



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: December 9, 2014

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Rate Structure Policy Direction For The Drought Related Water Rate Study

RECOMMENDATION:

That Council receive a presentation and provide direction on assumptions for the Drought Related Water Rate Study, specifically for the level of desalination debt service to recover in fixed revenues, and the size of the Tier 2 allotment for Single Family Residential customers.

DISCUSSION:

On July 29, 2014, Council authorized the Public Works Director to execute a City Professional Services contract with Raftelis Financial Consultants, Inc. (Raftelis), for the development of the Drought Related Water Rate Study (Study). The Study is being developed in preparation for continued drought conditions that necessitate the possible of the City's Charles Meyer Desalination Facility (Plant). The scope of the Study is to update the Water Fund Financial Plan and develop a rate structure that generates sufficient revenues to cover the cost of the Plant's reactivation, along with other expected drought related costs. The new rates will also be structured to increase the incentive for reduction in customer water use to ensure that the planned 20 percent reduction in demand continues to be achieved.

In compliance with Proposition 218, the City must notice the maximum rates that could be adopted, but the actual rates adopted shall reflect the actual costs to be incurred. The water rates to support the cost of the Desalination Plant reactivation will be based on the final costs negotiated with the successful contractor. Additionally, the way the Design, Build, Operate contract is structured, the three qualified firms pursuing this project are incentivized to identify the optimum cost effective ways to reactivate and operate the facility.

The estimate for reactivation of the desalination plant is approximately \$32 million, however there are significant unknown potential costs. Final project reactivation cost will not be known until a few weeks prior to award in April 2015. Staff recommends that rate noticing allow the flexibility to generate sufficient revenues to cover the debt service costs associated with financing a \$40 million facility, should proposals come in at that range. Because revenues from water rates are proposed to fund the debt service requirements, the rates can be set to reflect the actual costs as long as they are noticed at that level or higher. Raftelis' work assumes the \$40 million cost in the rate model; however, the actual rates that would be implemented would reflect the final costs.

Raftelis has begun to update the City's existing water rate model, based on preliminary cost information available for a Plant capacity of 3,125 acre-feet per year (AFY), which is considered the first phase of the Plant's reactivation. Annual operating costs are estimated at approximately \$5.2 million per year for full Plant production, and approximately \$2.5 million per year for standby mode. The Study assumes that the Plant will produce 3,125 AFY of desalinated water for one year, beginning in the summer of 2016, and then be put in standby mode, where it will produce a minimal amount of water to keep the Plant in a ready state. If drought conditions continue, prompting the need for extended operations or increased Plant capacity, a subsequent rate study will be performed.

For water rate modeling purposes, Council direction is needed regarding 1) the level of desalination debt service to be recovered in fixed revenues, and 2) the allotments for Single Family Residential Tier 2 for volumetric rates.

Desalination Capital Financing

On September 23, 2014, Council provided policy direction to assume a 10-year repayment period for the capital financing of design and construction of the Plant. With a capital cost of \$40 million, the estimated annual repayment over a ten-year period for Bonds is approximately \$5.3 million. Staff is also working on another form of funding through the Safe Drinking Water State Revolving Fund that could prove to be less but that funding is still uncertain at this time. Therefore, the higher financing option utilizing Bonds will be used during rate noticing.

Two scenarios were considered regarding the portion of desalination debt service to be recovered with the fixed meter charge: one with 100 percent being funded through the fixed meter charge, the other with 50 percent funding through the fixed meter charge and the balance funded through variable charges.

One of the key considerations is that revenues from volumetric charges can be volatile and, thus, less reliable in funding costs. In particular, since the annual debt service costs

tied to the financing of the Plant will be fixed over the ten-year repayment period, having a reliable funding source (i.e., rate structure) is important.

