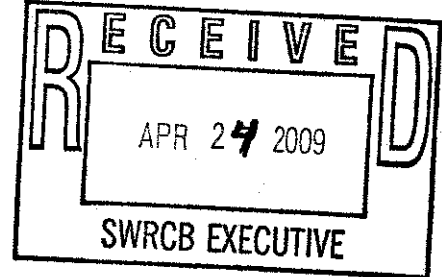




VIA E-MAIL AND HAND DELIVERY
ENCLOSURE MEMORANDUM



TO: CHAIR AND MEMBERS
STATE WATER RESOURCES CONTROL BOARD

FROM: MARTHA LENNIHAN

RE: ORDER WR 2009-0027-DWR
CITY OF SANTA ROSA
PROTEST, OBJECTION AND PETITION FOR RECONSIDERATION

DATE: APRIL 22, 2009

Honorable State Water Resources Control Board:

The City of Santa Rosa respectfully files the enclosed protests, and objects to and petitions for reconsideration of Order WR 2009-0027-DWR issued on the Sonoma County Water Agency's petition for temporary urgency change. In accordance with 23 CCR section 768, reconsideration of this order is requested on *inter alia* the following grounds:

1. The order is not supported by substantial evidence;
2. There is relevant evidence which, in the exercise of reasonable diligence, could not have been produced given the temporary urgency change petition process of the SWRCB;
3. The order contains errors in law; and
4. The order is contrary to the public interest.

The City's points and authorities in the form of a letter and attachments, outlining the issues in more detail, and protest forms, are attached.

A copy of this package has been served on the Sonoma County Water Agency and all interested parties known to the City.

Thank you.

LENNIHAN LAW
A Professional Corporation

By:
Martha H. Lennihan

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Info: (916) 341-5300, FAX: (916) 341-5400, Web: http://www.waterrights.ca.gov

PROTEST – (Petitions)

BASED ON ENVIRONMENTAL OR PUBLIC INTEREST CONSIDERATIONS
Protests based on Injury to Vested Rights should be completed on other side of this form

APPLICATION * _____ PERMIT * _____ LICENSE * _____

I, (We,) CITY OF SANTA ROSA
Name of protestant

of 69 Stony Circle, Santa Rosa, CA. 95401 Attn G. Wright; cc M Lennihan 2311 Capitol Ave, Sac, CA 95816 have read carefully
Post Office address of protestant

a notice relative to a petition for change or extension of time.

under APPLICATION * _____ of SONOMA COUNTY WATER AGENCY
State name of petitioner

to appropriate water from * see attachment A
Name of source

It is desired to protest against the approval thereof because to the best of our information and belief:
my or our

the proposed change/extension will

- (1) not be within the State Water Resources Control Board's (SWRCB) jurisdiction
- (2) not best serve the public interest
- (3) be contrary to law
- (4) have an adverse environmental impact



State facts, which support the foregoing allegations See accompanying letter of City of Santa Rosa, attached hereto.

The City is a legal user of water. Its primary source of municipal supply is provided by contract to the petitioner, the Sonoma County Water Agency. The City's municipal water supply and water planning could be seriously impaired if this petition is not handled correctly, as more fully set forth in the attached letter.. For clarity, the City does not object to the need to reduce instream flows as necessary to protect fishery resources, and the City strongly supports and implements conservation and recycling..

Under what conditions may this protest be disregarded and dismissed? See attached letter.
State conditions that will relieve protest, or if none, so state

Granting the City's petition for reconsideration and correcting the order in the manner requested in the attached letter is one approach.

A true copy of this protest has been served upon the petitioner by mail. Personally or by mail

Date 4/22/09

Mrs. A. Ferris
Protestant(s) or Authorized Representative sign here

Protests MUST be filed within the time allowed by the SWRCB as stated in the notice relative to the change or such further time as may be allowed.

(NOTE: Attach supplemental sheets as necessary)

State of California
State Water Resources Control Board
DIVISION OF WATER RIGHTS
P.O. Box 2000, Sacramento, CA 95812-2000
Info: (916) 341-5300, FAX: (916) 341-5400, Web: <http://www.waterrights.ca.gov>

PROTEST – (Petitions)

BASED ON INJURY TO VESTED RIGHTS

Protests based on Environmental or Public Interest Considerations should be completed on other side of this form

APPLICATION * _____ PERMIT * _____ LICENSE * _____

I, (We,) THE CITY OF SANTA ROSA _____
Name of protestant

of 69 Stony Circle, Santa Rosa, CA. 95401 Attn G. Wright; cc M Lennihan 2311 Capitol Ave, Sac, CA 95816 have read carefully
Post Office address of protestant

a notice relative to a petition for change or extension of time.

under APPLICATION * _____ of SONOMA COUNTY WATER AGENCY
State name of petitioner

to appropriate water from * See attachment A
Name of source

It is desired to protest against the approval thereof because to the best of our information and belief the
my or our
proposed change will result in injury to us as follows: Injury to the City and the community it serves with water,
me or us State the injury which will result to you (see NOTE below)
as legal users of water.

Protestant claims a right to the use of water from the source from which petitioner is diverting, or proposes to divert, which right is based on: contract and otherwise
Prior to application, notice posted, use begun prior to 12/19/14, riparian claim, or other right

Please provide application, permit or license numbers or statement of diversion and use numbers, which cover your use of water, or state 'none' see below _____. The extent of present and past use of water by protestant or his predecessors in interest from this source is as follows: The City uses more than 20,000 acre feet per year of water provided by the Sonoma County Water Agency pursuant to the Agency's water rights
State approximate date first use made, amount used, time of year when diversion made, the use to which water is put

Where is YOUR DIVERSION POINT located? same as Agency's 1/4 of _____ 1/4 of Section _____
Describe location with sufficient accuracy that position thereof relative to that of petitioner may be determined.

T. _____, R. _____, _____ B. & M. Is this point downstream from petitioner's point of diversion? YES NO
If Yes, explain: Same as petitioner's (the Sonoma County Agency)

Under what conditions may this protest be disregarded and dismissed? See attached letter
State conditions which will relieve protest, or if none, so state.

A true copy of this protest has been served upon the petitioner by mail

Date: 4/22/09 _____
_____ ^{personally or by mail}
Protestant(s) or Authorized Representative sign here

Protests MUST be filed within the time allowed by the SWRCB as stated in the notice relative to the change or such further time as may be allowed.

(NOTE: Attach supplemental sheets as necessary)

Attachment A to Protests of City of Santa Rosa
To Sonoma County Water Agency Petition for Temporary Urgency Change

Application Nos. 12919A, 15736, 15737, 19351
Permit No. 12947A, 12949, 12950, 16596

To appropriate water as more specifically
set forth in the above referenced permits



April 23, 2009

Chair and Members
STATE WATER RESOURCES CONTROL BOARD
P.O. Box 100
Sacramento, CA 95812-0100

HAND DELIVERED

**RE: Protest and Petition for Reconsideration
of State Water Board Order WR 2009-0027-DWR
Points and Authorities**

Dear Chairman Hoppin, Vice-Chair Spivey-Weber and Members of the Board,

The City of Santa Rosa would like to thank the State Water Resources Control Board staff for the timely response and issuance of State Water Board Order WR-2009-0027-DWR. The City does not dispute the need to take measures to protect fisheries and Lake Mendocino storage. The City fully concurs in the Board's interest in furthering conservation and reclamation. However, certain provisions of the Order will have serious impacts to the City and the community it serves, and are not warranted by the measures proposed to preserve Lake Mendocino storage or by the record. The City of Santa Rosa therefore submits the attached protest¹, objection, and this petition for reconsideration of State Water Board Order WR 2009-0027-DWR, dated April 6, 2009.

The City respectfully requests that the State Board reconsider certain items of the Order which are, among other things, contrary to the public interest, unsupported by the record or findings, and contrary to law. Specifically, the City objects to and requests removal of Provision 13 of the Order requiring the Water Agency to "make a 25 percent reduction in diversions from the Russian River to its service area from April 6, 2009 until the expiration of this order (October 2, 2009)" and Provision 14 of the Order directing the Water Agency to "prohibit irrigation of commercial turf grass within the SCWA service area for the period of May 1, 2009 until the expiration of this order (October 2, 2009)."

By way of background, the City of Santa Rosa is the largest water retailer (of the eight "prime" water contractors of the Water Agency²) and provides water services to over 50,000 customer accounts, serving a population of approximately 159,000 people. The City purchases 90% of our community's municipal water supply from the Water Agency. The Water Agency, the City, and other contractors have a contractual agreement for water supply entitled the Restructured Agreement for Water Supply (Restructured Agreement) which defines the maximum water

¹ The protest is for the purpose of establishing standing, to the extent needed.

² The Water Agency serves many customers, each of which has a different water supply portfolio, different demands, and different circumstances. The primary customers are referred to as the "prime contractors" and are parties to the Restructured Agreement. The City is a prime contractor.

allocations for each water contractor. Section 3.5 of the Restructured Agreement (Exhibit A) defines how the Water Agency will allocate water during a water shortage. Per Section 3.5, the Water Agency shall allocate water using a methodology that rewards and encourages conservation, avoids cutbacks based upon a percentage of historic consumption, and assures no penalty for "demand hardening" due to water conservation. The Water Agency Board of Directors adopted a water shortage allocation methodology consistent with Section 3.5 on April 18, 2006 (Exhibit B). The adopted allocation methodology ensures that those in the community who have already been implementing water conservation measures are not penalized by an across-the-board percentage cutback, while enabling the Water Agency to implement water shortage cutbacks when needed. Penalizing water conservation is clearly contrary to the public interest, and injurious to the environment, as well as injuring to the City and its citizens who are legal users of the water supply provided pursuant to the Water Agency's permits. It is also contrary to the many State laws endorsing conservation and interrelating land use and water supply.

The City of Santa Rosa has had a long-standing commitment to water conservation and has been implementing a water conservation program since 1977. The City became a signatory to the California Urban Water Conservation Council's Memorandum of Understanding Regarding Urban Water Conservation in California (CUWCC MOU) in 1998, implementing all 14 Best Management Practices (BMPs). The City has spent over \$13 million on its water conservation programs, including replacement of over 50,000 toilets with ultra low-flow and high-efficiency toilets and implementation of innovative programs such as our Green Exchange irrigation upgrade and turf replacement program, which has resulted in sustainable, measurable water savings of over 4,100 acre-feet per year (3.7 million gallons per day). In 2007, the City was recognized by the Public Officials for Water and Environmental Reform (P.O.W.E.R.) 2007 Water Conservation Scorecard as one of only two water retailers in the State of California that have successfully completed all 14 Best Management Practices (BMPs) without an exemption.

The City's successful conservation efforts have resulted in a water demand of 130 gallons per capita per day (gpcd) which is markedly lower than the statewide average of 154 gpcd.

Since 1992, the City of Santa Rosa has had a Water Shortage Contingency Plan (Exhibit C) in place pursuant to Section 10632 of the Water Code, which sets forth the City's plan to address water shortages. The Plan includes provisions to addresses water cutbacks in excess of 50%, if necessary, and does not unfairly penalize those residents who have been implementing conservation. The City's programs are designed to be consistent with this Plan, and its adopted Urban Water Management Plan.

There are additional State laws which rely upon local agencies having known and reliable water shortage procedures. Examples include the water supply assessment and water supply verification laws. (Water Code sections 10910-10915 and Gov't Code 66473.7.) Such a water supply system has been developed and is in place in this region. It is reflected in the existing contracts, allocation methodology, and planning documents referenced above. It would be counterproductive, at best, for the State Board to interfere with this orderly and entirely appropriate planning methodology implemented by the Water Agency, the City of Santa Rosa, and the other water contractors, and which is, in part, required under State law.

The City appreciates that the Board and staff may not have been aware of this background. The Board can achieve its goals by ordering the changed instream flows, which are likely to result in reduced supplies. The City and others will have to accommodate those reductions, and can and should be allowed to do so in accordance with the existing, multi-layered and multi-jurisdictional water supply reduction system.

The City protests, objects, and requests reconsideration of the order for the reasons set forth above, and as follows:

- The Water Agency's adopted Water Shortage Allocation Methodology per Section 3.5 of the Restructured Agreement allocates water in a manner that rewards past water conservation efforts and encourages continued water conservation implementation. Across-the-board percentage cutbacks, such as the 25% cutback required in Provision 15 of the Order, penalize those communities which have implemented conservation measures and are a disincentive to effective demand management. It will cause adverse environmental effects by deterring conservation. It interferes with the regional coordinated arrangements to address water shortages, which are essential tools to manage both water and land use in a manner required by State law.
- The Water Agency and prime contractors, including the City of Santa Rosa, have adopted Urban Water Shortage Contingency Plans (Shortage Plans) as required by California Water Code Section 10632. The Shortage Plans detail how each water contractor will respond to water supply shortages of up to 50%. Each contractor's Shortage Plan takes into account their different water supply portfolios and allows the contractors to meet the water supply shortage taking into account the needs and priorities of the community. The State Water Board should recognize these local plans as required by existing state law, rather than (perhaps unintentionally) seeking to usurp them. The Board's Order conflicts with these Statewide water planning and water conservation laws, and the City's actions to comply with them. This exceeds the jurisdiction of the SWRCB, is contrary to law and contrary to the public interest.
- Since 1993, the City of Santa Rosa has had an adopted Water Efficient Landscape Policy (WELP), per the requirements of California Government Code Section 65591. The WELP ensures efficient landscape water use by establishing design requirements consistent with the State Model Water Efficient Landscape Ordinance for all non-single family residential landscapes. The WELP emphasizes and promotes water efficient landscaping and discourages the installation of all high water use plants, not just turf. The WELP was further amended in 2007 and the City also developed and adopted a Single Family Residential Landscape Policy in 2007.

The State Model Water Efficient Landscape Ordinance and the City's WELP allow for irrigation of a small percentage of what the City surmises might be defined as "commercial turf". Commercial customers have designed and installed landscapes per

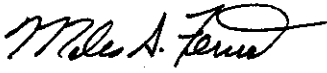
the WELP. Requiring commercial businesses to prohibit the irrigation of turf, Provision 14, conflicts and interferes with referenced State laws and the City's compliance therewith, is inconsistent with the City's responsible and progressive water conservation policies, will result in a severe financial hardship, is unnecessary to implement needed conservation, conflicts and interferes with the Restructured Agreement, is arbitrary and capricious, and will injure lawful users of water. There is no basis in the record for a blanket prohibition of one beneficial purpose of use. It is unrelated to the reduced instream flows needed to preserve Lake Mendocino storage (see, e.g., the Water Agency's Hydrologic Analysis filed with the petition).

- The Water Agency's Temporary Urgency Change Petition included a hydrologic analysis of Lake Mendocino storage indicating that a 20% reduction in diversions from the Russian River by water users in the Upper River coupled with a change to the instream flow requirements would provide for enough water storage in Lake Mendocino for fishery and recreation uses in the fall months. The City and other Restructured Agreement contractors derive water supply primarily from Lake Sonoma. The State Water Order Provision 13 appears to mistakenly correlate the prime contractors' water supply directly with the supply in Lake Mendocino, which is the sole subject of the petition, and requires a 25% reduction in diversions from the Russian River. There is no apparent basis for the 25%. It is more than what is required per the Water Agency hydrologic analysis and will unnecessarily and unlawfully injure lawful users of water. It is unsupported by any findings in the Order, contrary to law and the public interest.
- The Order appears to seek to constrain the City's and others' use of water supplies that are not subject to the permits which are the subject of the petition before the Board, about which the Board may have little or no information, and are outside of the Board's jurisdiction. The Board's action in this respect is arbitrary and capricious, contrary to law, public interest, and outside of its jurisdiction. From a common sense standpoint, the City asks that the Board respect that the City is effectively managing its water supply resources, including very limited groundwater and considerable recycled water, wisely and in the context of many constraints.

