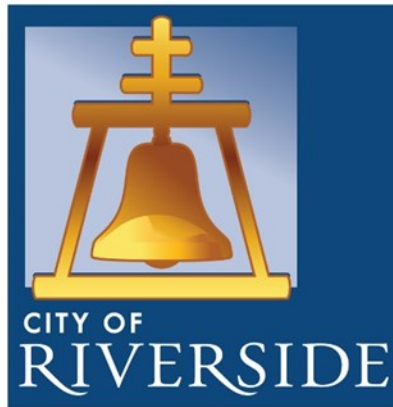


Appendix N

Water Supply Assessment

**Water Supply Assessment
for
Northgate Center Development
City of Riverside**



City of Arts & Innovation

Issued By:

**City of Riverside
Public Utilities Department; Water Engineering
3750 University Avenue,
Riverside, California 92522**

**Water Supply Assessment
for
Northgate Center Development
City of Riverside**

Section 1: Introduction:

On January 1, 2002, a new law, Senate Bill 610 (SB 610), took effect. SB 610, which has been codified in the Water Code beginning at Section 10910, requires the preparation of water supply assessments (WSA) for projects that propose to construct more than 500 residential units, or that will use an amount of water equivalent to what would be used by 500 residential units.

The purpose of this WSA is to satisfy the requirements under SB 610. SB 610 stipulates that when an environmental review is required in connection with certain development projects for approval by the lead agency, the water agency that is to serve the development must complete a water supply report to assess the adequacy of water supplies available to meet demands. The assessment must evaluate water supplies that are or will be available during normal, single-dry and multiple-dry years during a 20-year projection to meet existing and planned future demands including the demand associated with the proposed development.

The assessment includes, among other information, an identification of existing water supply entitlements, water rights, or other water service contracts relevant to the identified water supply for the proposed project and water received in prior years pursuant to those entitlements, rights, and contracts and a description of the quantities of water received in prior years by the public water system.

The development project under consideration for this WSA is the Northgate Center (Project).

Information in the City's 2015 Urban Water Management Plan (UWMP) and the 2009 Water Supply Plan were used in development of this WSA.

Section 2: Project Description

The approximately 35.4 acre project site is located in the northwestern section of the City of Riverside, and is generally bounded by Orange Street to the west, Strong Street to the north, State Route 60 to the south and Interstate 215 to the east. The project site is comprised of the following eight parcels: 209-020-047, 209-020-048, 206-151-036, 209-060-026, 209-060-022, 209-070-014, 209-070-009, and 206-151-029. The project site currently has a General Plan Land Use designation of O - Office and MDR - Medium Density Residential, and Zoning designations of R-1-7000 - Single Family Residential, R-3-1500 - Multiple Family Residential, and R-1-7000-WC – Single Family Residential and Water Course Overlay.

The project site is currently vacant with the exception of a concrete flood control channel (University Wash) that bisects the site. The project site is located adjacent to residential uses to the north, Fremont Elementary School to the west, Interstate 215 to the east and State Route 60 to the south. As shown in the Land Use Plan.

The proposed mixed-use project consists of multi-family residential dwelling units, multi-tenant commercial buildings, a vehicle fueling station, a drive-thru restaurant, two hotels, a Recreational Vehicle (RV) overnight parking component, and on-site activities (e.g., farmers market, outdoor entertainment).

The residential portion of the project will be constructed on approximately 18.4 acres on the northern half of the project site and includes a total of 482 one-, two- and three- bedroom residential units in 21 three-story buildings. Project plans identify 479,773 square feet of residential space, resulting in a density of 26.2 dwelling units per acre.

The commercial/retail, vehicle fueling station and drive-thru restaurant portion of the project would be located on approximately 7.6 acres on the southwest corner of the project site and includes a total of 49,500 square feet of multi-tenant lease space for restaurant and commercial retail tenants spread across 8 single-story buildings.

