.

3.2 Proposed Project Water Demand

The project sponsor's consultants provided a memo describing the methods and assumptions used to estimate the water demand of the proposed project, along with the resulting demand (Attachment B).

Because the proposed project must comply with San Francisco's Non-potable Water Ordinance (Article 12C of the San Francisco Health Code), estimates for both potable and non-potable demands were submitted as part of the WSA request. The Non-potable Water Ordinance requires new development projects with 100,000 square feet or more of gross floor area, that apply for a site permit after January 1, 2022, to install and operate an onsite non-potable water system. Commercial buildings must meet their toilet and urinal flushing and drain trap priming demands through the collection, treatment, and use of available blackwater and condensate. Residential and mixed-use buildings must meet their toilet and urinal flushing, irrigation, clothes washing, and drain trap priming demands through the collection, treatment, and use of available graywater and condensate. While not required, residential and mixed-use projects may use treated blackwater if desired. As indicated in the water demand memo provided on behalf of the project sponsor in Attachment B, the proposed project would meet the requirements of the Non-potable Water Ordinance by using graywater to meet toilet and urinal flushing, irrigation, clothes washing, and drain trap priming.

Both potable and non-potable demands for the project were estimated using the SFPUC's Non-potable Water Calculator and supplemented with additional calculations for cooling tower and drain trap priming demands. The SFPUC reviewed the memo and calculations to ensure that the methodology is appropriate for the types of proposed water uses, the assumptions are valid and thoroughly documented along with verifiable data sources, and a professional standard of care was used. The SFPUC concluded that the demand estimates provided on behalf of the project sponsor are reasonable. Water demand associated with the proposed project over the 20-year planning horizon is shown in the following Table 1.

The non-potable demand estimates in Table 1 are based on building uses anticipated at the time the WSA was requested, i.e., during the planning and environmental review stage of the proposed project. It is understood that these estimates will likely change as the proposed project's design progresses, and information submitted for the WSA request is not part of the proposed project's compliance with the Non-potable Water Ordinance. City review and approval of a proposed onsite water system must be performed separately through the Non-potable Water Program. However, the intent of providing a breakdown of potable and non-potable demand estimates in this WSA is to demonstrate that the proposed project will incorporate water reuse per City requirements and the proposed project's sustainability goals, if any. As noted earlier, the total demand of the proposed project, regardless of non-potable use, is already encompassed in the 2020 UWMP water demand projections. Furthermore, total demand represents the most conservative estimate and accounts for back-up potable supplies that must be provided by the SFPUC in the event that non-potable supplies serving the proposed project are unavailable.

Table 1: Water Demand Based on Project Phasing

	2025	2030	2035	2040	2045
Potable Demand (mgd)	--	0.026	0.026	0.026	0.026
Non-potable Demand (mgd)	--	0.013	0.013	0.013	0.013
Total Demand (mgd)	--	0.039	0.039	0.039	0.039
Potential Potable Water Savings as Percentage of Total Demand	--	33%	33%	33%	33%
mgd = million gallons per day					
<u>Notes:</u> Construction would occur in a single phase starting approximately mid-2024 and finishing in 2027.					

The San Francisco Planning Department has determined that the proposed project is encompassed within the housing projections described in the Housing Element 2022 Update and the employment projections from LUA 2017, as indicated in the letter from the Planning Department to the SFPUC (Attachment A). Therefore, the demand of the proposed project is also encompassed within the San Francisco retail water demands that are presented in **Section 4.1 of the UWMP**, which considers retail water demand based on the housing and employment projections provided by the Planning Department. The following Table 2 shows the demand of the proposed project relative to total retail demand.

Table 2: Proposed Project Demand Relative to Total Retail Demand

	2025	2030	2035	2040	2045
Total Retail Demand (mgd) ¹	70.7	72.4	74.5	77.4	80.6
Total Demand of Proposed Project (mgd)	--	0.039	0.039	0.039	0.039
Total Demand of Proposed Project as Percentage of Total Retail Demand ²	--	0.05%	0.05%	0.05%	0.05%
Notes: 1. Retail water demands per Table 4-1 of the UWMP . 2. The proposed project is accounted for in the housing and employment projections provided by the Planning Department; therefore, total demands associated with the proposed project are accounted for in the 2020 UWMP retail water demand projections.					