The City of Santa Rosa appreciates the State Water Board's consideration of its protest and petition of reconsideration of State Water Board Order WR 2009-0027-DWR. The City respectfully requests that the State Water Board reconsider the Order, delete Provisions 13 and 14, and allow the region to utilize existing tools including regional and local contracts and water shortage plans and programs, to accommodate the reduced water supply from the Water Agency this summer due to the need to protect fisheries and Lake Mendocino storage.

Chair and Members
State Water Resources Control Board
Re: Order WR 2009-0027-DWR
Page 5

Sincerely,



Miles A. Ferris
Utilities Director

Cc with enclosures:

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Mr. Randy Poole
General Manager/Chief Engineer
Sonoma County Water Agency
P. O. Box 11628
Santa Rosa, CA 95406

Cc: Interested Parties

Enclosures:

Exhibit A – Section 3.5 of the Restructured Agreement for Water Supply
Exhibit B – Water Agency Adopted Water Shortage Allocation Methodology
Exhibit C – City of Santa Rosa Urban Water Shortage Contingency Plan 2006

ATTACHMENT A

(d) The Water Contractors shall have first priority on deliveries of Surplus Water.

(e) The Agency desires to transfer all of its Surplus Customers to the Water Contractors. The parties to this Agreement shall cooperate in the voluntary permanent transfer of Surplus Customers from the Agency to the party whose corporate territory encompasses the site of a given Surplus Customer or whose corporate territory boundary is within two miles of the turnout(s) serving said customer. Should a given Surplus Customer lie within two miles of more than one party, the parties shall meet and confer with the Agency and by mutual agreement determine who is best suited to take over said Surplus Customer. Nothing in this subsection shall require a Water Contractor to take over service of any Agency Surplus Customer. Should a given party opt not to take over Surplus Customers who lie within their corporate territory or within two miles of the boundary of same, then any other party to this Agreement whose corporate territory lies within Sonoma County may apply to the Agency to take over said Surplus Customers. Parties who agree to take on such service shall be known as Surplus Water providers.

(f) Surplus Water providers agree to interrupt delivery of Surplus Water upon notification by Agency if Agency determines, in its sole discretion, that there exists an immediate or pending problem involving loss of Transmission System storage, inadequate pumping capacity, a valid complaint from any Regular Customer that they are not receiving their appropriate Entitlement as a result of Surplus Water deliveries, or any other problem impacting the delivery capability of the Transmission System. Surplus Water providers shall notify their customers of Agency's right to require such delivery interruptions. Notwithstanding the right of the Agency to notify and cause the interruption of delivery of Surplus Water, a Surplus Water provider may also interrupt delivery of Surplus Water at any time it determines it is necessary or prudent to do so in order to satisfy the demands of its non-Surplus Customers; or for water system maintenance, repair, or planned or unplanned outage of any nature whatsoever, including but not limited to a perceived, threatened or actual water shortage. Deliveries of Surplus Water shall not be deemed to be included as part of any Regular Customer's Entitlement or Entitlement Limit.

3.5 Shortage of Water and Apportionment

- (a) (1) The Agency shall use its best efforts to obtain, perfect, and maintain appropriative water rights in amounts sufficient to be able to make the water deliveries provided for in this Agreement. In its operation of the Russian River Project, the Agency shall use all reasonable means to prevent a deficiency in the

quantity of water that is available to the Agency for diversion and redirection under the Agency's water rights. However, nothing in the preceding two sentences shall be construed to limit the Agency's discretion to take appropriate actions in good faith to resolve any issue that may arise under the federal Endangered Species Act or any other federal or state law affecting the Agency's water rights or operation of the Russian River Project.

(2) If by reason of drought, environmental laws or regulations, other causes beyond the control of the Agency, or any change in the amounts of water imported by the Potter Valley Project into the Russian River watershed (whether or not such change is caused by any action or inaction of the Agency) a deficiency does occur, the Agency shall not be liable to any of its customers for any damage arising therefrom.

(3) In the event of a deficiency pursuant to subsection 3.5(a)(2), the Agency first shall cease all deliveries of Surplus Water to other than the Water Contractors; second, shall cease deliveries of all Surplus Water; third, shall cease deliveries to Regular Customers in excess of their respective annual Entitlement Limits; and fourth, shall apportion the available supply of water as follows:

(i) first, deliver to each of its Regular Customers, not in excess of their respective Entitlement Limits, authorize Agency's Russian River Customers to divert or redirect not in excess of the amounts for which those customers have contracted to purchase from the Agency, and deliver to Marin Municipal not in excess of the amounts, if any, that are required to be delivered pursuant to the Third Amended Offpeak Water Supply Agreement dated January 25, 1996, the Amended Agreement for the Sale of Water between the Sonoma County Water Agency and the Marin Municipal Water District dated January 25, 1996, amendments to these agreements that have been approved by the Water Advisory Committee, or subsequent agreements between the Agency and Marin Municipal that have been approved by the Water Advisory Committee, the quantities of water required by each such customer for human consumption, sanitation, and fire protection as determined by the Agency after taking into consideration all other sources of potable water then available to said customer, including, for Russian River Customers, water available under their own water rights;

(ii) second, to the extent additional water is available to the Agency, allocate that water proportionately as follows: deliver such water to Agency's Regular Customers based upon their respective average daily rate of flow during any month Entitlement Limits, authorize the Agency's Russian River Customers to divert or redivert such water based upon the delivery limits set forth in the agreements between the Agency and its Russian River Customers, and deliver such water to Marin Municipal pursuant to and to the extent required by the Third Amended Offpeak Water Supply Agreement dated January 25, 1996, the Amended Agreement for the sale of Water between the Sonoma County Water Agency and the Marin Municipal Water District dated January 25, 1996, amendments to these agreements that have been approved by the Water Advisory Committee, or subsequent agreements between the Agency and Marin Municipal that have been approved by the Water Advisory Committee;

(iii) provided, however, that no Customer shall receive under subsections 3.5(a)(3)(i) and 3.5 (a)(3)(ii) a total quantity of water in excess of its reasonable requirements or its said Entitlement Limits or contracted amount, whichever is less.

(b) (1) In the event of a temporary impairment of the capacity of the Transmission System by reason of natural disaster, sabotage or other causes beyond the control of the Agency, the Agency shall not be liable to any of its customers for any damage arising therefrom.

(2) In the event of a Section 3.5(b)(1) impairment, the Agency shall:

(i) first, deliver to each of its Regular Customers the quantity of water, not in excess of the respective average daily rate of flow during any month Entitlement Limit, required by it for human consumption, sanitation, and fire protection as determined by the Agency after taking into consideration all other sources of potable water then available to said customer;

(ii) second, to the extent additional Transmission System capacity is available to the Agency, deliver a quantity of water to the Regular Customers in proportion to their respective average daily rate of flow during any month Entitlement Limits, provided, however, that no Regular

Customer shall receive under subsections 3.5 (b)(2)(i) and (b)(2)(ii) a total quantity of water in excess of its reasonable requirements or its average daily rate of flow Entitlement Limit, whichever is less;

(iii) third, to the extent additional Transmission System capacity is available, deliver water to Regular Customers in excess of their average daily rate of flow Entitlement Limits pursuant to Section 3.3;

(iv) fourth, to the extent additional Transmission System capacity is available, deliver water to Marin Municipal not in excess of the delivery limitations in Section 3.12;

(v) fifth, to the extent additional Transmission System capacity is available, deliver Surplus Water to the Water Contractors;

(vi) sixth, to the extent additional Transmission System capacity is available, deliver Surplus Water to other than the Water Contractors.

(3) However, deliveries to Marin Municipal shall not be reduced or curtailed under this Section 3.5(b) because of inadequate capacity in the new aqueduct to be constructed generally paralleling the portion of the Petaluma Aqueduct that extends from the Ely Pumping Plant to Kastania Reservoir, if such new aqueduct is paid for and dedicated to the Agency pursuant to Section 13 of the Amended Agreement for the Sale of Water between the Sonoma County Water Agency and the Marin Municipal Water District dated January 25, 1996.

- (c) (1) In determining "human consumption, sanitation, and fire protection" amounts pursuant to this Section 3.5, the Agency shall take into account the level of water conservation achieved by the Customer and the resulting decrease in end user ability to reduce water use (the hardening of demand) resulting from such conservation. The allocations pursuant to subsection 3.5(a)(3)(i) shall be determined using a methodology which rewards and encourages water conservation; avoids cutbacks based upon a percentage of historic consumption, and, among other things, bases the amounts necessary for "human consumption, sanitation, and fire protection" upon no greater than average indoor per capita water use determined from recent retail billing records for winter water use by all of the Water Contractors; and, if necessary or appropriate for equitable purposes, considers commercial, industrial and institutional water uses separately and determines that element of the subsection 3.5(a)(3)(i) allocation

based on winter water use from recent retail billing records for commercial, industrial, and institutional uses.

(2) The fundamental purpose of the "reasonable requirements" limitation is to ensure that no Customer receives more water during a shortage than that Customer reasonably needs. In determining "reasonable requirements" pursuant to this Section 3.5, the Agency may take into account the hardening of demand resulting from the level of conservation achieved by the Customer; the extent to which the Customer has developed Recycled Water Projects and Local Supply Projects; and the extent to which the Customer has implemented water conservation programs (including conservation required pursuant to the provisions of Section 1.12 of this Agreement). It is the intention of the parties to this Agreement that the Agency make its "reasonable requirements" determinations so as to encourage Customers to implement water conservation, Recycled Water, and Local Supply Projects.

(d) The Agency shall at all times have an adopted water shortage allocation methodology sufficient to inform each Customer of the water that would be available to it pursuant to Section 3.5(a) in the event of reasonably anticipated shortages, which methodology shall be consistent with this Section 3.5 and shall be included in the Urban Water Management Plan prepared pursuant to Section 2.7.

(e) The parties agree that it is extremely difficult and impractical to determine the damage caused to the Agency or other Customers as a result of the taking of water by any Customers in excess of the limitations contained in this Section 3.5. If any Customer takes delivery of water from the Transmission System or otherwise from the Russian River system in violation of this Section 3.5, then it shall pay the Agency, in addition to all other applicable charges, liquidated damages in an amount equal to 50 percent of the applicable Operation and Maintenance Charge (including all sub-charges) times the amount of water taken in violation of the provisions of this Section 3.5. The Agency shall use its best efforts to incorporate this liquidated damages provision into its agreements with Other Agency Customers, Russian River Customers, Marin Municipal Water District, and into the Agency's rules and regulations for the provision of water service, and impose liquidated damages pursuant to this Section 3.5(e). The existence of this liquidated damage provision shall not limit or restrict the Agency from physically limiting the quantity of water taken to the amounts authorized by this Section 3.5 or from pursuing all other available legal and equitable remedies applicable to such violations. By affirmative vote, the Water Advisory Committee may request that the Agency physically limit the quantity of water taken by a Regular

Customer to the amounts authorized by this Section 3.5 or that the Agency pursue all other available legal and equitable remedies applicable to such violations. The proceeds of any liquidated damages assessed pursuant to this subsection shall be deposited and paid out in the same manner as the proceeds of the Operation and Maintenance Charge.

(f) Notwithstanding subsections (a) and (b) above, as an alternative method for allocation under this Section 3.5 during a period of water deficiency or temporary Transmission System impairment, the Water Advisory Committee (or, in the event of a Transmission System temporary impairment affecting fewer than all of the Water Contractors, the Water Advisory Committee representatives of the Water Contractors affected by the temporary impairment) may, by unanimous vote, determine how water shall be allocated among the affected Water Contractors. The Agency shall provide a calculation methodology or other information adequate to enable the determination, in a manner consistent with this Section 3.5, of the volume of water to which (i) the Water Contractors as a group, and (ii) all other Customers would be respectively entitled. Any alternative method for allocation determined by the Water Advisory Committee pursuant to this subsection shall apply only to the volume of water to which the Water Contractors are entitled as a group.

(g) In the event that Transmission System capacity is expanded by the construction of facilities other than those authorized by this Agreement, then notwithstanding anything in this Section 3.5 to the contrary, any allocations made pursuant to this section to Forestville that are based upon the average daily rate of flow during any month Entitlement Limits shall not use a denominator greater than 133.4 mgd.

3.6 Fire Fighting Service

~~Anything herein to the contrary notwithstanding, the Agency may furnish water for fire fighting from hydrants or standpipes on the Transmission System, provided, however, that such service within two miles of the Corporate Territory of a Water Contractor may be furnished only if and during the period of time said Water Contractor consents thereto in writing. The Agency shall set fees sufficient to recover the full cost of installing and maintaining and supplying water to fire hydrants. All revenue from such fees shall be treated the same as money received from the Operation and Maintenance Charge and shall be deposited and paid out as set forth in Section 1.7 and subdivision (b) of Section 4.1. Agency shall adopt service rules limiting hydrant water usage to fire suppression, fire training and limited temporary uses such as providing metered construction water.~~

ATTACHMENT B

**COUNTY OF SONOMA
AGENDA ITEM
SUMMARY REPORT**

Clerk of the Board Use Only
Meeting Date **Held Until**
 / / / /
Agenda Item No: **Agenda Item No:**

Department:
 Sonoma County Water Agency

() 4/5 Vote Required

Contact: Randy D. Poole **Phone:** 526-5370 **Board Date:** 04-18-06

Deadline for Board Action:

AGENDA SHORT TITLE:
 Water Shortage Allocation Methodology

REQUESTED BOARD ACTION(S):
 Resolution approving water shortage allocation methodology.

CURRENT FISCAL YEAR FINANCIAL IMPACT

<u>EXPENDITURES</u>		<u>ADD'L FUNDS REQUIRING BOARD APPROVAL</u>	
Estimated Cost	\$	-0-	Contingencies \$
			(Fund Name:)
Amount Budgeted	\$	-0-	Unanticipated Revenue \$
			(Source:)
Other Avail Approp (Explain below)	\$		Other Transfer(s) \$
			(Source:)
Additional Requested:	\$	-0-	Add'l Funds Requested: \$

Explanation (if required):

Prior Board Action(s):

06/29/04 Resolution directing the General Manager/Chief Engineer to proceed diligently with negotiations of the new Memorandum of Understanding and Restructured Water Supply Agreement and directing staff to review the City of Santa Rosa's pending report on an alternative water allocation methodology and, once consensus among the water contractors is reached, bring the allocation methodology to the Board for consideration.

Alternatives - Results of Non-Approval:

Background: Restructured Agreement for Water Supply on file with the Clerk.

Sonoma County Water Agency (Agency) staff has negotiated a new agreement for water supply with its water contractors pursuant to direction from the Board of Directors (Board). The new agreement, the proposed Restructured Agreement for Water Supply (Restructured Agreement), will replace the Eleventh Amended Agreement for Water Supply between the Agency and its water contractors after all parties approve it.

A new provision is included in Section 3.5 (Shortage of Water and Apportionment) of the proposed Restructured Agreement which requires "[T]he Agency shall at all times have a water shortage allocation methodology sufficient to inform each Customer of the water that would be available to it pursuant to Section 3.5(a) in the event of reasonably anticipated shortages, which methodology shall be consistent with this Section 3.5 and shall be included in the Urban Water Management Plan prepared pursuant to Section 2.7."

