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2554 SWEETWATER SPRINGS BOULEVARD, SPRING VALLEY, CALIFORNIA 91978-2004
TELEPHONE: 670-2222, AREA CODE 619

www.otaywater.gov

November 23, 2015

Project No.: D0675-090196
Activity: 3111

Matthew Teichner, Senior Project Manager
Facilities Management & Development
Sharp Health Care
8520 Tech Way
San Diego, CA 92123

SUBJECT: Will Serve Letter for Sharp Chula Vista Ocean View Tower;
APN: 641-010-28-00

Dear Mr. Teichner:

The Otay Water District (District) has the water storage capacity to serve the Sharp Chula Vista Ocean View Tower (Project). As provided to the District, the Project consists of an additional load of 350 GPM in addition to the existing cooling tower load of 50 GPM.

The Project can be served by the two (2) new 4-inch potable water meters (at 800 GPM per meter), the existing 8-inch potable water main at the loop road and by the 10-inch potable water main at Medical Center Court.

Each service must have an approved reduced pressure principle backflow prevention device (R/P) purchased and installed by the developer. The fire service line will not be allowed to be connected to any buildings; the line will be intended for fire services purposes only. Failure to comply with this request will result in violation of the District's Code of Ordinances and will be subject to penalties determined by the District. Water furnished for fire hydrant or fire sprinkler service shall be used only for fire protection purposes and shall be connected to a District water main. Where service is provided for fire hydrant or fire sprinkler service on privately-owned land, the service shall be provided by the District at the property line of land to be served. The developer should contact the Project's fire agency for any fire protection requirements.

Water availability is subject to all District requirements in effect at the time and you are strongly encouraged to adopt water conservation measures throughout the development.

Matthew Teichner, Senior Project Manager
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The District's Engineering Public Services Division can be contacted at (619) 670-2241, or visit the website at www.otaywater.gov for further requirements regarding inspection services, water main extensions, service laterals, backflow devices, and/or meter costs, and any other conditions that may have arisen since this letter was written for this Project.

Sincerely,
OTAY WATER DISTRICT



Dan Martin, P.E.
Engineering Manager

DM:mlc



5870 Oberlin Drive
San Diego, CA 92121, USA
T: 858.597.0555 • www.exp.com

November 16, 2015

Dan Martin
Olay Water District
2554 Sweetwater Springs Blvd.
Spring Valley, CA 91978

Your Ref.: Number
Our Ref.: 2015346.00

Subject: Sharp Chula Vista Ocean View Tower
Estimated Water Demand (GPM)

Dear Mr. Martin:

Per your request, we are confirming that the additional load for the new Ocean View Tower is 350 GPM. This flow rate includes requirement from all plumbing fixtures, kitchen equipment and mechanical equipment load.

The existing load which comes from the cooling tower make-up water and miscellaneous fixtures, is 50 GPM.

Please let us know if you have any questions on the above.

Sincerely,

A handwritten signature in black ink, appearing to read "Vicky Manuzon", is written over a horizontal line.

Vicky Manuzon
EXP US Services, Inc.

VA Design Manual - Hospitals

4. WATER SUPPLY:

- 4.1 Flow: If meter readings are not available, average domestic daily flow shall be determined using 1140 L (300 gallons) per day per bed and laundry daily flow shall be based on 21 L/kg (2.5 gallons) per pound of laundry. Daily fire demand shall be 340 kL (90,000 gallons). Average domestic demand in L/S (GPM) is determined by assuming 80% of the average domestic daily flow occurs in 16 hours (divide average domestic daily flow by 1200).
- 4.2 Sources: A connection to a public water company is preferred for the site. Two connection points are required with valving so that in the event of breakage in a portion of the supply, adequate water would still be available. If possible, supply the site from two different directions. If a public water supply is not possible, propose an alternate solution.
- 4.3 On-Site Storage: Provide storage, except for roof storage, and/or pumping system if the water source (public, well, etc.) cannot meet the either of the following requirements:
 - A. Fire Protection: On-site water distribution system shall provide 5670 L/min at 138 kPa (1500 GPM at 20 pounds per square inch) residual pressure.
 - B. Domestic Uses: On-site water distribution system shall provide 150 percent of the average domestic demand L/S (GPM) at a minimum residual pressure of 345 kPa (50 PSI). However, if adequate pressure to serve the highest user is not possible, building booster pumps may be used in lieu of pumping the entire distribution system (See Article, DOMESTIC WATER PUMPING SYSTEM).
- 4.4 Exceptions: When most of the following unfavorable conditions occur, daily fire demand shall be 680 kL (180,000 gallons) and on-site water distribution system shall provide 11340 L/min at 138 kPa (3000 GPM at 20 PSI) residual pressure for fire protection:
 - A. Buildings housing patients are not completely sprinklered.
 - B. Combustible construction.
 - C. Moderate or serious fire exposures.
 - D. Hindrance to fire department apparatus access to building site.
 - E. Delayed response by inadequately staffed fire department.

5. WATER DISTRIBUTION SYSTEM:

- 5.1 Design system to provide adequate water service for maximum domestic and fire protection requirements. Incorporate grid systems as far as practical. Buildings housing patients shall be looped by a water main with fire hydrants. No water main shall be smaller than 300 mm (8 inch) diameter and no fire hydrant branch less than 150 mm (6 inch) diameter. Flow velocity shall not exceed 3 m/s (10 feet per second).

