



AGENDA NO.  
MEETING DATE

8.  
May 14, 2019

TITLE **WATER SUPPLY ASSESSMENT FOR OAKLAND WATERFRONT BALLPARK PROJECT**

☒ MOTION ☐ RESOLUTION ☐ ORDINANCE



### RECOMMENDED ACTION

Approve the Water Supply Assessment (WSA) requested by the City of Oakland (City) for the Oakland Waterfront Ballpark Project (Project) pursuant to California Water Code, Sections 10910-10915.

### SUMMARY

The Project is located at the Charles P. Howard Terminal and is bounded by Oakland Estuary Middle Harbor to the south, Jack London Square to the east, Embarcadero West to the north, and Schnitzer Steel to the west (see Attachment A). The Project area consists of approximately 55 acres. At build-out, the Project will include a ballpark with 35,000 seats, 582,500 square feet of landscaped irrigation area, 3,000 multi-family housing units, 270,000 square feet of retail/cultural/civic space, 1.5 million square feet of office space, a 400-room hotel with a 50,000-square foot conference room, and a 3,500-seat performance center.

The existing land uses consist primarily of truck parking, container storage and staging, and longshore training facilities with a historical water use of approximately 7,200 gallons per day (GPD). The City provided an estimate of increased average water demand for the Project of approximately 1,616,200 GPD; however, this water demand estimate was based on the City's sanitary sewer flow estimate for the Project which also included wet weather infiltration. This results in an overestimate of potable water demand for the Project's multi-family residential, retail, hotel, office space, and ballpark land uses. Given the District's land use demand approach, system capacity charge studies on similar projects, and various reference data, the District's estimated increase in water demands is 854,400 GPD for the Project at build-out. This demand is accounted for in the District's Urban Water Management Plan (UWMP) 2015. Approval of the WSA by the Board of Directors is required prior to its submittal to the City. The WSA is described in the attached letter (Attachment B) and, upon Board approval, will be sent to the City.

Funds Available: FY		Budget Code:
DEPARTMENT SUBMITTING	DEPARTMENT MANAGER or DIRECTOR	APPROVED
Engineering and Construction	 Xavier J. Irias	 General Manager

Contact the Office of the District Secretary with questions about completing or submitting this form.

## DISCUSSION

On February 21, 2019, the City submitted a formal request for a consultation between the District and the City regarding preparation of a WSA for the Project, pursuant to California Environmental Quality Act Guidelines, Section 15155, and California Water Code, Sections 10910-10915. The Project, for which an Environmental Impact Report is being prepared, meets the threshold requirement for an assessment of water supply availability based on the amount of water this Project would require, which is greater than the amount of water required by a 500-dwelling-unit project. The City is required to consult with the public water supplier to determine whether the water demand associated with the Project was included in its last UWMP and to assess whether its 20-year water supply (available during normal, single-dry and multiple-dry water years) will meet the water demand associated with the Project.

The UWMP 2015 concludes that the District has, and will have, adequate water supplies to serve existing and projected demands within the Ultimate Service Boundary during normal and wet years but that deficits are projected for drought years. During multi-year droughts, the District may require significant customer water use reductions and may also need to acquire supplemental supplies to meet customer demand. The UWMP 2015 includes Drought Management Program (DMP) Guidelines that establish the level of water use restrictions the District may implement under varying conditions. Under the DMP Guidelines, water use restrictions may be determined based upon either projected end-of-September Total System Storage (TSS) or water use restriction mandates from the State Water Resources Control Board. When state-mandated water use restrictions exceed the reductions that would otherwise be called for based upon the end-of-September TSS, the District's water use reduction requirements may be guided by the applicable state mandates. Under either scenario, while the District strives to keep water use reductions at or below 15 percent, if the drought is severe, mandatory water use reductions could exceed 15 percent.

The Project will be subject to the same drought restrictions that apply to all District customers. In addition, the proposed Project will be subject to District regulations aimed at encouraging efficient water use, such as Sections 29 and 31 of the District's Regulations Governing Water Service. Section 29, "Water Use Restrictions," promotes efficient water use by District customers and prohibits certain uses of potable water. Section 31, "Water Efficiency Requirements," identifies the types of water efficiency requirements (i.e., maximum flow rates for flow control devices) for water service.

The WSA letter requests that the City comply with the California Code of Regulations concerning water-efficient landscapes and District water service regulations, including compliance with Sections 29 and 31, described above, in force at the time the application is made. The District also requests a meeting to discuss water conservation opportunities in the Project area, which will identify timely opportunities to maximize water conservation and identify District programs, as well as state and federal best management practices applicable to the Project.