An allocation methodology was originally developed by the City of Santa Rosa and subsequently amended by the Water Advisory Committee's consultant John Olaf Nelson Water Resources Management. A description of the model and a hard copy of the model output (developed as an EXCEL workbook) are attached (A1).

Although the current model is generally consistent with Section 3.5 of the proposed Restructured Agreement, it will be amended over the next several months as more information is developed during preparation of the Urban Water Management Plan. Staff plans to return to the Board with a revised version of the model when the Urban Water Management Plan is considered for approval. Staff also plans to continually improve the model over time as additional information and better modeling tools become available. As new versions of the model become available, staff expects to return to the Board for approval of the new versions.

The parties to the proposed Restructured Agreement have evaluated the current model. The parties have been informed that the model is expected to change over time and that new versions of the model will be approved by the Board as they are prepared.

REQUESTED BOARD ACTION(S):
Resolution approving water shortage allocation methodology.

Attachments: Resolution (R1); Model and Description (A-1)

On File With Clerk: Restructured Agreement for Water Supply

CLERK OF THE BOARD USE ONLY

Board Action (If other than "Requested")

Vote:

Resolution No. _____
County Administration Bldg.
Santa Rosa, CA

Date: _____

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SONOMA COUNTY WATER AGENCY APPROVING WATER SHORTAGE ALLOCATION METHODOLOGY.

WHEREAS, the General Manager/Chief Engineer has negotiated the proposed Restructured Agreement for Water Supply; and

WHEREAS, the proposed Restructured Agreement for Water Supply requires the Sonoma County Water Agency to have an adopted water shortage allocation methodology available at all times to inform each of its customers of the water that would be available in the event of reasonably anticipated shortages; and

WHEREAS, the proposed Restructured Agreement for Water Supply requires the adopted water shortage allocation methodology be consistent with Section 3.5 of the Restructured Agreement for Water Supply; and

WHEREAS, the City of Santa Rosa developed an allocation methodology regarding implementation Section 3.5 of the Restructured Agreement for Water Supply; and

WHEREAS, the Water Advisory Committee's consultant, in conjunction with the water contractors, amended and documented the allocation methodology developed by the City of Santa Rosa; and

WHEREAS, the General Manager/Chief Engineer staff plans to return to the Board with a revised version of the allocation methodology when the Urban Water Management Plan is considered for approval, and to continually improve the allocation methodology over time as additional information and better modeling tools become available.

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Sonoma County Water Agency hereby finds, determines, and declares as follows:

1. All of the above recitals are true and correct.
2. The water shortage allocation methodology is approved.

DIRECTORS:

BROWN _____ KERNS _____ SMITH _____ REILLY _____ KELLEY _____

Ayes _____ Noes _____ Absent _____ Abstain _____

SO ORDERED.

**Description of Model that Calculates the
Allocation of Water Available to Sonoma County Water Agency for its Customers*
During a Water Supply Deficiency Taking Demand Hardening into Account**

April 4, 2006 Version

This EXCEL workbook (040406 Allocation Model.xls) presents two models that calculate allocations to Sonoma County Water Agency (SCWA) Customers during a shortage of water supply in the Russian River. The calculations meet all of the requirements of the Restructured Agreement for Water Supply (Agreement). See **Contents** sheet for layout of sheets in the workbook. Another EXCEL workbook (040406 Customer Water Use.xls) supports this workbook and contains data compiled for the 2005 Urban Water Management Plan.

* "SCWA Customers" or "Customer" is defined as any of the following:

Regular Customers

Water Contractors (sometimes referred to as "Primes"): Cotati, Petaluma, Rohnert Park, Santa Rosa, Sonoma, Windsor (Airport Service Area), North Marin Water District, Valley of the Moon Water District.

Other Agency Customers: SCWA, County of Sonoma, Larkfield Water District, Forestville Water District, Lawndale Mutual Water Co., Kenwood Village Water Co., Penngrove Water Co., City of Sebastopol, State of California, and Santa Rosa Jr. College)

Marin Municipal Water District (MMWD)

Russian River Customers (Customers of SCWA that divert water directly from the Russian River or via wells adjacent to the River).

Where to Find Results:

Results for allocating water during a shortage given varying assumed amounts of water available to SCWA in the Russian River are modeled for two cases.

- The **Current Model** is to be employed during a real drought. Inputs to this model must be updated to then current conditions. For current conditions, results are shown on the **Current Recap** sheet.
- The **Future Model** is a "planning" model whose purpose is to predict allocations for various levels of deficiency in the future when all Customers are assumed to have reached there entitlement limits – generally about 20 years from now for most Customers. (Note: This was the type of model prepared by West, Yost & Associates for the City of Santa Rosa and is also the type prepared by Petaluma.) Results are shown on the **Future Recap** sheet.

Required Allocation Methodology:

Section 3.5(a)(3) of the Agreement provides for allocation of water in the event of a water supply deficiency as follows:

- **"First"**, Allocation of quantities of water required by each Customer* for human consumption, sanitation and fire protection (HC, S & FP) after taking into consideration all other sources of potable water then available to said customer. (Section 3.5(a)(3)(i)) (Often referred to as Tier 1.)
- **"Second"**, Allocation of any additional water available to the SCWA proportionately to its Customers* as follows (Section 3.5(a)(3)(ii)) (Often referred to as Tier 2 allocation.):

Regular Customers (Water Contractors and Other Agency Customers): Deliveries from aqueduct based on respective average daily rate of flow during any month entitlements. These entitlements are set forth as million gallon per day (mgd) rates in Sections 3.1(a) and 3.2 of the Agreement.

Russian River Customers: Authorized diversions or rediversions of water based on delivery limits set forth in agreements with the SCWA.

Marin Municipal Water District (MMWD): Deliveries based on Third Amended Offpeak Agreement and Agreement for Sale of Water (as amended on Jan 25, 1996), and amendments or subsequent agreements between the SCWA and MMWD that have been approved by the Water Advisory Committee.

- **Sum of Two:** The Agreement further requires that the sum of the "First" plus "Second" allocation for a given SCWA Customer not exceed the Reasonable Requirement or entitlement limit/contracted amount, whichever is less (Section 3.5(a)(3)(iii)).

"Human Consumption, Sanitation and Fire Protection" Definition:

In determining HC, S & FP amounts, the Agreement provides that SCWA shall take into account the level of water conservation achieved by the Customer and the resulting decrease in end user ability to reduce water use (the hardening of demand) resulting from such conservation. The allocation shall be determined using a methodology which rewards and encourages water conservation; avoids cutbacks based upon a percentage of historic consumption, and, among other things, bases the amounts necessary for HC, S & FP upon no greater than average indoor per capita water use determined from recent retail billing records for winter water use by all of the Water Contractors; and, if necessary or appropriate for equitable purposes, considers commercial, industrial and institutional water uses separately and determines that element of the allocation based on winter water use from recent retail billing records for commercial, industrial and institutional uses. (Section 3.5(c)(1))

"Reasonable Requirements" Definition:

The Agreement states that the fundamental purpose of the Reasonable Requirements limitation is to ensure that no Customer receives more water during a shortage than that Customer reasonably needs. In determining reasonable requirements, the SCWA may take into account the hardening of demand resulting from the level of conservation achieved by the Customer; the extent to which the Customer has developed recycled water projects and local supply projects, and the extent to which the Customer has implemented water conservation programs. The Agreement further states that it is the intention of the

parties that the SCWA make its Reasonable Requirements determinations so as to encourage Customers to implement water conservation, recycled water, and local supply projects. (Section 3.5(c)(2))

Description of Models:

Two models are presented.

- **Current Model:** The Current Allocation Model determines annual allocations based on the assumption the water supply deficiency occurs now and impacts current conditions and levels of use. This is the model that would be used in the event of an actual deficiency in water supply available from the Russian River. It employs estimates of HC, S & FP needs, Reasonable Requirements, and Local supply. In the event of a real perceived water supply deficiency, inputs to the model must be updated to then currently available data. If the shortage persists longer than one year the inputs must again be updated – particularly local supply estimates which should be updated every year of the drought. Customers relying on surface water for local supply, such as North Main Water District, and MMWD, can be expected to have reduced local supply available.
- **Future Model:** The second model is hypothetical and predicts future allocations at a point in time that assumes that all customers of the SCWA have reached their annual entitlement limits. It sets the Reasonable Requirement for each SCWA Customer to that customer's annual entitlement limit (cap). The Future Allocation Model is useful for planning purposes to predict allocations from the SCWA for various assumed water supply deficiencies.

Model Assumptions and Inputs:

1. **Entitlements:** Entitlements (Regular Customers) and contracted amounts (MMWD and Russian River Customers) for both models are as set forth in the Agreement and existing agreements between the SCWA and MMWD and its Russian River Customers. (See **Entitlements** and **RR Cust** sheets.)
2. **Local Supplies:** The estimates of safe yield of local supplies are the same for both models and are based on estimates reported by Water Contractors to West, Yost & Associates in a September 23, 2004 Tech. Memo to the City of Santa Rosa and are generally average local supply that was available for the period 2000 through 2003. A contingency factor is applied by John Olaf Nelson Water Resources Management (JONWRM) to each local supply to account for equipment/maintenance issues or other potential problems. This factor was assumed to be 10% for each Water Contractor for lack of better data. The safe yield value for MMWD was supplied by MMWD. Local supply estimates for Other Agency Customers were not available and was assumed to be "0". Information on Local supplies needs to be accurately determined and updated by the SCWA. (See **Local** and **TM Data** sheets.)
3. **Water for Human Consumption, Sanitation and Fire Protection:** Water needed to meet HC, S & FP needs for both models is assumed to be equal to total winter level demand of customers served by Customers of the SCWA and is based on metered water sales (billings) for calendar 2004, the base year analyzed in the 2005 Urban Water Management Plan. Winter level demands are then extrapolated to a full year to determine the annual HC, S & FP need. Water available

from local supplies is then determined and net HC, S & FP needs determined in order to calculate the "First" allocation. In determining the "First" allocation, demand hardening is accounted for using winter level per capita demand. (See **GPCD** and **Human** sheets and the footnotes on the Current Model for details.)

4. Reasonable Requirements:

- For the Current Model, Reasonable Requirements were assumed to equal average annual aqueduct deliveries to SCWA's Regular Customers and MMWD for FY 2003-04 and FY 2004-05. For Russian River Customers, the average for Water Years 2004 and 2005 was used, as that was the format the data was available in. (Use of a three or four year average would normally be a better choice for calculating Reasonable Requirements, however, this was not done as at least one SCWA customer made a significant policy change in aqueduct usage which would not have been fairly reflected if years prior to FY 2003-04 were used. Also in subsequent analyses, the data should be normalized to common annual periods.) (See **Reasonable** sheet.) Pursuant to Section 3.5(c)(2), Reasonable Requirements were adjusted with a demand hardening factor to account for differing levels of conservation achieved by Customers. The demand hardening factor is derived from total per capita demand (residential, non-residential and unaccounted for water) as determined for the base year (cal. 2004) of the 2005 Urban Water Management Plan. (See **DH Factor** sheet.)
- In the Future Model, Reasonable Requirements are set equal to annual entitlement limits (caps) or contract limits as applicable, it being assumed that each Customer has reached its annual entitlement limit (the same approach taken in the Santa Rosa and Petaluma models). **THIS IS THE ONLY INPUT DIFFERENCE BETWEEN THE "CURRENT" AND "FUTURE" MODEL.**

Model Design and Workbook Layout:

The two model sheets are totally independent and are designed to automatically calculate water shortage allocations for any SCWA available supply bounded by a low value equal to the sum of water required for HC, S & FP and an upper value equal to the sum of Reasonable Requirements or sum of annual entitlement limits, whichever is less. Cells in both models are linked to the various supporting data sheets.

To operate a model, simply input the assumed available supply in Cell H:4 of the model you are working with. The results – the sum of the "First" (Tier 1) plus "Second" (Tier 2) allocation appear to the far right (Column 42 of the Current Model and Column 39 of the Future Model).

The Current Model sheet is followed by a sheet entitled "Current Recap" that shows the resulting allocations (both in tabular and graph form) for each Customer for various assumed levels of available supply. This recap and the graphs are automatically populated by running the Macro entitled "CurRecap".

Likewise, following the Future Model sheet is a sheet entitled "Future Recap" which shows the tabular and graph results for the Future Model. This recap and the graphs are automatically populated by running the Macro entitled "FutRecap".

Caution Concerning Data Collection and Maintenance:

With the allocation methodology introduced in the Agreement, it is essential that the SCWA develop and maintain a data base containing information collected from all of its Customers based on application of uniform standards, and containing data on water service area population, portion of population served by private wells (none of the models correct for private well water use by service area population), winter level water consumption, annual consumption, local supplies, unaccounted for water, conservation, recycled water use, etc. Good regional data on evapotranspiration differences may also be needed to modify the Reasonable Requirement demand hardening adjustment factor. A fair and uniform way to determine the safe yield of local supply capacity is especially important. It may be useful to categorize local supply into: (1) normally available and used capacity, and (2) strictly standby capacity that is more expensive to use than aqueduct water or has some non-threatening quality issues, i.e. taste and odor that make it undesirable to use under normal water supply conditions.

John Olaf Nelson Water Resources Management (JONWRM)
1833 Castle Dr, Petaluma, CA 94954
Ph: (707) 778-8620 Email: jonolaf@comcast.net

**Contents of this EXCEL Workbook
Water Shortage Allocation Model w. Demand Hardening Factor (a)
April 4, 2006 Version**

Models (Current and Future)

Page

1	Contents
2, 3	Current Model (To be used in case of imminent drought.)
3, 4	Current Recap (Recap of <u>Current</u> Allocation Model)
5, 6	Future Model (To be used for long range planning purposes.)
7, 8	Future Recap (Recap of <u>Future</u> Allocation Model)

Input Data for Models

9	Entitlements *
10	RR Cust (Russian River Customer demand) *
11	Human (Human Consumption, Sanitation and Fire Protection demand) *
12	Reasonable ("Reasonable Requirements" are recent (non-drought) aqueduct deliveries and Russian River diversions of SCWA Customers) **
13	Local (Local Supply expected to be available in a drought) *
14	Pop (Service Area population data) *
15	GPCD (Winter level per capita demand (b))
16	DH Factor Demand Hardening Factor - used for adjusting "Reasonable Requirements" in <u>Current</u> Model
17	TM Date Data compiled by West, Yost & Associates for Santa Rosa Planning Allocation Model

* Same data used in both Current and Future Model.

** Based on aqueduct sales and Russian River diversions in recent non-drought years. In the Future Model, reasonable requirements are set equal to annual entitlement limits (caps) or contract delivery limits as applicable in order to estimate allocations at that time in the future when demand has grown to equal the annual entitlement limits.

