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2005 Urban Water Management Plan

Prepared by

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Section I: Introduction

The City of Red Bluff Urban Water Management Plan was prepared in accordance with the requirements of the California Water Code Division 6, Part 2.6 (Urban Water Management Planning). The adoption process includes a public hearing to obtain comments on the plan from all interested parties.

Section II: History

The City of Red Bluff serves an immediate population of 13,500 and an additional population of approximately 5,000 in the surrounding area. Red Bluff is located on Interstate 5 at the junction of State Highway 99 in the north end of the Sacramento Valley Area. The Sacramento River bisects the City. Red Bluff is the County seat and serves as a major commercial center for the area.

Agriculture and tourism are the primary industries of the area along with a growing commercial base. The local economy fluctuates accordingly with the cycles of these industries.

Red Bluff experiences hot dry summers and moderately cold winters. Temperatures range from the low 30's in the winter to over 100 degrees in the summer. Annual rainfall averages 22 inches falling primarily between the months of November and April. The high water use months are June, July, and August.

The City of Red Bluff has owned and operated its water system since 1921. The system sees an average growth rate of 1½ to 2 percent annually. There are a total of 4,503 service connections active within the current water system.

Section III: Water Supply and Facilities

Red Bluff taps groundwater supplies to meet its water needs. The water pumped from 14 City owned municipal water wells provide an ample supply for the community. All wells are equipped with meters for tracking the amount of water being pumped. The well flow meters are read on a monthly basis with the data recorded for later use. The average depth of the wells is 500 feet with water levels typically standing around 70 feet. The pumping capacities of the wells range from 550 to 2,600 gallons per minute serving three pressure zones.

Two three million gallon reservoirs serve as storage facilities. A combination of level control devices at the reservoirs and pressure switches at strategic well locations provides control for the City water system. Water is pumped directly into the distribution piping system without chemical treatment. The water distribution system includes more than 70 miles of pipeline improvements. There are no additional sources of water used by the City's system.

The City pumped 4,762 acre-feet of water from the Sacramento Valley, Red Bluff ground water sub-basin during 2005. Pumping levels have remained fairly constant over the past few years. No significant decreases in groundwater levels have been observed as a result of pumping by the City system. Groundwater quantity and quality are sufficient to meet the demands of the City.

The City of Red Bluff does not expect to receive water from a wholesaler now or in the future.

Opportunities do not exist to use desalinated water.

Section IV: Accomplishments

System improvements over the past couple of years include a new SCADA System and the construction of a new, 3 million gallon, steel storage tank. The City's main water system has been split into two main pressure zones and one small pressure zone that services a subdivision. In areas where pressures had typically been in the 35 to 40 psi range, the new storage tank enables us to furnish pressures in the 70 to 80 psi range. New water mains constructed along Baker and Paskenta Roads have enabled us to strengthen the water system and make it much more reliable. Several thousand feet of new water lines have been installed to replace or up-size existing old main lines. The City's flushing program, valve-exercising program and fire hydrant testing and replacement programs are all ongoing. The city currently has less than two hundred flat-rate water services and hopes to have them converted to metered services by the end of 2008. Upon the completion of the metering of the flat-rate services, we will convert the remaining manual read water meters to new Badger, radio-read meters which will enable us to return to monthly meter reading.

Section V: Water Conservation Programs/Water Shortage Contingency Plan

V.1 Preparation for Catastrophic Water Supply Interruption

Water Code

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:

10632(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.

V.1.1 Water Shortage Emergency Response

When responding to emergencies that can cause water supply shortages, the City of Red Bluff has in place an Emergency/Disaster Response Plan defining how it will respond to emergencies and/or disasters that are likely to affect its water supply operations. The plan identifies the following service goals:

To continue minimum service levels and mitigate the public health risks from drinking water contamination that may occur during a disaster or other emergency event, and

To provide reliable water service and minimize public health risks from unsafe drinking water during those events.

The City of Red Bluff Emergency/Disaster Response Plan designates responsible personnel and chain of command and identifies responsibilities. An inventory of system resources that are used for normal operations and available for emergencies, including maps and schematic diagrams of the water system, lists of emergency equipment, equipment supplies and emergency contracts are kept at the Emergency Operations Center (EOC). The Fire Department Training Center, located at 1015 Kimball Road, Red Bluff, has been designated as the communication network emergency operations center for the City.