According to California Urban Water Conservation Council (CUWCC) Best Management Practices (BMPs), the City's fixed revenues must be less than 30 percent of the total revenue. This is a conservation incentive to allow for volumetric charges based on the amount of water used. Compliance with the CUWCC BMP's affects the City's eligibility for certain State grant funding. Both of the proposed scenarios meet the requirements of the CUWCC for fixed revenues.

Preliminary results of the Study show that, for a Single Family Residential 5/8" meter, the increase in monthly fixed meter charges would be \$9.18, if 100 percent of the desalination debt service is recovered through fixed revenue. The monthly increase would be \$4.59, if 50 percent of the desalination debt service is recovered through fixed revenue.

Staff recommends that 100 percent of the desalination debt service be recovered through fixed revenue because 1) fixed revenues are a more reliable source of income for meeting debt service payments, and 2) the City will still meet compliance with CUWCC BMPs.

In addition to desalination debt service costs, the City will incur operating costs once the plant is online. Staff recommends that 100 percent of operational costs be recovered through volumetric charges, with the majority of desalination operational costs recovered through higher tiers of water use.

Single Family Residential Tier 2 Allotment^[x1]

The current Single Family Residential (SFR) allotment for Tier 1 and Tier 2 is 16 hundred cubic feet (HCF) per month (based on an allotment of 4 HCF in Tier 1 plus 12 HCF in Tier 2, for a total allotment of 16 HCF). A scenario was evaluated in which the total monthly allotment for Tier 1 and 2 was reduced to 12 units, with 4 HCF in Tier 1 and 8 HCF in Tier 2. With a reduced Tier 2 allotment, more customers would be pushed into Tier 3 usage.

Tables 1 and 2 below show a comparison of the preliminary SFR volumetric rates under both tier allotment scenarios.

Table 1. SFR Volumetric Rates with Existing Tier Allotments (Tier 3 > 16 HCF)

| | Current, \$/HCF | Proposed, \$/HCF | Difference, \$/HCF |
|--------|------------------------|-------------------------|---------------------------|
| Tier 1 | \$3.28 | \$3.38 | \$0.10 |
| Tier 2 | \$6.39 | \$7.38 | \$0.99 |
| Tier 3 | \$13.44 | \$16.53 | \$3.09 |

Table 2. SFR Volumetric Rates with Reduced Tier Allotments (Tier 3 > 12 HCF)

| | Current, \$/HCF | Proposed, \$/HCF | Difference, \$/HCF |
|---------|------------------------|-------------------------|---------------------------|
| Tier 1 | \$3.28 | \$3.38 | \$0.10 |
| Tier 2 | \$6.39 | \$7.31 | \$0.92 |
| Tier 3* | \$13.44 | \$14.33 | \$0.89 |

*For current rates, Tier 3 applies for usage over 16 HCF. In this scenario proposed Tier 3 rates apply to usage over 12 HCF.

With desalination and other drought expenses, preliminary results show an estimated price for Tier 3 to be \$16.53/HCF, which is a \$3.09/HCF increase compared with the current price of \$13.44/HCF. If the SFR Tier 2 allotment is reduced by 4 HCF (to a total of 12 HCF for Tier 1 and 2), the estimated price for Tier 3 water is estimated to be \$14.33/HCF, which is an \$0.89/HCF increase.

The estimated price for Tier 2 is \$7.38/HCF and \$7.31/HCF for the existing reduced Tier 2 allotment scenarios, respectively. Therefore, the projected increase for Tier 2 is roughly \$1/HCF under both scenarios, compared with the current \$6.39/HCF.

If the Tier 2 allotment is reduced, more customers will be subject to the Tier 3 water rate. Additionally, the increase in unit price would be about the same for Tier 2 and Tier 3 (an increase of approximately \$1/HCF for both Tier 2 and Tier 3). Given that SFR customers have met the required demand reduction under the existing tier allotments, staff recommends keeping the existing tier allotments (a total of 16 HCF for Tier 1 and Tier 2) which will result in a rate structure that has higher relative increases for Tier 3 rates compared with Tier 2 rates (an increase of approximately \$3/HCF compared with \$1/HCF, respectively).