Type of Establishment	Water Used (gpd)
Poultry (per 100 birds):	
Chicken	5 - 10
Ducks	22
Turkeys	10 - 25
Restaurant:	
Toilet facilities (per patron)	7 - 10
No toilet facilities (per patron)	2-1/2 - 3
Bar and cocktail lounge (additional quantity per patron)	2
School:	
Boarding (per pupil)	75 - 100
Day, cafeteria, gymnasiums, and showers (per pupil)	25
Day, cafeteria, no gymnasiums or showers (per pupil)	20
Day, no cafeteria, gymnasiums or showers (per pupil)	15
Service station (per vehicle)	10
Store (per toilet room)	400
Swimming pool (per swimmer)	10
Maintenance (per 100 sq. ft.)	
Theater:	
Drive-in (per car space)	5
Movie (per auditorium seat)	5
Worker:	
Construction (per person per shift)	50
Day (school or offices per person per shift)	15

Source: Adapted from *Design and Construction of Small Water Systems: A Guide^a for Managers*, American Water Works Association, 1984, and *Planning for an Individual Water System*. American Association for Vocational Instructional Materials, 1982.

S M I T H | H A R T V I G S E N P L L C

ATTORNEYS AT LAW

WATER CONVERSION CHART

VOLUME					ESTIMATED PEAK USE / SOURCE REQUIREMENTS (In gpd)		
	<u>gallons</u>	<u>cubic feet</u>	<u>acre-feet</u>	<u>M gallons</u>			
1 gallon =	1	0.1337	0.00000307	0.0000010			
1 cubic foot =	7,480.51	1	0.00002296	0.0000075			
1 acre-foot =	325,851	43,560	1	0.32585			
1 M gallons =	1,000,000	133,680	3.0689	1			

FLOW					ESTIMATED PEAK USE / SOURCE REQUIREMENTS (In gpd)		
	<u>gallons</u>	<u>cubic feet</u>	<u>acre-feet</u>	<u>M gallons</u>			
1 gallon per minute (gpm) =							
Second	0.01667	0.002228	-	-			
Minute	1	0.13368	0.000003	0.000001			
Hour	60	8.0208	0.000184	0.000060			
Day	1,440	192.5	0.004419	0.001440			
30-day month	43,200	5,775	0.132576	0.043200			
365-day year	525,600	70,262.5	1.613007	0.525600			
1 cubic foot per second (cfs) =							
Second	7,480.51	1	0.000023	0.000007			
Minute	448.83	60	0.001377	0.000449			
Hour	26,930	3,600	0.082626	0.026925			
Day	646,316	86,400	1.983	0.6462			
30-day month	19,389,482	2,592,000	59.49	19.386			
365-day year	235,905,363	31,536,000	723.97	235.863			
1 acre-foot per year (af/yr) =							
Second	0.01033	0.001381	-	-			
Minute	0.61996	0.08287	0.000002	-			
Hour	37.1976	4.9726	0.000114	0.000037			
Day	892.7425	119.342	0.002740	0.000893			
30-day month	26,782	3,580	0.082192	0.026786			
365-day year	325,851	43,560	1	0.3259			
1 million gallons per day (mgd) =							
Second	11.574	1.54722	0.000036	0.000012			
Minute	694.45	92.833	0.002131	0.000694			
Hour	41,667	5,570	0.127875	0.041667			
Day	1,000,000	133,680	3.069	1			
30-day month	30,000,000	4,010,400	92.07	30			
365-day year	365,000,000	48,793,200	1,120.18	365			

ESTIMATED ANNUAL USE			<u>acre-foot</u>	<u>gallons</u>
Per Family	0.450	146,833		
Cow, Horse or ELU	0.028	9,123.8		
Plg. Sheep, Goat, Elk or Moose	0.0056	1,824.8		
Ostrich or Emu	0.0036	1,173.1		
Llama	0.0022	716.9		
Deer, Antelope, Mtn. Goat/Sheep	0.0014	456.2		
Chicken, Turkey or Sage Hen	0.00084	273.7		
Mink or Fox (caged)	0.00005	16.3		

Source: Utah Admin Rules R309-510-7 and R317-5-1

Source: Utah Division of Water Rights

DUTY VALUES FOR IRRIGATION by County
 Duty is the maximum amount of water that can be beneficially used to irrigate one acre of land.

3 acre-feet duty per acre Box Elder,* Cache,* Daggett, Duchesne,* Emery,* Garfield,* Iron,* Juab,* Kane,* Millard,* Morgan, Piute, Rich, Sanpete,* Sevier,* Summit, Uintah* (3.7 in some places), Utah,* Wasatch,* Washington,* Wayne,* and Weber*

4 acre-feet duty per acre Beaver, Box Elder,* Carbon,* Cache,* Davis, Duchesne,* Emery,* Garfield,* Grand,* Iron,* Juab,* Kane,* Millard,* Salt Lake,* San Juan,* Sanpete,* Sevier,* Tooele, Weber,* Uintah,* Utah,* Wasatch,* Washington,* Wayne,* and Weber*

5 acre-feet duty per acre Carbon,* Emery,* Grand,* Kane,* Salt Lake,* San Juan,* and Washington*

6 acre-feet duty per acre Emery,* Grand,* San Juan,* and Washington*

*County has different duty limits for various portions of the County.

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