For questions, contact:

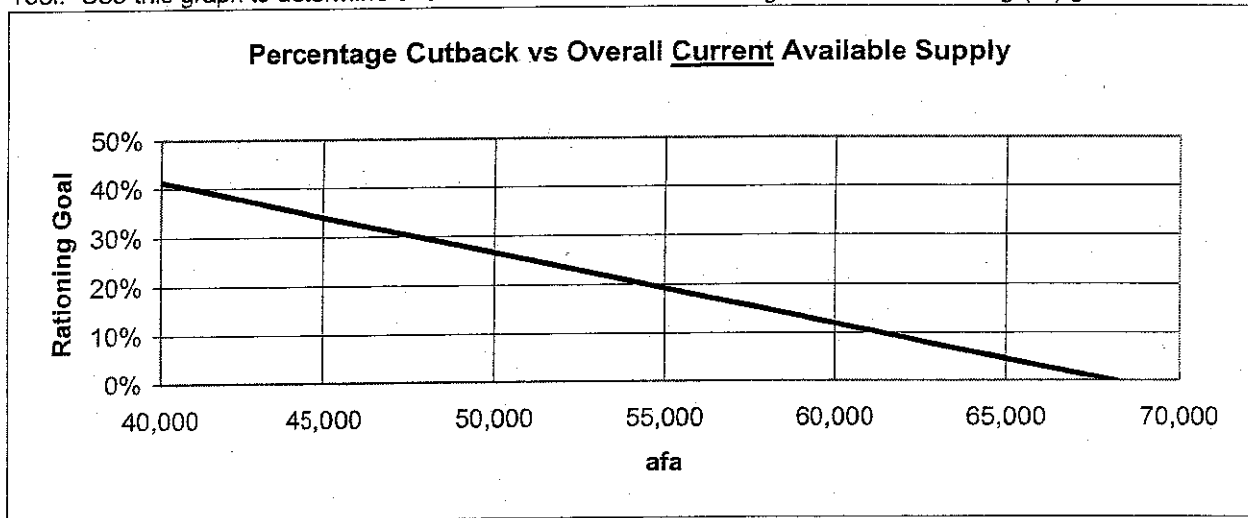
John Olaf Nelson Water Resources Mgt
Ph: (707) 778-8620
Email: jonolaf@comcast.net

Results for Current Allocation Model vs. Assumed Available Supply

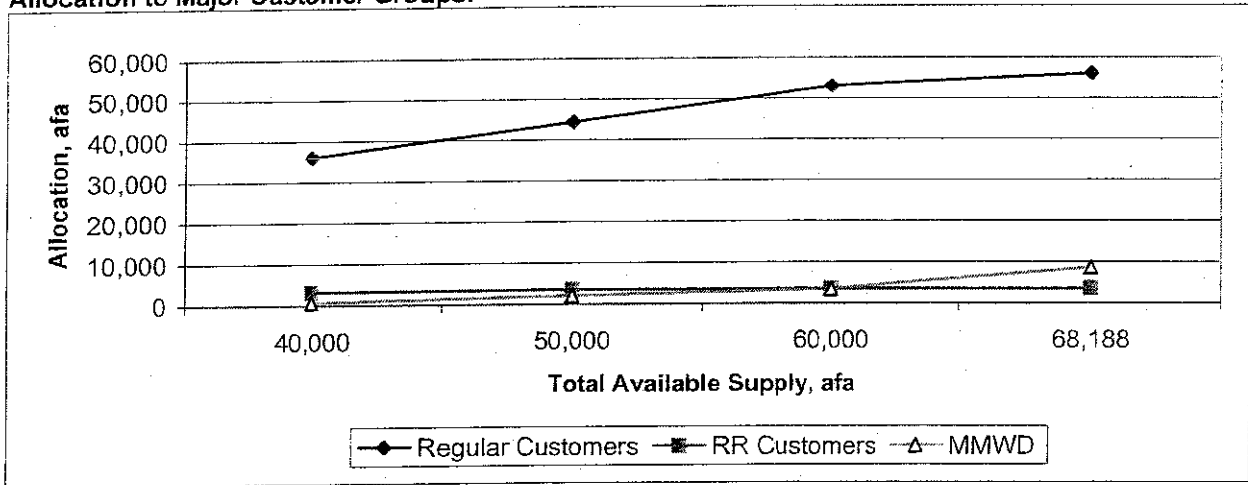
Available RR SCWA Supply, afa >	40,000	50,000	60,000	68,188 *
Equivalent Cutback in Deliveries >	41.3%	26.7%	12.0%	0.0%
Regular Customers				
Cotati	694	928	1,095	1,095
Petaluma	6,155	7,501	8,952	9,735
Rohnert Park	2,924	3,850	4,849	5,246
Sonoma	1,261	1,650	2,069	2,200
Windsor	317	409	410	410
NMWD	4,775	6,004	7,328	8,459
Santa Rosa	16,856	20,351	24,118	24,737
VOM	2,157	2,682	3,086	3,086
Other Agency	949	1,116	1,207	1,207
Sub-Total	36,088	44,491	53,114	56,173
MMWD	737	2,014	3,391	8,520
Russian River Cust's	3,175	3,495	3,495	3,495
Total	40,000	50,000	60,000	68,188

* Note: Max. Value is capped at 68,188 afa as this satisfies sum of Reasonable Requirements.

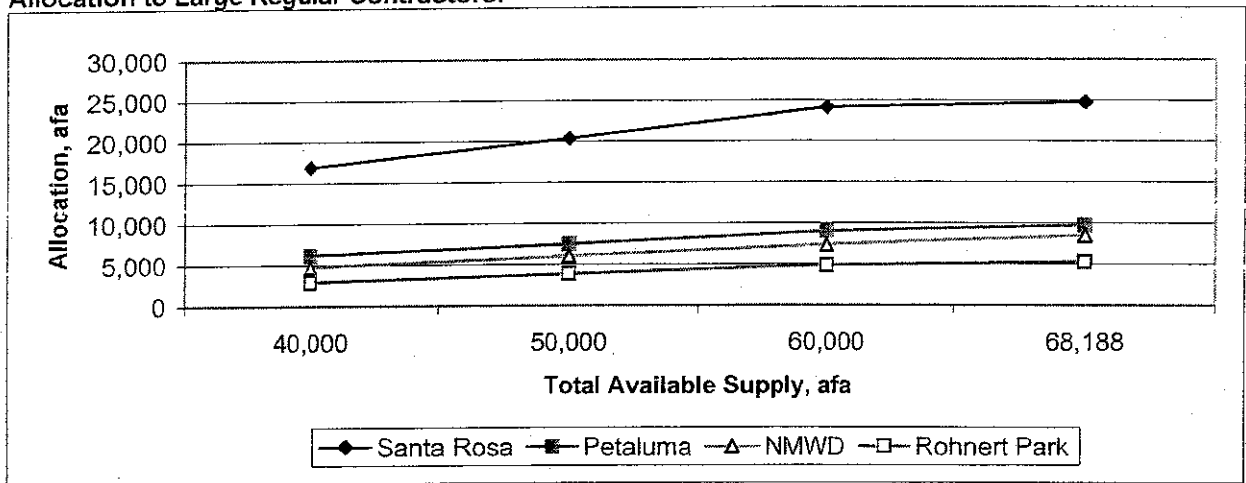
Tool: Use this graph to determine overall allocation available for a given overall rationing (%) goal.



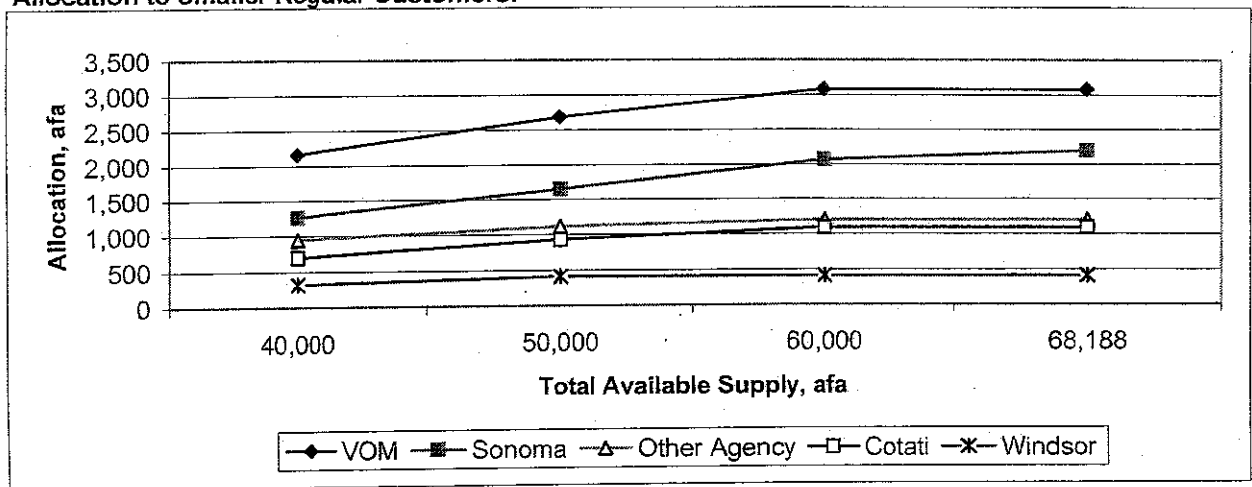
Allocation to Major Customer Groups:



Allocation to Large Regular Contractors:

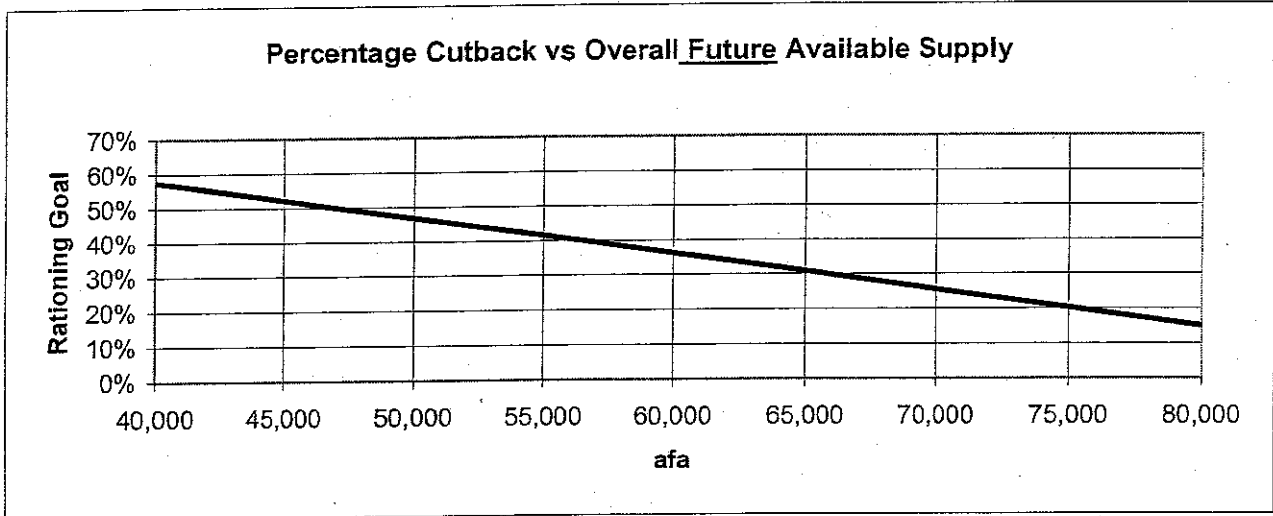


Allocation to Smaller Regular Customers:

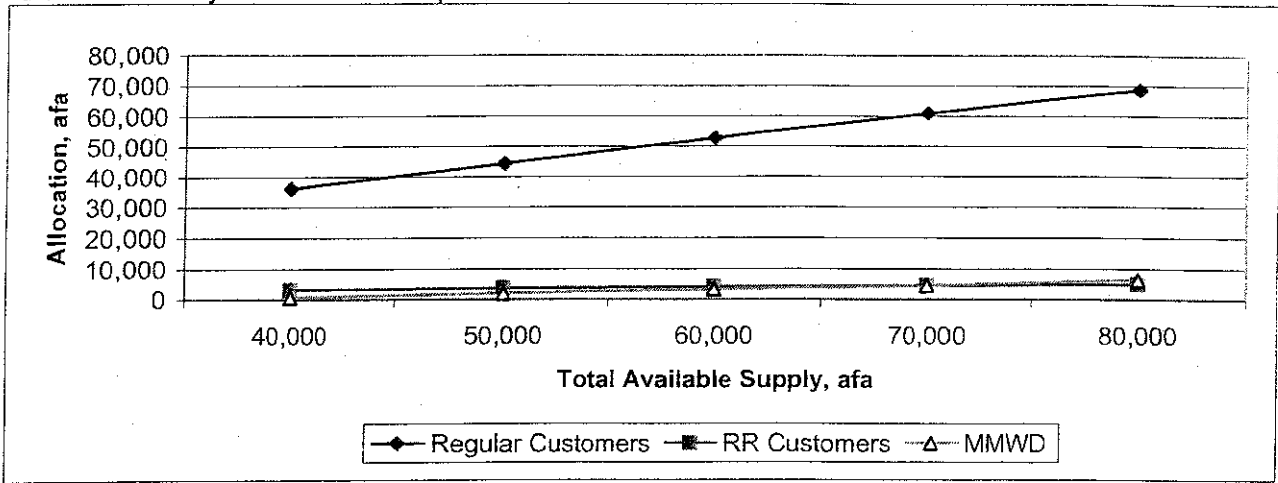


Results for Future Allocation Model vs. Assumed Available Supply

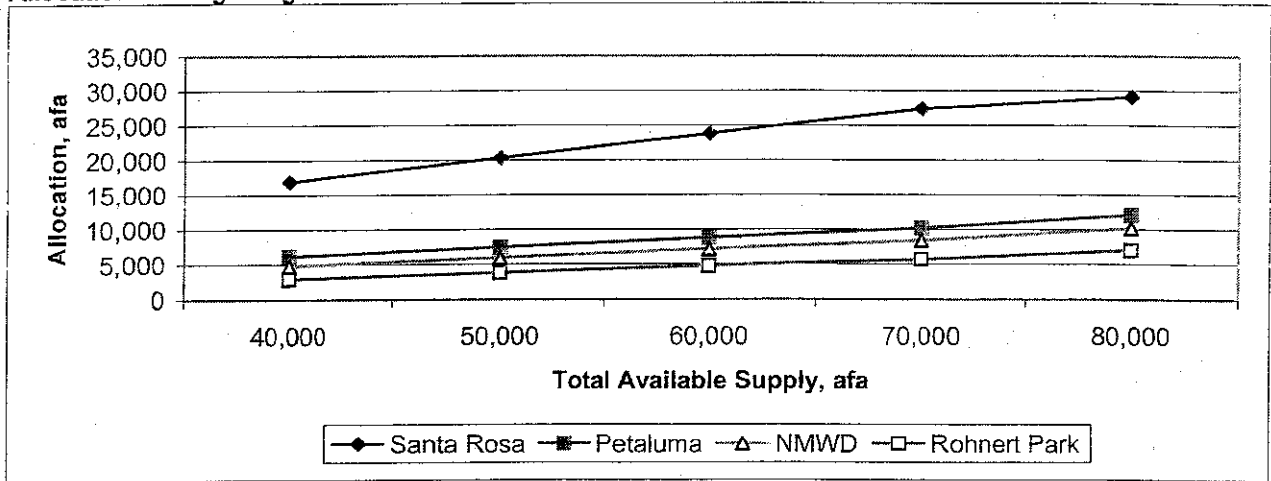
	40,000	50,000	60,000	70,000	80,000
Available RR SCWA Supply, afa >	40,000	50,000	60,000	70,000	80,000
Equivalent Cutback in Deliveries >	57.5%	46.9%	36.2%	25.6%	15.0%
Regular Customers					
Cotati	694	925	1,157	1,401	1,520
Petaluma	6,155	7,484	8,813	10,214	12,118
Rohnert Park	2,924	3,838	4,753	5,716	7,027
Sonoma	1,261	1,645	2,029	2,433	2,984
Windsor	317	408	500	596	727
NMWD	4,775	5,988	7,201	8,480	10,218
Santa Rosa	16,856	20,306	23,756	27,393	29,100
VOM	2,157	2,675	3,193	3,200	3,200
Other Agency	949	1,113	1,278	1,451	1,687
Sub-Total	36,088	44,384	52,680	60,884	68,581
MMWD	737	1,998	3,259	4,587	6,394
Russian River Cust's	3,175	3,618	4,061	4,528	5,025
Total	40,000	50,000	60,000	70,000	80,000