Portions of the Project area are located within and around the recycled water pipeline infrastructure of the East Bayshore Recycled Water Project service area. As part of its long-term water supply planning, the District will consider the feasibility of providing recycled water to the project area for appropriate

uses including landscape irrigation and commercial uses, as well as toilet and urinal flushing in non-residential buildings. The District recommends the City and developers maintain continued coordination and consultation with the District about recycled water feasibility as they plan and implement the various components of the Project.

## **ALTERNATIVE**

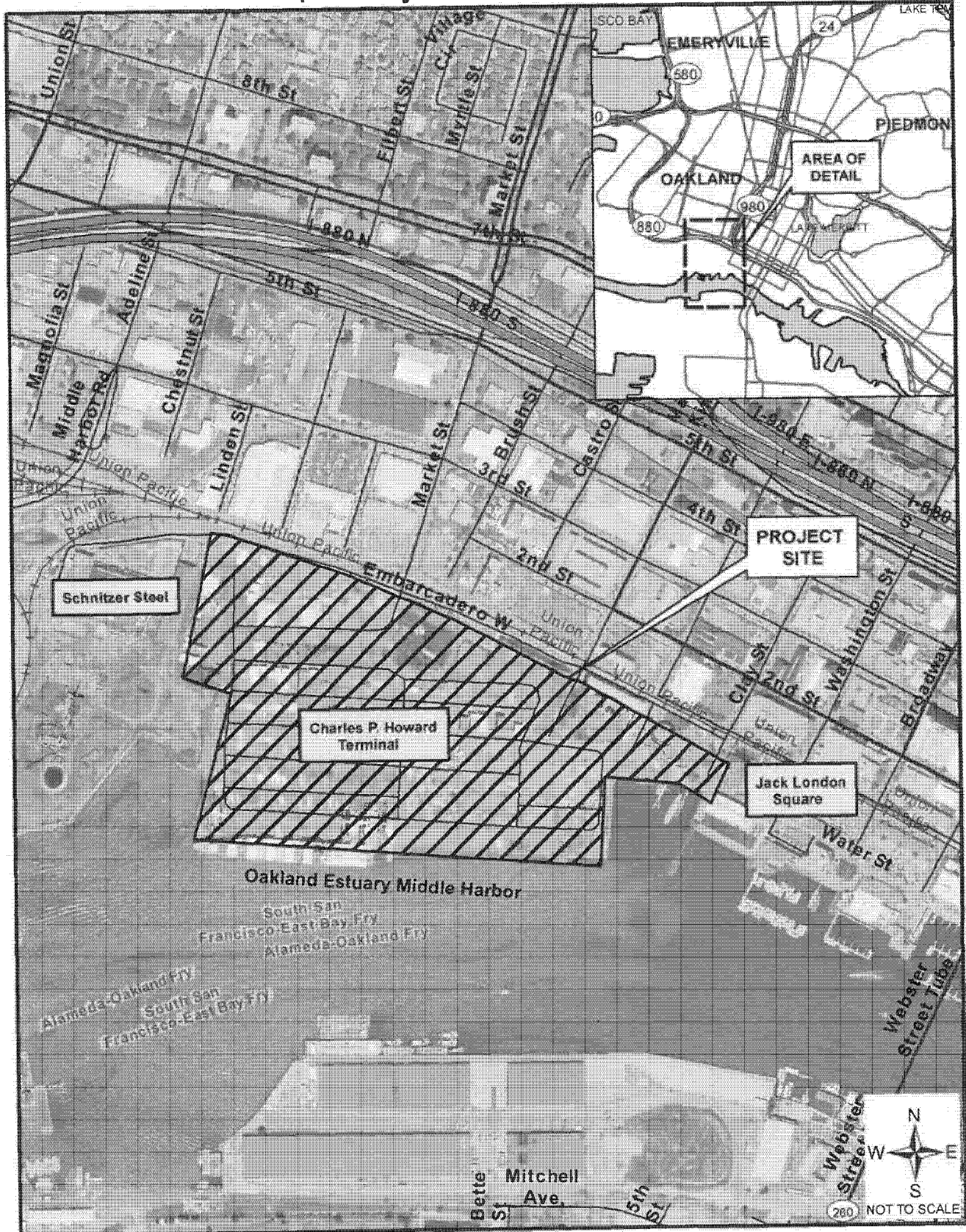
**Do not submit a response.** This alternative is not recommended. This WSA has been prepared pursuant to California Water Code, Sections 10910-10915 and is consistent with the law and the District's past WSAs.

