



## Memorandum

**To:** Honorable City Council  
Alex D. McIntyre, City Manager

**From:** Susan Rungren, Ventura Water General Manager

**Date:** July 19, 2021

**Re:** Water Rights Dedication and Water Resource Net Zero Fee Nexus  
Report: 2021 Update

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To ensure that new development does not adversely affect the water supply or water supply reliability of the City's existing customers, Ventura Water implemented the Water Rights Dedication and Water Resource Net Zero Policy that went into effect on August 11, 2016. The objective of these actions are to ensure that adequate water supplies are available for proposed new or intensified developments without adverse impacts to the City's existing customers or approved new developments. Developers could dedicate adequate water rights to support a proposed new or intensified development, implement extraordinary onsite or offsite conservation measures and/or pay a net zero fee so that the City could develop the necessary water supplies.

### **Background**

The City of San Buenaventura (City) owns and operates a water system that serves approximately 32,000 service connections, within and outside the City boundaries. Water is supplied through 3 main sources: local groundwater from the Mound, Santa Paula, and Oxnard Plain basins, treated water purchased from Casitas Municipal Water District (Casitas) and water diverted from the Ventura River and treated for potable use. Water from Casitas is primarily used by the City's customers that are within the boundaries of Casitas. Water service is provided to all residential, commercial, industrial and irrigation customers, including fire protection users.

The City water system is a complex system of 14 pressure zones, 10 wells, 19 booster stations, approximately 385 miles of pipelines ranging from 4-inches to 36-inches in diameter, and a total storage capacity of approximately 52 million gallons (mg) in 27 tanks and reservoirs. The system delivers water from sea level to a maximum elevation of over

1,000 feet. The City operates three purification facilities, including one membrane filtration treatment plant for surface water sources on the west side of the City, and two iron/manganese removal treatment plants for groundwater sources on the east side<sup>1</sup>.

In addition, recycled water from the City's Ventura Water Reclamation Facility is delivered to recycled water customers in close proximity to the facility located in the Ventura Harbor and along the Olivas Park Drive corridor. The City's existing Reclaimed Water Policy encourages the use of recycled water, and new development located near existing recycled water mains or within the defined recycled water focus area is required to use recycled water in lieu of potable water for irrigation and other uses as appropriate.

The City has various water planning documents that address water demands and supplies including the annual Comprehensive Water Resources Reports and Urban Water Management Plans (UWMP). The City's existing 2005 General Plan and 2011 Water Master Plan are currently being updated. Because these documents were prepared for different purposes, the water demand and supply projections differ. In 2013, the first Comprehensive Water Resources Report (CWRR) was developed per the City Council's request to compare the City's water demand projections with its available supplies. City Council approved the Final 2013 CWRR and directed staff to provide an annual update on the City's projected water supply and demand, and the document has been updated each year since. The UWMP is updated every five years and the 2020 UWMP was adopted by City Council in June 2021. Relevant conclusions of the 2021 CWRR and the 2020 UWMP are summarized below and form the basis for this evaluation. These documents are available at <https://www.cityofventura.ca.gov/1081/Library-of-Reports>.

### **Water Supply Reliability**

The City's existing reliable water supply is nearly equal to the City's current water consumption. The 2021 Comprehensive Water Resources Report (CWRR) indicates that the calendar year (CY) 2020 water demand, including a 6.15 percent water loss factor, was 14,130 acre-feet per year (AFY). The recommended baseline water demand for existing conditions (utilizing the most recent 5-year average, CY 2016-2020) was set at 14,030 AFY. Based on the estimated water demands of development projects that were approved, but not yet connected to the City's water system as of December 31, 2020, the 2021 CWRR projected the near-term water demand to grow to 14,928 AFY by 2025.