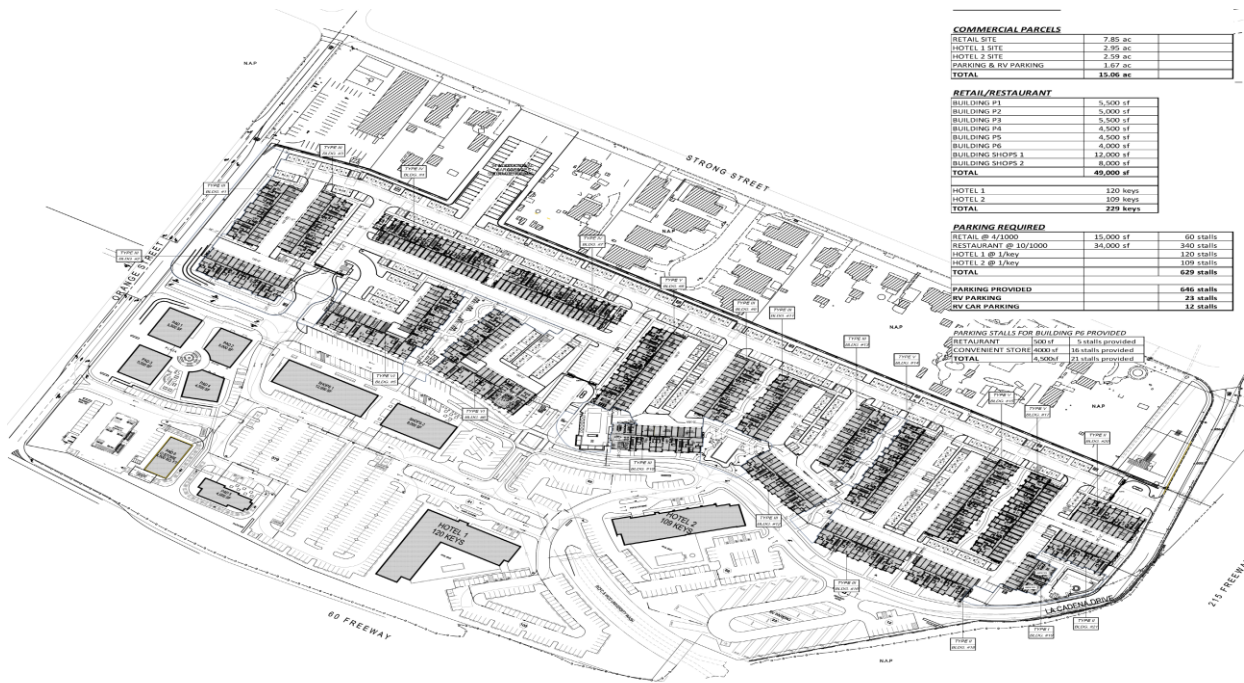
Two hotel buildings would be located on approximately 7.4 acres, near the southeast corner of the project site. The proposed RV Parking is located in the southeast corner of the project site, closest to the I-215/SR 60 interchange, adjacent to the proposed hotels. The RV Parking will contain 23 RV spaces and 23 vehicle stalls. The two, four-story hotels will total 130,000 square feet and contain 229 guest rooms. The hotels will operate independently of each other.

The proposed development includes provisions for live entertainment and events and a farmer's market to serve the proposed residences and surrounding community. The live entertainment would occur within the courtyard in the center of Buildings P1 through P4. The events would occur on occasion, on Fridays, Saturdays, or Sundays. Events could include farmers market, outdoor entertainment, car shows (demonstration only) and similar type events.

As part of the proposed development the applicant has submitted a Parcel Map subdividing 8 parcels into 15 parcels.

Construction on the project is anticipated to being in 2019, with full occupancy anticipated by 2022.