4.0 Conclusion

4.1 Comparison of Projected Supply and Demand

For all scenarios presented here, local supplies (i.e., supplies not from the RWS) correspond to those in **Table 6-5 of the UWMP**. Procedures for determining RWS supply availability per the SFPUC’s Water Shortage Allocation Plan (WSAP) are described in **Section 8.2.4 of the UWMP**.

As explained previously in Section 3.2, water demands associated with the proposed project are already captured in the retail demand projections presented in the UWMP. The proposed project is expected to represent up to 0.05% of the total retail water demand. Total retail demands correspond to those in **Table 4-1 of the UWMP** and reflect both passive and active conservation, onsite water reuse savings, and water loss.

4.1.1 Scenario 1: No Implementation of the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement

Table 3 below is adapted from **Section 8.4 of the UWMP** (Table 8-6) and compares the SFPUC’s retail water supplies and demands through 2045 during normal year, single dry-, and multiple dry-year periods under Scenario 1.

As shown in Table 3, under Scenario 1 without implementation of the Bay-Delta Plan Amendment, existing and planned supplies would meet all projected RWS demands in all years except in the 4th and 5th years of a multi-year drought at 2045 projected levels of demand; the projected shortfall in those years is 4 mgd, or 5.3% of demand. To manage a small shortfall such as this, the SFPUC may prohibit certain discretionary outdoor water uses and/or call for voluntary water use reduction by its retail customers pursuant to its Water Shortage Contingency Plan (**Appendix K of the UWMP**). The required level of water use reduction is well below the SFPUC’s RWS level of service (LOS) goal of limiting water use reduction to no more than 20% on a system-wide basis (i.e., an average throughout the RWS) in drought years. In 2008, by Resolution No. 08-0200, the Commission adopted this goal.

4.1.2 Scenario 2: Implementation of the Proposed Voluntary Agreement

A Voluntary Agreement has yet to be accepted by SWRCB as an alternative to the Bay-Delta Plan Amendment and thus the shortages that would occur with its implementation are not known with certainty. However, given that the objectives of the Proposed Voluntary Agreement are to provide fishery improvements while protecting water supply through flow and non-flow measures, the RWS supply shortfalls under the Proposed Voluntary Agreement would be less than those under the Bay-Delta Plan Amendment, and therefore would require water use reductions of a lesser degree than that which would occur under Scenario 3. The degree of water use reduction would also more closely align with the SFPUC's RWS LOS goal of limiting water use reduction to no more than 20% on a system-wide basis in drought years.

4.1.3 Scenario 3: Implementation of the Bay-Delta Plan Amendment

Table 4 below provides projected supplies and demands under Scenario 3. The RWS is projected to experience significant shortfalls in single dry and multiple dry years through 2045, regardless of whether the proposed project is constructed. These significant shortfalls are a result of implementation of the Bay-Delta Plan Amendment and not attributed to the incremental retail demand associated with the proposed project. Shortfalls would range from about 11 to 29 mgd, corresponding to water use reduction in the retail service area ranging from 14-35%, over the next 20 years.

**Table 3: Projected Supply and Demand Comparison Under Scenario 1
 (No Implementation of the Bay-Delta Plan Amendment or the Proposed Voluntary Agreement) (mgd)**

		Normal Year	Single Dry Year ¹	Multiple Dry Years ²				
				Year 1	Year 2	Year 3	Year 4	Year 5
2025	Total Retail Demand ³	70.7	70.7	70.7	70.7	70.7	70.7	70.7
	Total Retail Supply ⁴	70.7	70.7	70.7	70.7	70.7	70.7	70.7
	Shortfall	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Shortfall as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2030	Total Retail Demand ³	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	Total Retail Supply ⁴	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	Shortfall	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Shortfall as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2035	Total Retail Demand ³	74.5	74.5	74.5	74.5	74.5	74.5	74.5
	Total Retail Supply ⁴	74.5	74.5	74.5	74.5	74.5	74.5	74.5
	Shortfall	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Shortfall as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2040	Total Retail Demand ³	77.4	77.4	77.4	77.4	77.4	77.4	77.4
	Total Retail Supply ⁴	77.4	77.4	77.4	77.4	77.4	77.4	77.4
	Shortfall	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Shortfall as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
2045	Total Retail Demand ^{3, 5}	80.6	80.6	80.6	80.6	80.6	76.6	76.6
	Total Retail Supply ⁴	80.6	80.6	80.6	80.6	80.6	80.6	80.6
	Shortfall	0.0	0.0	0.0	0.0	0.0	4.0	4.0
	Shortfall as % of Demand	0.0%	0.0%	0.0%	0.0%	0.0%	5.3%	5.3%