### **Attachments**

- A. Map – Oakland Waterfront Ballpark Project
- B. District's Response to February 21, 2019 Water Supply Assessment Request

# Oakland Waterfront Ballpark Project

## Attachment A



**DRAFT**

May 14, 2019

Peterson Vollmann, Planner IV  
City of Oakland  
Dalziel Building  
250 Frank H. Ogawa Plaza, Suite 3315  
Oakland, CA 94612

Re: Water Supply Assessment – Oakland Waterfront Ballpark Project

Dear Mr. Vollmann:

This letter is in response to your request dated February 21, 2019, for water agency consultation (Enclosure 1) concerning the Water Supply Assessment (WSA) for the Oakland Waterfront Ballpark Project (Project), located in the City of Oakland (City), which is within East Bay Municipal Utility District's (EBMUD's) Ultimate Service Boundary. EBMUD appreciates the opportunity to provide this response.

Pursuant to Sections 10910-10915 of the California Water Code, the Project meets the threshold requirement for an assessment of water supply availability based on the amount of water this Project would require, which is greater than the amount of water required by a 500-dwelling-unit project.

Please note this WSA addresses the issue of water supply only and is not a guarantee of service; future water service is subject to the rates and regulations in effect at that time.

### **Project Demand**

The water demand for the Project is accounted for in EBMUD's water demand projections, as published in EBMUD's Urban Water Management Plan (UWMP) 2015 (Enclosure 2). EBMUD's water demand projections account for anticipated future water demands within EBMUD's service boundaries and for variations in demand-attributed changes in development patterns. The historical water use in the Project area is approximately 7,200 gallons per day (GPD). The City provided an estimate of increased average water demand for the Project of approximately 1,616,200 GPD; however, this water demand estimate was based on the City's sanitary sewer flow estimate which also included wet weather infiltration. This results in an overestimate of potable water demands for multi-family residential, retail, hotel, office space, and ballpark land uses. Given EBMUD's land-use demands approach, system capacity charge studies on similar projects, and various reference data, EBMUD's estimated increase in water demands is 854,400 GPD for the Project at build-out.

EBMUD's demand projections indicate both densification and land use changes in a few existing land use classifications, including commercial and residential land use areas. These changes increase demand for EBMUD water. EBMUD's UWMP 2015 projects water demands over time, accounting for estimated variations in demand usage minus conservation and recycled supply sources, as noted in the UWMP 2015, Table 4-1, Mid-Cycle Demand Projections (Table 1). Typically, EBMUD prepares a full demand study every ten years; the most recent version, the 2040 Demand Study, was completed in 2009. For planning purposes, water demands are estimated in five-year increments, but it is recognized that actual incremental amounts may occur stepwise in shorter time increments. An increase in usage by one customer in a particular customer class does not require a strict gallon-for-gallon increase in conservation by other customers in that class, as, in actuality, the amount of potable demand, conservation and recycled water use EBMUD-wide will vary somewhat. In 2014, EBMUD prepared the Mid-Cycle Demand Assessment (MCDA) in order to assess any significant effects on metered water consumption caused by the 2008-2010 drought, and the economic downturn that affected growth in the Bay Area. As part of the MCDA, EBMUD reviewed recently updated city and county general plans for significant changes since the 2040 Demand Study, and held meetings with representatives from the cities of Alameda, Oakland, Richmond and San Ramon. The MCDA concluded that, while the cities and counties might reach their build-out goals later than originally anticipated, they would still reach these goals by 2040. Accordingly, the MCDA validated the 2040 Demand Study, as demands are expected to gradually increase back to 2040 projected levels as development and water use return to pre-drought and pre-recession conditions. EBMUD plans to complete another comprehensive demand study in 2019 with a long-term horizon of 2050. As part of the demand study, EBMUD will reach out to each city and county in the service area to ask about projected development and future land-use changes. The study results will be incorporated into the UWMP 2020.

**Table 1**  
**Mid-Cycle Demand Projections (UWMP 2015, Table 4-1)**

TABLE 4-1 AVERAGE ANNUAL DEMAND (MGD)	MID-CYCLE DEMAND PROJECTIONS					
	2015	2020	2025	2030	2035	2040
PROJECTED TOTAL DEMAND	232	267	276	290	304	312
CONSERVATION <sup>1</sup>	-33	-39	-44	-51	-57	-62
NON-POTABLE WATER <sup>1,2</sup>	-9	-11	-14	-17	-18	-20
PLANNING LEVEL OF DEMAND	190	217	218	222	229	230

<sup>1</sup> See Chapters 6 and 7 for more discussion of water recycling and conservation, respectively.  
<sup>2</sup> Non-potable water includes recycled water and raw water projects.

## Project Area

The Project is located at the Charles P. Howard Terminal and is bounded by Oakland Estuary Middle Harbor to the south, Jack London Square to the east, Embarcadero West to the north, and Schnitzer Steel to the west.

The Project area consists of approximately 55 acres. At build-out, the Project will include, a ballpark with 35,000 seats, 582,500 square feet of landscaped irrigation area, 3,000 multi-family housing units, 270,000 square feet of retail/cultural/civic space, 1.5 million square feet of office

space, a 400-room hotel with a 50,000 square-foot conference room, and a 3,500-seat performance center.