NORTHGATE CENTER PLAN



COMMERCIAL PARCELS		
RETAIL SITE	7.85 ac	
HOTEL 1 SITE	2.95 ac	
HOTEL 2 SITE	2.58 ac	
PARKING & RV PARKING	1.67 ac	
TOTAL	15.06 ac	

RETAIL/RESTAURANT	
BUILDING #1	5,000 sf
BUILDING #2	5,000 sf
BUILDING #3	5,000 sf
BUILDING #4	4,500 sf
BUILDING #5	4,500 sf
BUILDING #6	4,000 sf
BUILDING SHOPS 1	12,000 sf
BUILDING SHOPS 2	8,000 sf
TOTAL	49,000 sf
HOTEL 1	120 rooms
HOTEL 2	100 rooms
TOTAL	220 rooms

PARKING REQUIRED		
RETAIL @ 5/1000	15,000 sf	60 stalls
RESTAURANT @ 10/1000	34,000 sf	340 stalls
HOTEL 1 @ 1/room		120 stalls
HOTEL 2 @ 1/room		100 stalls
TOTAL		620 stalls
PARKING PROVIDED		640 stalls
RV PARKING		24 stalls
RV CAR PARKING		12 stalls

PARKING STALLS FOR BUILDING #6 PROVIDED		
RESTAURANT	400 sf	5 stalls provided
CONVENIENT STORE	800 sf	10 stalls provided
TOTAL	1,200 sf	15 stalls provided

Northgate Center Water Supply Assessment Demand Table

Land Use Area	Product Type	Acreage	Units	Duty Factor ²	SB 7X-7 ¹	Potable Demand		
				(GPM/AC)	Demand AFY	Demand (GPM)	Demand (GPD)	Demand (AFY)
RES	HDR 710 SF - 1297 SF	18.4	482	-	0.715/unit ¹	-	-	345
COM ³	G-C	10.68	-	2.01 ³	-	21.47	30,912	35
Road	La Cadena Drive	2.8	-	0.51	-	1.43	2,056	2
Road	Orange Street	0.2	-	0.51	-	0.10	147	-
Project Totals		31.1	482			23.0	33,115	382

Notes:

1 - Using the updated compliance target pursuant to the SB X7-7 as shown in Table 6-1 of the 2015 Urban Water Management

2 - Water Duty Factor was taken from the RPU 2009 Water Master Plan (Table 2-1).

3 - Includes demand for the hotels.

Section 3: Requirement to Prepare a Water Supply Assessment

The City must determine whether the Project requires preparation of a water supply assessment. The City provides municipal water service to many of its residents and its service area includes the Project site. Because the City has over 5,000 water supply connections, SB 610 (Water Code section 10912 (a)) requires the City to prepare a water supply assessment when a project includes any of the following components: (1) more than 500 residential dwelling units, (2) a shopping center or business with more than 500,000 square feet of floor space or more than 1,000 employees, (3) a commercial office building with more than 250,000 square feet of floor space or more than 1,000 employees, (4) a hotel or motel with more than 500 rooms, (5) an industrial, manufacturing or processing plant, or an industrial park, with more than 650,000 square feet of floor area, more than 1,000 employees, or that occupies more than 40 acres, (6) a mixed-use project that includes one or more of the projects specified in the subdivision, or (7) 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.

The proposed project includes a mixed- use project and meets the triggering criterion set forth in Water Code section 10912(a)(6) and (7). Therefore, the City has prepared this Water Supply Assessment to evaluate the water demands of the proposed Northgate Center Development.

Section 4: Urban Water Management Plan

In accordance with the California Urban Water Management Planning Act, the City of Riverside adopted an Urban Water Management Plan (2015 UWMP) in June of 2016. As required by law, the 2015 UWMP includes projected water supplies required to meet future demands through 2040.

The 2015 UWMP describes the City's demand and supply; and, concludes that the City with the proposed plans for additional water supply would have adequate supplies to meet municipal, commercial and industrial demands, throughout the City's service area, through 2040. The 2015 UWMP is generally based on the overall anticipated growth rate within the City's water service area. A copy of the City's 2015 UWMP can be found at (<https://www.riversideca.gov/utilities/about-rpu/urban-water-management-plan.asp>).