Legal Considerations

Council should be aware that the proposed rate model is justified by the costs of service, as required by Proposition 218. While costs are allocated and recovered by customer class, there remains some legal uncertainty as to whether costs should be recovered at the finer-grained, tier level within each class. The proposed rate structure takes the more conservative approach and checks that the unit water rates for each tier are comparable to the the unit cost of water sources. This approach limits the Council's ability to set rates based on policy objectives such as conservation. However staff believes the proposed rates strike a balance of complying with Proposition 218 and while still providing adequate incentives for conservation.

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APPROVED BY: City Administrator's Office



Drought Water Rates Input

City Council
December 9, 2014

Outline

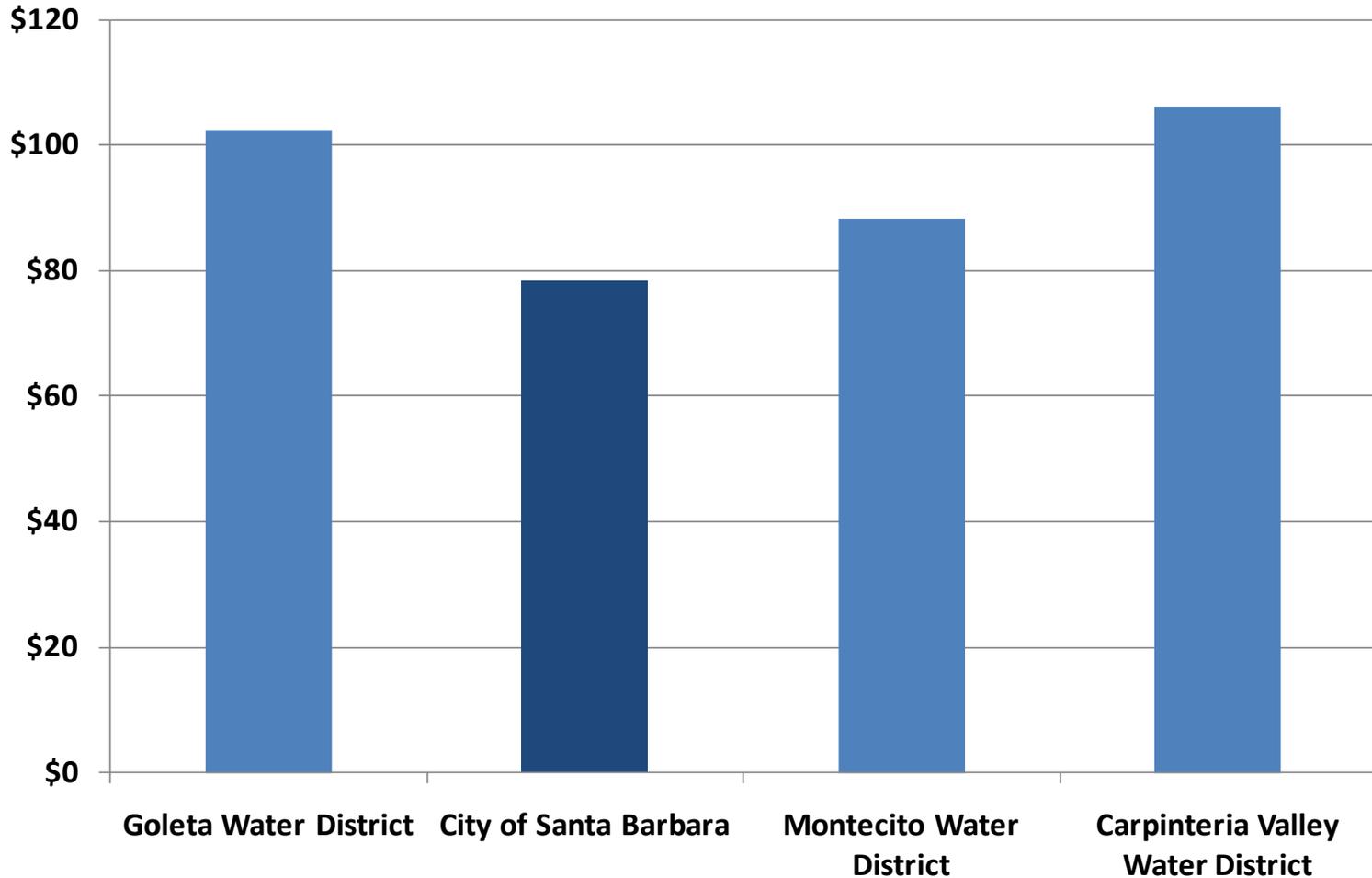
- ◆ Goals of Rate Study
- ◆ Proposed Schedule
- ◆ Introduction of Policy Issues
- ◆ Rate Options Considered
- ◆ Input on Rates