### **EBMUD Water Demand Projections**

Since the 1970s, water demand within EBMUD's service area has ranged from 200 to 220 million gallons per day (MGD) in non-drought years. Section 4.1 of the UWMP 2015 outlines past and current EBMUD water demand, including Figure 4-1 which shows historic water use (including metered and unmetered demands) within EBMUD's service area, along with the number of customer accounts. The 2040 water demand forecast of 312 MGD for EBMUD's service area can be reduced to 230 MGD with the successful implementation of water recycling and conservation programs, as outlined in the UWMP 2015. Current demand is lower than estimated in the MCDA as a result of the recent multi-year drought. This is because the planning level of demand may differ from the actual demand in any given year due to water use reductions that typically occur during droughts. After droughts, a rebound effect is expected wherein demand rises back to projected levels. Thus, the MCDA still reflects a reasonable expectation for demand in year 2040, as the demands are expected to gradually increase back to 2040 projected demand levels as development and water use return to pre-drought and pre-recession conditions. The proposed Project's future development and operations will not change EBMUD's 2040 demand projection.

### **EBMUD Water Supply, Water Rights and the UWMP 2015**

EBMUD has water right permits and licenses that allow for delivery of up to a maximum of 325 MGD from the Mokelumne River, subject to the availability of Mokelumne River runoff and the senior water rights of other users. EBMUD's position in the hierarchy of Mokelumne River water users is determined by a variety of agreements between Mokelumne River water right holders and the terms of the appropriative water right permits and licenses.

Conditions that could, depending on hydrology, restrict EBMUD's ability to receive its full entitlement include:

- Upstream water use by senior water right holders.
- Downstream water use by riparian and senior appropriators and other downstream obligations, including protection of public trust resources.
- Variability in precipitation and runoff.

During prolonged droughts, the Mokelumne River supply cannot meet EBMUD's projected customer demands. To address this, EBMUD has completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Project Phase 1, which are discussed below in the Supplemental Water Supply and Demand Management section of this assessment. EBMUD has obtained and continues to seek supplemental supplies.

The UWMP 2015, adopted on June 28, 2016 by EBMUD's Board of Directors under Resolution No. 34092-16, is a long-range planning document used to assess current and projected water usage, water supply planning, and conservation and recycling efforts. EBMUD's water supply



sources are discussed in Section 1.5.1 of the UWMP 2015. EBMUD's main water supply is the Mokelumne River, and EBMUD has rights to receive up to 325 MGD of water from this source subject to the availability of runoff, senior water rights of other users, and downstream fishery flow requirements. EBMUD also has a Long-Term Renewal Contract (Contract No. 14-06-200-5183A-LTR1) with the United States (U.S.) Bureau of Reclamation to receive water from the Central Valley Project (CVP) through the Freeport Regional Water Facility in years when EBMUD's water supplies are relatively low (for more details, see Section 3.3.2 of the UWMP 2015). During some dry years, EBMUD may purchase water transfers to help meet customer demands. Section 5.1 of the UWMP 2015 discusses EBMUD's water transfer program.

EBMUD maintains a biennial budget and five-year capital improvement program to optimize investments and maximize drinking water quality, and the reliability, safety, flexibility, and overall efficiency of the water supply system. EBMUD's most recently adopted budget, which includes capital expenditures for the delivery of water supplies to its customers, can be found at <http://www.ebmud.com/about-us/investors/budget-and-rates/>.

EBMUD complies with applicable local, state, and federal regulations in the operation of its water supply system. Figure 1-4 of the UWMP 2015 illustrates the numerous local, state, and federal agencies that may regulate EBMUD's facilities and operations.

A summary of EBMUD's demand and supply projections, in five-year increments, for a 25-year planning horizon is provided in UWMP 2015, Table 4-5, Preliminary EBMUD Baseline Supply and Demand Analysis (Table 2).

EBMUD's evaluation of water supply availability accounts for the diversions of both upstream and downstream water right holders and fishery releases on the Mokelumne River. Fishery releases are based on the requirements of a 1998 Joint Settlement Agreement (JSA) between EBMUD, U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife. The JSA requires EBMUD to make minimum flow releases from its reservoirs to the lower Mokelumne River to protect and enhance the fishery resources and ecosystem of the river. As this water is released downriver, it is, therefore, not available for use by EBMUD's customers.



