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memorandum

date April 29, 2019

to Chris Thomas, San Francisco Planning Department, Environmental Planning
Jeanie Poling, San Francisco Planning Department, Environmental Planning

from Susan Yogi, Karl Heisler, Jill Feyk-Miney, ESA

subject Balboa Reservoir Project: Water Supply Assessment Request

The purpose of the memorandum is to provide the specific project information necessary for the San Francisco Public Utilities Commission (SFPUC) to prepare a Water Supply Assessment (WSA) for the proposed Balboa Reservoir Project (proposed project). This memo provides a brief project description and estimated project water and wastewater demands for the proposed project, based on the calculations developed in the SFPUC Non-Potable Water Calculator, Version 6.

Project Description

The project site is located in San Francisco's West of Twin Peaks area on Assessor's Block 3180, which is bounded by Archbishop Riordan High School to the north, City College of San Francisco Ocean Campus to the east, multi-family residential development along Ocean Avenue to the south, and Westwood Park neighborhood to the west. The site currently contains 1,007 surface vehicular parking spaces. The proposed project would develop the site with mixed-income housing, open space, childcare facilities, a community room available for public use, retail space, on- and off-street parking, and new streets, utilities, and other infrastructure. **Table 1** provides a summary of the relevant project information.

TABLE 1 – PROJECT INFORMATION

Project Name	Balboa Reservoir Project
Case No.	2018-007883ENV
Estimated Construction Completion	2027
Project Contact	Jeanie Poling – (415) 575-9072, Jeanie.Poling@sfgov.org
Project Address	11 Frida Kahlo Way
Block/Lot	3180 / Lot 190
Project Site Size	767,000 square feet (17.6 acres)
Days In Operation Per Year	365 residential days; 365 retail days; 260 childcare days

The project includes two different sets of options for the site's residential density to capture the range of possible development on the project site: The first is the Developer's Proposed Option (1,100 dwelling units), proposed by Reservoir Community Partners, LLC. The second is the Additional Housing Option (1,550 dwelling units),

developed by the City to fulfill the objectives of the San Francisco General Plan (the general plan) to maximize affordable housing and housing in transit-rich neighborhoods.

Overall, the proposed project would construct up to approximately 1.8 million gross square feet of uses, including between approximately 1.3 and 1.6 million gross square feet of residential space (1,100 to 1,550 dwelling units plus residential amenities), approximately 10,000 gross square feet of community space (childcare and a community room for public use), approximately 7,500 gross square feet of retail, up to 550 residential parking spaces and 750 public parking spaces in the Developer's Proposed Option, and up to 650 residential parking spaces in the Additional Housing Option. The Developer's Proposed Option and Additional Housing Option are shown in **Table 2**. Construction is expected to begin in 2021 and be complete in 2027.

TABLE 2 – PROJECT CHARACTERISTICS

Proposed Use	Developer's Proposed Option	Additional Housing Option
Residential	1,100 units / 1,283,000 gsf	1,550 units / 1,588,000 gsf
Retail	7,500 gsf	7,500 gsf
Community Facilities/Childcare	10,000 gsf	10,000 gsf
Parking	1,300 spaces / 339,900 gsf	650 spaces / 231,000 gsf
TOTAL	1,640,400 gsf	1,836,500 gsf
Total Site Area	556,140 sf	556,140 sf
Above Ground Impervious Area ^a	207,194 sf	207,194 sf
Other Impervious Area ^b	152,121 sf	152,121 sf
Landscaped Area ^c	196,825 sf	196,825 sf
Height of Buildings	25 to 78 feet	25 to 88 feet

Notes:

- a. Excludes green roof features (factored under open space)
- b. Includes sidewalks and hardscape areas
- c. Includes publicly accessible open spaces

SOURCES: BKF Engineers and ESA, November 2018.

Tables 3, 4 and 5 show information pertinent to the estimate of water demand for the proposed project; this includes the proposed uses, square footages, as well as the site coverage data. The land uses and site coverage data are based on the total square footage of the proposed project, as well as total employment and square footage of impervious or landscaped area. Consistent with the City's Non-potable Water Ordinance and Water Efficient Irrigation Ordinance, it is likely that actual project water demand will be lower, after incorporation of the use of low-flow fixtures and other water saving measures (including water reuse and minimizing water use for irrigation), that are not yet fully defined at this time. The water demand supply calculations account for the capture, treatment as required, and reuse of graywater in the proposed project under both options.