Notes:

1. During all single dry years, no RWS system-wide shortages are in effect.
2. During multiple dry years, no RWS system-wide shortages are in effect until years 4 and 5 at 2045 levels of demand. During those years, a 10% system-wide shortage is in effect.
3. Total retail demands correspond to those in **Table 4-1 of the UWMP**
4. Local supplies (i.e., supplies not from the RWS, including groundwater and recycled water) correspond to those in **Table 6-5 of the UWMP**. Local supplies are assumed to be used before RWS supplies to meet retail demand.
5. As amended in 2018, the WSAP Tier One Allocation Plan requires retail customers to conserve a minimum of 5% during droughts. If, during a declared water shortage, retail demands on the RWS are lower than the retail allocation in a dry year, retail demands on the RWS will be reduced by 5%. This provision is in effect in years 4 and 5 of a multi-dry year sequence at 2045 levels of demand.

**Table 4: Projected Supply and Demand Comparison Under Scenario 3
 (Implementation of the Bay-Delta Plan Amendment) (mgd)**

		Normal Year	Single Dry Year ¹	Multiple Dry Years ²				
				Year 1	Year 2	Year 3	Year 4	Year 5
2025	Total Retail Demand ³	70.7	70.7	70.7	70.7	70.7	70.7	70.7
	Total Retail Supply ⁴	70.7	59.5	59.5	51.5	51.5	51.5	51.5
	Shortfall	0.0	-11.2	-11.2	-19.2	-19.2	-19.2	-19.2
	Shortfall as % of Demand	0.0%	-15.9%	-15.9%	-27.2%	-27.2%	-27.2%	-27.2%
2030	Total Retail Demand ³	72.4	72.4	72.4	72.4	72.4	72.4	72.4
	Total Retail Supply ⁴	72.4	61.4	61.4	53.4	53.4	53.4	53.4
	Shortfall	0.0	-11.0	-11.0	-19.0	-19.0	-19.0	-19.0
	Shortfall as % of Demand	0.0%	-15.1%	-15.1%	-26.3%	-26.3%	-26.3%	-26.3%
2035	Total Retail Demand ³	74.5	74.5	74.5	74.5	74.5	74.5	74.5
	Total Retail Supply ⁴	74.5	63.8	63.8	55.5	55.5	55.5	51.4
	Shortfall	0.0	-10.7	-10.7	-19.0	-19.0	-19.0	-23.1
	Shortfall as % of Demand	0.0%	-14.4%	-14.4%	-25.5%	-25.5%	-25.5%	-31.0%
2040	Total Retail Demand ³	77.4	77.4	77.4	77.4	77.4	77.4	77.4
	Total Retail Supply ⁴	77.4	66.4	66.4	57.9	57.9	52.0	52.0
	Shortfall	0.0	-11.0	-11.0	-19.5	-19.5	-25.4	-25.4
	Shortfall as % of Demand	0.0%	-14.2%	-14.2%	-25.2%	-25.2%	-32.8%	-32.8%
2045	Total Retail Demand ³	80.6	80.6	80.6	80.6	80.6	80.6	80.6
	Total Retail Supply ⁴	80.6	60.1	60.1	60.1	60.1	52.1	52.1
	Shortfall	0.0	-20.5	-20.5	-20.5	-20.5	-28.5	-28.5
	Shortfall as % of Demand	0.0%	-25.4%	-25.4%	-25.4%	-25.4%	-35.4%	-35.4%

Notes:

1. During a single dry year, system-wide shortages of 30 – 40% are in effect (see **Table 8-3 of the 2020 UWMP**). For this analysis, shortages greater than 20% are considered to have the same retail/wholesale allocation as the maximum Stage 4, 16-20% system-wide shortage in the Water Shortage Allocation Plan (WSAP).
2. During multiple dry years, system-wide shortages of 30 – 55% are in effect (see **Table 8-3 of the 2020 UWMP**). For this analysis, shortages greater than 20% are considered to have the same retail/wholesale allocation as the maximum Stage 4, 16-20% system-wide shortage in the WSAP.
3. Total retail demands correspond to those in **Table 4-1 of the UWMP**.
4. Local supplies (i.e., supplies not from the RWS, including groundwater and recycled water) correspond to those in **Table 6-5 of the UWMP**. Local supplies are assumed to be used before RWS supplies to meet retail demand.

