

Appendix Q

Water Demand Study

PRELIMINARY WATER DEMAND STUDY

Downtown Thousand Oaks Project

City of Thousand Oaks

January 5, 2026



PREPARED FOR:

City of Thousand Oaks

PREPARED BY:

RRM Design Group

Table of Contents

Purpose of Report.....	2
Location and Project Description.....	2
Estimated Water Use	4
Conclusion.....	5

EXHIBIT 1 - CONCEPTUAL SITE PLAN

EXHIBIT 2 – WATER DEMAND CALCULATIONS

ATTACHMENT 1 – WATER DEMAND FACTORS EXCERPT FROM CITY OF THOUSAND OAKS
WATER DESIGN AND CONSTRUCTION STANDARDS (2009)

ATTACHMENT 2 – EXCERT FROM LADPW SEWERAGE FACILITIES CHARGE SEWER
GENERATION FACTOR FOR RESIDENTIAL AND COMMERCIAL CATEGORIES

Purpose of Report

The purpose of this report is to assess the anticipated domestic water demand for the proposed development. The analysis is prepared by applying the water demand factors provided in the City of Thousand Oaks Water Design and Construction Standards (2009) to the proposed land uses to develop an estimate of the net increase in total water demand for the proposed development.

Location and Project Description

The project site is located at 2100 E. Thousand Oaks Boulevard in the City of Thousand Oaks. The site is approximately 17.68 acres in size and is bounded by E. Thousand Oaks Boulevard to the north, Highway 101 to the south, The Lakes shopping center to the east, and the private property at 1850 E. Thousand Oaks Boulevard to the west. See the Project Site Area Map in Figure 1 below.

The existing condition of the site includes City Hall Administrative Offices, Kavli Theatre, Scherr Forum, and three parcels - 1934, 1938, and 1948 E. Thousand Oaks Boulevard - with existing commercial buildings. The proposed project involves the comprehensive redevelopment of the site to create a mixed-use environment including a total of 240 residential units above ground floor commercial uses in two buildings, a 125,675 sf hotel, a standalone restaurant building, the partial demolition and reconstruction of the existing City Hall administrative offices, a public market, artist incubator space, and other commercial and community serving uses. Outdoor improvements include the renovation of the existing Carpenter Park and the construction of an outdoor amphitheater with a bandshell structure for community performances. The Kavli Theatre and Scherr Forum will remain unchanged. See the Program Summary below and Exhibit I-Proposed Site Plan.

At the time of the preparation of this report, the project is at the schematic level of design. The report analyzes domestic flows and does not take into account spontaneous fire flows. The analysis of actual peak demand including fire flows will be completed during final design for purposes of sizing meters and service lines.



Figure 1. Project Site Area Map

Program Summary:

Proposed New Uses:

Building	Use	Quantity	Unit Type
B1	Restaurant	6,725	Gross Square Feet
B2	Amphitheater	350	Seats
C1	Retail	2,410	Gross Square Feet
	Multi-Purpose Performance Venue	200	Seats
	Library Outpost	2,680	Gross Square Feet
	Office	5,210	Gross Square Feet
	Police Depot	360	Gross Square Feet
	Artist Incubator	4,800	Gross Square Feet
	Public market	13,500	Gross Square Feet
	City Hall Administrative Offices	74,320	Gross Square Feet
E1	Hotel	125,675	Gross Square Feet
E2	Commercial	8,950	Gross Square Feet
	Residential	161	Units
E3	Commercial	19,048	Gross Square Feet
	Residential	79	Units
Carpenter Park	Irrigated Landscape Area	36,737	Square Feet

Existing Uses to be Demolished:

Building	Use	Quantity	Unit Type
1934, 1938, 1948 E. Thousand Oaks Boulevard	Commercial	7,628	Gross Square Feet
Existing Civic Arts Plaza Bldg.	City Hall Administrative offices (existing to be demolished)	80,332	Gross Square Feet

Existing Uses to Remain:

Building	Use	Quantity	Unit Type
Existing Civic Arts Plaza Bldg.	Kavli Theater	1800	Seats
	Scherr Forum	394	Seats

Estimated Water Use

Method of Analysis

The City of Thousand Oaks Water Design and Construction Standards (2009) water demand factors were used to calculate the anticipated water demand for all program land uses except the performance venues, which the City's standards document does not provide an equivalent land use for this type of use. Therefore, in coordination with City of Thousand Oaks Public Works staff, the Performance Venue factor was derived from the City of Los Angeles Department of Public Works 2012 Sewage Facilities Charge for Theater: Live/Music/Opera land use category.