Both project options would include 7,500 sf of retail and 10,000 sf of childcare and community space. As shown in Table 3, between the retail and childcare uses on site, it is anticipated that the proposed project would employ approximately 30 full-time employees (FTEs) and 153 transient FTEs at buildout.

"Project coverage" refers to the permeability of materials used onsite. Both project options would have similar site plans and building footprints. Therefore, as shown in Table 4, the impervious and pervious areas are assumed to be the same for both project options. Approximately half of the project site would be covered in impervious

surfaces, which would include the building roofs and sidewalk/hardscape areas. Less than one-quarter of the site area would consist of open spaces, which would be a mix of paving and landscaped areas.

TABLE 3 – PROPOSED PROJECT, BUILDING INPUTS FOR BOTH PROJECT OPTIONS

Proposed Use	Total Proposed (sf)	Days in Use	SF Per Land Use		Commercial Use Occupancy	
			FTE	Transient FTE	Estimated FTE	Estimated Transient FTE
Retail	7,500	365	550	130	14	58
Community Facilities/Childcare	10,000	260	630	105	16	95
TOTAL	17,500	-	-	-	30	153

TABLE 4 – PROPOSED PROJECT, RESIDENTIAL INPUTS

Data Inputs	Developer's Proposed Option	Additional Housing Option	Unit
Residential Type	multi-family		
Occupancy	2.01	2.01	persons per household unit
Number of Residential Units	1,100	1,550	units
Residential Gross Area	1,283,000	1,588,000	gsf
Number of Residential Occupants	2,211	3,116	people
Days in Operation	365	365	days

TABLE 5 – PROPOSED PROJECT, COVERAGE FOR BOTH PROJECT OPTIONS

Surface	Area
Impervious Area	359,315 sf
<i>Roof</i>	207,194 sf
<i>Sidewalks/Open Space</i>	152,121 sf
Pervious Area	196,825 sf
<i>Landscaped Area</i>	135,425 sf
<i>Green Roof</i>	61,400 sf

Proposed Project Options – Demand

Table 6 shows the estimated daily and annual water demand for the proposed project by land use category. As shown, the total water use for the project options would range between 104,467 to 147,115 gallons per day (gpd), or 39.54 to 55.11 million gallons per year (gpy). Of the total water demand, 38.12 to 53.68 million gpy would be for indoor water use and 1.43 gpy would be for irrigation purposes. In addition, SFPUC estimates that approximately 90 percent of water supplied is discharged as wastewater into the sewer system; therefore, the project would discharge around 93,020 to 132,404 gpd, or 35.9 to 49.6 million gpy, of wastewater. Lastly, because the proposed project would comply with the City's Non-potable Water Ordinance and Reclaimed Water Use Ordinance, other water saving measures not yet fully determined, but which could involve water efficient fixtures and onsite reuse, could result in the availability of up to 52,843 to 74,455 gpy of graywater to offset projected water demand.

TABLE 6 - PROPOSED PROJECT, ESTIMATED DEMAND

Proposed Use	Estimated Daily Water Demand (gpd)	Estimated Annual Water Demand (gpy)
Developer's Proposed Option		
Commercial water demand	216	65,319
Multi-Family water demand	104,251	38,051,564
Irrigation	N/A	1,426,668
TOTAL^a	104,467	39,543,551
Wastewater Discharge (at 90% non-landscape water supplied)	41,175	34,305,195
Additional Housing Option		
Commercial water demand	216	65,319
Multi-Family water demand	146,899	53,618,113
Irrigation	N/A	1,426,668
TOTAL^a	147,115	55,110,100
Wastewater Discharge (at 90% non-landscape water supplied)	57,946	48,315,089

a. Does not reflect offset of potable demands with graywater sources

Project Phasing

Construction of the proposed project (both options) would occur in three main phases over the course of six years.. Phase 0 would include grading and construction of site infrastructure, followed by two phases (Phase 1 and 2) of vertical construction for both project options. The construction phasing and durations would be similar for both project options, except that the number of units developed would be different. Phase 1 of the Developer's Proposed Option would construct 645 units on Blocks C, D, E, F, TH1, and TH2, with construction completed in 2024. Phase 2 would develop 455 units on Blocks A, B, G, and H with construction completed by 2027. The Additional Housing Option would be developed in similar phases. Phase 1 would develop 850 units on Blocks C, D, E, F, I, TH1, and TH2, finishing construction in 2024. Phase 2 would develop 700 units on blocks A, B, G, and H with construction completed by 2027. It is assumed that retail space would be developed on Block C, D, E, or F in Phase 1 under both project options. The community facilities/childcare space would be developed on block B in Phase 2 under both project options. **Table 7** shows the water demand for each project option based on project phasing for the years 2015-2040.^{1,2}

¹ Phase 2 data was derived by subtracting Phase 1 calculations from the total project water demand.