**Table 2**  
**Preliminary EBMUD Baseline Supply and Demand Analysis (UWMP 2015, Table 4-5)**

<b>TABLE 4-5</b>		<b>PRELIMINARY EBMUD BASELINE SUPPLY &amp; DEMAND ANALYSIS</b>					
<b>SUPPLY AND DEMAND COMPARISON - NORMAL YEAR (MGD)</b>		2015	2020	2025	2030	2035	2040
<b>MOKELUMNE SYSTEM</b>		>190	>217	>218	>222	>229	>230
<b>DEMAND TOTALS</b>		190	217	218	222	229	230
<b>DIFFERENCE</b>		0	0	0	0	0	0
<b>DRY YEAR RESULTS FROM EBMUDSIM (MGD)</b>		2015	2020	2025	2030	2035	2040
<b>SINGLE DRY YEAR OR FIRST YEAR OF MULTI-YEAR DROUGHT</b>	<b>MOKELUMNE SYSTEM</b>	145	169	170	173	179	179
	<b>CVP SUPPLIES<sup>2</sup></b>	36	35	35	35	35	35
	<b>BAYSIDE<sup>3</sup></b>	0	0	0	0	0	0
	<b>SUPPLY TOTALS</b>	181	204	205	208	214	214
	<b>PLANNING LEVEL DEMAND<sup>1</sup></b>	190	217	218	222	229	230
	<b>RATIONING<sup>4</sup></b>	5%	6%	6%	6%	7%	7%
	<b>DEMAND TOTALS</b>	190	217	218	222	229	230
	<b>NEED FOR WATER (IAD)<sup>5</sup></b>	0	0	0	0	0	0
<b>SECOND YEAR</b>	<b>MOKELUMNE SYSTEM</b>	81	103	103	107	112	113
	<b>CVP SUPPLIES<sup>2</sup></b>	71	71	71	71	71	71
	<b>BAYSIDE<sup>3</sup></b>	0	0	0	0	0	0
	<b>SUPPLY TOTALS</b>	152	174	174	178	183	184
	<b>PLANNING LEVEL DEMAND<sup>1</sup></b>	190	217	218	222	229	230
	<b>RATIONING<sup>4</sup></b>	20%	20%	20%	20%	20%	20%
	<b>DEMAND TOTALS</b>	190	217	218	222	229	230
	<b>NEED FOR WATER (IAD)<sup>5</sup></b>	0	0	0	0	0	0
<b>THIRD YEAR</b>	<b>MOKELUMNE SYSTEM</b>	111	132	132	125	120	104
	<b>CVP SUPPLIES<sup>2</sup></b>	40	40	40	40	40	40
	<b>BAYSIDE<sup>3</sup></b>	1	1	1	1	1	1
	<b>SUPPLY TOTALS</b>	152	173	173	166	161	145
	<b>PLANNING LEVEL DEMAND<sup>1</sup></b>	190	217	218	222	229	230
	<b>RATIONING<sup>4</sup></b>	20%	20%	20%	20%	20%	20%
	<b>DEMAND TOTALS</b>	190	217	218	222	229	230
	<b>NEED FOR WATER (IAD)<sup>5</sup></b>	0	0	2	13	24	48

1. Planning Level of Demand accounts for projected savings from water recycling and conservation programs as discussed in Chapters 6 and 7 respectively. Customer demand values are based on the Mid Cycle Demand Assessment, October 2014.  
2. Projected available CVP supplies are taken according to the Drought Management Program Guidelines discussed in Chapter 3.  
3. For the purposes of this modeling effort, it is assumed that the Bayside Groundwater Project would be brought online in the third year of a drought.  
4. Rationing reduction goals are determined according to projected system storage levels in the Drought Management Program Guidelines discussed in Chapter 3.  
5. Need for Water includes unmet customer demand as well as shortages on the Lower Mokelumne River.

The available supply and demand shown in Table 2 were derived from EBMUD's baseline hydrologic model with the following assumptions:

- Customer demand values are based on the MCDA, and planning-level demands account for projected savings from water recycling and conservation programs.
- EBMUD Drought Planning Sequence assumes water years 1976, 1977 and a modified 1978 hydrology.
- Total system storage is depleted by the end of the third year of the drought.
- EBMUD will implement its Drought Management Program (DMP) when necessary.

- The diversions by Amador and Calaveras Counties upstream of Pardee Reservoir will increase over time, eventually reaching the full extent of their senior rights.
- Releases are made to meet the requirements of senior downstream water right holders and fishery releases, as required by the JSA.
- EBMUD allocation of CVP supply is available the first year of a drought and subsequent drought years, according to the U.S. Bureau of Reclamation's Municipal and Industrial Shortage Policy.
- The Bayside Groundwater Project Phase 1 is available and brought online in the third year of a drought.

The UWMP 2015 concludes that EBMUD has, and will have, adequate water supplies to serve existing and projected demand within the Ultimate Service Boundary during normal and wet years, but that deficits are projected for multi-year droughts. During multi-year droughts, EBMUD may require significant customer water use reductions and may also need to acquire supplemental supplies to meet customer demand.