Goals of Rate Study

- ◆ Provide sufficient revenue to meeting Water Operating and Capital needs
 - Drought Costs
 - Desalination Costs
- ◆ Distribute costs in a manner that is consistent with prop 218 requirements
- ◆ Rates that incentivize Conservation

FY 2015 South Coast Water Rates

FY 15 South Coast Monthly Charges for 12 HCF Use
Single Family Residential Customer with 5/8" meter



Schedule

- Aug 2014: Initiate Rate Study & Preliminary Input from Water Commission (WC)
-  Sep-Dec: WC and Council Policy Input
- Jan: Present Proposed Rates; Request Authorization for Noticing (Prop 218)
- Jan 2015 Prop 218 notices mailed
- Mar 2015: Tentative Adoption of Rates
- April 2015: Consider Award of Contract to Reactivate the Desal Plant

Rate Study Policy Issues

- ✓ ◆ What should loan payback period be?
- ✓ ◆ How long should we assume plant operates at full production capacity?
- ✓ ◆ How to manage reserves?
- ◆ How much should financial burden be covered in monthly fixed charges?
- ◆ What should Single Family Tier 2 allotment be?
- ◆ How to advise customers of the rate impacts of desalination?

Cost of Desalination

- ◆ Plant Capacity: 3,125 AFY
- ◆ Rate Study Assumptions:
 - \$40 M capital cost
 - 10 year payback at ~6% interest
 - \$5.3 million per year
 - Loan payments begin July 2015
 - \$5.2 M operating cost (full production)
 - \$2.5 M operating cost (standby mode)

Financial Plan

| Parameter | Projected | | | |
|---------------------------|--------------|--------------|-------------|-------------|
| | FY15 | FY16 | FY17 | FY18 |
| Capital | 7.7 | 6.2 | 6.3 | 10.0 |
| Operating | 33.4 | 34.2 | 35.4 | 35.5 |
| Debt Service | 5.1 | 10.3 | 10.3 | 10.3 |
| Total Expenditures | 46.2 | 50.8 | 52.1 | 55.9 |
| Total Revenue | 39.0 | 48.4 | 52.7 | 58.1 |
| Reserves Funding | (7.2) | (2.4) | 0.6 | 2.2 |

*All values in million of dollars.

Reserve Balance

| Parameter | Projected | | | |
|-------------------------------------|-----------|------|------|------|
| | FY15 | FY16 | FY17 | FY18 |
| Reserve Balance (Ending Balance) | 21.7 | 19.3 | 19.9 | 22.1 |
| Reserve Policy Requirements | 16.8 | 18.9 | 17.6 | 18.6 |
| Surplus/Deficit | 4.9 | 0.4 | 2.3 | 3.5 |

*All values in million of dollars.