Coordination procedures with governmental agencies for health and safety protection, technical, legal and financial assistance and public notification procedures are continually being developed and updated through regulation and experience and will be added as necessary to the Emergency/Disaster Response Plan.

In the event of an emergency, responsible personnel will, as quickly as possible, determine the status of other employees, assess damage to water system facilities, provide logistics for emergency repairs, monitor progress of repairs and restoration efforts and communicate with health officials and water users (according to "Emergency Notification" on file with the Department of Health Services and Tehama County Environmental Health), and document damage and repairs.

The City has in place the steps that will be taken to resume normal operations in the event of the following types of service interruptions:

- Leaks or service interruption (result of earthquake, etc.)
- Low system pressure (result of earthquake, fire, etc.)
- Power outage
- Contamination of source and/or transmission/distribution system
- Physical destruction of facility (sabotage)

The City has enough supplies (pipe, valves, etc.) in stock to perform spot repairs on the City of Red Bluff Municipal Water System.

All significant water outages (widespread and lasting more than eight hours) or disinfection failure will be reported to the Department of Health Services or Local Primary Agency by telephone or other rapid means. All emergencies will be documented along with action taken, and kept in the files of the water system office. Acts of sabotage will be reported to the local law enforcement agency.

V.1.2 Supplemental Water Supplies

The City maintains supplemental water supplies in the form of storage within the transmission and distribution system and water system storage reservoirs. The

City maintains a total storage of 6.0 million gallons in two reservoirs; the Village Drive Reservoir (3,000,000 gallons), and the Mendenhall Road Reservoir (3,000,000 gallons).

V.1.3 Water Transfers

The City does not presently engage in the purchase or exchange of water supplies from other agencies. Transfer opportunities do not exist.

V.1.4 Long Term Additional Water Supply Options

The City's current water supply is sufficient to meet the consumptive, irrigation and industrial water needs of its customers through the year 2020, and possibly beyond. Future water supply options will likely involve the construction of one or more additional wells, thereby increasing the available water supply.

V.2 Water Shortage Contingency Ordinance/Resolution

Water Code

10632(h) A draft water shortage contingency resolution or ordinance.

V.2.1 City of Red Bluff Water Shortage Response

The City of Red Bluff prepared a Water Shortage Contingency Plan in 1992. The Plan was developed prior to the recent transmission and distribution system upgrades, and was based on the probability that a water shortage emergency would be caused by transmission capacity limits and not supply deficiencies or by other disaster related events impacting the water supply.

The City has not experienced a water source deficiency. In theory, the worse case situation would be that the water system's transmission capacity is unable to meet consumer demand. However, with the recent upgrades to the City's water transmission system, the probability of this situation occurring has lessened from what it was prior to the upgrades, therefore making it an unlikely situation.

V.3 Stages of Action

Water Code

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:

10632(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.

V.3.1 Rationing Stages and Reduction Goals

The City Council of the City of Red Bluff is vested with the authority to invoke the various "stages" of action described in the City's Water Shortage Contingency Plan, based upon the recommendation of the Director of Public Works.

The City developed a four stage-rationing plan to invoke during declared water shortages. The action stages and trigger levels have been developed to implement the Water Shortage Contingency Plan. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage. The rationing stages are triggered by water levels in the City's Village Drive and Mendenhall Road storage facilities.

Unforeseeable circumstances may cause declaration of a higher action stage or postponement of an action stage other than when trigger levels occur. The Director of Public Works will determine the action stage. All restrictions under each applicable action stage will be implemented immediately upon declaration of such stage. Lifting of an emergency action stage and resumption to the normal operating stage will be determined by the Director of Public Works based on current conditions affecting the water supply. The rationing stages are described in detail below.

Stage I – Voluntary Conservation Measures. Voluntary compliance with conservation measures.

The City may initiate a water conservation program to provide public information on ways to reduce water use. Water customers and the community will be made

aware of the emergency action stages and restrictions under the Water Shortage Contingency Plan.