4.2 Potential for Shortages in SFPUC Service Area

The inflow to SFPUC reservoirs can vary greatly from year to year, based on the hydrology of the region. When inflows are low during dry years, the potential exists for water supply shortages in the SFPUC service area. The occurrence of shortages depends on the magnitude and duration of dry conditions, and also on the system demand for water supply.

- In an evaluation of historical hydrology (1920 – 2017) combined with 2020 system demand, the potential for water supply shortages due to dry hydrology is low.
- When projected system demand in 2045 (an increase over 2020 demand) is evaluated along with historical hydrology, the potential for shortage increases but remains relatively low.
- When large increases in instream flow requirements (such as those associated with the Bay-Delta Plan update) are included in either of the above evaluations, the potential for water shortages in the SFPUC system increases markedly. The instream flow requirements are analogous to an increase in demand in this evaluation.

4.3 Water Use Reduction Implications to the Proposed Project

While the levels of water use reduction described above apply to the retail service area as a whole (i.e., 0-5% under Scenario 1, 14-35% under Scenario 3), the SFPUC may allocate different levels of water use reduction to individual retail customers based on customer type (e.g., dedicated irrigation, single family residential, multi-family residential, commercial) to achieve the required level of retail system-wide demand reduction. Allocation methods and processes that have been considered in the past and may be used in future droughts are described in the SFPUC's 2020 Water Shortage Contingency Plan (**Appendix K of the UWMP**). For both residential and commercial customers, the SFPUC may implement varying levels of water use reductions based on the baseline level of water use, e.g., require less reduction from customers that use less water to begin with. Under the 2020 Water Shortage Contingency Plan, the allocation method or combination of methods that would be applied during water shortages caused by drought would be subject to the discretion of the General Manager.

In accordance with the Water Shortage Contingency Plan, the level of water use reduction that would be imposed on the proposed project would be determined at the time of a drought or other water shortage and cannot be established with certainty prior to the shortage event. However, newly constructed buildings, such as the proposed project, have water-efficient fixtures and non-potable water systems that comply with the latest regulations and should be better prepared than older buildings to meet the required reductions.

4.4 Findings

Regarding the availability of water supplies to serve the proposed project beginning in 2027, the SFPUC finds, based on the entire record before it, as follows:

- During normal years, the SFPUC's total projected water supplies will meet the projected demands of its retail customers, including those of the proposed project, existing customers, and foreseeable future development under Scenario 1, Scenario 2, and Scenario 3.
- During single dry years and multiple dry years under Scenario 1—No implementation of the Bay-Delta Plan Amendment or a Voluntary Agreement—the SFPUC can meet the projected demands of its retail customers, including those of the proposed project, existing customers, and foreseeable future

development without the need for water use reduction beyond the LOS goal of 20% system-wide water use reduction.

- During single dry years and multiple dry years under Scenario 2—Implementation of a Voluntary Agreement—the SFPUC would still face a shortfall in single dry and multiple dry years, thus requiring water use reduction, but to a lesser degree and in closer alignment to the LOS goal of no more than 20% system-wide water use reduction compared to that which would occur under Scenario 3.
- During single dry years and multiple dry years under Scenario 3—Implementation of the Bay-Delta Plan Amendment—the SFPUC cannot reliably meet the projected demands of its retail customers, including the proposed project, existing customers, and foreseeable future development, without water use reduction at a level greater than that required to achieve the LOS goal of a maximum of 20% system-wide average water use reduction starting as soon as 2022. The SFPUC estimates it would impose up to 35% water use reductions across the retail service area.
- The SFPUC’s 2020 Water Shortage Contingency Plan describes allocation methods and processes that may be used in future droughts. For both residential and commercial customers, the SFPUC may implement varying levels of water use reductions based on the baseline level of water use, e.g., require less reduction from customers that use less water to begin with. For the proposed project specifically, these policies may result in lower levels of mandatory water use reduction as a result of the installation of water-efficient plumbing fixtures and non-potable water systems associated with new construction.
- Under Scenario 3, the relatively small volume of water demand generated by the proposed project itself would not exacerbate the projected shortfalls resulting from implementation of the Bay-Delta Plan Amendment. Regardless of whether the proposed project is constructed, with implementation of the Bay-Delta Plan Amendment, the SFPUC’s existing and planned water supplies will not meet the water demands of its retail service area in dry years without significant demand reductions.

