

Date: March 10, 2022

To: Julie Blue, Auditor Controller, North Marin Water District

From: Mark Hildebrand, Hildebrand Consulting, LLC

Subject: Drought Surcharge Review – Proposed Revisions to District Regulation 54 (a)(3) and (c)(3)

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Hildebrand Consulting, LLC has been retained by North Marin Water District (District) to evaluate the District’s existing Drought Surcharges for the Novato Water Enterprise (hereafter “Novato Water”) and West Marin Water Enterprise (hereafter “West Marin”) and provide recommendations as needed. This memorandum gives background on the purpose of the Drought Surcharges, evaluates the existing practices, and makes recommendations for revised District Drought Surcharges. The analyses demonstrate that the proposed Drought Surcharges do not exceed the cost of providing service, which is a substantive requirement of California Constitution Article XIII D, Section 6(b) (commonly known as Proposition 218).

## **Section 1. PURPOSES OF DROUGHT SURCHARGES**

Drought Surcharges are a tool for reducing the (potentially severe) financial impacts associated with reduced water sales and increases in operating costs during a water shortage emergency or drought event. During a water shortage event the District is impacted by a number of financial changes including:

- 1) Rate revenue decreases due to the decrease in water sales.
- 2) Decreases in operating costs due to the decrease in water deliveries, including wholesale water purchases, electricity (for pumping), and chemicals (for treatment).
- 3) Increases in operating costs such as the cost of the District’s conservation program and the cost of utilizing water from alternate sources.

Since the reduction in water sales revenue is more significant than the reduction in operating costs during water shortage emergencies or drought events, the net impact results in a financial deficit for the District. Drought surcharges are designed to partially (or completely) mitigate that financial deficit. Drought surcharges are often part of a multi-pronged approach that also includes capital spending reductions and use of reserves to help bridge the financial deficit.

## **Section 2. CURRENT DROUGHT SURCHARGES**

The District's current Drought Surcharges are designed to be overlaid on then-current Water Quantity (usage) rates during the period of time that a water shortage emergency is declared by the District's Board. The surcharges are temporary and affect only the Quantity Rate; not the fixed Service Charge.

The District implements separate Drought Surcharges for Novato Water and West Marin. Pursuant to Regulation 54(a)(3), the District's Drought Surcharge for Novato Water of \$1.00 per thousand gallons (TGAL) applies to all commercial, institutional and irrigation accounts (hereafter "non-residential") water usage and to any residential water usage in excess of 300 gallons per day (gpd) whenever mandatory reductions in water use are in effect. In accordance with Regulation 54(c)(3), the District's Drought Surcharge for West Marin is \$2.50 per TGAL and applies to all non-residential water usage and to any residential water usage in excess of 200 gpd whenever mandatory reductions in water use are in effect. The Board established these gpd thresholds on May 20, 2014 (for Novato Water) and June 24, 2014 (for West Marin) based on the recommendations contained in February 28, 2014 and March 14, 2014 memoranda to the Board from the District's then Auditor-Controller, David Bentley.

In a memorandum to the District dated March 25, 2021, Hildebrand Consulting estimated that implementation of the existing Drought Surcharge during a 20 percent mandatory reduction in water use would likely mitigate the financial shortfall annually by about \$804 thousand but would still likely result in an annual financial deficit of approximately \$745 thousand for Novato Water. For West Marin, the financial deficit was estimated to be approximately \$64 thousand,

despite approximately \$96 thousand in additional revenue from the West Marin Drought Surcharge.

The findings went on to explain that the Drought Surcharges should be increased in order to better mitigate the financial shortfalls caused by water shortage emergencies and drought events, and also concluded that the Drought Surcharges should be applied to all water usage by all customers, not just water usage above a given threshold.

### **Section 3. DROUGHT SURCHARGE ANALYSIS**

This section presents recommended revisions to the Drought Surcharges for both Novato Water and West Marin. Much like the existing Drought Surcharges, the revised Drought Surcharges are designed to be overlaid on then-current Water Quantity Charges during water shortage emergencies and droughts on a temporary basis and would not affect the fixed Service Charge. The revised Drought Surcharges are designed to be aligned with the respective Water Shortage Contingency Plans (WSCP) for Novato Water and West Marin, which define water usage reduction targets by various stages. The analysis for both Services Areas define:

- 1) The water usage reduction goals by water shortage stage;
- 2) The estimated water use reduction during each respective stage;
- 3) The estimated changes in rate revenue for each respective stage;
- 4) The estimated changes in expenditures for each respective stage;
- 5) The proposed Drought Surcharge by stage (expressed as a percent increase to the Water Quantity Charges;
- 6) The proposed reduction in capital spending by stage; and
- 7) The anticipated financial deficit that will occur by stage (after accounting for the mitigating measures).

Each of the above steps are detailed in the respective subsection of Section 4 below.

## **Section 4.      PROPOSED NOVATO WATER DROUGHT SURCHARGES**

The following details the analysis behind the proposed revised drought surcharges for Novato Water.

### **4.1    Novato Water Shortage Stages and Assumed Water Reduction**

The Novato Water WSCP (most recently revised in 2020) aligns with the requirements of Senate Bill 606, which requires water utilities to incorporate six (6) stages of water shortages in their WSCPs. The water usage reduction goals are shown in Row 2 of Attachment A. This analysis assumes that the actual water usage reductions during each defined stage will be the midpoint of the water reduction goals (see Row 3 of Attachment A).