Section 5: City's Existing and Projected Water Supply

5.1 Water Supply Entitlements, Rights or Contracts That May Be Used to Serve the Project

All water supply entitlements, water rights, and/or water service contracts that may be used to serve the Project are set forth in the 2015 UWMP. Pursuant to Water Code 10910(c)(2), the City incorporates the 2015 UWMP by reference.

The City's existing and projected water supplies are presented in the following Table (Table 1-3 of the 2015 UWMP). The sources of water are local groundwater basins, imported water, recycled water, and anticipated supply projects. Currently, the Bunker Hill and Riverside (North & South) basins are the main sources for the City's water production.

Actual and Planned Water Supplies (acre-feet per year) from Table 1-3 of 2015 UWMP

Water Supply	Additional Detail on Water Supply	2015 Actual	2020	2025	2030	2035	2040
Groundwater	Bunker Hill	53,793	55,263	55,263	55,263	55,263	55,263
Groundwater	Banking BH Conjunctive Use	0	0	2,000	2,000	2,000	2,000
Groundwater	Seven Oaks Dam Phase II (Enhanced)	0	1,000	1,000	1,000	1,000	1,000
Groundwater	BH Active Recharge 2025	0	0	1,500	1,500	1,500	1,500
Groundwater	Riverside North	6,357	10,902	10,902	10,902	10,902	10,902
Groundwater	RNASR	0	2,000	2,000	2,000	2,000	2,000
Groundwater	Riverside South	13,571	16,880	16,880	16,880	16,880	16,880
Groundwater	Box Springs	0	0	0	2,800	2,800	2,800
Groundwater	Columbia, Etc. Stormwater	0	0	1,500	1,500	1,500	1,500
Groundwater	Rialto-Colton	1,205	2,728	2,728	2,728	2,728	2,728
Recycled water	RWQCP	200	6,430	6,430	6,430	6,430	6,430
Purchased or Imported Water	From WMWD	0	21,700	21,700	21,700	21,700	21,700
Total		75,126	116,903	121,903	124,703	124,703	124,703
<p>Note:</p> <p>Imported water from WMWD is shown as a supply available to RPU. RPU intends to use this supply only as necessary and if needed.</p>							

Bunker Hill Adjudicated Groundwater Basin

Much of the City's water supply comes from the Bunker Hill Groundwater Basin in San Bernardino County. The Bunker Hill Basin is adjudicated. Under the Western-San Bernardino Judgment entered for the Bunker Hill Basin, the City and Gage Canal Company are entitled to export 51,261 acre-feet of water annually. The City condemned and acquired most of the assets of the Gage Canal Company through a stipulated judgment in 1965. The Gage Canal Company assets acquired included pumping facilities, water rights in the Bunker Hill Basin, the Gage Pipeline and Gage Canal, which were and are used to transport water from San Bernardino to Riverside. The City, as a Gage shareholder, has the right to receive certain amounts of water. And, the City has increased its entitlement to water through further acquisition of Gage Canal Company stock.

The City acquired additional rights to withdraw water from the Bunker Hill Basin when it acquired shares of stocks in the Meeks & Daley and Riverside Highland water companies. Under the Judgment, Agua Mansa Water Company and Meeks & Daley Water Company are collectively entitled to export 7,773 acre-feet of water per year from the basin. The Western-San Bernardino Judgment also allows Riverside Highland Water Company to export 1,986 acre-feet of water per year. As of 2018, the City's shares of

stocks in Agua Mensa, Meeks & Daley and Riverside Highland water companies entitle the City to export 3,448 acre-feet of water from the basin each year.

The City has an additional right to Bunker Hill Basin withdrawals as the successor-in-interest to the Regents of the University of California's share of the extractions. The Western-San Bernardino Judgment allowed the University to withdraw 536 acre-feet per year of water from the basin. The Regents subsequently assigned this right to the City. With this right, the total export water rights of the City from the Bunker Hill Basin as of 2018 is 53,426 (49,542 + 55,263 (51,261+3,348 + 536448+554) acre-feet per year.