Approval of this WSA by the Commission is not equivalent to approval of the development project for which the WSA is prepared. A WSA is an informational document required to be prepared for use in the City’s environmental review of a project under CEQA. It assesses the adequacy of water supplies to serve the proposed project and cumulative demand.

Furthermore, this WSA is not a “will serve” letter and does not verify the adequacy of existing distribution system capacity to serve the proposed project. A “will serve” letter and/or hydraulic analysis must be requested separately from the SFPUC City Distribution Division to verify hydraulic capacity.

While this WSA contains information provided by or on behalf of the project sponsor regarding the proposed project’s plans for onsite water reuse and demand estimates using the SFPUC’s Non-potable Water Calculator, any information submitted to the SFPUC for preparation of this WSA does not fulfill the requirements of the Non-potable Water Ordinance. City review and approval of a proposed onsite water system must be performed separately through the Non-potable Water Program.

If there are any questions or concerns, please contact Steve Ritchie at (415) 934-5736 or SRitchie@sfgwater.org.

Attachments: Attachment A, Communications from San Francisco Planning Department
Attachment B, 395 3rd Street Project Demand Memo

Attachment A –

Communications from San Francisco Planning Department



October 27, 2020

Michael P. Carlin
Deputy General Manager, SFPUC
525 Golden Gate Street
San Francisco, CA 94102

Re: **Projections of growth for San Francisco 2020-2040**

Dear Michael:

I am forwarding you information regarding the Department's current growth projections for households and jobs as requested by Paula Kehoe, Manager, Water Resources Planning, SFPUC.

Citywide Land Use Allocation

Table 1 shows the Planning Department's housing and job growth projections for the years 2020-2045. Housing growth is based on the Housing Element 2022 Update and job growth is based on the current citywide Land Use Allocation (LUA) 2017.

Table 1: Development Projections

	2020	2025	2030	2035	2040	2045
Housing Units	399,313	425,118	450,923	476,728	502,533	528,338
Jobs	785,530	823,505	840,270	862,315	872,510	894,255

The Planning Department is currently updating the city's General Plan Housing Element (Housing Element 2022 Update). The housing element update is required to be adopted by the city and submitted to the state Department of Housing and Community Development by January 2023. One of the primary goals of the Housing Element 2022 Update is to improve housing affordability by increasing the rate of housing production compared with the past several decades. The housing unit figure for 2020 is based on the Planning Department's 2019 Housing Inventory report, which indicates that the city had a total of 399,313 housing units as of January 1, 2020, and the successive year projections are based on the Housing Element 2022 Update objective of producing an average of 5,000 housing units per year with adjustments for certain large development plans.

The Planning Department routinely updates its LUA when ABAG/MTC updates their regional projections, typically every four years as part of the Plan Bay Area adoption process. The most recent Plan Bay Area was adopted in

July 2017 and had a time horizon of 2040. Since the 2017 Plan Bay Area projections only extend through 2040, for the purposes of this projection series for the UWMP, we have projected the additional five-year period through 2045 using the average annual job growth rate (+4,350 jobs/year) projected for the 2020-2040 period. The regional agencies are currently in the midst of the planning process for Plan Bay Area 2050, including producing and refining the county and jurisdiction-level housing, household, and job projections through 2050, scheduled for adoption in summer 2021. Following adoption of Plan Bay Area 2050, the department will produce a new LUA that extends to the year 2050, a process that typically takes a few months to complete.

The department uses the LUA for a variety of purposes, including analyzing impacts of plans and projects undergoing the environmental review process, and the LUA is provided to many agencies analyzing future infrastructure and operational needs. We continue to use the current LUA until ABAG/MTC finalizes a new set of projections series that extends the projections horizon, though the department occasionally adjusts the LUA at a sub-city geographic level in the intervening years in the case of adoption of previously unforeseen major new plans, projects or zoning changes that might change the distribution of projected growth within the city.

In preparing the LUA, the department's method uses the best information available to allocate the growth to location. That information includes proposed and entitled projects (the "pipeline"), expected area plan development based on proposed and approved area plans, and parcels with the greatest likelihood of new development based on existing conditions, zoning, and existing policies. Typically, the LUA allocates household and job growth earlier in the time series to development in the pipeline, with later years assigned to other areas. Note that the LUA assumes that large master plan development agreement projects intended to be built in phases over time (e.g. Treasure Island, Parkmerced, Pier 70), will be built in increments over the period of their entitlement (which varies from approximately ten to thirty years depending on the project). It is also the case that the LUA allocates projections for some households and jobs to existing development to account for economic and demographic changes (e.g. assigning jobs to existing office space due to economic changes in unemployment levels and worker densities, assigning households to existing housing due to changes in vacancy rates).