² Impervious area between phases was assumed to be proportional to the housing units (i.e. 59 percent in Phase 1 and 41 percent in Phase 2 for the Developer's Proposed Option and 55 percent in Phase 1 and 45 percent in Phase 2 for the Additional Housing Option).

TABLE 7 – WATER DEMAND BASED ON PROJECT PHASING (mgd)

Data Inputs	2015	2020	2025	2030	2035	2040
Developer's Proposed Option						
Phase 1 (645 Units) Potable	0	0	0.053254	0.053254	0.053254	0.053254
Phase 1 (645 Units) Non-Potable	0	0	0.010639	0.010639	0.010639	0.010639
Phase 2 (455 Units) Potable	0	0	0	0.037573	0.037573	0.037573
Phase 2 (455 Units) Non-Potable	0	0	0	0.006872	0.006872	0.006872
Total Potable	0	0	0.053254	0.090827	0.090827	0.090827
Total Non-Potable	0	0	0.010639	0.017511	0.017511	0.017511
Total ^a	0	0	0.063893	0.108338	0.108338	0.108338
Additional Housing Option						
Phase 1 (850 Units) Potable	0	0	0.070177	0.070177	0.070177	0.070177
Phase 1 (850 Units) Non-Potable	0	0	0.013025	0.013025	0.013025	0.013025
Phase 2 (700 Units) Potable	0	0	0	0.057800	0.057800	0.057800
Phase 2 (700 Units) Non-Potable	0	0	0	0.009985	0.009985	0.009985
Total Potable	0	0	0.070177	0.127977	0.127977	0.127977
Total Non-Potable	0	0	0.013025	0.023010	0.023010	0.023010
Total ^a	0	0	0.083202	0.150987	0.150987	0.150987

a. Does not reflect offset of potable demands with graywater sources

Compliance with Ordinances Related to Water Conservation and Resources

The proposed project (both options) would be subject to and would comply with Tier 2 requirements of the San Francisco Water Efficient Irrigation Ordinance (San Francisco Administrative Code, chapter 63) because it includes 500 square feet or more of new landscaped areas. The proposed project (both options) would comply with all standards in the Residential Water Conservation Ordinance (San Francisco Housing Code, chapter 12A) by meeting at least the minimum standards specified in the Ordinance as applicable.

The proposed project (both options) would comply with the Residential Water Conservation Ordinance (San Francisco Housing Code, chapter 12A). To reduce potable water demand, high-efficiency fixtures and appliances would be installed in the new buildings. The proposed project includes no alterations to existing commercial properties. Therefore, the Commercial Water Conservation Ordinance (San Francisco Building Code, chapter 13A) is not applicable.

The proposed project (both options) would be required by law comply with the Non-potable Water Ordinance (San Francisco Health Code, article 12C) which requires large development projects (a single building, or multiple buildings on one or more parcels of 250,000 square feet or more of gross floor area) to be constructed, operated, and maintained using available alternate water sources for toilet and urinal flushing and irrigation. The San Francisco Recycled Water Use Ordinance (San Francisco Public Works Code, Article 22) would not be applicable to the proposed project as it is not within a designated recycled water use area.