As discussed under the DMP Guidelines section in Chapter 3 of the UWMP 2015, EBMUD's system storage generally allows EBMUD to continue serving its customers during dry-year events. EBMUD typically imposes water use restrictions based on the projected storage available at the end of September and, based on recent changes to its DMP Guidelines (summarized below), may also implement water use restrictions in response to a State of California mandate. By imposing water use restrictions in the first dry year of potential drought periods, EBMUD attempts to minimize water use restrictions in subsequent years if a drought persists. Throughout dry periods, EBMUD must continue to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies.

The UWMP 2015 includes DMP Guidelines that establish the level of water use restrictions EBMUD may implement under varying conditions. Under the DMP Guidelines, water use restrictions may be determined based upon either projected end-of-September Total System Storage (TSS) or water use restriction mandates from the State Water Resources Control Board. When state-mandated water use restrictions exceed the reductions that would otherwise be called for based upon end-of-September TSS, EBMUD's water use reduction requirements may be guided by the applicable state mandates. Under either scenario, while EBMUD strives to keep water use reductions at or below 15 percent, if the drought is severe, mandatory water use reductions could exceed 15 percent.

Despite water savings from EBMUD's aggressive conservation and recycling programs and water use restrictions called for in the DMP Guidelines, supplemental supplies are still needed in significant, severe, and critical droughts. The proposed Project will be subject to the same drought restrictions that apply to all EBMUD customers. In addition, the proposed Project will be subject to EBMUD's regulations aimed at encouraging efficient water use, such as Sections 29 and 31 of EBMUD's Regulations Governing Water Service. Section 29, "Water Use Restrictions," promotes efficient water use by EBMUD customers and prohibits certain uses of potable water. Section 31, "Water Efficiency Requirements," identifies the types of water efficiency requirements (i.e., maximum flow rates for flow control devices) for water service.

## **Supplemental Water Supply and Demand Management**

The goals of meeting projected water needs and increased water reliability rely on supplemental supplies, improving reliability of existing water supply facilities, water conservation and recycled water programs.

By 2011, EBMUD completed construction of the Freeport Regional Water Facility and the Bayside Groundwater Project Phase 1 to augment its water supply during drought periods. However, additional supplemental supplies beyond those provided through these facilities will still be needed, as noted above. Chapter 5 of the UWMP 2015 describes potential supplemental water supply projects that could be implemented to meet projected long-term water demands during multi-year drought periods.

The Freeport Regional Water Facility became operational in February 2011. EBMUD's ability to take delivery of CVP water through the Freeport Regional Water Facility is based on its Long Term Renewal Contract (LTRC) with the U.S. Bureau of Reclamation. The LTRC provides for up to 133,000 acre feet of CVP supply in a single dry year, not to exceed a total of 165,000 acre feet in three consecutive dry years. Under the LTRC, the CVP supply is available to EBMUD only in dry years when EBMUD's total stored water supply is forecast to be below 500,000 total acre feet on September 30 of each year.

EBMUD is developing the Bayside Groundwater Project in phases to provide a source of supplemental supply in dry years. Construction of the first phase (Bayside Groundwater Project Phase 1) was completed in 2010, allowing EBMUD to inject treated potable water into a deep aquifer in the South East Bay Plain Groundwater Basin for later extraction, treatment, and use during severe droughts. A permit from the Department of Public Health is required before the groundwater can be extracted and treated for municipal use. As described in Chapter 4 of the UWMP 2015, EBMUD's drought planning calls for using the Bayside Groundwater Project Phase 1 during the third year of multi-year droughts to provide up to 1 MGD of water to meet customer demands. Additional information on the Bayside Groundwater Project can be found in Section 5.3 and Appendix E of the UWMP 2015.

Chapter 5 of the UWMP 2015 also lists other potential supplemental water projects, including Northern California water transfers, Bayside Groundwater Project Expansion, expansion of Contra Costa Water District's Los Vaqueros Reservoir, and others that could be implemented to meet the projected long-term water supplemental need during multi-year drought periods. The UWMP 2015 identifies a broad mix of projects, with inherent scalability and the ability to adjust implementation schedules for particular components, which will allow EBMUD to pursue the necessary supplemental supplies while minimizing the risks associated with future uncertainties, such as project implementation challenges and global climate change. The Environmental Impact Report that EBMUD certified for the Water Supply Management Program 2040 examined the impacts of pursuing these supplemental supply projects at a program level. Separate project-level environmental documentation will be prepared, as appropriate, for specific components as they are developed in further detail and implemented in accordance with EBMUD's water supply needs.