Seven Oaks Dam Conservation Project

The Western-San Bernardino Judgment allows the City to acquire additional water rights in the Bunker Hill Basin through new conservation. It is estimated that the City's share of water from this project will average about 4,000 acre feet per year.

Riverside Groundwater Basin

The City also has the right to withdraw water from the Riverside groundwater basin. For jurisdictional purposes, the Riverside groundwater basin is divided into the Riverside North and Riverside South sub-basins, but the basin is one hydrological unit. The Riverside/San Bernardino County line is the dividing line between the Riverside North and Riverside South sub-basins.

In recent years, the City has been producing about 27,600 acre-feet per year of water from its domestic wells in the Riverside (North & South) Basin. To further augment its production from the Riverside basin, the City through its public utility (RPU) in conjunction with Western Municipal Water District (WMWD) and San Bernardino Valley Municipal Water District (the Valley District), have proposed the construction of a rubber dam in the Santa Ana River to recharge, on average, about 6,000 acre feet per year and divert about 4,000 acre feet per year to the Riverside Canal.

Rialto-Colton Groundwater Basin

The City plans to develop a potable groundwater source from the Rialto-Colton Basin as part of its long-term water supply plan. This plan will increase the City's production capacity by 2,728 acre feet per year by 2040.

Recycled Water

The City's wastewater treatment plant provides recycled water that can be used for non-potable uses. The City currently uses approximately 260 acre-feet of recycled water per year. A future recycled water project is planned from Don Derr Park up to the intersection of Cleveland Avenue and Jackson Street to introduce highly treated recycled water at the Mockingbird Reservoir for direct potable reuse (DPR) when the regulatory framework is established in the future to permit such usage; however, this second phase of the project is unfunded at this time in the in the City's biennial budget.

Imported Water

The City has a contract to obtain State Water Project water from the WMWD. A copy of the City's contract with WMWD to obtain this water is part of the 2015 UWMP (Appendix E of UWMP) and incorporated herein by reference.

5.2 Amount of Water Historically Received

The amount of water the City has historically received under each of the water rights described in Section 5.1 is set forth in the 2015 UWMP. Pursuant to Water Code 10910(c)(2), the City incorporates by reference in this WSA the information set forth in the 2015 UWMP.

Groundwater Production

The City's annual domestic groundwater production from 2010 through 2015 is presented in the following Table (Table 7-2 of the 2015 UWMP). As indicated in this table the groundwater volume pumping ranged from 90,400 acre-feet to 75,000 acre-feet with an average production of 84,000 acre-feet during this period.

City's Domestic Groundwater Volume Pumped during 2010– 2015 Period

Table 7-2. DWR Table 6-1R of 2015 UWMP

Groundwater Type	Basin Name	Water Quality	2010	2011	2012	2013	2014	2015
Alluvial Basin	Bunker Hill	Drinking Water	45,360	46,148	50,515	46,702	47,862	48,086
Alluvial Basin	Riverside North	Drinking Water	8,993	7,397	10,862	9,237	6,735	5,095
Alluvial Basin	Riverside South	Drinking Water	11,942	13,773	10,926	14,859	15,221	7,966
Alluvial Basin	Bunker Hill	Raw Water	4,229	4,191	5,859	7,329	5,399	5,707
Alluvial Basin	Riverside North	Raw Water	3,127	5,339	4,319	2,943	2,013	1,262
Alluvial Basin	Riverside South	Raw Water	8,695	7,739	7,921	5,976	6,595	5,605
Alluvial Basin	Rialto-Colton	Raw Water	0	0	0	0	0	1,205
Total			82,346	84,587	90,402	87,046	83,825	74,926

Imported Water

The City hasn't received imported State Water Project water since 2009.

Recycled Water

The City has the capacity to provide recycled water for non-potable uses, but to date, there has been little demand for this water because non-potable groundwater has been available for irrigation use. As of 2015, the City was providing up to 260 acre-feet per year that was primarily used for irrigation. In August of 2018, the City completed construction of the first phase of a recycled water pipeline extending from the intersection of Van Buren Boulevard and Jackson Street to Don Derr Park on Monroe Avenue.