NON-POTABLE WATER CALCULATOR

Project Summary Sheet

Project Contact: Brian Scott, BKF Engineers
(650) 482-6335
bscott@bkf.com

Estimated Site/Building Permit Issuance Date: TBD



1. Demands and Supplies Summary

Grant Criteria Status: This building is 250,000 sq.ft. or greater in size and is not eligible for a grant

Demands Met by Non-Potable Supply for Project (gpy):	3,883,400	Meets grant criteria of offsetting a minimum of 1,000,000 gal/yr of potable water use
Demands Met by Non-Potable Supply for Project *:	17%	
Project Total Annual Water Demand (gpy) *:	23,321,060	
Project Total Annual Toilet + Irrigation Water Demand (gpy) *:	3,883,380	
Toilet + Irrigation Demands Met by Non-Potable Supply *:	100.0%	
Potable Water Allocation (gpy):	21,381,448	Potable supplies are allocated to this project to meet remaining demands. Projects are allocated an additional 10% in potable supplies that are available as a buffer.
Daily Wet Weather Potable Allocation (gpd):	58,823	Projects are allocated these potable supplies during wet weather months (October - March)
Daily Dry Weather Potable Allocation (gpd):	58,435	Projects are allocated these potable supplies during dry weather months (April - September)

*Note: Estimates for Demands Met by Non-Potable Supply for Project and Project Total Annual Water Demand based on Tab 6 - Building Potential Summary total water demand values. Manually entered non-potable demands that exceed auto-calculated non-potable demands from Tab 6 may result in Total Annual Water demands greater than the value used in this analysis.
Project Total Annual Toilet Water Demand and Toilet Demands Met by Non-Potable Supply based on Tab 6 - Building Potential Summary toilet demands.

2. Building Information Summary

Project / Building Name:	Balboa Reservoir - Developer's Proposed Option (Phase 1)	Building Type:	Mixres
Project Address:	11 Frida Kahlo Way	(gross square footage or GSF):	965,011
Assessor's Block & Lot No. / APN:	3180190	Total Lot Size (ft²):	767,000
Year Online:	2024	Number of Residential Units:	645
		Impervious Surface Above Grade (ft²):	149,634
		Impervious Surface Below Grade (ft²):	115,865
		Landscaped Area (ft²):	138,075
		Site Location (Zone):	Western SF

3. Summary of Non-Potable Demands and Supplies for the Project

Non-Potable Water Supply Estimates

On-site Alternate Water Source Supplies	Water Quantity (gpy)
Rainwater:	0
Stormwater:	0
Graywater:	11,309,227
Blackwater:	0
Foundation Drainage:	0
Cooling & Other Supplies:	0
TOTAL:	11,309,227

Non-Potable Water Demand Estimates

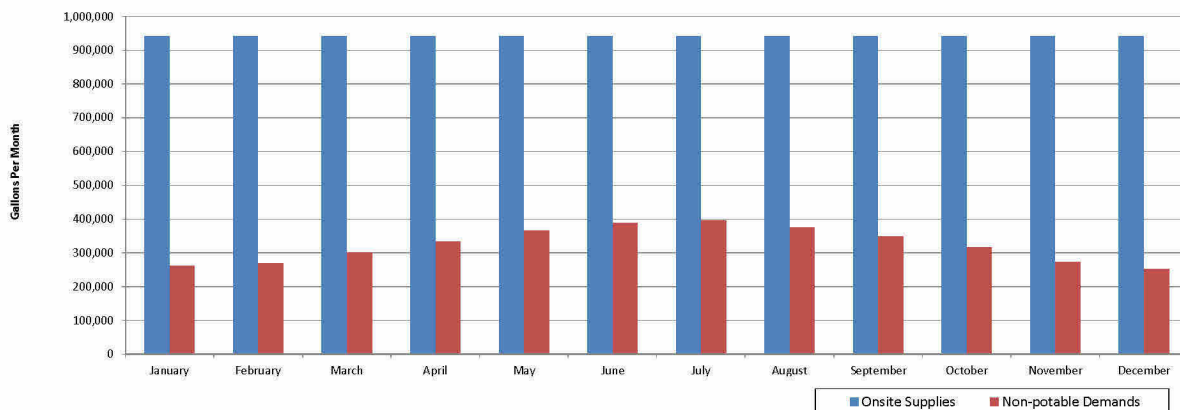
Project Specific Non-Potable Application Demands	Quantity (gpy)
Toilets/Urinals:	2,905,915
Irrigation:	977,465
Toilets/Urinals + Irrigation:	3,883,380
Cooling Tower:	0
Commercial Laundry & Other:	0
Total:	3,883,380