Customers are encouraged to reduce water usage by taking the following voluntary water conservation measures:

1. Refrain from landscape watering between the hours of 10:00am and 6:00pm;
2. Refrain from allowing water run off from any lawns, landscapes, or garden
3. into adjoining streets, gutters, sidewalks, parking lot or alley;
4. Refrain from hosing or washing sidewalks, walkways, driveways, parking lots, or other hard surfaced areas;
5. Refrain from washing cars, boats, trailers, or other vehicles except by hose with a shutoff nozzle and bucket;
6. Equip any hose with a shutoff nozzle and bucket;
7. Promptly repair all leaks in plumbing fixtures, water lines, and sprinkler systems;
8. Equip ornamental fountains, ponds or lakes with a water recycling system;
9. Equip commercial car washes with a water recycling system;
10. Refrain from filling or refilling a swimming pool, spa, or hot tub;
11. Install low flow shower heads, low flush water closets, and faucet aerators;
12. Operators of restaurants provide on each table a notice of water emergency and refrain from serving drinking water except upon specific request of a customer;
13. Operators of hotels and motels provide in each room a notice of water emergency.

This will be the normal operating stage for the water system.

Stage II – Mandatory Conservation Measures. Mandatory implementation of conservation measures.

Customers shall comply with Stage I measures 1. – 12.

Customers will be notified via news media and other methods of this stage of water shortage emergency and implementation of mandatory conservation measures.

Industrial water users will be specifically notified via telephone and City staff will make every attempt to keep them informed of the status of the water emergency so they can prepare for a possible shutdown of production.

Stage III – Serious Water Shortage. Mandatory Reduction.

Customers will be notified via news media and other methods of this stage of water shortage emergency. Industrial users will be notified specifically via telephone and will be asked to voluntarily shutdown production during a Stage III water emergency.

City staff will make every attempt to keep the industrial users informed of the status of a water emergency prior to the declaration of a Stage III water emergency so they can prepare for a possible shutdown of production.

The following water uses will be prohibited for all water users:

1. Landscape irrigation or watering of lawns or gardens;
2. Washing of cars, boats, trailers or other vehicles;
3. Washing down of driveways, sidewalks, buildings, windows, or any outdoor surface;
4. Filling of swimming pools, spas, or hot tubs;
5. Serving of drinking water at restaurants unless requested;
6. Filling or operating of ornamental fountains, ponds, or lakes;
7. Sewer system maintenance, fire protection training, or flushing of hydrants;

8. Street cleaning or dust control;
9. Use of hydrant meters for construction purposes.

Stage IV – Disaster Shortage/Rationing. Major catastrophe or contamination of the water supply. Priorities for all water use will be for human consumption, sanitation, and fire protection.

All water users will be limited to amounts required for human consumption, sanitation, and fire protection. No water will be available for nonessential use or for commercial or industrial processes.

Customers will be notified via news media and other methods of this stage of water shortage emergency.

If contamination of the water supply occurs, consult with County/State health officials on the need to institute a boil order before use of any water.

V.3.2 Priority by Use

The City does not have a priority for use of available potable water based on customer type during a water shortage emergency. Water conservation and water use measures apply to all customers.

V.3.3 Health and Safety Requirements

The City will provide information to its customers regarding health and safety requirements during a water shortage emergency when the water shortage occurs. Customers will be notified via news media and other methods regarding important health and safety requirements.

V.3.4 Water Shortage Stages and Triggering Mechanisms

As the water purveyor, the City of Red Bluff must provide the minimum health and safety water needs to the community at all times. The rationing program triggering levels shown below were established to ensure that this goal is met.

Stage I - This will be the normal operating stage for the water system at a projected 12.5% reduction.

Stage II - This stage will take effect when the tank levels at the Village Drive and/or Mendenhall Road storage facilities fall below 50% of their storage capacity. This would be at a projected 25% reduction.

Stage III - This stage will take effect when the tank level at the Village Drive and/or Mendenhall Road storage facilities fall below 35% of storage capacity. This would be at a projected 25% reduction.

Stage IV - This stage will take effect when a disaster related event impacting the water supply occurs. This would be at a projected 50% reduction.

V.3.5 Water Allotment Methods

The City does not have a method of allocating water based on customer type during a water shortage emergency. Water conservation and water use measures apply to all customers, and specific customers (i.e., industrial) will be contacted directly by the City regarding water allotment and conservation measures.

V.4 Prohibitions, Consumption Reduction Methods and Penalties Water Code

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:

10632(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.