Housing Typology Composition of Projected Growth (Single Family vs Multi-Family)

In addition to the request for the current LUA, it is our understanding that SFPUC would like to understand the proportion of new housing construction that is projected to take the form of single-family houses¹ versus units in multi-family structures, since water consumption per household is substantially less in multi-family structures than for single-family detached houses. The Planning Department recommends that the SFPUC assume for the purposes of modelling citywide projected housing development in San Francisco that **the number of single-family detached houses will not increase from existing stock and that all future net housing growth will take the form of multi-family structures.**

¹ For the purposes of this discussion, "single family home" means a detached house consisting of a single housing unit, typically on its own assessor's lot. Attached townhouses are not included in this definition.

While the majority (62%) of San Francisco’s residential land is currently zoned for single-family housing, approximately 30% of the existing housing stock (in terms of units) is comprised of single-family houses² and there is little to no vacant land in San Francisco zoned for single-family houses. Nearly all new housing built in San Francisco is in the form of units in multi-family buildings, ranging from duplexes and attached townhouses up through mid-rise and high-rise buildings, with the vast majority of units produced each year in larger structures with more than 20 units. As published in our 2019 Housing Inventory document³, of the net housing growth from 2010-2019 less than 1% was in the form of single-family buildings.

San Francisco Housing Stock by Building Type, 2010–2019

Building Type	Single Family	2 to 4 Units	5 to 9 Units	10 to 19 Units	20 + Units	Total
2010 ACS5	123,951	79,774	37,088	37,656	93,496	372,535
Net Added 2011–2019	235	878	368	677	24620	26,778
TOTAL	124,186	80,652	37,456	38,333	118,116	399,313

Source: U.S. Census Bureau; Planning Department

* This total includes other "housing" types that the Census Bureau counts, such as mobile homes, RVs, vans, and houseboats.

Of the total units authorized for construction each year from 2015-2019, the annual percentage of units that were single-family houses averaged less than 1%, with the percentage in 2018 and 2019 being less than 0.6%, as shown in the table below. However, an even more significant trend is addition to or conversion of single household properties to convert them into multi-family properties, ranging from the additions of accessory dwelling units to existing houses to the replacement of existing houses with multi-family structures. An average of 14 single family homes were demolished annually 2015-2019, and 270 accessory dwelling units were added to structures in San Francisco in 2019, many of which were added to previously single-family structures. As a result, the net addition of single-family houses to city over the past several years has likely been negligible or effectively zero. Moreover, given the scarcity and cost of land in San Francisco and city, regional and state goals to maximize housing production in urbanized areas that are served by transit and have access to jobs and other urban opportunities, the few single family houses that are likely to be built in the foreseeable future would be incorporated as a small component of the relatively few large master developments⁴ in the city.

Units and Projects Authorized for Construction by DBI by Building Type, 2015–2019

Year	Units by Building Type					Total	Projects
	Single Family	2 Units	3 to 4 Units	5 to 19 Units	20+ Units		
2015	39	142	68	127	2,606	2,982	276
2016	52	151	105	192	3,559	4,059	386
2017	45	82	100	256	6,248	6,731	331
2018	31	219	93	393	5,361	6,097	504
2019	17	183	137	72	2,535	2,944	556
TOTAL	216	738	436	1,043	21,270	23,703	1,737

² *Housing Needs and Trends Report*, Table 1. San Francisco Planning Department, 2018,

³ Housing Inventory 2019 is available at <https://sfplanning.org/resource/housing-inventory-2019>.

⁴ For instance, there are 12 single family houses included in the approved 273-unit redevelopment of the former CPMC hospital site at 3700 California Street.

If you or your staff has any questions, please contact me at Joshua.Switzky@sfgov.org or Scott Edmondson, by telephone (1-628.652.7432) or email (Scott.Edmondson@sfgov.org).

Sincerely,

A handwritten signature in black ink, appearing to read "J Switzky". The signature is stylized and cursive.