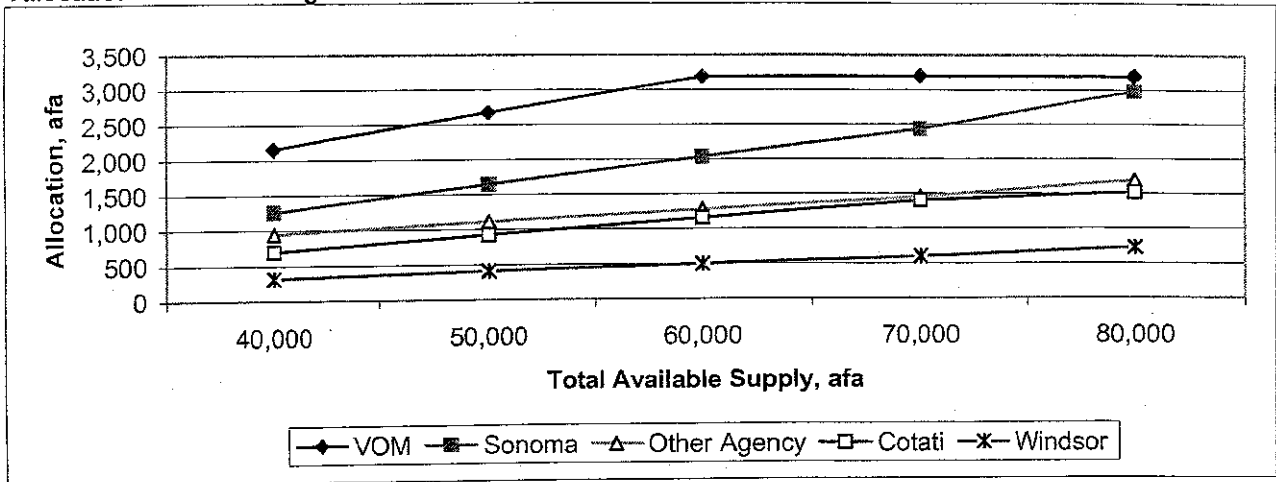
Allocation to Major Customer Groups:



Allocation to Large Regular Contractors:



Allocation to Smaller Regular Customers:



Entitlements of SCWA Customers

SCWA Customer:	Source	Entitlement mgd (any month)	Annual Limit afa
Regular Customers			
Cotati	a	3.8	1,520
Petaluma	a	21.8	13,400
Rohnert Park	a	15	7,500
Sonoma	a	6.3	3,000
Windsor (Airport Service Area)	b	1.5	900
North Marin WD	a	19.9	14,100
Santa Rosa	a	56.6	29,100
Valley of the Moon WD	a	8.5	3,200
Other Agency Cust (Includes FWD)	c	2.7	2,048
Sub-Total		136.1	74,768
Marin Muni. WD	d	0	14,300
Russian River Customers	e	0	5,025
Total		136.1	94,093

Notes:

- a Eleventh Amended WS Agree. (Proposed Restructured WS Agree is same)
- b Proposed Restructured WS Agree. Applies only to Airport Service Area served from SCWA Aqueduct. Windsor's direct diversions from the RR are covered by an Agreement with the SCWA and potentially via its pending application to the State for Water Rights
- c "mgd any month" limit is per Eleventh Amended WS Agree. (Proposed Restructured WS Agree is same). Annual limit is estimated based on avg. annual Other Agency Customer demand (as defined in Restructured Agree) for FY's 2003 and 2004 (1,356 af) projected through 2020 assuming a 2% per year increase for anticipated growth plus a 10% contingency.
- d Second Amended WS Agree and Agree for Sale of Water as Amended by The Supplemental WS Agree dated Jan 25, 1996. Note: Annual deliveries are subject to certain prior year minimum purchase provisions. Deliveries are subordinate to Regular Customer Entitlements.
- e Various Agreements between SCWA and each of its RR Customers (refer "RR Cust" sheet)

Russian River Customers of SCWA

Entitlements of RR Customers

Source: Chris Murray, SCWA, 3/3/05

Contractor	Date	Max Diversion Limit, afa	Comments
Currently Approved Points of Diversion *:			
Town of Windsor **	1/8/1991	4,725	Windsor has application pending for its own water rights
Russian River Co. WD	3/14/1991	300	
Sub-total		5,025	
No Points of Diversion Approved*			
City of Healdsburg	11/17/1992	4,440	Healdsburg holds own water rights for other points of diversion
Camp Meeker Parks & Rec. Dist.	7/9/1996	90	
Occidental CSD	4/23/2002	65	
Redwood Valley Co. WD	Pending	?	Agreement pending
Sub-total		4,595	
Potential Total		9,620	

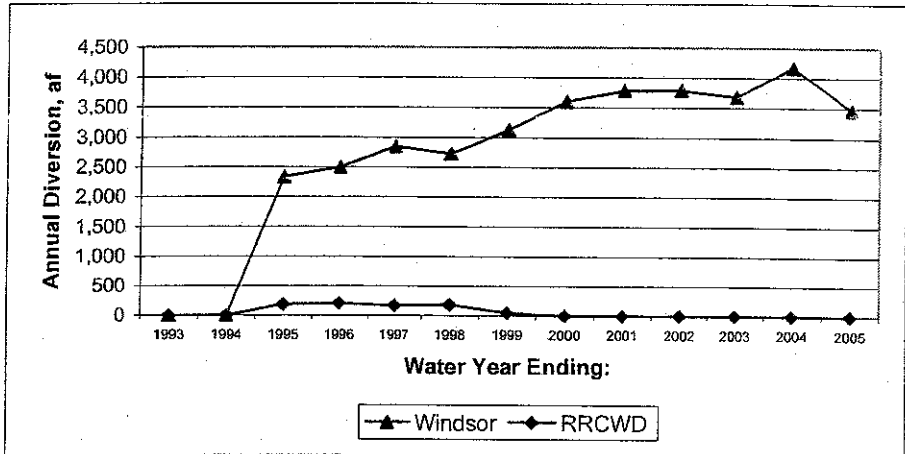
* As pertains to SCWA's water rights.

** Direct diversions via wells situated near the Russian River.

Historic Diversions from the RR, af

Source: Chris Murray, SCWA, 2/15/06 (SCWANTS.xls)

W Yr	RRCWD	Windsor	Total
1993	0	0	0
1994	0	0	0
1995	182	2,337	2,519
1996	203	2,496	2,699
1997	166	2,848	3,013
1998	183	2,728	2,911
1999	47	3,124	3,171
2000	0	3,596	3,596
2001	0	3,786	3,786
2002	0	3,789	3,789
2003	0	3,684	3,684
2004	0	4,173	4,173
2005	0	3,465	3,465



Avg of W Yr's 2004 & 05 **3,819**
 Avg of last 3 W Yrs 3,882

Note: Water Yr extends from Oct 1 through Sept 30 of subsequent yr.

Water Needed for Human Consumption, Sanitation and Fire Protection (a)

	TM Data (b)	6/15/05 Model	2005 UWMP (c)	4/4/06 Model
SCWA Customer:				
Regular Customers				
Cotati	0.62	0.62		0.64 f
Petaluma	5.83	5.83	6.15	6.15
Rohnert Park	4.23	4.23	3.74	3.74
Sonoma	1.45	1.45	0.92	0.92
Windsor (Airport Service Area)		0.13 d		0.24 g
North Marin WD	5.80	5.80	6.04	6.04
Santa Rosa	13.74	13.74	13.48	13.48
Valley of the Moon WD	2.01	2.01	2.14	2.14
Other Agency Cust (Includes FWD)		0.45 d		0.48 g
Sub-Total				
Marin Muni. WD		17.1 e		18.4 h
Russian River Customers		unknown		unknown
Total				

Notes:

- a Water needed for HC, S & FP is assumed to be equal to "inside" use for all retail customers. Inside use in turn is estimated by examining retail sales in the Winter months (generally Jan. and Feb).
- b Estimate by West/Yost contained in Allocation Table prepared for City of Santa Rosa (Sept 23 Tech Memo).
- c Total demand including UFW as determined by Maddaus for base year (Cal. 2004) of the 2005 UWMP. Indoor use is based on average of 2 lowest consecutive months in the winter if meters read bimonthly, or single lowest month if meters read monthly. Winter level use for Cotati supplied by Toni Bertolero (see Note f).
- d Avg Jan and Feb Aqueduct Sales* as

	Windsor	Other Ag Cust
Avg af/mo (2000->03, SCWA, Kiergan Pegg)	11.5	40.6
Avg mgd	0.13	0.45
- * In the case of Windsor (ASA only) and Other Agency Customers, winter level demand is unknown and is therefore estimated from Aqueduct sales, it being assumed that all Winter demand is met from the Aqueduct.
- e MMWD customer Avg per capita use in Jan and Feb for (2000 - 03), mgd, Dana Roxon,
- f Avg. Jan and Feb Aq plus Local use FY 2003 -> FY 2005, Tony Bertolero via Matthew Damos
- g Avg. Jan and Feb Aq Sales w. Billing Days for FY 2003 -> FY 2005 from Kiergan Pegg,
- h From MMWD Water Watch Reports, avg demand for period noted, mgd

Week Ending:	For same	
	For period noted to left	week one yr earlier
2/26/2006	17.6	17.6
2/19/2006	18.4	18.3
2/12/2006	18.8	19.1
2/5/2006	18.2	18.6
1/29/2006	18.4	18.5
1/22/2006	18.5	18.7
1/15/2006	17.9	18.6
1/8/2006	18.5	18.8
1/1/2006	18.1	18.5
Avg Winter	18.3	18.5
Avg for both yrs	18.4	

Reasonable Annual Need, afa (a)
(Avg. Aq. Sales or RR Diversions for FY's Indicated)

	6/15/05	4/4/06 Model
	Model	Avg for FY 03-04 and FY 04-05
Regular Customers	FY 03-04	FY 04-05
Cotati	1,071	1,045
Petaluma	11,294	10,636
Rohnert Park	4,710	4,835
Sonoma	2,611	2,403
Windsor (Airport Service Area)	474	448
North Marin WD	9,498	9,242
Santa Rosa	24,421	23,584
Valley of the Moon WD	3,157	3,036
Other Agency Cust (Includes FWD) (b)	1,326	1,318
Sub-Total	58,561	56,547
Marin Muni. WD	7,792	7,823
Russian River Customers (c)	3,928	3,819
Total	70,281	68,188

Notes:

- a SCWA Aqueduct Sales Records, Kiernan Pegg, SCWA. Note that Surplus sales are not included.
- b SCWA Aq. Sales Records. Excludes Windsor and includes FWD as proposed in Restructured WS Agree.
- c Average of Water Yr Diversions for 2003 and 2004 was used for 6/15/05 Model and avg. of 2004 and 2005 was used for 4/4/06 Model. (see RR Cust sheet).

Local Potable Water Supply Available to SCWA Customers, afa

	Local Supply (a)	Contingency Factor (b)	Est'd Safe Yield (c)
Regular Customers			
Cotati	240	10%	216
Petaluma	831	10%	748
Rohnert Park	2308	10%	2,077
Sonoma	80	10%	72
Windsor (Airport Service Area)	0	10%	0
North Marin WD	2000	10%	1,800
Santa Rosa	1700	10%	1,530
Valley of the Moon WD	595	10%	536
Other Agency Cust (Includes FWD) (d)	0		0
Sub-Total	7754		6,979
Marin Muni. WD Local Sys. Safe Yield (e)			20,500
Russian River Customers (d)	0		0
Total			27,479

Notes:

- a Based on 4-yr avg: 2000-2003 as reported in Sept 33, 2004 Tech. Memo to Santa Rosa
- b To account for well equipment problems/maintenance down-time, etc. Estimated by JONWRM
- c It is recognized that the quality of Local Supply varies. Presented here is the yield (safe yield) that is expected to be available in the first year of a water supply deficiency based on Local Water Supply capacities..
- d Unknown and therefore assumed to be "0" for the purposes of this model. Needs to be determined by SCWA.
- e Safe Yield of Local Supply System provided by MMWD. Source: Dana Roxon, 5/31/05.

Most Recent Service Area Population

SCWA Customer:	TM Data for Yr 2003	6/15/05 Model	2005 UWMP	4/4/06 Model
Regular Customers				
Cotati	6,825	6,825		7,337 e
Petaluma	57,050	57,050	58,057	58,057
Rohnert Park	42,300	42,300	42,329	42,329
Sonoma	10,252	10,252	10,502	10,502
Windsor (Airport Service Area)		1,338 d		2,495 f
North Marin WD	56,000	56,000	55,587	55,587
Santa Rosa	153,400	153,400	155,121	155,121
Valley of the Moon WD	23,000	23,000	22,646	22,646
Other Agency Cust (Includes FWD)	8,000 a	8,000		8,080 g
Sub-Total		358,165		362,154
Marin Muni. WD	184,999 b	184,999		189,945 h
Russian River Customers	27,360 c	27,360		27,634 g
Total		570,524		579,733

Notes:

- a Estimate by West/Yost contained in Allocation Table prepared for City of Santa Rosa (Sept 23 Tech Memo).
- b Estimate provided by MMWD to West/Yost and contained in Allocation Table prepared for City of Santa Rosa (Sept 23 Tech Memo).
- c Estimate by West/Yost contained in Allocation Table prepared for City of Santa Rosa (Sept 23 Tech Memo). Includes 24,350 (2003 Department of Finance estimate for the Town of Windsor) and an estimate of 3,000 for the RRCWD service area.
- d Windsor Airport Service Area is primarily Commercial and Institutional use. An equivalent population is estimated by dividing avg Winter use by 95 gpcd, the wt'd avg. per capita use determined by West/Yost.
- e Cotati pop. per Dept of Finance data as of 1/1/2005, Cristina Goulart, Winzler & Kelly
- f Windsor Airport Service Area is primarily Commercial and Institutional use. An equivalent population is estimated by dividing avg Winter use by 94 gpcd, the wt'd avg. per capita use determined in the 2005 UWMP.
- g Population estimated for 6/15/05 Model increased by an assumed growth rate of 1%.
- h MMWD 2004 Pop., provided by Dana Roxon, MMWD, Mar. 2006.