### **4.2    Forecasted Changes in Rate Revenue**

The forecasted reduction in Water Quantity Charge revenue for each stage was modeled by applying the assumed water usage reduction evenly across all customers. This was done by applying a uniform reduction in water usage across all customers using customer billing data from the 2020 Novato Water Rate Study. It is important to note, however, that Novato Water's Quantity Charge revenue is complicated by the fact that the Novato Water has tiered rates for residential customers. As a result, a reduction in Tier 3 water usage will have a significantly larger financial impact than the same reduction in Tier 1 water usage. Modeling which customers (the "water savers" that stay in Tier 1 or the larger consumers that use Tier 3 water) will reduce their water usage during a water shortage emergency or drought is not easily determined. It is beyond the scope of this analysis to model the uneven distribution of water reductions across different types of customers. We acknowledge that this assumption may under-estimate the revenue shortfall, thereby yielding lower recommended drought surcharges than might actually be needed to cover the shortfall. Future iterations of this analysis may choose to address any revenue shortfalls that may come to fruition.

Service Charge and non-rate revenues are not expected to change as a result of a water shortage emergency or drought (see Rows 4 and 6 of Attachment A). Rows 7 and 8 of Attachment A shows the relative amount of total revenue expected during each stage of drought.

### **4.3 Forecasted Changes in Expenditures**

Novato Water has some expenses that are fixed and not expected to change during a water shortage emergency or drought event (see Rows 11,12, 13, 14, 16, 17<sup>1</sup>, 18, 19, 20, and 21 of Attachment A). Other expenses are expected to change as a result of a water shortage emergency or drought event.

#### **4.3.1 Source of Supply**

Novato Water purchases most of its water from Sonoma Water. It is assumed that all water usage reductions will be taken from that water source (i.e., water usage from Stafford Lake will remain constant). The reduction in this cost accounts for the fact that Sonoma Water represents about 75 percent of the Novato Water's water supply, and it is estimated that the decreases to this line item are about 5 percent less than the decreases in water purchases (because the Source of Supply line item includes some (non-Sonoma Water) fixed costs).

#### **4.3.2 Pumping**

About 75 percent of the "Pumping" line item is for the electricity needed to move water. This analysis assumes that those electricity costs decline in proportion to the decrease in water volumes.

#### **4.3.3 Water Conservation**

Novato Water's water conservation program gets ramped up during water shortage emergencies/drought events. Increases in costs are driven by intensified outreach and bolstered rebate programs. Based on past trends, it is assumed that the conservation program budget will increase in proportion to the decrease in water usage. In addition, it is assumed that a part-time position (0.5 full-time equivalent) will be created whenever Novato Water enters into a Stage 4 drought due to the increase in conservation rebate activity.

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<sup>1</sup> While the capital spending expense is shown to remain constant in this row, a reduction in capital spending is shown in Row 36.

#### 4.4 Proposed Drought Surcharge and Capital Spending Reduction by Stage

Upon completion of the above analysis, we assessed the total financial deficit that would occur in each stage if no mitigating measures were taken. Row 24 of Attachment A shows that a financial deficit of \$4.7 million is expected in a Stage 6 drought. The proposed Drought Surcharge rests on a policy that employs a multi-prong approach and does not rely entirely on a surcharge in order to address the financial deficit. Instead, the policy proposes a revised Drought Surcharge, a reduction in capital spending, and a use of reserves.

The financial deficit in a Stage 1 water shortage emergency is expected to be about \$440 thousand. Given that Stage 1 water shortage emergencies are a relatively common occurrence and do not require mandatory rationing, it assumes that a Stage 1 water shortage emergency would not trigger a drought surcharge nor a reduction in capital spending. This is financially viable because Novato Water maintains sufficient reserves that it can withstand a \$440 thousand deficit for multiple years.

The proposed Drought Surcharge and reduction in capital spending for Stage 2 – 6 have been calibrated to yield an overall deficit that is similar to a Stage 1 deficit (about \$400 thousand).

The table below and Row 25 of Attachment A show the proposed Drought Surcharge by stage (as a percentage of Quantity Charges).

**Proposed Drought Surcharge by Drought Stage for Novato Water**  
(applied to Quantity Charges only)

<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Stage 4</b>	<b>Stage 5</b>	<b>Stage 6</b>
NA	5%	13%	21%	30%	42%

Row 26 of Attachment A shows the estimated resultant additional rate revenue. Rows 27 and 28 show the proposed reduction in capital spending by stage. To be clear, the proposed Drought Surcharge would be applied to all water usage, not just water usage above a given threshold (as is currently the practice).

Finally Row 29 shows the anticipated financial deficit that would be absorbed by Novato Water reserves after these mitigation measures have been implemented.

## **Section 5.      PROPOSED WEST MARIN DROUGHT SURCHARGES**

The following details the analysis behind the proposed revised drought surcharge rates for West Marin.

### **5.1    West Marin Shortage Stages and Assumed Water Reduction**

The West Marin WSCP (last revised in 2016) includes three (3) stages of water shortage. West Marin is not required to adopt the six stages as defined by SB 606 due to its small size. The water usage reduction goals are shown in Row 2 of Attachment B. This analysis assumes that the actual water usage reductions during each defined stage are equal to the reduction goals (see Row 3 of Attachment B).