4. Project Summary

Demands Met by Non-Potable Supply for Projects (gpy):	3,883,400	
Total Water Demand (gpy):	23,321,060	Based on Tab 6 - Building Potential Summary tab
Total Water Demand Offset:	17%	
Potable Water Allocation (gpy):	21,381,448	Amount of Potable Water Allocated to Project to Meet Total Demands
Daily Wet Weather Potable Allocation (gpd):	58,823	Amount of Potable Water Allocated Daily during Wet Weather Months
Daily Dry Weather Potable Allocation (gpd):	58,435	Amount of Potable Water Allocated Daily during Dry Weather Months
Total Toilet + Irrigation Water Demand (gpy):	3,883,380	Based on Tab 6 - Building Potential Summary tab
Total Toilet + Irrigation Water Demand Offset:	100%	Based on Tab 6 - Building Potential Summary tab
Selected Toilet + Irrigation Water Demand (gpy):	3,883,380	Based on selections on Tab 7 - Project Definition
Selected Toilet + Irrigation Water Demand:	100%	Based on selections on Tab 7 - Project Definition

This offset analysis assumes the full year of supplies is available to offset non-potable demands. Some scenarios may require storage to store excess supplies from one month in order to use those supplies in another month with unmet demands.

Monthly Summary of Selected Onsite Supply vs. Selected Non-Potable Demand



NON-POTABLE WATER CALCULATOR

Project Summary Sheet

Project Contact: Brian Scott, BKF Engineers
(650) 482-6335
bscott@bkf.com

Estimated Site/Building Permit Issuance Date: TBD



1. Demands and Supplies Summary

Grant Criteria Status: **This building is 250,000 sq.ft. or greater in size and is not eligible for a grant**

Demands Met by Non-Potable Supply for Project (gpy): **6,391,500** **Meets grant criteria of offsetting a minimum of 1,000,000 gal/yr of potable water use**

Demands Met by Non-Potable Supply for Project %: **16%**

Project Total Annual Water Demand (gpy) *: **39,543,551**

Project Total Annual Toilet + Irrigation Water Demand (gpy) *: **6,391,463**

Toilet + Irrigation Demands Met by Non-Potable Supply %: **100.0%**

Potable Water Allocation (gpy): **36,467,297**

Daily Wet Weather Potable Allocation (gpd): **100,326**

Daily Dry Weather Potable Allocation (gpd): **99,664**

Potable supplies are allocated to this project to meet remaining demands. Projects are allocated an additional 10% in potable supplies that are available as a buffer.
Projects are allocated these potable supplies during wet weather months (October - March)
Projects are allocated these potable supplies during dry weather months (April - September)

*Note: Estimates for Demands Met by Non-Potable Supply for Project and Project Total Annual Water Demand based on Tab 6 - Building Potential Summary total water demand values. Manually entered non-potable demands that exceed auto-calculated non-potable demands from Tab 6 may result in Total Annual Water demands greater than the value used in this analysis.
Project Total Annual Toilet Water Demand and Toilet Demands Met by Non-Potable Supply based on Tab 6 - Building Potential Summary toilet demands.

2. Building Information Summary

Project / Building Name:	Balboa Reservoir - Developer's Proposed Option (Phase 1+2)	Building Type:	Mixres
Project Address:	11 Frida Kahlo Way	(gross square footage or GSF):	1,640,400
Assessor's Block & Lot No. / APN:	3180190	Total Lot Size (ft ²):	767,000
Year Online:	#VALUE!	Number of Residential Units:	1,100
		Impervious Surface Above Grade (ft ²):	207,194
		Impervious Surface Below Grade (ft ²):	152,121
		Landscaped Area (ft ²):	196,825
		Site Location (Zone):	Western SF

3. Summary of Non-Potable Demands and Supplies for the Project

Non-Potable Water Supply Estimates

On-site Alternate Water Source Supplies	Water Quantity (gpy)
Rainwater:	0
Stormwater:	0
Graywater:	19,287,683
Blackwater:	0
Foundation Drainage:	0
Cooling & Other Supplies:	0
TOTAL:	19,287,683