Other Data:

From 2005 UWMP, population for 2004:

FWD population	2,201
Windsor RR Service Area	24,899

Winter Level Per Capita Demand, gpcd

	TM Data (a)	6/15/05 Model	2005 UWMP (b)	4/4/06 Model
Regular Customers				
Cotati	89	89		88 c
Petaluma	101	101	106	106
Rohnert Park	96	96	88	88
Sonoma	136	136	88	88
Windsor (Airport Service Area)		95		94
North Marin Water Dist.	99	99	109	109
Santa Rosa	87	87	87	87
Valley of the Moon Water Dist.	87	87	94	94
Other Agency Cust (Includes FWD)		unknown		94
Sub-Total				
Marin Muni. Water Dist.			92	97 c
Russian River Customers				
Wt'd Avg	95			94 d

Notes:

- a Source: TM Data sheet by West Yost and Assoc. Winter level use is based on avg. use in Jan, and Feb. of 2000 through and including 2003.
- b Source: Bill Maddaus Tech. Memos - Includes Unaccounted For Water (UFW). Inside use is calculated from calendar 2004 retail sales records and is based on average of 2 lowest consecutive months in the winter if meters are read bimonthly, or single lowest month if meters read monthly.
- c Calc'd from Winter level demand (See Human sheet) and est'd pop. (See Pop Sheet)
- d Data for 11th Amend. Agree. Primes:

	gpcd	pop
Cotati	88	7,337
Petaluma	106	58,057
Rohnert Park	88	42,329
Sonoma	88	10,502
NMWD	109	55,587
Santa Rosa	87	155,121
VOM	94	22,646
FWD	99	2,201
Wt'd Avg. (using pop. as weighting factor)	94	

Other Data:

From 2005 UWMP, Winter Level Use, gpcd:

FWD 99

Demand Hardening Factor - Used for Adjusting Reasonable Need in Current Allocation

	Total Demand mgd 1	Total gpcd 2	Use in 3/27/06 Model 3	Lesser of Col. 3 or Average 4	Demand Hardening Adj Factor (Avg / Col. 4) 5
Regular Customers					
Cotati	1.07 b	146 d	146	146	1.14
Petaluma	10.19 c	176 d	176	167	1.00
Rohnert Park	5.95 c	141 d	141	141	1.19
Sonoma	2.25 c	214 d	214	167	1.00
Windsor (Airport Service Area)		172 e	172	167	1.00
North Marin Water Dist.	10.58 c	190 d	190	167	1.00
Santa Rosa	22.57 c	146 d	146	146	1.15
Valley of the Moon Water Dist.	3.40 c	150 d	150	150	1.11
Other Agency Cust (Includes FWD)			167 f	167	1.00
Sub-Total					
Marin Muni. Water Dist.			140 g	140	1.19
Russian River Customers			167 f	167	1.00
Average for Water Contractors (h)		167			

Notes:

- a Sec 3.5(c)(2) provides that in determining "reasonable requirements" the SCWA may take into account hardening of demand resulting from the level of conservation achieved by a given customer of the SCWA.
- b From Toni Bertolero. Avg of RR Purchases and Ground Water Production for FY 2003->05, mgc
- c Total demand including UFW as determined by Maddaus for base year (2004) 2005 UWMP.
- d Col 1 divided by population. See Pop sheet.
- e There are no residents in Windsor ASA therefore per capita demand set equal to Windsor RR Service Area average value as determined for base year (2004) of 2005 UWMP.
- f No data available so assumed equal to average value for Water Contractors.
- g From MMWD 2005 Fact Sheet - avg demand for 10 yrs ending 2005, r 26.6 divided by population (See Pop sheet).

Other Data from 2005 UWMP for Base Yr 2004:

	mgd	gpcd
Forestville Water Dist.	0.48	219
Windsor RR Service Area	4.29	172

SUPPORT TABLES
For Tech Memo

Table A-1. Average Monthly Retail Sales (acre-feet) for SCWA Water Contractors in January & February^(a)

Contractor	2000	2001	2002	2003	4-Year Average ^(b)
Santa Rosa	1,263	1,316	1,265	1,154	1,249
Petaluma	553	538	515	514	530
North Marin	563	554	525	468	528
City of Rohnert Park	406	406	356	373	385
Cotati	45	73	58	50	57
Forestville ^(c)	22	23	24	21	22
City of Sonoma	136	135	133	122	131
Valley of the Moon	182	189	187	174	183

Table A-2. Historical Population^(d)

Contractor	2000	2001	2002	2003
Santa Rosa	147,595	149,300	151,700	153,400
Petaluma	53,710	54,510	55,850	57,050
North Marin	55,000	56,000	56,000	56,000
Rohnert Park	42,236	42,200	42,150	42,300
Cotati	6,471	6,600	6,861	6,825
Forestville ^(e)	1,973	Not Available	Not Available	Not Available
Sonoma	10,091	10,131	10,172	10,252
Valley of the Moon	20,512	21,996	22,923	23,000

Table A-3. Per Capita Demand (gpcd) for SCWA Water Prime Contractor in Winter (January & February)^(a,f)

Contractor	2000	2001	2002	2003	4-Year Average ^(b)
Santa Rosa	90	93	88	79	87
Petaluma	108	104	97	95	101
North Marin	108	104	99	88	99
Rohnert Park	101	101	89	93	96
Cotati ^(g)	72	116	89	78	89
Forestville	115	123	126	113	119
Sonoma	142	140	138	125	136
Valley of the Moon	93	90	86	80	87
Simple Average ^(h)	104	109	101	94	102
Weighted Average ⁽ⁱ⁾	99	100	93	87	95

^(a) Data obtained from water sales data from the Prime Contractor

^(b) Simple average of the last 4 years. Using Santa Rosa in Table A-1: $(1,263 + \dots + 1,154)/4 = 1,249$ acre-feet

^(c) Data for Forestville obtained from the SCWA

^(d) Data obtained from the Prime Contractor, California Department of Finance Website, or the 2000 UWMP for Sonoma County unless specified otherwise

^(e) Population for Forestville obtained from the 2000 SCWA UWMP

^(f) Based on populations from Table A-2, if population for particular year was not available, then population for year 2000 was used

^(g) For 2001 & 2002, based on Dec/Jan instead of Jan/Feb because Cotati did not provide Feb; 2003 is based on Jan/Feb

^(h) Simple average of the eight individual gpcds. Using 2000 of Table A-3: $(90 + \dots + 93)/8 = 102$ gpcd

⁽ⁱ⁾ Weighted average for population. Using 2000 of Table A-3: $(90 * 147,595 + \dots + 93 * 20,512) / (147,595 + \dots + 20,512) = 98$ gpcd

ATTACHMENT C

City of Santa Rosa
Urban Water Shortage
Contingency Plan

2006



CITY OF SANTA ROSA
URBAN WATER SHORTAGE CONTINGENCY PLAN 2006
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CITY OF SANTA ROSA URBAN WATER SHORTAGE CONTINGENCY PLAN - 2006 UPDATE

Section 1: Introduction

The City of Santa Rosa Water Shortage Contingency Plan (Plan) was first adopted on February 11, 1992 and is updated every five years. The Plan is a component of the regional Urban Water Management Plan, which is prepared by the Sonoma County Water Agency (SCWA). The Plan was first adopted in response to emergency legislation, California Assembly Bill 11X. Legislation has changed the requirements of water shortage contingency planning several times since the initial bill. Current requirements are in Section 10632 of the California Water Code, the Urban Water Management Planning Act, which is provided as Appendix 3 to this document.

Santa Rosa's initial Plan was first revised in 1996 with updated demand and financial figures. In 2002, a more comprehensive revision was completed, which included updated demand projections, financial analysis, and rate structure design for each rationing stage; a change in the per capita allocations in Stages 2-4; and a change in the methodology for determining landscape allocations in Stages 2-4. In 2005, the revision updated the demand and financial figures. This 2006 revision adds two sections to the document addressing minimum water supply and drought/emergency planning actions.

Santa Rosa's Urban Water Shortage Contingency Plan addresses demand reduction strategies for the Santa Rosa system. Trigger points on the Russian River system, which in turn trigger Santa Rosa's program, are determined by SCWA.

Section 2: City of Santa Rosa Water Supply

The City of Santa Rosa provides water to 48,700 connections, with an annual total demand in 2004 of 23,584 acre-feet (AF). The City's source of water supply is the Sonoma County Water Agency. Santa Rosa's demand constituted approximately 36% of SCWA's total production in 2004.

Santa Rosa has historically received all of its potable water supply from the SCWA aqueduct system, which delivers water from the Russian River, and from groundwater wells in the Santa Rosa Plain. Under a master agreement entered into in October 1974 and amended most recently in 2001, Santa Rosa holds an entitlement to 56.6 million gallons per day, peak month average, with an annual volume limit of 29,100 AF. In 2005, Santa Rosa converted one emergency groundwater source to production status, with an annual yield of approximately 1,700 AF.

In December 1999, SCWA declared a state of impairment on their delivery system caused by delayed completion of critical pumping and conveyance facilities. The delay has been brought on by Endangered Species Act requirements and litigation. SCWA asked all water contractors and other customers to sign a Memorandum of Understanding (MOU) that defines certain operating agreements during this impairment condition. This MOU was executed in February 2001. Among other things, it requires parties to activate certain measures of Stage 1 of their Water Shortage Contingency Plans from June through

September until 2005 when additional pumping capacity on the Russian River System can be secured. During the impairment condition, parties to the MOU are also operating under modified peak entitlements.

Santa Rosa has never formally activated the Plan. There has not been a drought-based reduction in delivery from SCWA to the City of Santa Rosa since 1976-77. However, due to dry conditions on both the Russian River system and throughout the State, Santa Rosa adopted voluntary demand reduction Resolutions in 1988 and 1991; because of the SCWA impairment condition, the City again adopted a voluntary demand reduction Resolution in 2000.

Section 3: Past, Current and Projected Demand

Santa Rosa is a community of 154,000. Of the approximately 48,700 water connections, 91% service residential demand while 9% service commercial. Utility customers are segregated into the following large customer classes: single-family residential, multi-family residential, and commercial. The multi-family residential class can be further divided by number of living units. In the commercial customer class, all utility customers have been classified according to the Standard Industrial Classification (SIC) system, which allows the commercial category to be sorted into sub-categories including: irrigation only, governmental institution, health care facility, and public safety. This latter classification system is represented in the demand reduction schedule of this plan (Table IV).

Analysis of historic dry year conditions in the "Sonoma County Water Agency Urban Water Management Plan 2000" indicates that no supply curtailment would result to Santa Rosa if the hydrologic conditions of the driest three-year historic sequence (1990-1992) occurred today (Page 6-3 UWMP 2000).

The following table summarizes highest historical water use and projected demand by customer class for the next three years. Actual purchase of water would be approximately 6% higher than demand due to normal unaccounted for water losses.

Table I - Customer Class, Highest Year Demand, and Estimated Demand

Customer Class	Number of Connections 2004	Highest Demand (AF) 2004	Estimated Demand (AF) 2005	Estimated Demand (AF) 2006	Estimated Demand (AF) 2007
Single Family Residential	41,310	13,638	13,911	14,249	14,473
Multiple Family Residential	3,046	3,505	3,575	3,662	3,719
*Commercial	2,737	3,569	3,640	3,729	3,788
Irrigation (est.)	1,673	2,872	2,930	3,001	3,048
Total	48,766	**23,584	**24,056	**24,641	**25,029

*Includes Commercial, Industrial, Institutional, Health Care and Public Safety

**Demand totals do not include unaccounted for water loss, which is approximately 6%.

3.1 – ESTIMATED MINIMUM WATER SUPPLY FOR NEXT THREE YEARS

The City has one primary source of supply, the Sonoma County Water Agency (SCWA), with City groundwater as an emergency backup supply. The estimated minimum water supply for the next three years assumes a multiple dry year condition based on the driest three-year historic sequence (1990 to 1992). As indicated in the SCWA UWMP 2000, no supply curtailment would result to Santa Rosa if the hydrologic conditions of the driest three-year historic sequence occurred today. Table II presents the estimated minimum water supply for the next three years.

Table II – Estimated Minimum Water Supply for the Next Three Years

Supply Source	Projected Minimum Water Supply, acre-feet		
	2006	2007	2008
SCWA*	29,100	29,100	29,100
City Groundwater	1,550	1,550	1,550
Total Supply	30, 650	30, 650	30, 650
Projected Water Demand	**24,641	**25,029	**25,403
Projected Supply Shortfall	No Shortfall Projected		

* Assumes no supply curtailment based on information provided in the SCWA 2000 UWMP.

**Demand totals do not include unaccounted for water loss, which is approximately 6%.

Also shown in Table II are the projected demands for the next three years. As shown, the estimated minimum water supply is sufficient to meet the projected water demands and no supply shortfall is projected.

Section 4: Drought/Emergency Planning Actions

In addition to responding to drought conditions, the City's Water Shortage Contingency Plan can be used to respond to emergency conditions that interrupt water supplies to the City. Water supplies may be interrupted in the future due to water supply contamination, major transmission pipeline break, regional power outage, or a natural disaster such as an earthquake. In the event of an emergency, the Utilities Department would respond as outlined in the City's current City of Santa Rosa Utilities Department Water System Emergency Response Plan. Actions that the City would take if these emergencies occurred today are outlined below.

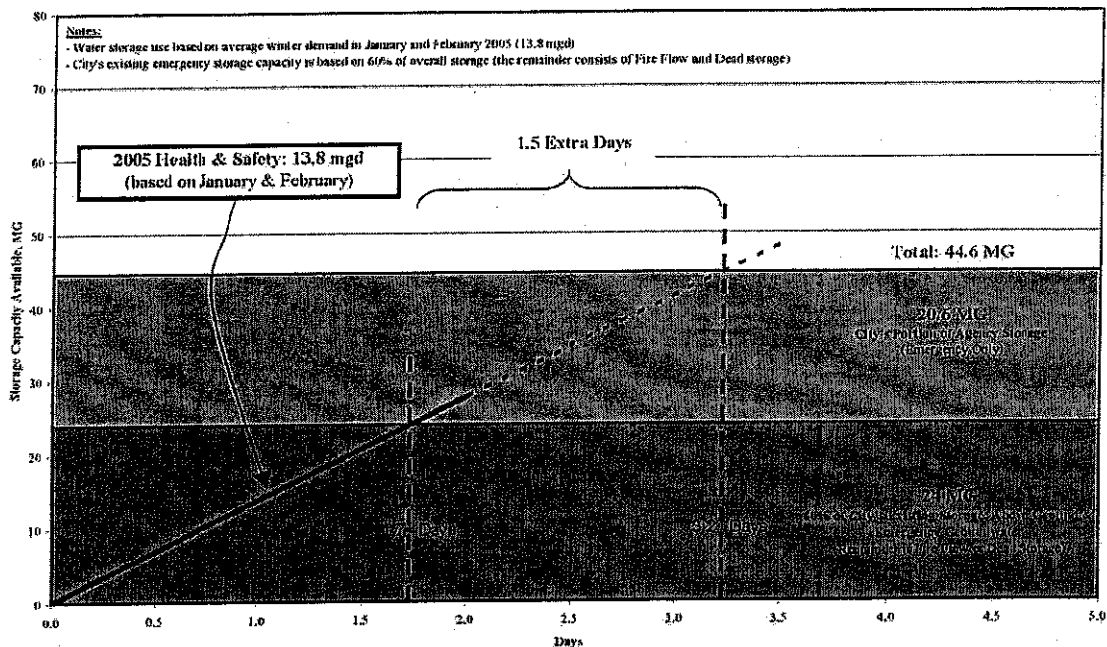
4.1 NO WATER AVAILABLE FROM SCWA

In the event that SCWA's Russian River supply becomes contaminated (i.e. due to a chemical spill or other environmental incident), it may be possible that no water would be available from SCWA for a period of time. In such a case, the City would need to rely on water from its distribution system storage facilities or emergency wells.

Figure 1 shows a water supply outage scenario along with minimum amounts of water required for health and safety purposes. As shown, based on the City's assumed available storage capacity at the time of the emergency and minimum health and safety water needs, the City's stored water supplies would last 3.2 days. If such an event were to occur, the City would need to implement one or more stages of the Water Shortage Contingency Plan to

notify customers of the need to reduce water use until the SCWA water supply could be restored.