### **5.2    Forecasted Changes in Rate Revenue**

Much like Novato Water, the forecasted reduction in Water Quantity Charge revenue for each stage was modeled by applying the assumed water usage reduction evenly across all customers (for details see Section 4.1). In this case we used billing data from the 2021 West Marin Water Rate Study. As explained in Section 4.1, we acknowledge that the approach may under-estimate the revenue shortfalls during water shortage emergencies/drought events and the proposed Drought Surcharge may be less than what will actually be needed to cover the shortfall.

Service Charge and non-rate revenues are not expected to change as a result of a water shortage emergency or drought (see Rows 4 and 6 of Attachment B). Rows 7 and 8 of Attachment B shows the relative amount of total revenue expected during each stage of water shortage emergency.

### **5.3 Forecasted Changes in Expenditures**

West Marin has some expenses that are fixed and not expected to change during a drought event (see Rows 9, 11, 13, 14, 16, 17, 18<sup>2</sup>, and 19 of Attachment B). Other expenses are expected to change as a results of water shortage emergencies.

#### **5.3.1 Pumping**

About 40 percent of the “Pumping” line item is for the electricity needed to move water. This analysis assumes that those electricity costs decline in proportion to the decrease in water volumes.

#### **5.3.2 Water Treatment**

About 20 percent of the “Treatment” line item is for the variable costs of treating pumped groundwater, including electricity and chemicals. This analysis assumes that those costs decline in proportion to the decrease in water volumes.

#### **5.3.3 Conservation Program**

West Marin’s water conservation program gets ramped up during water shortage emergencies/drought events. Increases in costs are driven by intensified outreach and bolstered rebate programs. Based on the current water shortage emergency, it is assumed that the conservation program budget will increase from a baseline of \$4 thousand during a normal year to \$44 thousand. The conservation budgets for Stage 1 and Stage 3 were estimated based on a linear progression.

### **5.4 Proposed Drought Surcharge and Capital Spending Reduction by Stage**

Upon completion of the above analysis, we assessed the total financial deficit that would occur in each stage if no mitigating measures were taken. Row 22 of Attachment B shows a financial

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<sup>2</sup> While the capital spending expense is shown to remain constant in this row, a reduction in capital spending is shown in Row 36.



deficit of \$446 thousand is expected in a Stage 3 drought. As explained in Section 4.4, a multi-pronged approach is proposed to address this deficit.

The financial deficit in a Stage 1 water shortage emergency is expected to be about \$136 thousand. Given that Stage 1 water shortage emergencies are a relatively common occurrence and do not require mandatory rationing, it assumes that a Stage 1 drought would not trigger a drought surcharge nor a reduction in capital spending. This is financially viable because West Marin maintains sufficient reserves that it can withstand a \$136 thousand deficit for multiple years.

The surcharges and reduction in capital spending for Stage 2 and 3 have been calibrated to yield an overall deficit that is similar to a Stage 1 deficit (about \$150 thousand).

The table below and Row 23 of Attachment A shows the proposed drought surcharge by stage (as a percentage of Quantity Charges).

**Proposed Drought Surcharge by Drought Stage for West Marin**

(applied to Quantity Charges only)

<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>
NA	13%	30%

Row 24 of Attachment A shows the estimated resultant additional rate revenue. Rows 25 and 26 shows the proposed reduction in capital spending by stage. To be clear, the proposed Drought Surcharge would be applied to all water usage, not just water usage above a given threshold (as is currently the practice).

Finally Row 27 shows the anticipated financial deficit that would be absorbed by West Marin reserves after these mitigation measures have been implemented.

## **Section 6. CONCLUSION**

This study used methodologies that are aligned with industry standard practices for rate setting as promulgated by the American Water Works Association (AWWA) and all applicable laws, including California's Proposition 218. The proposed Drought Surcharges on Water Quantity Charges during water shortage emergencies are designed to meet cost of service principles in accordance with Proposition 218 and allow the District to continue to provide reliable service to customers.

The District must also follow the procedural requirements of Proposition 218, which includes: 1) mailing a notice to each affected property owner or customer at least 45 days prior to conducting a public hearing. The notice shall provide the time, date, and location of the hearing, list the proposed new Drought Surcharges, provide reasons why the new Drought Surcharges are necessary, and provide the process for protesting the proposed Drought Surcharges; and 2) receiving and considering all comments and tally all written protests at the public hearing before the Board may consider adoption of the new Surcharges.