10632(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.

10632(f) Penalties or charges for excessive use, where applicable.

V.4.1 Mandatory Prohibitions on Water Wasting

Due to the abundant supply of water from the groundwater basin, the City does not currently have a need to implement any mandatory prohibitions on water wasting. Warnings will be issued for water waste, over-watering and water leaks.

V.4.2 Excessive Use Penalties

Penalties or charges will be issued for water waste, over-watering and water leaks.

V.5 Revenue and Expenditure Impacts and Measures to Overcome Impacts

Water Code

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:

10632(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.

10632(g) An analysis of the impacts of each of the proposed measures to overcome those revenue and expenditure impacts, such as the development of reserves and rate adjustments.

V.6 Reduction Measuring Mechanism

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:

10632(i) A mechanism for determining actual reductions in water use pursuant to the urban water shortage contingency analysis.

V.6.1 Mechanism to Determine Reductions in Water Use

Because of the City's abundant supply of water from the groundwater basin, the City does not anticipate the need to implement drought condition water management policies. Therefore, reductions in water use are not determined.

Section VI: Best Management Practices

The City of Red Bluff is committed to the conservation of its water resource. The City actively promotes the following "Demand Management Measures" throughout the community:

DMM (A) Water Survey Programs for Residential and Multi-Family Customers

Water survey programs for residential and multi-family customers should be implemented by year end 2008 pending completion of customer metering to enable monitoring of water use affects of the program.

DMM (B) Residential Plumbing Retrofit

Since 1994, the City has enforced the low flow plumbing fixture standards for new construction and encourages all others to replace old fixtures through building department code enforcement and educational literature.

DMM (C) System Water Audits, Leak Detection

The City is continuously monitoring the system for leaks in the City's lines as well as those of private owners. Any leaks found are reported immediately to the Water Division and repairs are scheduled or coordinated with City staff and private owners. Leak detection equipment was purchased in the 00/01 budget year to assist with this effort. The City expects to be fully metered by year end 2008 to enable accounting of water delivered to customers when conducting a water audit.

DMM (D) Metering With Commodity Rates for New Connections and Retrofit of Existing Connections

The City has been working toward a fully metered system since 1999 and expects to be fully metered by the end of 2008. Currently all building permits require the installation of water meters, if not already metered. Unmetered service rates are set higher than metered services to encourage owners to

convert to metered service. Iso hydrant meters are required for all developments that use City water during the construction process.

DMM (E) Large Landscape Conservation and Incentives

All customers having large landscaped areas are required to account for landscape water separate from their domestic use. This provides the City with an enhanced ability to track various water usages and improves oversight of water wasting throughout the system. The City also adopted a policy that encourages the use of drought resistant, low water demand vegetation. The City employs a groundcover and landscaping policy that encourages water conservation and separate metering of irrigation water. A fully metered system should be implemented by year end 2008, allowing the control necessary for proper implementation.

DMM (F) High-Efficient Washing Machine Programs

The City encourages all customers to use water-conserving devices, however no formal program is in place at this time.

DMM (G) School Education Programs

Information is distributed to schools through personal presentations at various classrooms and events.

DMM (H) Public Information Programs

Information is distributed to customers through mailings. The annual Consumer Confidence Report is mailed to each water customer and contains information on the City's water source, permit to operate, chemical treatment, drinking water standards, testing requirements and a water quality analysis of the water delivered by the City.

DMM (I) Conservation Programs for Commercial, Industrial and Institutional Accounts

This activity will be available when the system is fully metered.

DMM (J) Wholesaler Incentives

Not Applicable

DMM (K) Conservation pricing

The City should be fully metered by the end of 2008 and conservation pricing implemented thereafter.

DMM (L) Conservation Coordinator

The Director of Public Works and Water Division Supervisor share this responsibility. Once system is fully metered by year end 2008, this activity will be refined.

DMM (M) Water Waste Prohibition

Observed water wasters are notified of the problem and forced to install a water meter if the situation continues.

DMM (N) Ultra Low Flush Toilet Replacement

Since 1994, the City has enforced the Ultra Low Flush Toilet standards for new construction and encourages all customers to use water-conserving devices, however no formal rebate program for fixture changeout is in place. It is not beneficial for the City to implement the replacement due to the oversight necessary to properly conduct the program being beyond our staffing capabilities at this time.