Non-Potable Water Demand Estimates

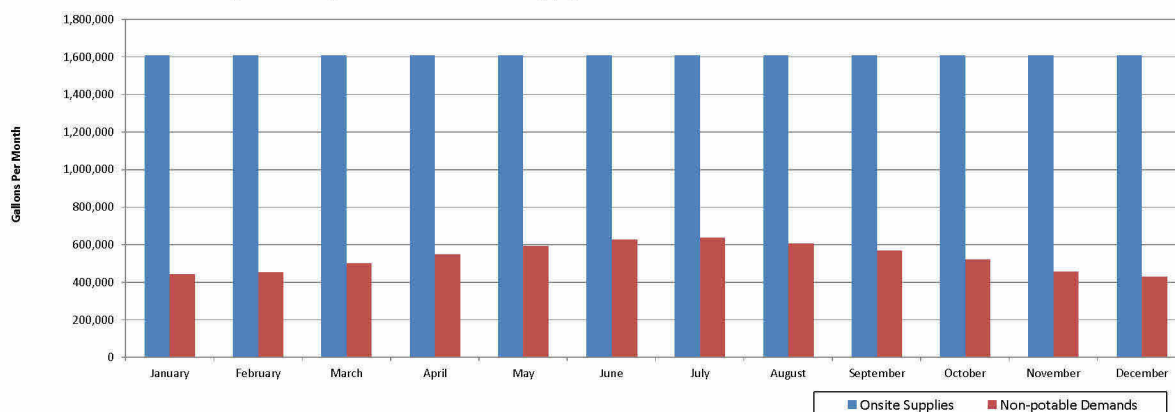
Project Specific Non-Potable Application Demands	Quantity (gpy)
Toilets/Urinals:	4,964,795
Irrigation:	1,426,668
Toilets/Urinals + Irrigation	6,391,463
Cooling Tower:	0
Commercial Laundry & Other:	0
Total:	6,391,463

4. Project Summary

Demands Met by Non-Potable Supply for Projects (gpy):	6,391,500	
Total Water Demand (gpy):	39,543,551	Based on Tab 6 - Building Potential Summary tab
Total Water Demand Offset:	16%	
Potable Water Allocation (gpy):	36,467,297	Amount of Potable Water Allocated to Project to Meet Total Demands
Daily Wet Weather Potable Allocation (gpd):	100,326	Amount of Potable Water Allocated Daily during Wet Weather Months
Daily Dry Weather Potable Allocation (gpd):	99,664	Amount of Potable Water Allocated Daily during Dry Weather Months
Total Toilet + Irrigation Water Demand (gpy):	6,391,463	Based on Tab 6 - Building Potential Summary tab
Total Toilet + Irrigation Water Demand Offset:	100%	Based on Tab 6 - Building Potential Summary tab
Selected Toilet + Irrigation Water Demand (gpy):	6,391,463	Based on selections on Tab 7 - Project Definition
Selected Toilet + Irrigation Water Demand:	100%	Based on selections on Tab 7 - Project Definition

This offset analysis assumes the full year of supplies is available to offset non-potable demands. Some scenarios may require storage to store excess supplies from one month in order to use those supplies in another month with unmet demands.

Monthly Summary of Selected Onsite Supply vs. Selected Non-Potable Demand



NON-POTABLE WATER CALCULATOR

Project Summary Sheet

Project Contact: Susan Yogi
(415) 962-8447
syogi@esassoc.com

Estimated Site/Building Permit Issuance Date: TBD



1. Demands and Supplies Summary

Grant Criteria Status: **This building is 250,000 sq.ft. or greater in size and is not eligible for a grant**

Demands Met by Non-Potable Supply for Project (gpy): 4,754,000 **Meets grant criteria of offsetting a minimum of 1,000,000 gal/yr of potable water use**

Demands Met by Non-Potable Supply for Project *: 16%

Project Total Annual Water Demand (gpy) *: 30,368,671

Project Total Annual Toilet + Irrigation Water Demand (gpy) *: 4,753,985

Toilet + Irrigation Demands Met by Non-Potable Supply *: 100.0%

Potable Water Allocation (gpy): 28,176,155

Daily Wet Weather Potable Allocation (gpd): 77,516

Daily Dry Weather Potable Allocation (gpd): 77,005

Potable supplies are allocated to this project to meet remaining demands. Projects are allocated an additional 10% in potable supplies that are available as a buffer.
Projects are allocated these potable supplies during wet weather months (October - March)
Projects are allocated these potable supplies during dry weather months (April - September)

*Note: Estimates for Demands Met by Non-Potable Supply for Project and Project Total Annual Water Demand based on Tab 6 - Building Potential Summary total water demand values. Manually entered non-potable demands that exceed auto-calculated non-potable demands from Tab 6 may result in Total Annual Water demands greater than the value used in this analysis.
Project Total Annual Toilet Water Demand and Toilet Demands Met by Non-Potable Supply based on Tab 6 - Building Potential Summary toilet demands.