## Attachment A – Novato Water Drought Surcharge Analysis

	Normal Supply <sup>1</sup>	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
1							
2	Use Reduction Goal -->	(na)	Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%
3	Modeled Use Reduction -->	0%	5%	15%	25%	35%	45%
	<b>Revenues</b>						
4	Service Charge Revenue	\$6,027,000	\$6,027,000	\$6,027,000	\$6,027,000	\$6,027,000	\$6,027,000
5	Quantity Charge Revenue <sup>2</sup>	\$15,998,000	\$15,162,000	\$13,500,000	\$11,854,000	\$10,222,000	\$8,607,000
6	Non-Rate Revenue	\$1,347,000	\$1,347,000	\$1,347,000	\$1,347,000	\$1,347,000	\$1,347,000
7	<b>Total Revenues:</b>	\$23,372,000	\$22,536,000	\$20,874,000	\$19,228,000	\$17,596,000	\$15,981,000
8	(% of normal)		96%	89%	82%	75%	68%
	<b>Expenditures and Transfers</b>						
9	Source of Supply <sup>3</sup>	-\$6,141,000	-\$5,747,000	-\$4,958,000	-\$4,170,000	-\$3,382,000	-\$2,593,000
10	Pumping <sup>4</sup>	-\$561,000	-\$540,000	-\$498,000	-\$456,000	-\$414,000	-\$372,000
11	Other Operations	-\$850,000	-\$850,000	-\$850,000	-\$850,000	-\$850,000	-\$850,000
12	Water Treatment <sup>5</sup>	-\$2,594,000	-\$2,594,000	-\$2,594,000	-\$2,594,000	-\$2,594,000	-\$2,594,000
13	Transmission & Distribution	-\$3,853,000	-\$3,853,000	-\$3,853,000	-\$3,853,000	-\$3,853,000	-\$3,853,000
14	Consumer Accounting	-\$498,000	-\$498,000	-\$498,000	-\$498,000	-\$498,000	-\$498,000
15	Water Conservation <sup>6</sup>	-\$377,000	-\$396,000	-\$434,000	-\$471,000	-\$609,000	-\$647,000
16	General Administration	-\$2,496,000	-\$2,496,000	-\$2,496,000	-\$2,496,000	-\$2,496,000	-\$2,496,000
17	Average Cash Capital	-\$2,741,480	-\$2,741,480	-\$2,741,480	-\$2,741,480	-\$2,741,480	-\$2,741,480
18	Debt	-\$776,000	-\$776,000	-\$776,000	-\$776,000	-\$776,000	-\$776,000
19	Transfer Out to Recycled Water	-\$747,000	-\$747,000	-\$747,000	-\$747,000	-\$747,000	-\$747,000
20	Funding for Affordability Program	-\$89,000	-\$89,000	-\$89,000	-\$89,000	-\$89,000	-\$89,000
21	Forecasted Change in Fund Balance <sup>7</sup>	-\$1,648,520	-\$1,648,520	-\$1,648,520	-\$1,648,520	-\$1,648,520	-\$1,648,520
22	<b>Revenue Requirement:</b>	<b>-\$23,372,000</b>	<b>-\$22,976,000</b>	<b>-\$22,183,000</b>	<b>-\$21,390,000</b>	<b>-\$20,698,000</b>	<b>-\$19,905,000</b>
23	(% of normal)		98%	95%	92%	89%	85%
24	<b>Surplus/(Deficit) Due to Shortage</b>	<b>\$0</b>	<b>-\$440,000</b>	<b>-\$1,309,000</b>	<b>-\$2,162,000</b>	<b>-\$3,102,000</b>	<b>-\$3,924,000</b>
25	Drought Surcharge <sup>8</sup>		0%	5%	13%	21%	30%
26	Drought Surcharge Revenue		\$0	\$675,000	\$1,541,000	\$2,147,000	\$2,582,000
27	Capital Spending Reduction			5%	10%	20%	30%
28	Reduction in Capital Spending			\$137,000	\$274,000	\$548,000	\$822,000
29	<b>Strategic Use of Reserves</b>		<b>-\$440,000</b>	<b>-\$497,000</b>	<b>-\$347,000</b>	<b>-\$407,000</b>	<b>-\$520,000</b>

<sup>1</sup> The FY 2020/21 actual expenses and revenues are assumed to be a typical water supply year for purposes of this analysis.

<sup>2</sup> Assumes that water sales reductions will occur evenly across all customers.

<sup>3</sup> Assumes that 95% of the Source of Supply budget is proportionate to the volume of water purchased and that Sonoma Water water purchases comprises 74% of Novato's water supply.

<sup>4</sup> Assumes that 75% of pumping costs are affected by the volume of water delivered.

<sup>5</sup> Assumes that treatment costs don't change because Stafford Lake water usage doesn't change (all reductions will come from Sonoma Water purchases).

<sup>6</sup> Assumes that conservation programs costs will increase in proportion to the water use reduction target and that 0.5 FTE is added in Stage 4 (cost: \$100K).

<sup>7</sup> Represents the planned change in fund balance during test year.

<sup>8</sup> Surcharge is applied to usage rates only and is applied to all water usage.