Figure 1. Existing Emergency Storage Available to Meet Health & Safety Water Demands



Last Revised: 05/23/06
 Location: C:\Clients\405 City of Santa Rosa\02-04-16 DWMP Update\ENGR\Presentation\Pres_Table 5-9.xls

West Yost Associates

4.2 AREA-WIDE ELECTRICAL POWER FAILURE

If an area-wide electrical power failure were to occur within the City's water service area, many of the City's pumping facilities could potentially be impacted. The City has stationary generators at some of its booster pump stations, while others only have receptacles for use with portable generators. The City has acknowledged this potential vulnerability and has included the provision of back-up power facilities at each of the City's booster pump stations in the City's current Capital Improvement Program.

SCWA's facilities may also be vulnerable to power outages; however, most of the SCWA facilities which serve the City have backup power provisions.

4.3 EARTHQUAKE

Water system infrastructure, including pump stations, storage tanks, and pipelines, can be damaged during a strong earthquake. The City's facilities have been constructed in accordance with the applicable building codes to minimize potential damage during an earthquake. However, it is expected that some facilities may be damaged as the result of a strong earthquake. The City has planned for this potential outage scenario by constructing

system redundancy into its water system. The City has multiple storage facilities and looped distribution pipelines, to allow potentially damaged portions of the City's system to be quickly isolated and repaired.

Section 5: Stages of Action for Demand Reduction up to 50%

Demand reduction strategies will be employed at all stages of a water shortage emergency. This Section includes details of *Rationing Stages*, *Reduction Goals*, *Consumption Limits*, *Prohibitions on Water Use*, and *Water Shortage Rate Structure*. The entire strategy for demand reduction is summarized in Appendix 1, the Water Shortage Action Plan table.

5.1 RATIONING STAGES: The City has determined the following rationing stages for response to reduced supply in a water shortage emergency:

Table III - Rationing Stages and Reduction Goals

Supply Shortage	Rationing Stage	Overall Demand Reduction Goal	Program Type
Up to 15%	Stage 1 - Minimal	15%	Voluntary
15% - 25%	Stage 2 - Moderate	25%	Mandatory
25% - 35%	Stage 3 - Severe	35%	Mandatory
35% - 50%+	Stage 4 - Critical	50%+	Mandatory

5.2 DEMAND REDUCTION GOALS: Overall demand reduction will be achieved with different reduction goals in each user class. The following priorities have been established for use in developing demand reduction programs and allocations during a water shortage emergency. Priorities for use of available water, from highest to lowest priority, are:

- Health and Safety
- Commercial, Industrial and Governmental
- Existing Landscaping - especially trees and shrubs
- New Demand - projects without permits when shortage is declared

With these guidelines in mind, the following table details overall reduction goals by customer class for Stages 2-4 of the water shortage emergency. Reduction goals for single-family customers are based on per capita water allocation, plus an irrigation allocation (as further described below). For irrigation water services, the allocation is based on plant type and evapotranspiration data. For the commercial customers, prior year demand is the basis for calculating demand reduction.

Table IV - Customer Class, Highest Year Demand and Reduction Goals

	Highest Year 2004	Stage 2	Stage 3	Stage 4
		% Reduction	% Reduction	% Reduction
Customer Class	Annual Demand	Annual Allocation	Annual Allocation	Annual Allocation
		29%	40%	57%
Single Family	13,638 AF	9,682 AF	8,251 AF	5,905 AF
		2%	14%	23%
Multiple Family	3,505 AF	3,418 AF	3,014 AF	2,699 AF
		15%	20%	30%
Commercial/ Industrial/ Governmental	2,962 AF	2,518 AF	2,370 AF	2,073 AF
		48%	60%	79%
Irrigation	2,872 AF	1,493 AF	1,149 AF	599 AF
		5%	10%	15%
Health Care Facilities/ Public Safety	607 AF	577 AF	546 AF	516 AF
		25%	35%	50%
Total	23,584 AF	17,688 AF	15,330 AF	11,792 AF

5.3 CONSUMPTION LIMITS: To achieve the overall reduction goals, a community-wide goal is assigned in Stage 1, and allocations are determined for each customer within a customer class for Stages 2-4. Details of reduction strategies for each customer class at each reduction stage are as follows:

Stage 1 is a voluntary program with 15% overall reduction:

- Community-wide reduction is the goal; elimination of all waste; minimization of non-essential use; "water-on-request" restaurant program

Stage 2 is a mandatory program with 25% overall reduction. Allocations are developed for each water service:

- Single-family customers receive 65 gallons per capita day (gpcd) plus a moderate landscape allotment of 2,500 gallons per month from May through October
- Multi-family customers receive 65 gpcd plus a moderate landscape allotment if irrigation usage is not on a separate dedicated service
- Commercial/Industrial/ Governmental receives 85% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives a water budget based on the 80% of historical net evapotranspiration-based demand for the square footage of the irrigated area
- Health care and public safety receives 95% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

Stage 3 is a mandatory program with 35% overall reduction. Allocations are developed for each water service:

- Single-family customers receive 57 gpcd plus a minimal landscape allotment of 2,000 gallons per month from May through October
- Multi-family customers receive 57 gpcd plus a minimal landscape allotment if irrigation usage is not on a separate dedicated service
- Commercial/Industrial/Governmental receives 80% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives a water budget based on the 50% of historical net evapotranspiration-based demand for the square footage of the irrigated area
- Health care and public safety receives 90% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

Stage 4 is a mandatory program with 50% overall reduction. Allocations are developed for each water service:

- Single and multi-family customers receive 50 gpcd with no landscape allotment
- Commercial/Industrial/Governmental receives 70% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place
- Irrigation receives allotment only for mature trees and shrubs
- Health care and public safety receives 85% of previous 12 months' usage or of the most recent 12-month period with no water shortage restrictions in place

5.4 PROHIBITIONS ON WATER USE: Santa Rosa adopted a Water Waste Ordinance in 1999 which prohibits the following:

- Irrigation in such a manner that it runs off or over-sprays the irrigated area
- Leaks that are detected yet un-repaired

The Ordinance states that water service will be discontinued for continued violation once notification has been made.

In addition to the prohibitions outlined in the Water Waste Ordinance, the following program of prohibited use is established for the Water Shortage Emergency condition:

Stage 1

- Hose-end shut-off nozzles required on all garden and utility hoses
- Water served in restaurants on request only
- Washing sidewalks, patios, and other hard surfaces prohibited

Stage 2 - All prohibitions established in previous stage plus:

- Irrigation limited to the hours of 8:00 pm to 6:00 am
- Operating ornamental fountains prohibited
- Filling new swimming pools prohibited
- Reclaimed water must be used for construction dust control

Stage 3 - All prohibitions established in previous stage plus:

- No water using landscape installation in new construction
- New construction must offset new demand by conserving two times the new demand within the community
- Filling or topping-off of existing swimming pools prohibited

Stage 4 - All prohibitions established in previous stage plus:

- No water using landscape installation
- New construction must offset new demand by conserving three times the new demand within the community

A customer will be found in violation of a prohibited use if the use continues after two official City written notifications. Remedies for violation of these prohibited actions are included in Section 5.6.

5.5 WATER SHORTAGE RATE STRUCTURE

Santa Rosa's water commodity rate structure as of January 1, 2005 is \$2.89 per 1,000 gallons. Water rates during a shortage condition as defined in the following sections will be based on modifications to the commodity rate in place at the time of the declared emergency.

Santa Rosa's water rate structure is designed to encourage efficient water use, even during normal water supply conditions. This is achieved through a low fixed service charge and a

relatively high commodity rate applicable to each unit of water use. This conservation-oriented rate structure introduces some financial risk in that some fixed costs are recovered through the commodity rate, based on total water usage. A reduction in water usage results in revenues not covering all fixed costs.

Changes to the water rate structure during each stage of rationing are designed to encourage customers to reduce water use commensurate with water allocations and reduction goals. In addition, the rate structure changes are also necessary to help protect the financial condition of the water system as water demands are reduced.

Three lines of defense are incorporated into the City's water shortage financial strategy and rate structure.

1. The catastrophic reserve will be drawn down to absorb part of the financial deficit caused by a reduction in water rate revenues (due to lower water sales) that exceeds the reduction in operating costs.
2. All customers will be subject to an increased commodity rate (Water Shortage Charge) to encourage water conservation by all customers and help protect the financial condition of the water utility. The Water Shortage Charge (described below) is designed such that customers meeting reduction goals will have lower water bills than they do with normal usage.
3. Water service customers that exceed water allocations and do not meet reduction goals will be subject to additional Excess Use Charges during severe (Stage 3) and critical (Stage 4) periods. Revenues from Excess Use Charges will be used only for specified purposes.

In Stage 1, there are no changes to the water rate structure. To compensate for loss of revenue from reduced water sales and increased staffing for the water shortage response effort, the Catastrophic Reserve will be employed. In the event of a water shortage, adoption of the Water Shortage Resolution (See Section 7: Implementation of the Plan) by Santa Rosa City Council will allow the appropriation of funds from the Catastrophic Reserve.

In Stages 2-4, reduction in net revenue brought on by reduced water sales and increased costs for the water shortage response effort will be mitigated by both the Catastrophic Reserve and the introduction of a Water Shortage Charge (WSC) on each unit of water sold. The WSC is designed to recover a portion of the cost of the revenue from the shortfall from the entire community, and is designed such that a typical customer's bill will not change significantly even though the rate has increased (this assumes the typical customer will reduce use at least at the level of the WSC). The WSC will increase with each stage according to Table V.

Table V - Water Shortage Charge (WSC) for All Water Sold: Stages 2-4

Stage	Charge for water	Example with current rate (charge per 1000 gallons)
Stage 2	Commodity rate + 10% WSC	$\$2.89 + 0.29 = \3.18
Stage 3	Commodity rate + 20% WSC	$\$2.89 + 0.58 = \3.47
Stage 4	Commodity rate + 30% WSC	$\$2.89 + 0.87 = \3.76

In addition to the WSC, an inclining block rate designed to reward customers for staying within their allotment and to assess Excess Use Charges (EUC) for water use over the allotment will be adopted at Stages 3 and 4. The blocks will be designed to reflect the structure illustrated in Table VI.

Table VI – Excess Use Charge (EUC) in an Inclining Block Rate for Water Used in Excess of Allotment - Stages 3-4

Water Use Compared to Allotment	Block/Rate
Water use up to 100% of allotment	Block 1: Commodity rate with WSC per table V
Water use 101% to 150% of allotment	Block 2: Block 1 rate + 50% EUC (Stage 3) or 100% EUC (Stage 4)
Water use over 150% of allotment	Block 3: Block 1 rate + 100% EUC (Stage 3) or 200% EUC (Stage 4)

EUC revenues are not intended to be used as general operating revenues during the emergency, but may be used to: (1) offset the extraordinary costs of the water shortage emergency such as additional conservation support; (2) rebuild the Catastrophic Reserve; (3) establish a rate stabilization fund for the post-emergency recovery.

Table VII summarizes the water shortage rate structure for each stage of rationing based on the current (2005) water rates.

Table VII - Water Shortage Rate Structures (2005)

	Normal	Stage 1	Stage 2	Stage 3	Stage 4
Monthly Service Charge (\$/Month)					
5/8" Meter	\$ 5.07	\$ 5.07	\$ 5.07	\$ 5.07	\$ 5.07
1" Meter	\$ 9.23	\$ 9.23	\$ 9.23	\$ 9.23	\$ 9.23
1 1/2" Meter	\$ 17.66	\$ 17.66	\$ 17.66	\$ 17.66	\$ 17.66
2" Meter	\$ 29.68	\$ 29.68	\$ 29.68	\$ 29.68	\$ 29.68
3" Meter	\$ 69.40	\$ 69.40	\$ 69.40	\$ 69.40	\$ 69.40
4" Meter	\$ 118.07	\$ 118.07	\$ 118.07	\$ 118.07	\$ 118.07
6" Meter	\$ 258.48	\$ 258.48	\$ 258.48	\$ 258.48	\$ 258.48
Commodity Rates (\$/1,000 Gal.)					
Uniform (Tier 1) Rate (1)	\$ 2.89	\$ 2.89	\$ 3.18	\$ 3.47	\$ 3.76
Tier 2 Rate (2)	n/a	n/a	n/a	\$ 5.21	\$ 7.52
Tier 3 Rate (3)	n/a	n/a	n/a	\$ 6.94	\$ 11.28
Commodity Rate Components (\$/1,000 Gal.)					
Standard Commodity Rate	\$ 2.89	\$ 2.89	\$ 2.89	\$ 2.89	\$ 2.89
Water Shortage Charge (4)	\$ -	\$ -	\$ 0.29	\$ 0.58	\$ 0.87
Tier 2 Excess Use Charge (5)	\$ -	\$ -	\$ -	\$ 1.74	\$ 3.76
Tier 3 Excess Use Charge (6)	\$ -	\$ -	\$ -	\$ 3.47	\$ 7.52

Notes:

- (1) Includes the Standard Commodity Rate plus the Water Shortage Charge.
- (2) Includes the Tier 1 rate plus the Tier 2 Excess Use Charge. Applies to water use 101% to 150% of allocation.
- (3) Includes the Tier 1 rate plus the Tier 3 Excess Use Charge. Applies to water use in excess of 150% of allocation.
- (4) Equals 10%, 20%, or 30% of Standard Commodity Rate during Stage 2, Stage 3, or Stage 4, respectively.
- (5) Equals 50% of Tier 1 Rate during Stage 3 and 100% of Tier 1 Rate during Stage 4.
- (6) Equals 100% of Tier 1 Rate during Stage 3 and 200% of Tier 1 Rate during Stage 4.

5.6 VIOLATIONS OF WATER USE RESTRICTIONS AND REPEATED EXCESS USE

Any customer who exceeds the established allotment three consecutive months, or exceeds the established allotment six months within a twelve month period, or violates one or more prohibited uses, may, at the discretion of the Director of Utilities, be subject to any of the following actions:

- At the customer's expense, undergo a complete site water audit and install certain water efficient fixtures
- Installation of a flow reducing device at the water meter
- Disconnection of water service and payment of a designated fee for reconnection of the water service

5.7 VARIANCE PROCEDURES

This Plan is designed to place the responsibility for managing our water resource during a water shortage emergency on the entire community. Care has been taken in the design of the Plan not to penalize any customer who has undertaken conservation measures in the past for having saved water on an ongoing basis. Furthermore, any customer meeting water use reduction goals by limiting water use to defined allocations will be able to avoid paying Excess Use Charges.

Any customer who feels their established allotment is unfair may apply to the City for a reassessment. Variances will be granted, on a case-by-case basis, at the discretion of the Director of Utilities. The following conditions are among those that may be given

consideration in the variance process:

- Water uses that support public health and safety,
- Non-residential water customers (whose allotment is based on previous consumption) who can demonstrate that water efficient hardware and conservation practices were in place prior to the water shortage emergency, and
- Water used for mature trees for which an inadequate allocation has been made.

Section 6: Analysis of Revenue and Expenditure Impacts

Table VIII details the Santa Rosa Water Utility's projected annual revenue and expenditure status (based on 2005) in non-shortage conditions and at each stage in the water shortage program.