This project will provide over 820 AFY of direct irrigation use for potential recycled water customers along the pipeline alignment. A future second phase will continue from Don Derr Park up to the intersection of Cleveland Avenue and Jackson Street. This second phase project will introduce highly treated recycled water at the Mockingbird Reservoir for direct potable reuse (DPR) when the regulatory framework is established in the future to permit such usage; however, this second phase of the project is unfunded at this time in the in the City's biennial budget.

Section 6: Description of Groundwater Basins and Analysis of Groundwater Supply

As indicated in Section 5 above, the City's primary source of supply is groundwater, and the UWMP contains the following information, which the City incorporates into this WSA by reference, pursuant to Water Code 10910(c)(2):

- a. Descriptions of groundwater basin(s) that will be used to serve the Project - Please see 2015 UWMP and Section 5.1 above for descriptions of the two (2) groundwater basins that will be used, in part, to serve the Project.
- b. Legal status of the groundwater basin(s) that will be used to serve the Project.
 - (1) Bunker Hill - As indicated in the 2015 UWMP and in Section 5.1 above, the Bunker Hill Basin is adjudicated. The Judgment determined the safe yield of the basin and the amount of water to which the City is entitled. A copy of the Judgment is included in the 2015 UWMP (Appendix D of UWMP) incorporated herein by reference.
 - (2) Riverside - As indicated in the 2015 UWMP and above in Section 5.1, the Riverside basin is adjudicated.
- c. The Bunker Hill Basin, the Rialto-Colton Basin, the Riverside North and South Basins are adjudicated in the Western-San Bernardino judgement (Western Municipal Water District of Riverside County v. East San Bernardino County Water District, Case No. 78426). As such all of the above named basins are exempt from the Sustainable Groundwater Management Act (SGMA).

Section 7: Existing and Forecasted Water Demands

The 2015 UWMP contains the past, current and forecasted water use within the City's service area, and, pursuant to Water Code 10910(c)(2), the City incorporates by reference the information in this WSA.

Two water supply assessments were prepared prior to the 2015 UWMP – one for the California Baptist University and another one for the River Valley development in November 2015.

In addition, a cooperative agreement for long-term wheeling and surplus water sales between City of

riverside and Western Municipal Water District-Riverside was effective in July of 2017. The agreement comprises a delivery of a minimum of 2,000 AFY of Riverside water to Western over the next ten years.

The demands for these developments and the agreement are taken into account in the City's Water Supply Plan, prepared in 2009, and are reflected in the 2015 UWMP.

Section 8: Adequacy of Water Supply

The City's total projected water supplies available during normal, single-dry, and multiple-dry years over a 20-year period would be adequate to meet the projected water demand associated with the proposed Northgate Center project, as it is estimated to have a smaller water demand than the previously entitled River valley development project. As indicated in the 2015 UWMP (Section 5), the City's water supply can potentially surpass the projected water demand when the planned water conservation program is in place and the future water supply plans, such as use of recycled water and groundwater development, are implemented.

Because 100% of the City's water supplies come from groundwater, the City is generally not subject to shortfalls in times of drought, so single-dry or multiple-dry years do not create supply uncertainty or water shortages.

Therefore, the City's total projected water supplies (with proposed plans) during the next 20 years would be sufficient to meet the potential 382 acre-feet per year of water demand resulting from this Project in addition to existing and planned future water uses.

However, this finding of adequacy is solely for the Northgate Center. Additional water supply assessments may be needed, pursuant to Water Code section 10910(h), which provides that additional water supply assessments shall be required for subsequent projects that were part of a larger project for which a water supply assessment was completed and one or more of the following changes occurs: "(1) Changes in the project that result in a substantial increase in water demand for the project, (2) Changes in the circumstances or conditions substantially affecting the ability of the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), to provide a sufficient supply of water for the project, or (3) significant new information becomes available which was not known and could not have been known at the time when the assessment was prepared."