## Attachment B – West Marin Drought Surcharge Analysis

	Normal Supply <sup>1</sup>	Stage 1	Stage 2	Stage 3
1				
2	Use Reduction Goal -->	(na)	15%	25%
3	Modeled Use Reduction -->	0%	15%	25%
	<b>Revenues</b>			
4	Service Charge Revenue	\$242,000	\$242,000	\$242,000
5	Quantity Charge Revenue <sup>2</sup>	\$809,000	\$683,000	\$599,000
6	Non-Rate Revenue	\$98,000	\$98,000	\$98,000
7	<b>Total Revenues:</b>	<b>\$1,149,000</b>	<b>\$1,023,000</b>	<b>\$939,000</b>
8	(% of normal)		89%	82%
	<b>Expenditures and Transfers</b>			
9	Source of Supply	-\$28,000	-\$28,000	-\$28,000
10	Pumping <sup>3</sup>	-\$76,000	-\$71,000	-\$68,000
11	Other Operations	-\$79,000	-\$79,000	-\$79,000
12	Water Treatment <sup>4</sup>	-\$165,000	-\$160,000	-\$157,000
13	Transmission & Distribution	-\$168,000	-\$168,000	-\$168,000
14	Consumer Accounting	-\$26,000	-\$26,000	-\$26,000
15	Water Conservation <sup>5</sup>	-\$4,000	-\$24,000	-\$44,000
16	General Administration	-\$64,000	-\$64,000	-\$64,000
17	Debt	-\$71,000	-\$71,000	-\$71,000
18	Capital	-\$443,800	-\$443,800	-\$443,800
19	Forecasted Change in Fund Balance <sup>6</sup>	-\$24,200	-\$24,200	-\$24,200
20	<b>Revenue Requirement:</b>	<b>-\$1,149,000</b>	<b>-\$1,159,000</b>	<b>-\$1,173,000</b>
21	(% of normal)		101%	102%
22	<b>Surplus/(Deficit) Due to Shortage</b>	<b>\$0</b>	<b>-\$136,000</b>	<b>-\$234,000</b>
23	Drought Surcharge <sup>7</sup>	0%	13%	30%
24	Drought Surcharge Revenue	\$0	\$77,870	\$117,600
25	Capital Spending Reduction	0%	0%	40%
26	Reduction in Capital Spending	\$0	\$0	\$177,520
27	<b>Strategic Use of Reserves</b>	<b>\$0</b>	<b>-\$136,000</b>	<b>-\$156,130</b>
				<b>-\$150,880</b>

### Notes:

<sup>1</sup> The FY 2020/21 (actual) expenses and revenues are assumed to be a typical water supply year for purposes of this analysis.

<sup>2</sup> Assumes that water sales reductions will occur evenly across all customers.

<sup>3</sup> Assumes that 40% of pumping costs are variable (electricity) and decrease with lower sales.

<sup>4</sup> Assumes that 20% of treatment costs are variable (electricity & chemicals) and decrease with lower sales.

<sup>5</sup> Assumes that a conservation program budget of \$44 thousand is typical for Stage 2 (as recently adopted).

<sup>6</sup> Represents the planned change in fund balance during test year.

<sup>7</sup> Surcharge is applied to usage rates only and is applied to all water usage.



**NORTH MARIN  
WATER DISTRICT**

# **2022 Drought Surcharge Study**

**for Novato and West Marin Service Areas**

**March 15, 2022**



# Why Drought Surcharges?

Drought Surcharges are designed to reduce the financial impacts associated with reduced water sales and increases in operating costs during drought events.

Water shortage financial changes include:

- 1) Decrease in rate revenue
- 2) Decrease in some operating costs (water purchases, electricity, chemicals)
- 3) Increase in some operating costs (conservation program)

# **The proposed changes to the drought surcharges include:**

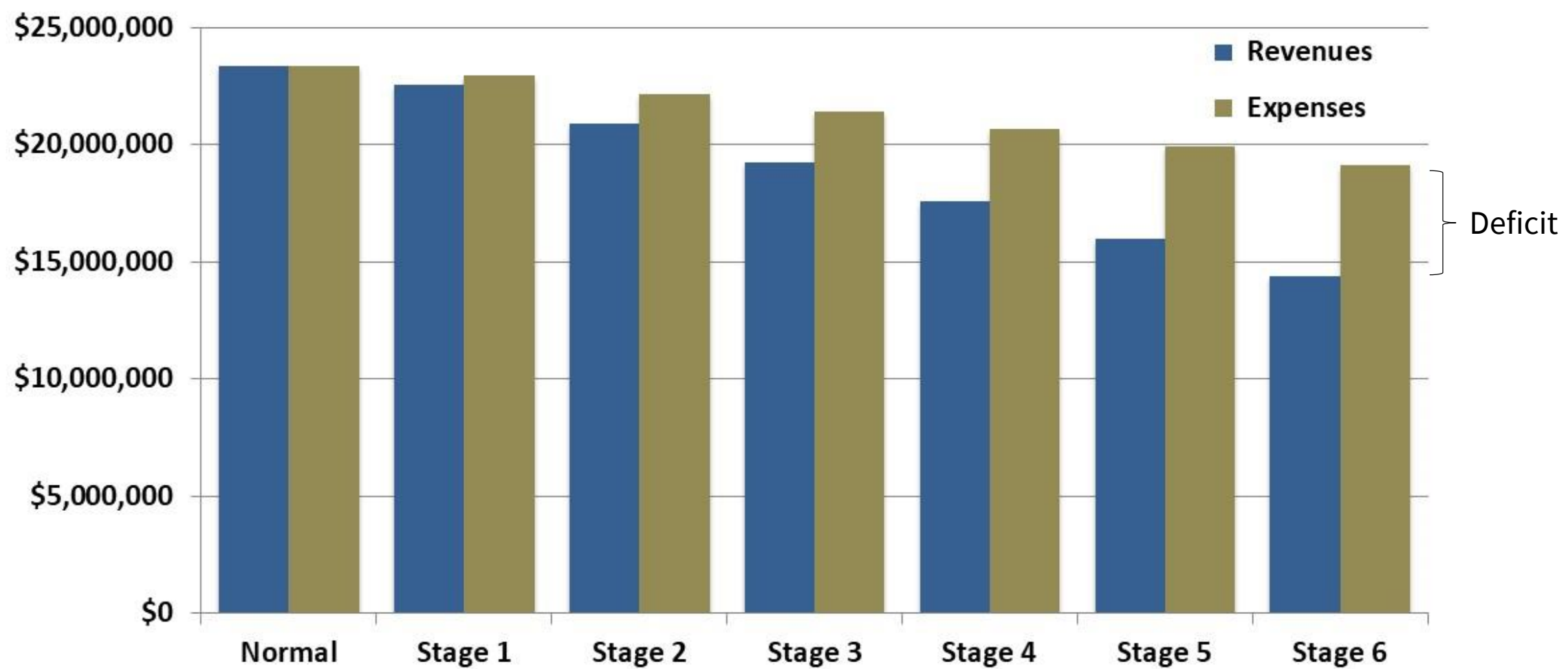
- 1) Aligning the surcharges with the water shortage contingency plans (WSCP)
  - a. Novato Water WSCP defines six water shortage stages
  - b. West Marin WSCP defines three water shortage stages
- 2) Propose a multi-prong approach to addressing financial deficit
  - a. Water Quantity Surcharge
  - b. Reduction in capital spending
  - c. Measured use of financial reserves