Rate Options Considered

| | Option A | Option B | Option C |
|---|------------------|------------------|----------------|
| Portion of Desal Debt Service Recovered From Fixed Meter Charge | 50% | 100% | 100% |
| SFR Combined Tier 1+2 Allotment (Hundred Cubic Feet, HCF) | 16; no change | 16; no change | 12; reduced |

Option A

- ◆ 50% of debt service in Fixed Charge
- ◆ Existing Tier Allotments

| Single Family Residential | | Current | Proposed | | | Difference from Current |
|-----------------------------------|----------|---------|---------------------|-----------------|---------|-------------------------|
| | | | Non-Desal Component | Desal Component | Total | |
| 5/8" Meter Charge | | \$14.22 | \$14.22 | \$4.58 | \$18.80 | \$4.58 |
| Volumetric Charges, \$/HCF | | | | | | |
| Tier 1 | 4 HCF | \$3.28 | \$4.05 | \$0.00 | \$4.05 | \$0.77 |
| Tier 2 | 4-16 HCF | \$6.39 | \$6.87 | \$1.19 | \$8.05 | \$1.66 |
| Tier 3 | >16 HCF | \$13.44 | \$14.74 | \$2.37 | \$17.11 | \$3.67 |

Option B

- ◆ 100% of debt service in Fixed Charge
- ◆ Existing Tier Allotments

| Single Family Residential | | Current | Proposed | | | Difference from Current |
|-----------------------------------|----------|---------|---------------------|-----------------|---------|-------------------------|
| | | | Non-Desal Component | Desal Component | Total | |
| 5/8" Meter Charge | | \$14.22 | \$14.22 | \$9.17 | \$23.39 | \$9.17 |
| Volumetric Charges, \$/HCF | | | | | | |
| Tier 1 | 4 HCF | \$3.28 | \$3.38 | \$0.00 | \$3.38 | \$0.10 |
| Tier 2 | 4-16 HCF | \$6.39 | \$6.20 | \$1.19 | \$7.38 | \$0.99 |
| Tier 3 | >16 HCF | \$13.44 | \$14.16 | \$2.37 | \$16.53 | \$3.09 |

Option C

- ◆ 100% of debt service in Fixed Charge
- ◆ Reduced SFR Tier 2 Allotment

| Single Family Residential | | Current | Proposed | | | Difference from Current |
|-----------------------------------|----------|----------------|---------------------|-----------------|----------------|-------------------------|
| | | | Non-Desal Component | Desal Component | Total | |
| 5/8" Meter Charge | | \$14.22 | \$14.22 | \$9.17 | \$23.39 | \$9.17 |
| Volumetric Charges, \$/HCF | | | | | | |
| Tier 1 | 4 HCF | \$3.28 | \$3.38 | \$0.00 | \$3.38 | \$0.10 |
| Tier 2 | 4-12 HCF | \$6.39 | \$6.20 | \$1.12 | \$7.31 | \$0.92 |
| Tier 3 | >12 HCF | \$13.44 | \$12.10 | \$2.23 | \$14.33 | \$0.89 |