2. Building Information Summary

Project / Building Name:	Balboa Reservoir - Additional Housing Option (Phase 1)	Building Type:	Mixres
Project Address:	11 Frida Kahlo Way	(gross square footage or GSF):	1,007,950
		Total Lot Size (ft ²):	767,000
		Number of Residential Units:	850
Assessor's Block & Lot No. / APN:	3180190	Impervious Surface Above Grade (ft ²):	144,018
Year Online:	2024	Impervious Surface Below Grade (ft ²):	112,327
		Landscaped Area (ft ²):	132,344
		Site Location (Zone):	Western SF

3. Summary of Non-Potable Demands and Supplies for the Project

Non-Potable Water Supply Estimates

On-site Alternate Water Source Supplies	Water Quantity (gpy)
Rainwater:	0
Stormwater:	0
Graywater:	14,902,858
Blackwater:	0
Foundation Drainage:	0
Cooling & Other Supplies:	0
TOTAL:	14,902,858

Non-Potable Water Demand Estimates

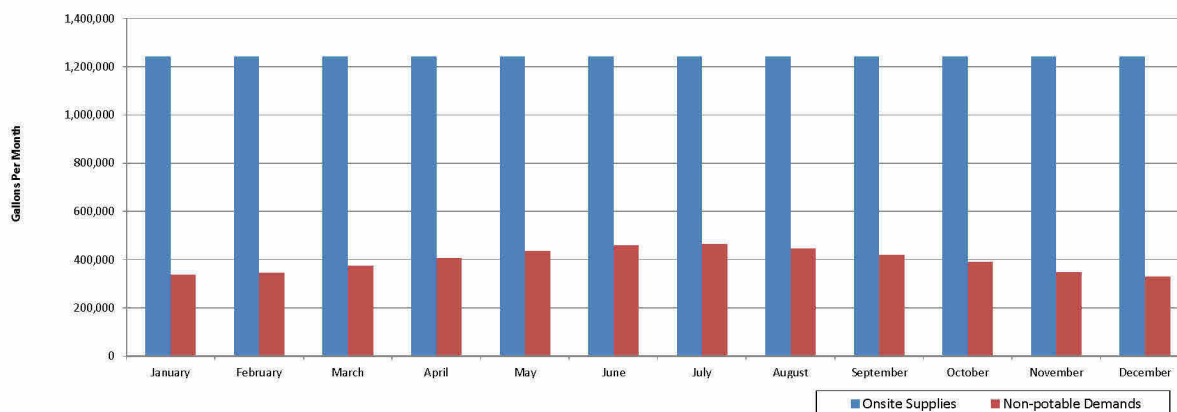
Project Specific Non-Potable Application Demands	Quantity (gpy)
Toilets/Urinals:	3,820,336
Irrigation:	933,649
Toilets/Urinals + Irrigation:	4,753,985
Cooling Tower:	0
Commercial Laundry & Other:	0
Total:	4,753,985

4. Project Summary

Demands Met by Non-Potable Supply for Projects (gpy):	4,754,000	
Total Water Demand (gpy):	30,368,671	Based on Tab 6 - Building Potential Summary tab
Total Water Demand Offset:	16%	
Potable Water Allocation (gpy):	28,176,155	Amount of Potable Water Allocated to Project to Meet Total Demands
Daily Wet Weather Potable Allocation (gpd):	77,516	Amount of Potable Water Allocated Daily during Wet Weather Months
Daily Dry Weather Potable Allocation (gpd):	77,005	Amount of Potable Water Allocated Daily during Dry Weather Months
Total Toilet + Irrigation Water Demand (gpy):	4,753,985	Based on Tab 6 - Building Potential Summary tab
Total Toilet + Irrigation Water Demand Offset:	100%	Based on Tab 6 - Building Potential Summary tab
Selected Toilet + Irrigation Water Demand (gpy):	4,753,985	Based on selections on Tab 7 - Project Definition
Selected Toilet + Irrigation Water Demand:	100%	Based on selections on Tab 7 - Project Definition

This offset analysis assumes the full year of supplies is available to offset non-potable demands. Some scenarios may require storage to store excess supplies from one month in order to use those supplies in another month with unmet demands.