Table VIII - Impact of Water Shortage on Revenues and Expenditures (2005)

	Normal Supply	Stage 1: 15% Shortage	Stage 2: 25% Shortage	Stage 3: 35% Shortage	Stage 4: 50% Shortage
Sources of Funds					
Service Charge Revenues	\$ 3,560,000	\$ 3,560,000	\$ 3,560,000	\$ 3,560,000	\$ 3,560,000
Commodity Rate Revenues (1)	\$ 20,860,000	\$ 17,731,000	\$ 15,645,000	\$ 13,559,000	\$ 10,430,000
Water Shortage Charge Revs. (2)	\$ -	\$ -	\$ 1,564,000	\$ 2,712,000	\$ 3,129,000
Other Operating Revenues	\$ 2,881,000	\$ 2,881,000	\$ 2,881,000	\$ 2,881,000	\$ 2,881,000
Total Sources of Funds	\$ 27,301,000	\$ 24,172,000	\$ 23,650,000	\$ 22,712,000	\$ 20,000,000
(% of normal)		89%	87%	83%	73%
Uses of Funds					
Purchase of Water (3)	\$ 10,570,000	\$ 8,985,000	\$ 7,928,000	\$ 6,871,000	\$ 5,285,000
Water Quality	\$ 624,000	\$ 624,000	\$ 624,000	\$ 624,000	\$ 624,000
Water Maintenance	\$ 8,506,000	\$ 8,506,000	\$ 8,506,000	\$ 8,506,000	\$ 8,506,000
Demand Management	\$ 1,704,000	\$ 1,704,000	\$ 1,704,000	\$ 1,704,000	\$ 1,704,000
Water Shortage Prog. Expend. (4)	\$ -	\$ 250,000	\$ 600,000	\$ 800,000	\$ 1,000,000
Operation & Maintenance Projects	\$ 657,000	\$ 657,000	\$ 657,000	\$ 657,000	\$ 657,000
Water Operations Turnback	\$ (500,000)	\$ (500,000)	\$ (500,000)	\$ (500,000)	\$ (500,000)
Net Transfers and Use of Reserves	\$ 5,740,000	\$ 5,740,000	\$ 5,740,000	\$ 5,740,000	\$ 5,740,000
Total Uses of Funds	\$ 27,301,000	\$ 25,966,000	\$ 25,259,000	\$ 24,402,000	\$ 23,016,000
(% of normal)		95%	93%	89%	84%
Surplus/(Deficit) in Operations	\$ -	\$ (1,794,000)	\$ (1,609,000)	\$ (1,690,000)	\$ (3,016,000)
Catastrophic Reserve					
Available Balance (5)	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000	\$ 5,000,000
Excess Use Chrg. Revs. (6)	\$ -	\$ -	\$ -	\$ -	\$ -
Used to Cover Oper. Deficit	\$ -	\$ (1,794,000)	\$ (1,609,000)	\$ (1,690,000)	\$ (3,016,000)
Ending Balance	\$ 5,000,000	\$ 3,206,000	\$ 3,391,000	\$ 3,310,000	\$ 1,984,000

Notes:

- (1) Commodity rate revenues would decline in proportion with water
- (2) Water shortage charge would be imposed in Stages 2, 3, and 4 to limit the operating
- (3) Water supply costs would be reduced in proportion with water
- (4) Additional expenditures associated with water shortage
- (5) Assumed catastrophic reserve balance at start of
- (6) Excess Use Charge would be imposed in Stages 3 and 4. Revenues are difficult to predict due to relationship customer rationing response at the margin. If customers achieve rationing goals Excess Use Charges would be

Table IX summarizes the water bill for a typical single-family customer during each stage of water rationing. One example shows the customer's bill when water usage is limited to the specified water allocation, and the other example shows the customer's bill if no reduction is made in water use.

Table IX - Single Family Water Bills During Stages of Rationing (1)

Rationing Stage	Single Family Reduction Goal	Monthly Water Use (1000 gal)	Service Charge	Standard Commodity Charge	Water Shortage Charge	Excess Use Charge	Total Water Bill
<i>Average Single Family Customer Meeting Allocation Limits</i>							
Normal	0%	12	\$ 5.07	\$ 34.68	\$ -	\$ -	\$ 39.75
Stage 1	15%	10	\$ 5.07	\$ 28.90	\$ -	\$ -	\$ 33.97
Stage 2	29%	9	\$ 5.07	\$ 26.01	\$ 2.60	\$ -	\$ 33.68
Stage 3	40%	7	\$ 5.07	\$ 20.23	\$ 4.05	\$ -	\$ 29.35
Stage 4	57%	5	\$ 5.07	\$ 14.45	\$ 4.34	\$ -	\$ 23.86
<i>Average Single Family with No Water Use Reduction</i>							
Normal	0%	12	\$ 5.07	\$ 34.68	\$ -	\$ -	\$39.75
Stage 1	15%	12	\$ 5.07	\$ 34.68	\$ -	\$ -	\$39.75
Stage 2	29%	12	\$ 5.07	\$ 34.68	\$ 3.47	\$ -	\$43.22
Stage 3	40%	12	\$ 5.07	\$ 34.68	\$ 6.94	\$ 8.66	\$55.35
Stage 4	57%	12	\$ 5.07	\$ 34.68	\$ 10.40	\$ 45.07	\$95.22

Notes:

(1) Assumes 3 person household and summertime irrigation

Section 7: Implementation of the Plan

At the time of a water shortage emergency, the Santa Rosa City Council will adopt a Water Shortage Resolution. A draft Water Shortage Declaration Resolution is found in Appendix 2. With Stages 2-4, a Water Shortage Emergency Ordinance will also be adopted.

In the event that a Water Shortage Emergency occurs and the City Council cannot assemble to adopt the Water Shortage Resolution, the Director of Utilities is authorized to implement the appropriate stage, based on the reduction in water supply, of the Urban Water Shortage Contingency Plan. The Director of Utilities determination to implement the Urban Water Shortage Contingency Plan shall remain effective until the City Council meeting immediately following such determination, at which time the Santa Rosa City Council will adopt the Water Shortage Resolution.

Section 8: Monitoring Procedures

Stage 1 - Monthly delivery records from SCWA meters and from local groundwater sources, if in use, will be reported to the Director of Utilities or the Director's designee. If overall reduction goals are not met, the Director may notify the Board of Public Utilities and more aggressive measures can be implemented.

Stage 2 - 4 - Weekly delivery figures from SCWA meters and local groundwater sources, if in use, and monthly consumption data from Santa Rosa Utility Billing will be reported to the Director of Utilities or the Director's designee. If reduction goals are not met, the Director will notify the Board of Public Utilities and more aggressive action will be taken.

Section 9: Public Noticing and Adoption

The City of Santa Rosa prepared the first Water Shortage Contingency Plan during December 1991 and January 1992. The Board of Public Utilities adopted the Plan on February 6, 1992. The Santa Rosa City Council adopted the Plan on February 11, 1992. The Plan was updated in data areas only in 1996 and reviewed by the Board of Public Utilities Water Conservation Subcommittee. The 2002 revision was reviewed in a public hearing before the Santa Rosa Board of Public Utilities. The City Council adopted the plan on May 21, 2002.

The 2005 revision was updated in data areas only and reviewed in public hearing before the Santa Rosa Board of Public Utilities on May 19, 2005, and was recommended for adoption by the Santa Rosa City Council on that date. The City Council adopted the plan on June 7, 2005.

This 2006 revision was updated as part of the adoption of the City's 2005 Urban Water Management Plan. This revision was updated by adding Section 4 to the document and was reviewed by the Board of Public Utilities Water Conservation Subcommittee in May 2006. The 2006 plan was reviewed in public hearing before the Santa Rosa Board of Public Utilities on June 15, 2006, and was recommended for adoption by the Santa Rosa City Council on that date. The City Council adopted the plan on June 27, 2006 as part of the adoption of the City's 2005 Urban Water Management Plan.

Appendices

City of Santa Rosa - Water Shortage Action Plan 2005

Stage	Utility Department Actions	Customer Actions	Comments
<p>Stage I - Minimal: 15 percent overall reduction.</p>	<p>1) Adopt resolution: *Requesting voluntary water conservation with non-allotment based cut-back goals for all user classes. *Prohibiting water waste and reducing all non-essential uses.</p> <p>2) Initiate public information campaign: *Prepare and disseminate educational brochures, bill inserts, etc. *Disseminate technical information to specific customer types. *Set up public information booths urging water conservation and showing ways the public can save water. *Coordinate media outreach program; issue news releases to the media. *Explain other stages and forecast future actions.</p> <p>3) Increase agency support: *Add temporary position to staff phone lines. *Initiate patrol for water waste violations and customer audits.</p> <p>4) Prepare for future stages: *Develop computer capability to initiate rationing stages. *Gather census information from residential sector for per capita allotments</p>	<p>1) Implement voluntary water use reductions.</p> <p>2) Adhere to water shortage resolution.</p> <p>3) Become aware of possible further restriction.</p>	<p>*Voluntary program, community-wide reduction goals.</p> <p>*Strong public information campaign.</p> <p>*Emphasis on elimination of waste and increased awareness.</p> <p>* Hose-end shut-off nozzles and required on all garden and utility hoses.</p> <p>* Hosing off hard surfaces prohibited.</p> <p>* A "Water-on-request" restaurant program.</p>

City of Santa Rosa - Water Shortage Action Plan 2005

Stage	Utility Department Actions	Customer Actions	Comments
<p>Stage II - Moderate: 25 percent overall reduction.</p>	<p>In addition to stage I: 1) Adopt rationing ordinance: *Assigning allotment to each water service: residential based on per capita allotment plus landscape; irrigation only based on ETo water budget; non-residential based on reduction from previous consumption. *Implement Water Shortage Charge (WSC) *Expanding prohibited uses and developing penalty structure for waste violations. *Defining criteria and administrative procedures for variances.</p> <p>2) Intensify public info campaign: *Notify each service of allotment goals. *Make site surveys available to all customers</p> <p>3) Increase agency support: *Establish Shortage Response Center *Appoint variance officer and administer variance program for all user classes. *Increase patrol/audit support.</p>	<p>1) Adhere to allotment for 25 percent overall reduction: *Single Family - 65 gpcd, plus landscape allotment of 2,500 gallons per month May-Oct. *Multiple Family - 65 gpcd, plus moderate landscape allotment. *Commercial/Industrial/Governmental - 85 % of previous 12 months usage (15% reduction). *Irrigation - 80% of ET based water budget. *Health Care Facilities - 95% of previous 12 months usage (5% reduction).</p> <p>2) Request variance where required.</p> <p>3) Eliminate all prohibited uses.</p>	<p>*Mandatory program with allotments for each service; residential with moderate landscape allotments. *Close tracking and feedback to community. *Restricted uses include: - irrigation limited to the hours between 8pm to 6am. - operation of ornamental fountains prohibited. - filling new swimming pools prohibited. - reclaimed water must be used for construction dust control.</p>

City of Santa Rosa - Water Shortage Action Plan 2005

Stage	Utility Department Actions	Customer Actions	Comments
<p>Stage III - Severe: 35 percent overall reduction.</p>	<p>In addition to Stage II:</p> <p>1) Intensify ordinance requirements: *Prohibit installation of landscapes in new construction. *Require new construction to offset two times the new demand through upgrades to existing homes and businesses (toilet replacements, etc.). *Implement excess use charge (EUC) in addition to WSC.</p> <p>2) Intensify public information campaign: *Promote participation in new construction offset program.</p> <p>3) Staffing: *Expand Shortage Response Center and patrol/audit effort.</p>	<p>In addition to Stage II:</p> <p>1) Adhere to allotment for 35 percent overall reduction: *Single Family - 57 gpcd, plus landscape allotment of 2,000 gallons per month May-Oct. *Multiple Family - 57 gpcd, plus minimal landscape allotment. *Commercial/Industrial/Governmental - 80 % of previous 12 months usage (20% reduction). *Irrigation - 50% of ET based budget. *Health Care Facilities - 90% of previous 12 months usage (10% reduction).</p> <p>2) Request variance when required.</p> <p>3) Eliminate all prohibited uses.</p>	<p>*Mandatory program with minimal landscape allotments.</p> <p>*Prohibit uses from Stage II plus: - new construction program - offset twice the new demand. - no water using landscape installation in new construction. - filling or topping off of existing swimming pool is prohibited.</p>

City of Santa Rosa - Water Shortage Action Plan 2005

Stage	Utility Department Actions	Customer Actions	Comments
<p>Stage IV - Critical: 50 percent overall reduction.</p>	<p>In addition to Stage III:</p> <ol style="list-style-type: none"> 1) Intensify ordinance requirements: <ul style="list-style-type: none"> *Prohibit installation or replanting of any landscaping. *Allowing residential use of grey water if State allows. *Requiring new construction to offset three times the new demand through upgrades to existing homes and businesses; toilet replacement, etc. *Continue WSC and EUC. 2) Intensify public information campaign: <ul style="list-style-type: none"> *Develop demonstrations of grey water use. 3) Expand Drought Response Center and patrol/audit effort. 	<ol style="list-style-type: none"> 1) Adhere to allotment for 50 percent overall reduction: <ul style="list-style-type: none"> *Single Family - 50 gpcd, no landscape allotment. *Multiple Family - 50 gpcd, no landscape allotment. *Commercial/Industrial/Governmental - 70% of previous 12 months usage (30% reduction). *Irrigation - minimal allotment - for mature trees and shrubs only. *Health Care Facilities - 85% of previous 12 months usage (15% reduction). 2) Request variance where required. 3) Eliminate all prohibited uses. 	<ul style="list-style-type: none"> *Severe penalties for excess usage. *Prohibited uses from Stage III plus: <ul style="list-style-type: none"> - new construction offset program - offset three times new demand. - no new water using landscaping.

DRAFT WATER SHORTAGE EMERGENCY RESOLUTION

RESOLUTION OF THE SANTA ROSA CITY COUNCIL DECLARING A WATER SHORTAGE EMERGENCY.

WHEREAS, the City of Santa Rosa is a City empowered to provide water service within certain boundaries; and

WHEREAS, due to (current condition - drought, contamination, etc.), water supply conditions indicate that a ____% reduction in demand is required to ensure adequate supply in 20____; and

WHEREAS, the Sonoma County Water Agency has reduced delivery to the City and all prime contractors by ____%; and

WHEREAS, the City of Santa Rosa has the authority and responsibility to adopt water demand reduction measures within its area of service; and

WHEREAS, the City of Santa Rosa has the authority to employ the Catastrophic Reserve during a Water Shortage Emergency.

NOW, THEREFORE, IT IS RESOLVED that the City Council declares that under the current water shortage conditions a Water Shortage Emergency exists within the area served by the City water system.

BE IT FURTHER RESOLVED, that the City Council directs staff to implement a program of demand management as defined in the Santa Rosa Urban Water Shortage Contingency Plan to realize district-wide reduction of ____%.

BE IT FURTHER RESOLVED, that the City Council directs staff to utilize the Catastrophic Reserve to compensate for loss of revenue due to reduced water sales.

DULY AND REGULARLY ADOPTED this _____ day of _____, 20____

AYES:

NOES:

ABSENT:

ABSTAIN:

Chairman

Recording Secretary

California Water Code Section 10632
Urban Water Management Planning
Water Shortage Contingency Analysis

10632. The plan shall provide an urban water shortage contingency analysis, which includes each of the following elements, which are within the authority of the urban water supplier:

- (a) Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage.
- (b) An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply.
- (c) Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster.
- (d) Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning.
- (e) Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply.
- (f) Penalties or charges for excessive use, where applicable.
- (g) An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments.
- (h) A draft water shortage contingency resolution or ordinance.
- (i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.