# Novato Water Drought Surcharge Analysis

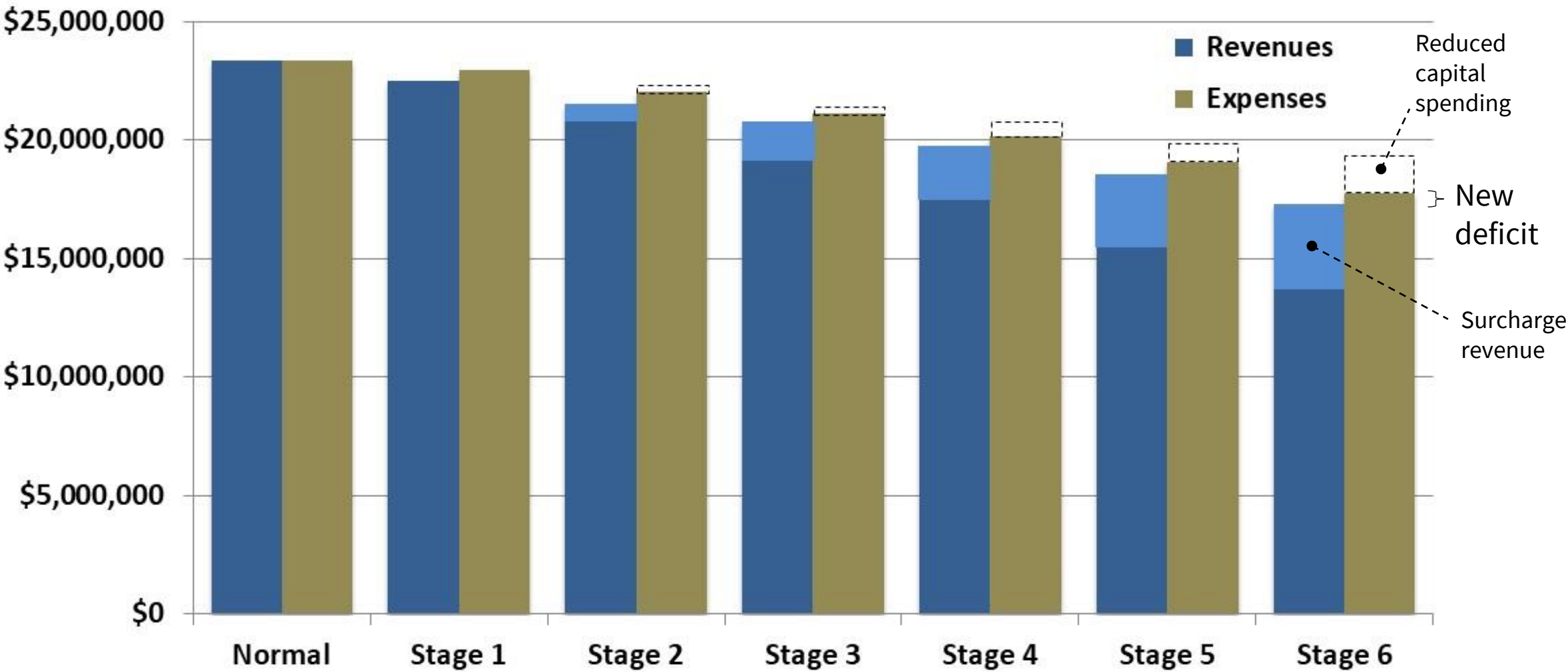
Use Reduction Goal -->		Up to 10%	Up to 20%	Up to 30%	Up to 40%	Up to 50%	Above 50%
Assumed Water Use Reduction -->		5%	15%	25%	35%	45%	55%
Drought Surcharge -->		<b>0%</b>	<b>5%</b>	<b>13%</b>	<b>21%</b>	<b>30%</b>	<b>42%</b>
Normal Supply		Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
<b><i>Estimated Financial Impact from Water Shortage</i></b>							
Reduced Water Sales Revenue	(na)	-\$836,000	-\$2,498,000	-\$4,144,000	-\$5,776,000	-\$7,391,000	-\$8,991,000
Reduced Water Supply Costs	(na)	\$394,000	\$1,183,000	\$1,971,000	\$2,759,000	\$3,548,000	\$4,336,000
Reduced Pumping Costs	(na)	\$21,000	\$63,000	\$105,000	\$147,000	\$189,000	\$231,000
Increase in Conservation Program Costs	(na)	-\$19,000	-\$57,000	-\$94,000	-\$232,000	-\$270,000	-\$307,000
<b>Est. Total Financial Deficit</b>	<b>\$0</b>	<b>-\$440,000</b>	<b>-\$1,309,000</b>	<b>-\$2,162,000</b>	<b>-\$3,102,000</b>	<b>-\$3,924,000</b>	<b>-\$4,731,000</b>
<b><i>Multi-Pronged Corrective Strategy</i></b>							
Increase in Revenue from Surcharges	(na)	\$0	\$675,000	\$1,541,000	\$2,147,000	\$2,582,000	\$2,943,000
Strategic Decrease in Capital Spending	(na)	\$0	\$137,000	\$274,000	\$548,000	\$822,000	\$1,371,000
<b>Total Corrective Actions:</b>	<b>(na)</b>	<b>\$0</b>	<b>\$812,000</b>	<b>\$1,815,000</b>	<b>\$2,695,000</b>	<b>\$3,404,000</b>	<b>\$4,314,000</b>
<b>Strategic Use of Reserves</b>	<b>\$0</b>	<b>-\$440,000</b>	<b>-\$497,000</b>	<b>-\$347,000</b>	<b>-\$407,000</b>	<b>-\$520,000</b>	<b>-\$417,000</b>