In addition to pursuing supplemental water supply sources, EBMUD also maximizes resources through continuous improvements in the delivery and transmission of available water supplies and investments in ensuring the safety of its existing water supply facilities. These programs, along with emergency interties and planned water recycling and conservation efforts, would ensure a reliable water supply to meet projected demands for current and future EBMUD customers within the current service area.

### **Water Conservation and Recycled Water Considerations**

The proposed Project presents opportunities to incorporate water conservation measures. Conditions of approval for the implementation of the proposed Project should require that the Project comply with the California Model Water Efficient Landscape Ordinance (Division 2, Title 23, California Code of Regulations, Chapter 2.7, Sections 490 through 495). EBMUD staff would appreciate the opportunity to meet with the City to discuss conservation measures. This meeting will explore early opportunities to expand water conservation via EBMUD's conservation programs and best management practices applicable to the Project.

Conservation strategies will be required to achieve water use reduction goals and restrictions, including compliance with Sections 29 and 31, described above, of EBMUD's Regulations Governing Water Service, and the Water Conservation Act of 2009. The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020.

Portions of the Project area are located within and around the recycled water pipeline infrastructure of the East Bayshore Recycled Water Project service area. As part of its long-term water supply planning, EBMUD will consider the feasibility of providing recycled water to the project area for appropriate uses including landscape irrigation and commercial uses, as well as toilet and urinal flushing in non-residential buildings. EBMUD recommends the City and developers maintain continued coordination and consultation with EBMUD about recycled water feasibility as they plan and implement the various components of the Project.

The Project sponsor should contact Jennifer L. McGregor, Senior Civil Engineer, at (510) 287-1030 for further information.

Sincerely,

David J. Rehnstrom  
Manager of Water Distribution Planning Division

DJR:JML:nl  
sb19\_052b\_Oakland Waterfront Ballpark\_WSA\_Letter

Peterson Volmann, Planner IV  
May 14, 2019  
Page 9

**DRAFT**

Enclosures: 1. Letter of Request for Water Supply Assessment dated February 21, 2019  
2. EBMUD Urban Water Management Plan 2015

cc: Board of Directors w/o Enclosure 2

RECEIVED

FEB 25 2019

WATER SERVICE PLANNING  
CITY OF OAKLAND

DALZIEL BUILDING • 250 FRANK H. OGAWA PLAZA • SUITE 3315 • OAKLAND,  
CALIFORNIA 94612

Planning and Building Department  
Bureau of Planning

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February 21, 2019

David J. Rehnstrom  
Manager of Water Distribution Planning  
EBMUD  
375 Eleventh Street  
Oakland, CA 94607-4240

The City of Oakland is preparing the Environmental Impact Report (EIR) for the proposed Oakland Waterfront Ballpark Project. The proposed Project location is the Charles P. Howard Terminal (Howard Terminal) and adjacent properties in the southwestern area of Oakland, California. Existing regional freeway access to the Project site exists via Interstate 880 (I-880) and Interstate 980 (I-980). Existing hardscape and at-grade drainage facilities are located at the surface, and it is understood that the site has existing utility infrastructure to support the current Port of Oakland operations, including water, power, storm drain and sewer. The site is currently serviced by two waterlines, one from Market Street and one from Martin Luther King Jr. Way. There is also a service line located along the north frontage of the site in Embarcadero West, from Jefferson Street to Clay Street. Recycled water is not available to the Project site at this time.

The proposed Project would be developed in phases, with Phase 1 including the Oakland A's ballpark, hotel, performance center, and mixed use development. The A's intend to construct the primary streets, backbone infrastructure and site grading for initial development in Phase 1, and individual development block(s) may sell to one or more individuals developers over time. After Phase 1, the pace of buildout of the Project site will be dependent on market demand, financial feasibility, construction practicalities, as well as development agreement terms between the developer and the City and Port. Construction of development phases after Phase 1 could overlap to accommodate construction schedules and other constraints or opportunities. The Project development includes residential, commercial/retail, open space, and recreation uses. Details on the Project's development program in terms of unit count and square footage by specific land use type are included in **Attachment A**, Howard Terminal CEQA Program. The Project's estimated water and wastewater demands are provided in **Attachment B**.

With this letter, the City of Oakland is requesting a Water Supply Assessment for the Project in accordance with the California Environmental Quality Act (CEQA) Guidelines Section 15083.5 that requires consultation with EBMUD for projects within its service area. The City of Oakland requests

EBMUD provide the necessary WSA to verify EBMUD's capability to deliver water supplies sufficient to meet the demands of the Project and to determine if the proposed increase in water demand would require new or expanded water supply facilities.

If you have any questions, please contact me at (510) 238-6167 or at email address [pvollmann@oaklandca.gov](mailto:pvollmann@oaklandca.gov). Thank you for your assistance.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Peterson Vollmann', with a long horizontal line extending to the right.

