



Memorandum

To: Honorable City Council
Mark D. Watkins, City Manager

From: Shana Epstein, Ventura Water General Manager

Date: March 30, 2016 – Revised May 11, 2016

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

To assure that new development does not adversely affect the water supply or water supply reliability of the City's existing customers, Ventura Water proposes to implement a water rights dedication and water resource net zero fee ordinance and resolution. The objective of these actions would be to assure 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 16 pressure zones, 11 wells, 21 booster stations, approximately 380 miles of pipelines ranging from 4-inches to 36-inches in diameter, and a total storage capacity of approximately 52 million gallons (mg) in 32 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 side¹.

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 previously prepared various water planning documents that address water demands and supplies. These documents include the 2005 General Plan, Amended 2010 Urban Water Management Plan, and 2011 Water Master Plan. Because these documents were prepared for specific and different purposes, the water demand and supply projections differ. The City prepared a Final 2013 Comprehensive Water Resources Report (CWRR) to compare the water demand and supply projections in the previous reports and compare the City's water demand projections with its available supplies. Council approved the Final 2013 CWRR and directed staff to provide an annual update on the City's projected water supply and demand. Relevant conclusions of the 2013 CWRR as well as the subsequent annual reports are summarized and form the basis for this evaluation. These documents are available at www.cityofventura.net./water/supply

Impact from New Development

New development places an increased demand for water upon the City's water supply. The City appears to have limited opportunities for developing additional water resources for new development. Of the sources identified, water from Casitas is limited to City service within the boundaries of Casitas, restoration of the Foster Park wellfield production capacity can be utilized throughout the City, and recycled water can be applied directly or indirectly to benefit new development throughout the City. 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.

¹ City of San Buenaventura Water Master Plan, 2011.

Water Supply Capacity

The City's water supply is currently being used at nearly full capacity. Based on a review of the previous water demand projections and a detailed evaluation of historical water demands, the Final 2013 Comprehensive Water Resources Report (CWRR) indicates that the calendar year (CY) 2012 water demand including a 6.5 percent water loss factor was 18,004 acre-feet per year (AFY). The recommended baseline water demand for existing conditions (utilizing the most recent 5-year average, CY 2008-2012) was set at 17,601 AFY. Based on the estimated water demands of approved and yet unbuilt new developments as of December 31, 2012, the Final 2013 Comprehensive Water Resources Report projected the near-term water demand to grow to 18,643 AFY by 2019.

The Final 2013 CWRR summarizes the City's current available water supplies as 5,000 AFY from Casitas, 4,200 AFY from the Ventura River (Foster Park), 4,000 AFY from the Mound Groundwater Basin, 4,100 AFY from the Oxnard Plain Groundwater Basin, 1,600 AFY from the Santa Paula Groundwater Basin, and 700 AFY of recycled water. Accordingly, the City's current water supply portfolio totals 19,600 AFY during a normal hydrologic year.

The 2015 CWRR is the latest CWRR as of the time of this report and indicates that the CY 2015 water demand including a 6.5 percent water loss factor was 16,995 acre-feet per year (AFY). The reduction in water demand compared to previous years can be attributed to increased water rates and the City's request to customers to voluntarily reduce their water usage by at least 10% in response to the prolonged drought. The recommended baseline water demand for existing conditions (utilizing the most recent 5-year average, CY 2010-2014) was set at 17,167 AFY. Based on the estimated water demands of approved and yet unbuilt new developments as of December 31, 2014, the 2015 Comprehensive Water Resources Report projected the near-term water demand to grow to 18,295 AFY by 2022. Accordingly, the City's current water supply of 19,600 AFY during a normal hydrologic year is only 7.1 percent higher than the projected demand. Since the City's targeted supply buffer is 20%, additional supplies are required. The 20% buffer was established in order to insure that water demands could still be met without the need for mandatory conservation in the event of future droughts or other water shortage event emergencies such as the sudden loss of one of the City's supply sources.

Additional Water Resources for New Development

There exists a need for additional water resources, and that need is caused by new or intensified development. The 2015 Comprehensive Water Resources Report identifies future and potential additional future water supplies. Future water supplies include increased Casitas deliveries of 409 AFY to areas within the Casitas service area (based

on estimated growth from approved projects located within the Casitas service area as of December 31, 2014), restoration of the Foster Park wellfield production capacity by 2,500 AFY, construction and operation of Saticoy Well No. 3 to increase supply from the Santa Paula Basin and increased recycled water deliveries by 700 AFY. These future water supplies would increase the future available supplies to 24,377 AFY. Potential additional future water supplies include 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.

Of the potential additional future water supply sources of water identified for new development, several have uncertainties or complexities that limit their utilization as the basis for development of a water resource Net Zero fee.