Joshua Switzky
Land Use & Community Planning Program Manager
Citywide Division

cc:

Paula Kehoe, SFPUC
Sarah Trilio, SFPUC
Scott Edmondson, Planning
Chris Kern, Planning

Attachment B –

395 3rd Street Project Demand Memo



December 9, 2022

To: Fan Lau, P.E. – San Francisco Utilities Commission
From: Florentina Craciun, AICP – Environmental Planning

Re: 395 3rd Street Development Water Supply Assessment Request
Planning Department File No. 2021-003762ENV

The purpose of this memorandum is to request that the San Francisco Public Utilities Commission (SFPUC) prepare a Water Supply Assessment (WSA) for the proposed project at 395 3rd Street, in compliance with CEQA Guidelines Section 15155 and Sections 10910 through 10915 of the California Water Code.

The project sponsor (395 Third Property, LLC) proposes to redevelop the approximately 0.5-acre site in the Central SoMa plan area in San Francisco. The project site is occupied by an existing surface parking lot. The project would include approximately 524 residential units; up to approximately 4,500 square feet of new retail or restaurant space; approximately 125 parking spaces; and significant improvements to the public realm at the ground floor fronting Harrison Street. Project construction of the high-rise tower would occur in a single phase starting approximately mid-2024 and finishing in 2027.

The project sponsor provided project information intended to meet the requirements outlined in the SFPUC guidance memo dated January 13, 2022. A summary of the project description, average daily water demands, and supporting tables prepared by the project sponsor's consultant (based on the SFPUC Non-Potable Water Calculator(s) Version 9.1), are attached.

Should you have questions or need additional information from the Planning Department or the project sponsor, please contact me at 628.652.7510 or Florentina.craciun@sfgov.org.

Sincerely,

Florentina Craciun, AICP

Memorandum

Date December 9, 2022

To Florentina Craciun, San Francisco Planning Department, Environmental Planning

From 395 Third Property, LLC

Subject **395 3rd Street Development - Project Demand Memorandum for Preparation of Water Supply Assessment Case No. 2021-003762ENV**

This memorandum presents a project description and project information regarding water demand for the San Francisco Public Utilities Commission (SFPUC) to prepare a Water Supply Assessment (WSA) for the 395 3rd Street development (proposed project). The SFPUC will prepare the WSA for the proposed project based on the 2020 Urban Water Management Plan for the City and County of San Francisco. This memo is expected to be attached to the WSA as an appendix and referenced in the WSA as needed. **Table 1** provides the basic information of the proposed project.

TABLE 1 – PROJECT INFORMATION

Project Name	395 3 rd Street Development Project
Case No.	2021-003762ENV
Estimated Construction Completion	2027
Project Contact	Florentina Craciun – (628) 652-7510, Florentina.Craciun@sfgov.org
Current Land Use(s)	Parking Lot
Proposed Land Use(s)	Retail – Commercial Restaurant Residential
Project Address	395 3 rd Street
Block/Lot	3750/086
Project Site Size	22,567sf (0.52 AC)
Days In Operation Per Year	365 residential days; 365 retail days

Proposed Project Description

The proposed Project is located on an approximately 0.5-acre site in the Central SoMa plan area in San Francisco. The project sponsor, 395 Third Property, LLC proposes to redevelop the site, an existing parking surface parking lot, into a 524-unit multifamily tower with ground floor, community facing retail at the corner of 3rd St and Harrison St.

Overall, the proposed project would include up to approximately 524 residential units; up to approximately 4,500 square feet (sf) of new retail or restaurant space; approximately 125 parking spaces; and significant improvements to the public realm at the ground floor (refer to **Table 2**, for existing, proposed, and net new uses).

Table 2: Project Characteristics

Project Characteristics	Existing	Proposed Project	
Residential Use	N/A	Approximately 455,812 sf	
Restaurant	N/A	Approximately 4,459 sf	
Parking Garage Use	N/A	Approximately 71,884 sf	
Mech. Shafts, Bikes, Basement	N/A	Approximately 21,681 sf	
Total Building Gross Area	N/A	Approximately 553,836 sf	
Proposed Dwelling Units		Number (approximate)	Percentage (approximate)
Studio	N/A	136	26%
1-bedroom	N/A	174	33%
2-bedroom	N/A	214	41%
Total Dwelling Units		524 Units	100%
Proposed Parking	Number (approximate)		
Vehicle parking spaces:	~92 striped stalls	125 parking stalls	
Car-Share parking spaces	4 car-share	6 car-share	
Bicycle parking:			
Bicycle parking class 1	N/A	208	
Bicycle parking class 2	N/A	32	
Total Bicycle Parking	N/A	240	
Building Characteristics			
Stories	N/A	34 stories + 4 basement levels	
Height	N/A	369 feet to base of mechanical penthouse	
Ground floor	N/A	18ft	

Project construction of the high rise tower would occur in a single phase starting approximately mid-2024 and finishing in 2027.