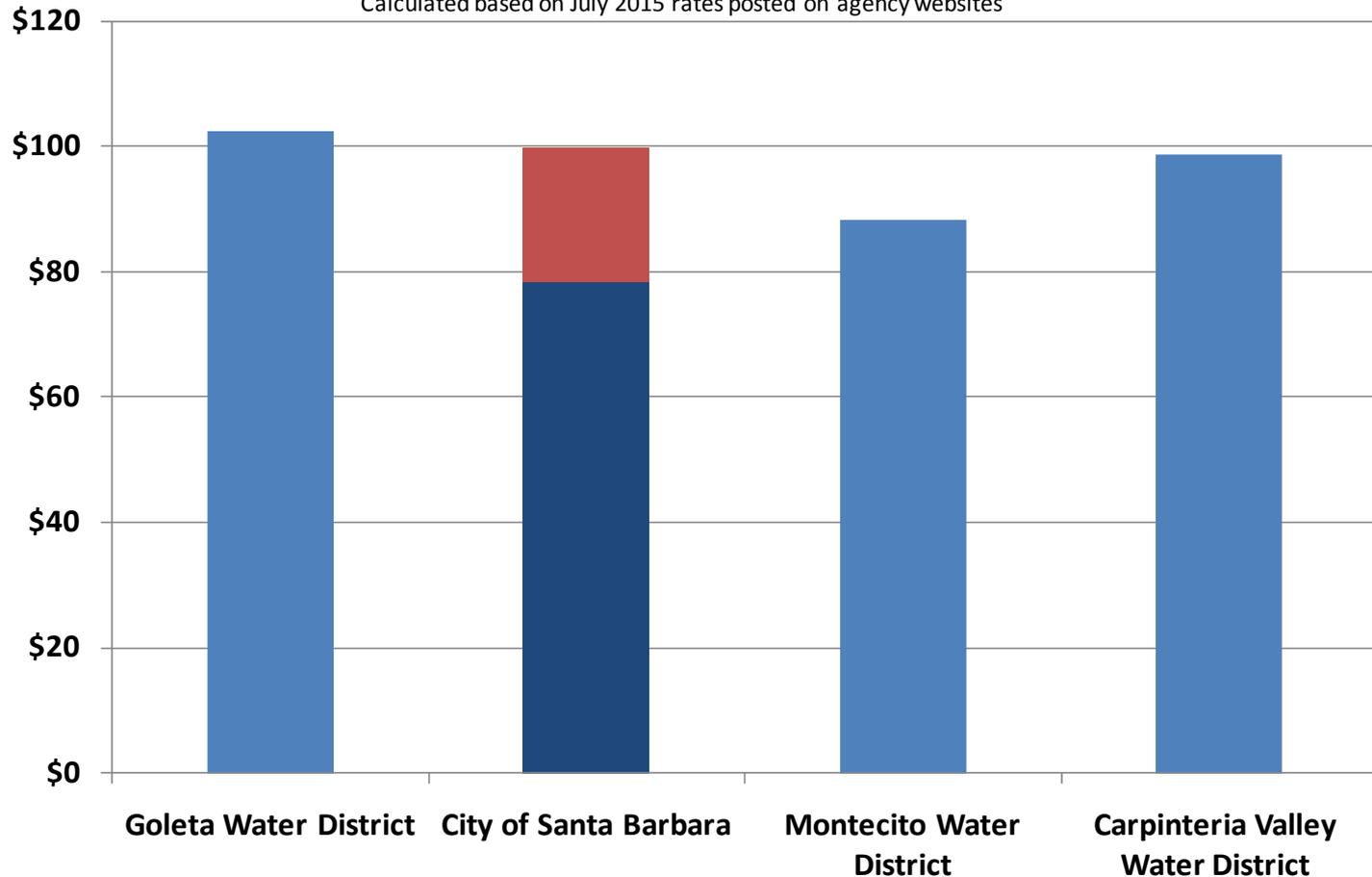
Summary of SFR Monthly Bill

| Usage Level | Monthly Usage, HCF | Existing | Proposed: Option A | Proposed: Option B | Proposed : Option C |
|-------------|--------------------|----------|--------------------|--------------------|---------------------|
| Low | 4 | \$27.34 | \$35.00 | \$36.91 | \$36.91 |
| Average | 12 | \$78.46 | \$99.40 | \$95.95 | \$95.39 |
| High | 32 | \$319.06 | \$405.36 | \$389.95 | \$381.99 |

Water Rates with Desal

**FY 15 South Coast Monthly Charges for 12 HCF Use
Single Family Residential Customer with 5/8" meter**

Calculated based on July 2015 rates posted on agency websites



Council Input

- ◆ Recommendation:
 - Recover 100% of desal debt cost in fixed meter charge
 - Keep current tier allotments