Monthly Summary of Selected Onsite Supply vs. Selected Non-Potable Demand



NON-POTABLE WATER CALCULATOR

Project Summary Sheet

Project Contact: Susan Yogi
(415) 962-8447
syogi@esassoc.com

Estimated Site/Building Permit Issuance Date: 02/29/2027



1. Demands and Supplies Summary

Grant Criteria Status: **This building is 250,000 sq.ft. or greater in size and is not eligible for a grant**

Demands Met by Non-Potable Supply for Project (gpy): 8,398,800 **Meets grant criteria of offsetting a minimum of 1,000,000 gal/yr of potable water use**

Demands Met by Non-Potable Supply for Project *: 15%

Project Total Annual Water Demand (gpy) *: 55,110,100

Project Total Annual Toilet + Irrigation Water Demand (gpy) *: 8,398,729

Toilet + Irrigation Demands Met by Non-Potable Supply *: 100.0%

Potable Water Allocation (gpy): 51,382,508

Daily Wet Weather Potable Allocation (gpd): 141,359

Daily Dry Weather Potable Allocation (gpd): 140,427

Potable supplies are allocated to this project to meet remaining demands. Projects are allocated an additional 10% in potable supplies that are available as a buffer.
Projects are allocated these potable supplies during wet weather months (October - March)
Projects are allocated these potable supplies during dry weather months (April - September)

*Note: Estimates for Demands Met by Non-Potable Supply for Project and Project Total Annual Water Demand based on Tab 6 - Building Potential Summary total water demand values. Manually entered non-potable demands that exceed auto-calculated non-potable demands from Tab 6 may result in Total Annual Water demands greater than the value used in this analysis.
Project Total Annual Toilet Water Demand and Toilet Demands Met by Non-Potable Supply based on Tab 6 - Building Potential Summary toilet demands.

2. Building Information Summary

Project / Building Name:	Balboa Reservoir - Additional Housing Option (Phase1+2)	Building Type:	Mixres
Project Address:	11 Frida Kahlo Way	(gross square footage or GSF):	1,836,500
		Total Lot Size (ft ²):	767,000
		Number of Residential Units:	1,550
Assessor's Block & Lot No. / APN:	3180190	Impervious Surface Above Grade (ft ²):	207,194
Year Online:	#VALUE!	Impervious Surface Below Grade (ft ²):	152,121
		Landscaped Area (ft ²):	196,825
		Site Location (Zone):	Western SF

3. Summary of Non-Potable Demands and Supplies for the Project

Non-Potable Water Supply Estimates

On-site Alternate Water Source Supplies	Water Quantity (gpy)
Rainwater:	0
Stormwater:	0
Graywater:	27,176,141
Blackwater:	0
Foundation Drainage:	0
Cooling & Other Supplies:	0
TOTAL:	27,176,141

Non-Potable Water Demand Estimates

Project Specific Non-Potable Application Demands	Quantity (gpy)
Toilets/Urinals:	6,972,061
Irrigation:	1,426,668
Toilets/Urinals + Irrigation:	8,398,729
Cooling Tower:	0
Commercial Laundry & Other:	0
Total:	8,398,729

4. Project Summary

Demands Met by Non-Potable Supply for Projects (gpy):	8,398,800	
Total Water Demand (gpy):	55,110,100	Based on Tab 6 - Building Potential Summary tab
Total Water Demand Offset:	15%	
Potable Water Allocation (gpy):	51,382,508	Amount of Potable Water Allocated to Project to Meet Total Demands
Daily Wet Weather Potable Allocation (gpd):	141,359	Amount of Potable Water Allocated Daily during Wet Weather Months
Daily Dry Weather Potable Allocation (gpd):	140,427	Amount of Potable Water Allocated Daily during Dry Weather Months
Total Toilet + Irrigation Water Demand (gpy):	8,398,729	Based on Tab 6 - Building Potential Summary tab
Total Toilet + Irrigation Water Demand Offset:	100%	Based on Tab 6 - Building Potential Summary tab
Selected Toilet + Irrigation Water Demand (gpy):	8,398,729	Based on selections on Tab 7 - Project Definition
Selected Toilet + Irrigation Water Demand:	100%	Based on selections on Tab 7 - Project Definition

This offset analysis assumes the full year of supplies is available to offset non-potable demands. Some scenarios may require storage to store excess supplies from one month in order to use those supplies in another month with unmet demands.

Monthly Summary of Selected Onsite Supply vs. Selected Non-Potable Demand