The 2021 CWRR summarizes the City's current water supply capacity as 5,425 AFY from Casitas, 4,200 AFY from the Ventura River (Foster Park), 4,000 AFY from the Mound Groundwater Basin, 5,304 AFY from the Oxnard Plain Groundwater Basin, 3,126 AFY from the Santa Paula Groundwater Basin, and 576 AFY of recycled water. Accordingly, the City's current water supply capacity totals 22,631 AFY during a normal hydrologic

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<sup>1</sup> City of San Buenaventura Water Master Plan, 2011.

year assuming no operational constraints. However, operational, climatic, and regulatory factors limit the availability of supplies in a given year. The projected water supply for 2021 of 16,345 AF is nearly 30 percent lower than the supply capacity due to drought restricted supplies from Casitas and Ventura River and operational constraints in the Mound and Santa Paula groundwater basins. Groundwater supplies from the Oxnard Plain Basin are expected to decrease by 45 percent between 2021 and 2040. The drought risk assessment in the 2020 UWMP projects that water supplies will range from 16,335 AF to 17,580 during consecutive dry years between 2021 and 2025. The 2020 UWMP also projects that water supplies during a five year drought could total only 16,496 AFY by 2045 without the development of additional water supply sources. While the UWMP only requires an analysis of a five year drought, more severe droughts are possible between 2021 and 2050. A worst case scenario drought condition could trigger Stage 2 restrictions in the Santa Paula Basin and Stage 5 restrictions from Lake Casitas resulting in a projected water supply of 12,367 AFY.

### **Impact from New Development**

New development places an increased demand for water upon the City's water supply. The City has limited opportunities for developing additional water resources for new development. Dedication of available water rights will provide the City with access to water supplies that will serve and offset the demand of new or intensified development. Water resource net zero fees will be used to develop new facilities that will enable the City to increase water production to serve and offset the demand of new or intensified development. The City's 2021 CWRR projected that development projects that were approved or under construction as of December 31, 2020 will increase water demands by 898 AFY by 2025. Using a growth rate of .54 percent per year (Per City Planning Department based on the Department of Finance historical data for population), the 2020 UWMP projects that water demands due to new development will increase by approximately 1,600 AFY between 2025 and 2040 to 16,422 AFY. Projecting growth out to 2050 results in an estimated total increase in demand of 3,070 AFY.

### **Additional Water Resources for New Development**

There exists a need for additional water resources, especially during drought periods, and that need is partially caused by new or intensified development.

The 2015 Comprehensive Water Resources Report identified future and potential additional future water supplies. Future water supplies included increased Casitas deliveries to areas within the Casitas service area (based on estimated growth within the Casitas service area), restoration of the Foster Park wellfield production capacity, construction and operation of Saticoy Well No. 3 to increase supply from the Santa Paula Basin, and increased recycled water deliveries. These future water supplies would

increase the future available supplies to 24,377 AFY. Potential additional future water supplies included deliveries of imported water supplies from the State Water Project, Saticoy County Yard Well, recycled water and/or Potable Reuse from the Ventura Water Reclamation Facility (VWRF), recycled water from Ojai Valley Sanitary District (OVSD), and ocean desalination.

Prior to the adoption of the Water Rights Dedication and Water Resource Net Zero Fee in 2016, the Water Commission was presented with three scenarios of water supply portfolios based on the above potential supply projects. The Water Commission selected Portfolio 3, which included potable reuse, Foster Park Wellfield Restoration, and desalination. Since 2016, significant progress has been made towards developing additional water supply projects. Based on the conclusions of the Ventura Water Supply Projects Environmental Impact Report (EIR), which was certified by City Council in October 2019, staff recommends that the fee only include the VenturaWaterPure Program projects in the calculation of the fee basis. The City is moving forward with implementing the VenturaWaterPure Program, and it will provide a new, reliable, and drought-resilient water supply source for Ventura Water's customers.

Staff no longer recommends including the Foster Park Wellfield Restoration Project in the fee basis because based on current regulatory, climatic, hydrogeologic, and operational conditions, it is unlikely that the project would provide additional water supply on a consistent basis. As stated in the 2021 CWRR: "The Foster Park Wellfield Production Restoration project is identified as a Capital Improvement Project but is currently unfunded. The project involves the replacement of the destroyed wells and construction of new facilities to restore historical production capabilities of 6,700 AFY *in a wet year*." (2021 CWRR, p. 4-14 [emphasis added].)