The proposed project will meet the requirements of all applicable City and County of San Francisco ordinances related to water conservation and resources, including:

- To reduce potable water demand, high-efficiency fixtures and appliances would be installed in new buildings to comply with the state's Title 24 requirements, the San Francisco Green Building Standards Code, and the San Francisco Plumbing Code.
- The project site is located within a designated recycled water use area, and the proposed project would provide the piping needed to supply and distribute recycled water when it becomes available, as required under San Francisco's Recycled Water Use Ordinance (San Francisco Public Works Code, Article 22).
- The proposed project would comply with San Francisco's Non-potable Water Ordinance (San Francisco Health Code, Article 12C) and would include the diversion and reuse of greywater to meet the project non-potable demands which include toilet and urinal flushing, clothes washers, trap primers, and irrigation.
- Landscaped areas would be installed, constructed, operated, and maintained in accordance with the Water Efficient Irrigation Ordinance (San Francisco Administrative Code, Ch. 63).

Proposed Project Water Demand

Tables 3, 4, & 5 show the estimated annual water demand for the proposed project by land use category. As shown, the total water use for the proposed project is approximately 14,393,175 gallons per year (gpy). Of the total water demand, 13,365,651 gpy is indoor water use (commercial, residential and other water demand) and 1,027,524 gpy is for outdoor water use (cooling tower and irrigation). In addition, because the proposed project would comply with the City's Non-potable Water Ordinance water saving measures involving water efficient fixtures and onsite reuse, up to 4,710,900 million gpy or 32.7% of proposed project's water demand is expected to be met by a non-potable supply. The calculations were developed using the SFPUC Single Site Non-Potable Water Calculator, Version 9.1.

Table 3: Total Project Water Demand

Total Water Demand	Estimated Annual Water Demand (gpy)
Indoor Water Demand	
Indoor Demand – Commercial	355,610
Indoor Demand – Residential	13,009,814
Other Indoor Uses (Trap Priming) *	227
Indoor Demand Total	13,365,651
Outdoor Water Demand	
Irrigation Demand	35,780
HVAC/Cooling Demand	991,744
Other Outdoor Demands	0
Grand Total	14,393,175
Grand Total Roundup **	14,393,200

*The SFPUC NP calculator does not add the trap priming demand and therefore the roundup total for annual water demand in the Project Summary Tab is 14,393,000 gallons per year.

**The SFPUC NP calculator uses the Excel Roundup function to indicate the Grand Total Gallons per Year (GPY).

Table 4: Non-Potable Demand Estimates

Project Non-Potable Uses	Estimated Annual Water Demand (gpy)
<u>Commercial Indoor Water Demands</u>	
Toilets	43,844
Urinals	2,480
<u>Residential Demands</u>	
Toilets	2,460,369
Drain Trap Priming*	227
Irrigation	35,780
Clothes Washing	2,168,200
Total Non-Potable Water Demand	4,710,900

*Annual water use for drain trap primers is calculated assuming 40 trap primers in the building at 2 oz of water per trap per day.

**Total annual water use for Toilets and Urinals on the Project Summary tab of the NP calculator is the sum of commercial and residential toilets plus urinals, or 2,506,693 gpy.

Table 5: Non-Potable Supply Estimates

Onsite Alternate Water Sources	Estimated Annual Water Supply (gpy)
Greywater	6,842,554
Total Supply	6,842,554

The following summary **Table 6**, with water volumes, shall be reported in units of million gallons per year (mgy) are presented below.

Table 6: Potential Potable Water Savings for the Proposed Project

Demand of Proposed Project (mgy)	2028	2030	2035	2040	2045
Total Water Demand (mgy)*	14.39	14.39	14.39	14.39	14.39
Demand met by Non-potable Supply (mgy)**	4.71	4.71	4.71	4.71	4.71
Potential Potable Water Savings as Percentage of Total Demand***	32.7%	32.7%	32.7%	32.7%	32.7%

NOTES:

SOURCE: SFPUC Single Site Non-Potable Water Calculator, Version 9.1

*Total Demand is 14,393,175 gallons per year (not rounded).

**Total Demand met by Non-potable Supply is 4,710,900 gallons per year.

***Potential Potable Water Savings in NP Calculator Project Summary tab has been rounded up to 33%.