Peterson Vollmann, Planner IV  
City of Oakland | Bureau of Planning

Attachments

- A. Likely Development Scenario
- B. Estimated Wastewater Demands



**Likely Development Scenario - Full Buildout**

Use (total)	Total	Program Sq. Ft.	Parking Ratio	Parking Spaces	Parking Sq. Ft.	Total Sq. Ft.	Comments
Ballpark (capacity)	35,000	1,200,000	Flat rate	2,000	600,000	1,800,000	
Residential (units)	3,000	3,300,000	1/unit	3,000	900,000	4,200,000	
Office (sf)	1,500,000	1,500,000	2/1,000 sf	3,000	900,000	2,400,000	
Retail/Cultural/Civic (sf)	270,000	270,000	2.6/1,000 sf	700	210,000	480,000	
Hotel (rooms)	400	280,000	0.5/room	200	60,000	340,000	
Performance Center (capacity)	3,500	50,000	Shared	-	-	50,000	Shared parking with the Ballpark parking spaces
<b>Total</b>	-	<b>6,600,000</b>	-	<b>8,900</b>	<b>2,670,000</b>	<b>9,270,000</b>	-

**Likely Development Scenario - Phase 1**

Use (total)	Total	Program Sq. Ft.	Parking Ratio	Parking Spaces	Parking Sq. Ft.	Total Sq. Ft.	Comments
Ballpark (capacity)	35,000	1,200,000	Flat rate	3,500	1,050,000	2,250,000	3,500 interim parking stalls
Residential (units)	540	624,000	1/unit	540	162,000	786,000	
Office (sf)	250,000	250,000	2/1,000 sf	500	150,000	400,000	
Retail/Cultural/Civic (sf)	30,000	30,000	Shared	-	-	30,000	
Hotel (rooms)	400	280,000	0.5/room	200	60,000	340,000	
<b>Total</b>	-	<b>2,384,000</b>	-	<b>4,740</b>	<b>1,422,000</b>	<b>3,806,000</b>	-

**Notes:**

1 - Parking sq. footage assumes 300 sq. ft. per space

Total Plumbing Demands			Sewer			Infiltration (1000 gpd/ac)	Sewer totals	Water	Gas
	Square Footage	Units or Capacity	Demand/SF	Demand/Unit	Demand (gpd)	Demand (gpd)	(gpd)	(gpd)	
Residential	3,300,000	3,000	N/A	250	750,000	75,758	825,758	825,758	362,000 cfh
Office	1,500,000	N/A	0.2	N/A	300,000	34,435	334,435	334,435	12,500 cfh
Retail/Cultural/Civic	270,000	N/A	0.15	N/A	40,500	6,198	46,698	46,698	20,000 cfh
Hotel	280,000	400	N/A	150	60,000	6,428	66,428	66,428	9,100 cfh
Hotel Conference Room	50,000	3,333	N/A	5	16,667	Included in Hotel	16,667	16,667	Included in Hotel
Performance Center	50,000	3,500	N/A	5	17,500	1,148	18,648	18,648	2,000 cfh
Ballpark	1,200,000	35,000	N/A	8	280,000	27,548	307,548	307,548	43,000 cfh
Avg Day							1,616,182	1,616,182	
Peaking Factor							3.75	4	
Peak Hour							6,060,682	6,464,727	

## Phase 1 Demands

	Square Footage	Units or Capacity	Demand/SF	Demand/Unit	Demand (gpd)	Infiltration (1000 gpd/ac)	Sewer totals	Water
						Demand (gpd)	(gpd)	Daily (gpd)
Residential	624,000	540	N/A	250	135,000	14,325	149,325	149,325
Office	250,000	N/A	0.2	N/A	50,000	5,739	55,739	55,739
Retail/Cultural/Civic	30,000	N/A	0.15	N/A	4,500	689	5,189	5,189
Hotel	280,000	400	N/A	150	60,000	6,428	66,428	66,428
Hotel Conference Room	50,000	3,333	N/A	5	16,667	Included in Hotel	16,667	16,667
Ballpark	1,200,000	35,000	N/A	8	280,000	27,548	307,548	307,548
Avg Day							600,896	600,896
Peaking Factor							3.75	4
Peak Hour							2,253,359	2,403,583

## Notes:

1. Demands per unit values taken from the City of Oakland Sanitary Sewer Design Standards, Revised August 2008, Table 1 - Average Flow Rate on Specific Developments
2. Infiltration calculated as gpd/acre because LF of sanitary sewer piping is not yet known.
3. For Ballpark, daily loads are game days. Assume 35,000 staff and attendees, 100 players/coaches.
4. For Performance Center, daily loads are event days.
5. Gas demands have been provided by Meyers+ Engineers.
6. Water demand estimates are shown. EBMUD demand estimates may be lower than amounts shown.

## Attachment B