At the December 22, 2015 Water Commission Meeting City staff presented a written and oral report regarding potential future water supplies and associated estimate capital costs and financing costs related to three scenarios for potential future supply projects. As summarized in Section 3 of the Evaluation of a Water Resource Net Zero Fee Report, three scenarios of water supply portfolios were developed for determination of the recommended net zero fee. Portfolio 1 would include all of the programs in the City's CIP that relate to new or restored supplies, Portfolio 2 would include Potable Reuse and Foster Park restoration only, and Portfolio 3 would include all of the new or restored supply projects except OVSD. Of the portfolios, Portfolio 2 would not include the Water Commission's water supply buffer of 20 percent.

Currently, State Water is limited by the ability to deliver the water to the City. Although State Water can be wheeled through the Metropolitan Water District of Southern California and Calleguas Municipal Water District, it would be costly and the necessary agreements have not been negotiated. The City continues to discuss potential intertie projects with other local agencies and a Water Intertie Project is included in City's current Capital Improvement Program (Program #97949). In the interim, in June 2013, Council authorized the City's 10,000 acre-foot of State Water Project allocation to be sold in the State's Multi-Year Water Pool Demonstration Program (Program). The Program provides flexibility in pricing and greater return on the City's investment than the traditional pool. In addition, the City Council gave authority to staff to negotiate a temporary transfer for a portion of the City's entitlement to help recuperate the City's investment in State Water.

The City in collaboration with the County of Ventura, constructed and completed the Saticoy County Yard Well and associated facilities in 2009, which would have provided additional water to the City and Saticoy area. Concerns regarding the operation of the Saticoy County Yard Well were raised by the Fox Canyon Groundwater Management Agency and United Water Conservation District. As a result, a Limitation and Tolling

Agreement was put into effect. It was determined that the 2004 County of Ventura Saticoy Operations Yard EIR was not sufficient for the anticipated operations of the Saticoy County Yard Well and, therefore, additional environmental review is warranted for operation of the well. At this time, there are no plans to operate the well due in part to water quality issues with the well.

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 and financing cost to develop the additional water supplies to serve new development.

Evaluation of a Water Resource Net Zero Fee Report

The City has retained Water Consultancy, a water resource expert firm, to prepare an Evaluation of a Water Resource Net Zero Fee Report. That evaluation establishes 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 is based on the required capital cost and financing cost to develop the additional water supplies to serve new development.

Water Land Use Demand Factors

The Final 2013 Comprehensive Water Resources Report refined water land use demand factors to be more consistent with local water use trends and water efficiency, and to provide more accurate estimates. Staff will utilize these factors to determine the impact of development on the water supply and to calculate the amount of water right and/or net zero fee required to offset new water demand. Below are the water land use demand factors to be utilized from Table 3-3 of the report:

Water Use Demand Factors

Land Use	Demand Factor *	AFY/Unit *
<i>Residential</i>		
Residential 0 - 8 du/acre	370 gpd/du	0.415 AFY/du
Residential 9 - 20 du/acre	250 gpd/du	0.280 AFY/du
Residential 21+ du/acre	250 gpd/du	0.280 AFY/du
Commercial/Retail/Industrial/Hotel	265 gpd/ksf	0.300 AFY/ksf

Public/Institutional		
Hospital/Assisted Living	545 gpd/bed	0.611 AFY/bed
Park/Landscape/Irrigation	2,000 gpd/acre	2.240 AFY/acre

gpd/du – gallons per day per dwelling unit

gpd/ksf – gallons per day per thousand square feet

Source: 2013 Comprehensive Water Resources Report

**Consumption factors include 6.5% water loss and 20% adjustment for planning purposes.*

Conceptual project applications will use the above land use categories. For those projects that do not define the residential density, the highest density demand factor will be used. Industrial, commercial, and retail will assume the square footage reflecting the highest and best use of the acreage. 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 and Proposed Ordinance

There is a reasonable relationship between the water dedication requirements and net zero fees established by this Ordinance 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 Water Consultancy Report, directly proportional to the impacts of the new development upon which the dedication requirement or fees are imposed.

Conclusion and Recommendations

Based on the Water Consultancy Report, the recommended water resource net zero fee for 2016 is \$26,457 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. Although the water demand factors of new development have been dropping due to the incorporation of water conservation measures, the City should be conservative in its application of water demand factors. Accordingly, it is recommended that the City utilize the City's current local water use demand factors approved by Council on June 10, 2013, as presented in the Final 2013 Comprehensive Water Resources Report, to the recommended water resource net zero fees for appropriateness and conservatism. It is anticipated that the

City's water demand factors will be reevaluated in 2023 unless additional information requires an earlier reevaluation. 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 Zone 1

Water Demand Impact Calculation

Land Use Type	Units	*Water Use Demand Factor	Total Average Demand	AFY Demand
Residential (0-8) du/ac	85	370 gpd/du	21.84 gpm	35.23
Transferable Water Right (AFY)				35.23
or				
**Net Zero Fee (AFY x \$26,457)				\$932,080

***Water Use Demand Factor** – See Table 3-3, City of Ventura Final 2013 Comprehensive Water Resources Report, June 2013.

**** Net Zero Fee**– See Evaluation of a Water Resource Net Zero Fee, Water Consultancy, March 30, 2016 –Revised May 11, 2016.