# Novato Water Without Mitigating Measures



# Novato Water with Mitigating Measures

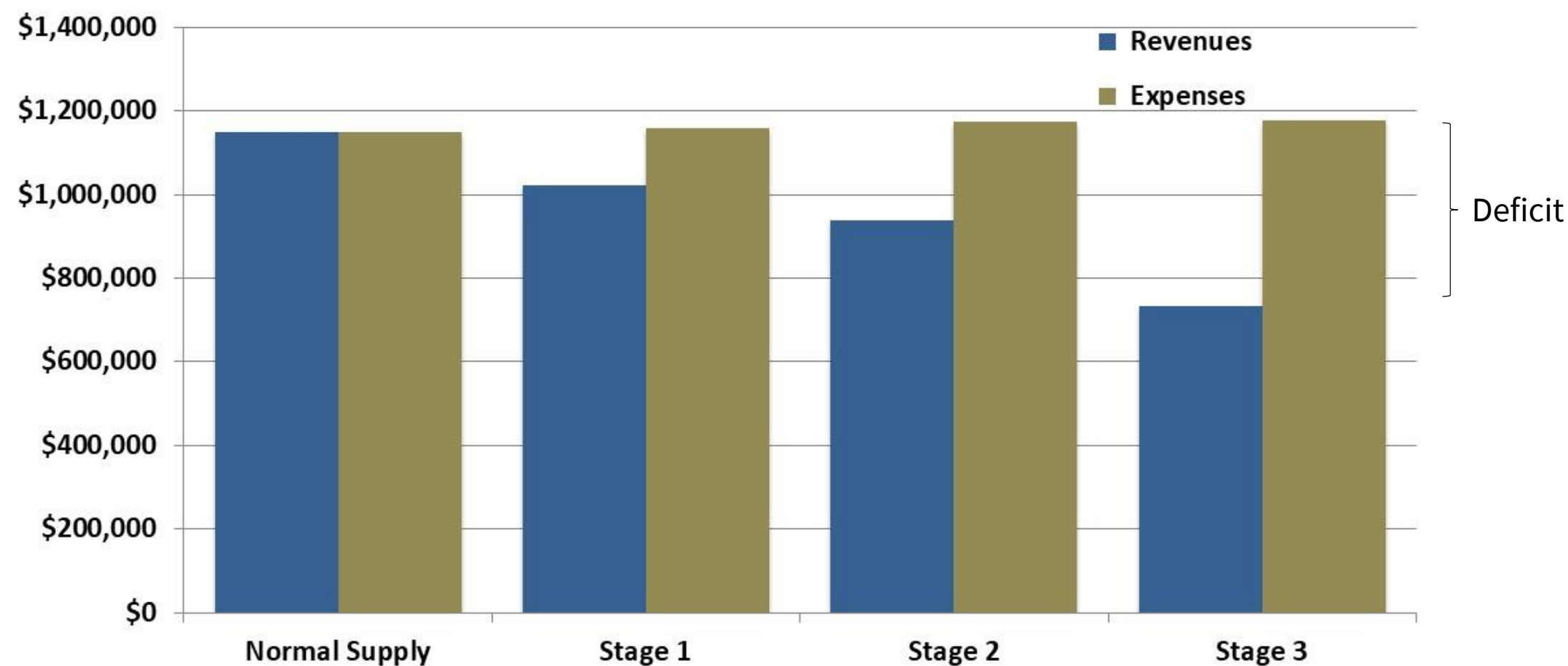


# West Marin Drought Surcharge Analysis

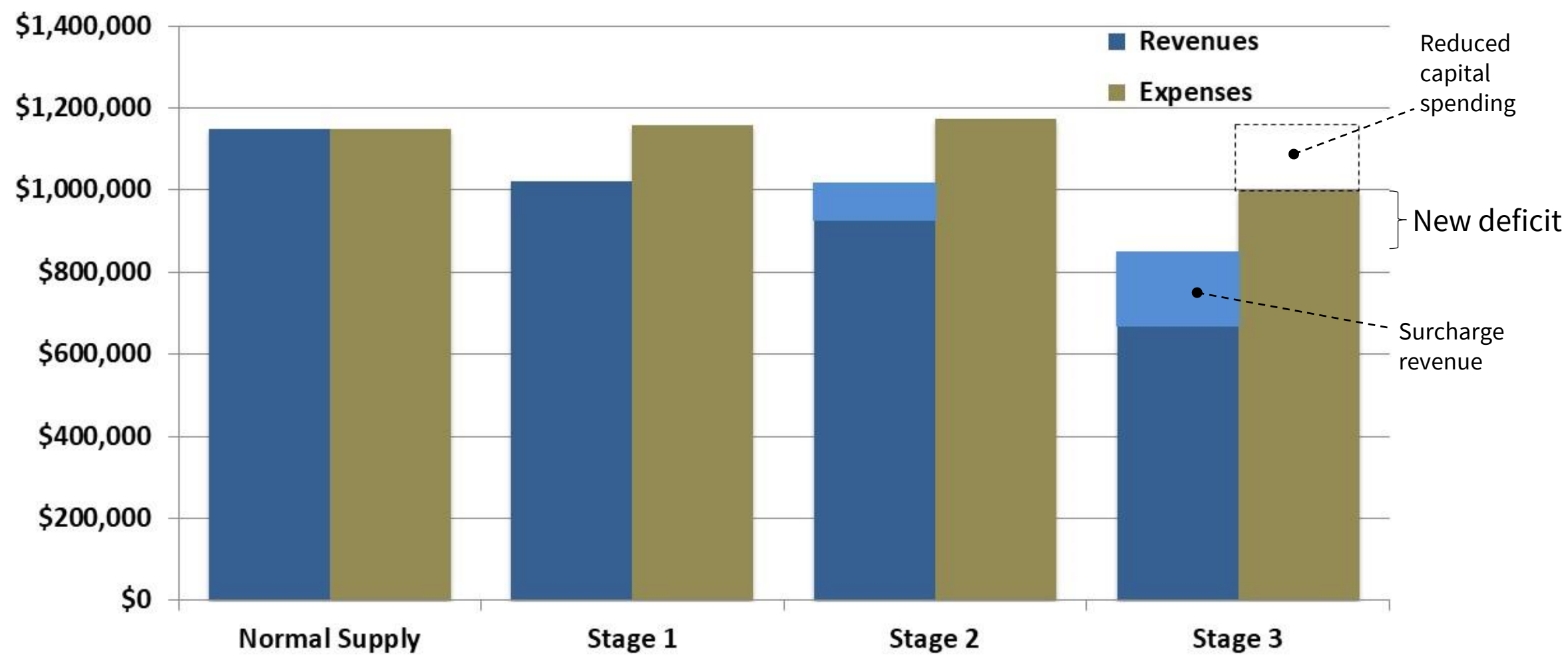
Use Reduction Goal -->	15%	25%	50%
Assumed Water Use Reduction -->	15%	25%	50%
Drought Surcharge -->	<b>0%</b>	<b>13%</b>	<b>30%</b>

	Normal Supply	Stage 1	Stage 2	Stage 3
<b><i>Estimated Financial Impact from Water Shortage</i></b>				
Reduced Water Sales Revenue	(na)	-\$126,000	-\$210,000	-\$417,000
Reduced Water Treatment Costs	(na)	\$5,000	\$8,000	\$16,000
Reduced Pumping Costs	(na)	\$5,000	\$8,000	\$15,000
Increase in Conservation Program Costs	(na)	-\$20,000	-\$40,000	-\$60,000
<b>Estimated Total Financial Deficit</b>	<b>\$0</b>	<b>-\$136,000</b>	<b>-\$234,000</b>	<b>-\$446,000</b>
<b><i>Multi-Pronged Corrective Strategy</i></b>				
Increase in Revenue from Surcharges	(na)	\$0	\$77,870	\$117,600
Strategic Decrease in Capital Spending	(na)	\$0	\$0	\$177,520
<b>Total Corrective Actions:</b>	<b>(na)</b>	<b>\$0</b>	<b>\$77,870</b>	<b>\$295,120</b>
<b>Strategic Use of Reserves</b>	<b>\$0</b>	<b>-\$136,000</b>	<b>-\$156,130</b>	<b>-\$150,880</b>

# West Marin Without Mitigating Measures



# West Marin with Mitigating Measures



# Next Steps

- Mail Prop 218 Notices May 2, 2022
- Conduct Public Hearing Novato Water June 21, 2022
- Conduct Public Hearing West Marin June 28, 2022
- Implement Surcharges July 1, 2022