Table 1. Applicable City of Thousand Oaks Water Demand Factors

Use Category	Water Demand Factor	Water Demand Factor Unit
Commercial	130	Gallons Per Day per 1,000 sf
Institutional	45	Gallons Per Day per 1,000 sf
High Density Residential (15-30 du/ac)	180	Gallons Per Day Per Dwelling Unit
Proposed Park and Recreation Area	3,400	Gallons Per Day Per Acre
Performance Venue	3	Gallons Per Day Per Seat

Calculated Water Use

Using the applicable water demand factors and program land use areas, the net increase in estimated water demand associated with the proposed development project has been calculated and details are provided in Exhibit 2-Water Demand Calculation. Because the existing Kavli Theater and Scherr Forum uses will remain unchanged, their water demand neither increases nor decreases the project's net water demand and are therefore excluded from the calculation. A summary of the net increase in estimated water demand is provided below:

Table 2. Estimated Net Increase in Water Demand

Use Category	Estimated Water Demand
Proposed New Uses	81,737 Gallons Per Day
Existing Uses to be Demolished	(11,435) Gallons Per Day
Total Estimated Net Increase in Water Demand	70,302 Gallons Per Day

SB 610 Compliance

In addition, the project is required to comply with SB 610, which requires that a Water Supply Assessment be prepared for projects that exceed various threshold criteria. Based on the proposed development program, only one threshold criteria is applicable: “a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.”

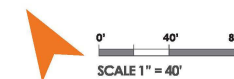
Using the same water demand factor for High Density Residential (15-30 du/ac) uses (180 gallons per day per dwelling unit), a 500-dwelling-unit project would demand 90,000 gallons per day. Therefore, the project’s estimated water demand does not exceed that of a 500 dwelling project nor any of the threshold criteria under SB 610, and a Water Supply Assessment is not required.

Conclusion

Based on the conceptual site plan, the proposed development results in an estimated net increase in water demand of 70,302 gallons per day, or 78.75 acre-feet per year.

EXHIBIT 1
PROPOSED SITE PLAN

Exhibit 1



ENTITLEMENT SET - SUBMITTAL 2

NO.	REVISION	DATE
△		
△		
△		
△		
△		
△		
PROJECT MANAGER		
MP		
DRAWN BY		CHECKED BY
MP		MP
DATE		
9/25/25		
PROJECT NUMBER		
DP-2025-70015		
SHEET		

DOWNTOWN THOUSAND OAKS

2100 THOUSAND OAKS BLVD, THOUSAND OAKS, CA 91362

PROPOSED SITE PLAN

AGENCY



CONSULTANT

STAMP

PRIME



SMITHGROUP
 smithgroup.com | (213) 228-6916
 rmcdesign.com | (805) 543-1794

rrmdesign.com | (805) 543-1794 smithgroup.com | (213) 228-6916

EXHIBIT 2
WATER DEMAND CALCULATIONS

Exhibit 2

		CTO Water Design & Construction Standards (2009)						
PROPOSED NEW USES		Demand Factor Land Use			Area	Water Demand		Estimated
		Category	Quantity	Unit type	(acres)	Factor	Unit	Water Demand
B1	Restaurant	Commercial	6,725	gsf		130	gpd/ksf	874
B2	Amphitheater	Performance Venue*	350	seats		3	gal/seat/day	1,050
C1	Retail	Commercial	2,410	gsf		130	gpd/ksf	313
	Multi-purpose performance	Performance Venue*	200	seats		3	gal/seat/day	600
	Library	Institutional	2,680	gsf		45	gpd/ksf	121
	Office	Commercial	5,210	gsf		130	gpd/ksf	677
	Police Outpost	Institutional	360	gsf		45	gpd/ksf	16
	Arts Incubator	Commercial	4,800	gsf		130	gpd/ksf	624
	Public Market (Restaurant)	Commercial	13,500	gsf		130	gpd/ksf	1,755
	City Hall Administrative Offices	Commercial**	74,320	gsf		130	gpd/ksf	9,662
E1	Hotel	Commercial	125,675	gsf		130	gpd/ksf	16,338
E2	Commercial - Retail & Restaurant	Commercial	8,950	gsf		130	gpd/ksf	1,164
	Residential	High Density Residential (15-30 du/ac)	161	units		180	gpd/du	28,980
E3	Commercial - Retail & Restaurant	Commercial	19,048	gsf		130	gpd/ksf	2,476
	Residential	High Density Residential (15-30 du/ac)	79	units		180	gpd/du	14,220
Carpenter Park		Proposed Park and Recreation						
	Landscaping	Area	36,737	sf	0.84	3400	gal/acre/day	2,867
SUBTOTAL PROPOSED NEW USES								81,737