Staff also does not recommend including a potential Desalination project in the fee basis because it is likely to be unnecessary if sufficient water supply volumes are generated by the VenturaWaterPure Program, and is therefore too speculative at this time. As stated in the 2021 CWRR: "According to the Ventura Water Supply Projects Environmental Impact Report certified on October 14, 2019, if sufficient water supply is not available from the diversion of discharges to the SCRE, then the City may need to develop desalination facilities to meet future water supply needs. Phase 2 of the proposed projects would augment water supplies to meet future water needs, including the accommodation of planned growth, either through increasing the amount of recycled water produced, or construction of an ocean desalination facility. This would be accomplished through either the expansion of the AWPF as a first option pending regulatory approvals, or, if this option is not approved or does not meet the City's water supply needs, through construction of an ocean desalination facility." (2021 CWRR, p. 4-23.)

The City is also working on design of the State Water Interconnection Project which would allow the City to receive delivery of its State Water entitlement. While the City's State Water supply contract provides the City with a maximum annual allocation of 10,000 acre-

feet, the actual allocation of available water is set annually by the Department of Water Resources. Based on historical allocations, the range of available State Water Project water has ranged from 5% to 100% over the last 25 years. Although an important project to improve system reliability by providing a backup supply for the City's other supply sources, the City does not recommend including State Water in the fee basis due to its variability and uncertainty in any given year.

### **Mitigation of New Development Water Resources Impacts**

In order to mitigate the water resource impacts of new urban development, it is necessary and desirable for new or intensified urban development to provide supplemental water resources to the City's water system in an amount proportional to the new demand created by such development. This can be accomplished by dedication of water rights where available. The amount of the recommended water resource net zero fee is based on the required capital cost to develop the additional water supplies to serve new development.

Based on the methodology used in the 2021 CWRR to estimate demands, it is estimated that new development will increase demand by 3,070 AFY by the Year 2050. The VenturaWaterPure Program is anticipated to provide an additional 5,400 AFY in reliable water supply by the Year 2050. Therefore, 3,070 AFY of the 5,400 AFY of new supply is estimated to be required to supply new development and the remaining 2,030 AFY would provide benefits to existing customers and overall reliability.

### **Evaluation of a Water Resource Net Zero Fee Report**

In May 2016, the City Council accepted the Evaluation of a Water Resource Net Zero Fee Report, prepared by Water Consultancy, a water resource expert firm. That evaluation established the estimated costs of obtaining water resources and the basis for determination of the net zero fee. The amount of the recommended water resource net zero fee in the report was based on the required capital cost and financing cost to develop the additional water supplies to serve new development. Per the Net Zero policy, the fee amount must be adjusted accordingly based on a new or updated report no greater than every five years or at the same time that water rates are revisited for adjustments. Therefore, Raftelis Financial Consultants, Inc. was retained to prepare an update to this report during the 2020-2021 water and wastewater rate setting process.

### **Water Demand Factors**

The 2016 Evaluation of a Water Resource Net Zero Fee Report utilized the water demand factors established in the 2013 Comprehensive Water Resources Report. In 2020, the City's water demand factors were updated to reflect current usage behavior and to establish additional relevant subcategories for customer classes. Staff and

applicants utilize these updated water demand factors to determine the impact of development on the water supply and to calculate estimated water demands and the amount of water right and/or net zero fee required to offset new water demand. Below are the water demand factors utilized from Table 10 of the 2020 Water Demand Factor Study:

**Water Demand Factors**

<b>Category</b>	<b>Water Demand Factor (gpd/unit)</b>	<b>Water Demand Factor (AFY/Unit)</b>
Single-Family	294/du	0.33 /du
Multi-Family	209/du	0.23 /du
Accessory Dwelling Unit	154/ksf	0.17 /du
Office	38/ksf	0.04/ksf
Medical/Dental Office	168/ksf	0.19/ksf
Hotel (w/ restaurant)	172/room	0.19/room
Hotel/motel (no restaurant)	134/room	0.15/room
Public & Institutional	68/ksf	0.08/ksf
School	20/student	0.02/student
Restaurant (sit-down)	673/ksf	0.75/ksf
Restaurant (fast-food)	870/ksf	0.97/ksf
Brewery	435/ksf	0.49/ksf
Bakery/Coffee Shop	149/ksf	0.17/ksf
Grocery Store	156/ksf	0.17/ksf
Multi-Tenant Commercial	155/ksf	0.17/ksf
Single-Use Commercial	105/ksf	0.12/ksf
Self-Storage	286/acre	0.32/acre
Church	92/ksf	0.10/ksf
Gym (w/ pool)	213/ksf	0.24/ksf
Car Wash	1,081/ksf	1.21/ksf
Gas Station (w/ car wash)	2,342/ksf	2.62/ksf
Gas Station	255/ksf	0.29/ksf
Assisted Living	91/bed	0.10/bed
Parks/Golf Course	1,720/acre	1.93/acre

*gpd – gallons per day*

*AFY – acre foot per year*

*du – dwelling unit*

*ksf – 1,000 square feet*

*Source: Final Water Demand Factor Study dated April 8, 2020*

*\*Water demand factors include 7% water loss and 20% adjustment for planning purposes.*

Conceptual project applications will use the above land use categories. If the proposed project does not fit any of the above categories (i.e. industrial), the water demand of the proposed use will be assessed on a case by case basis. As a project is revised, further defined, density decreased or density increased, the water demand for the project will be required to be revised. See attached Exhibit A: Sample Water Demand Impact Calculation as an example of how the demand factor will be used to calculate the required water right allocation and/or net zero fee to be paid. These demand factors establish the relationship between the amount of water rights to be dedicated or the amount of any in net zero fee to be charged and the impacts of new or intensified development.

### **Nexus between New Development, Ordinance, and Proposed Updated Fee Resolution**

There is a reasonable relationship between the water dedication requirements and net zero fees established by the Ordinance, the updated Fee Resolution, and the impacts of new development because the amount of water to be dedicated and the amount of any fees to be collected is, based upon the water use demand factors and the City of San Buenaventura Evaluation of a Water Resource Net Zero Fee Report: 2021 Update prepared by Raftelis Financial Consultants, Inc., , directly proportional to the impacts of the new development upon which the dedication requirement or fees are imposed.

### **Conclusion and Recommendations**

Based on the City of San Buenaventura Evaluation of a Water Resource Net Zero Fee Report: 2021 Update prepared by Raftelis Financial Consultants, Inc., the recommended water resource net zero fee for 2021 is \$22,806 per AFY of additional demand.

To implement the recommended fees, the City must have an accurate assessment of the potential water demands of proposed new development. Accordingly, it is recommended that the City utilize the City's current local water use demand factors approved by Council in June 2020, as presented in the 2020 Water Demand Factor Study, to the recommended water resource net zero fees for appropriateness and conservatism. In addition, it is recommended that the City continuously monitor its available water supplies so that new supplies are developed in a timely manner to serve potential new development.

**Exhibit A: Sample Water Demand Impact Calculation**

To provide predictability and consistency, a Water Demand Impact Calculation is proposed to summarize a project’s water demand impact and to calculate the amount of water right to be transferred to the City and/or the amount of the net zero fee to be paid.

**Sample Development Project**

**Water Demand Impact Calculation**

<b>Land Use Type</b>	<b>Units</b>	<b>*Water Use Demand Factor</b>	<b>Total Average Demand</b>	<b>AFY Demand</b>
Single-family Residential	85	294 gpd/du	24,990 gpd	27.99
<b>Transferable Water Right (AFY)</b>				<b>27.99</b>
<b>or</b>				
<b>**Net Zero Fee (AFY x \$22,806)</b>				<b>\$638,339</b>

\***Water Demand Factor** – See Table 10, Ventura Water, Water Demand Factor Study, April 8, 2020.

\*\* **Net Zero Fee**– See Evaluation of a Water Resource Net Zero Fee Report: 2021 Update, Raftelis Financial Consultants, Inc., July 19, 2021.