Exhibit 2

EXISTING USES TO BE DEMOLISHED

1934, 1938, 1948 E. Thousand Oaks Boulevard	Commercial	7,628 gsf	130 gpd/ksf	(992)
City Hall Administrative Offices	Commercial**	80,332 gsf	130 gpd/ksf	(10,443)
SUBTOTAL EXISTING USES TO BE DEMOLISHED				(11,435)

TOTAL PROPOSED NEW USES + EXISTING USES TO BE DEOMOLISHED (NET INCREASED WATER DEMAND)	70,302 Gallons Per Day
	78.75 Acre Feet Per Year

EXISTING USES TO REMAIN (NO CHANGE TO EXISTING)***

Kavli Theater	Performance Venue*	1,800 seats	3 gal/seat/day	5,400
Scherr Forum	Performance Venue*	394 seats	3 gal/seat/day	1,182
TOTAL EXISTING USES TO REMAIN				6,582

* Performance Venue water demand factor derived from City of Los Angeles DPW's 2012 Sewage Facilities Charge for Theater: Live/Music/Opera as directed by City of Thousand Oaks Public Works Staff

** City Hall Administrative Offices are assumed to function similarly to a commercial office use, therefore the Commercial water demand factor has been applied

*** For reference only. The Existing Uses to Remain estimated water demand is assumed to remain unchanged and therefore will not increase or decrease net water demand

ATTACHMENT 1

WATER DEMAND FACTORS EXCERPT FROM
CITY OF THOUSAND OAKS WATER DESIGN AND CONSTRUCTION STANDARDS (2009)

ATTACHMENT 1
WATER DEMAND FACTORS EXCERPT FROM CITY OF THOUSAND
OAKS WATER DESIGN AND CONSTRUCTION STANDARDS (2009)

Water Demand Factors

Land Use Description	Density (DU/Acre)	Demand Factor	Unit
High Density Residential	15-30	180	gal/du/day
Medium Density Residential	4.5-15	310	gal/du/day
Low Density Residential	2-4.5	405	gal/du/day
Very Low Density Residential	0-2	440	gal/du/day
Reserve Residential (ultimate need)	0-2	440	gal/du/day
Commercial/Residential (High Density)	15	200	gal/du/day
Commercial	-	130	gal/ksf/day
Industrial	-	60	gal/ksf/day
Institutional	-	45	gal/ksf/day
Elementary School	-	15	gal/ksf/day
Intermediate School	-	15	gal/ksf/day
High School	-	15	gal/ksf/day
Existing Parks, Golf Courses, Open Space	-	3400	gal/ac/day
Proposed Park and Recreation Areas	-	3400	gal/ac/day
Residential Developable Land (ultimate need)	0.2-1.0	440	gal/du/day

ATTACHMENT 2

WATER DEMAND FACTORS EXCERPT FROM
CITY OF THOUSAND OAKS WATER DESIGN AND CONSTRUCTION STANDARDS (2009)

Attachment 2

**SEWERAGE FACILITIES CHARGE
SEWAGE GENERATION FACTOR FOR
RESIDENTIAL AND COMMERCIAL CATEGORIES**

EFFECTIVE DATE: April 6, 2012

<i>Line No.</i>	FACILITY DESCRIPTION	PROPOSED SGF IN GPD	BOD (mg/l)	SS (mg/l)
157	Store: Retail (l)	50/1,000 Gr SF	265	275
158	Studio: Film/TV - Audience Viewing Room (q)	3/Seat	265	275
159	Studio: Film/TV - Regular Use Indoor Filming Area (q)	50/1,000 Gr SF	265	275
160	Studio: Film/TV - Ind. Use Film Process/Machine Shop (q)	50/1,000 Gr SF	265	275
161	Studio: Film/TV - Ind. Use Film Process/Machine Shop	Total	265	275
162	Studio: Recording	50/1,000 Gr SF	265	275
163	Swimming Pool (Commercial with backwash filters)	Total	265	275
164	Tanning Salon: Independent, No Shower (r)	50/1,000 Gr SF	265	275
165	Tanning Salon: Within a Health Spa/Club	640/1,000 Gr SF	265	275
166	Theater: Drive-In	6/Vehicle	265	275
167	Theater: Live/Music/Opera	3/Seat	265	275
168	Theater: Cinema	3/Seat	265	275
169	Tract: Commercial/Residential	1/Acre	265	275
170	Trailer: Const/Field Office (e)	120/Office	265	275
171	Veterinary Clinic/Office	250/1,000 Gr SF	265	275
172	Warehouse	30/1,000 Gr SF	265	275
173	Warehouse w/ Office	Total	265	275
174	Waste Dump: Recreational	400/Station	2650	2750
175	Wine Tasting Room: Kitchen	200/1,000 Gr SF	265	275
176	Wine Tasting Room: All Area	50/1,000 Gr SF	265	275