Section VII: Water Outlook

Close monitoring of the City's existing well levels do not indicate a potential water shortage problem in the foreseeable future. All efforts are being expended for the efficient use of the ground water pumped into the City's system. The City's current level of system oversight is appropriate for its size. The City will continue to upgrade, enhance, monitor, and explore new ways to provide quality water system service to its customers.

Section VIII: Recycled Water

The City is also working with local water users to promote water reclamation practices. Reclaimed water from the City's Wastewater Treatment Facility is used to irrigate on site landscaping and adjacent highway landscaping. If Caltrans were to expand freeway landscaping, infrastructure exists to supply more recycled water to those areas. The effluent limitations are the same as the Sacramento River, described below. Infrastructure does not exist outside of what was installed for highway landscaping, however, future use could include golf course and park irrigation. The majority of the treated--reclaimed--effluent is discharged into the Sacramento River for downstream uses. The effluent limitations on the discharge are Biochemical Oxygen Demand-10mgs per liter, Suspended Solids-10mgs per liter, Chlorine Residual-.02mgs per liter (daily maximum) and Total Coliform Organisms-23 most probable number (weekly median). Unrestricted use of recycled water would have to be disinfected to less than 2.2 MPN as per Title 22 CCR, with corresponding increased treatment cost. Businesses in the community such as car washes are encouraged to install re-circulating systems. Any plan for the reuse of water is balanced by comparing the cost of providing the infrastructure necessary to serve the project with the cost to provide water through conventional means. The City continues to seek opportunities to use recycled or reclaimed water, however, there is limited opportunity for expanding use of recycled water due to cost of installing a conveyance system.

Appendix A

Water Use 1980 - 2030

Acre-Foot Per Year

<u>Source of Supply</u>	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>	<u>2005</u>	<u>2010</u>	<u>2015</u>	<u>2020</u>	<u>2025</u>	<u>2030</u>
Municipal Wells	2845	3860	4491	4233	4233	4681	4774	4869	4966	5065	5166

CITY OF RED BLUFF

2005 URBAN WATER MANAGEMENT PLAN UPDATE

APPENDIX B-1

WATER USE PROJECTIONS WORKSHEET

SOURCE OF WATER	PAST (ACTUAL)							PROJECTED				
	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
LOCAL	9 wells	11 wells	11 wells	12 wells	12 wells	13 wells	14 wells	15 wells	15 wells	15 wells	15 wells	15 wells
SURFACE												
IMPORTED												
GROUND WATER (Aquifer Names)	TEHAMA FORMATION											
Is this usable water?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the aquifer adjudicated?				No	No	No	No	No	No	No	No	No
Is the aquifer in overdraft?				No	No	No	No	No	No	No	No	No
What is the % of overdraft?												
What % of service area is over usable aquifer?												
WASTE WATER RECLAMATION												
Is reclaimed water currently delivered to customers?				Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Indicate quantity (MG/yr)				4	6	6	16	17	18	20	22	24
% of total available				.7	1	1	3	3	3	3	3	3
Are reclamation projects under consideration?				None	None	None	None	None	None	None	None	None
Where is wastewater discharged?	Sacramento River											
AF-Year							462	497	535	574	617	663
Where is storm water discharged?	Local Water courses to Sacramento River											
Is storm water combined with the sewer system?				No	No	No	No	No	No	No	No	No
Wastewater collected & treated in service area						184	478	514	553	594	639	687
Volume that meets recycled water standard						184	478	514	553	594	639	687
OTHER												
WATER USE												
Gross Quantity of Water into Distribution System:												
Million gallons/day	3.1	2.5	3.4	4	3.8	4.1	4.2	4.3	4.3	4.3	4.3	4.3
Million gallons/year	1126	927	1258	1465	1379	1495	1525	1555	1586	1617	1649	1681
Acre-feet/year	3456	2845	3860	4496	4233	4590	4681	4774	4869	4966	5065	5166

CITY OF RED BLUFF

2005 URBAN WATER MANAGEMENT PLAN UPDATE

APPENDIX B-2

WATER USE PROJECTIONS WORKSHEET

	PAST (ACTUAL)						CURRENT	PROJECTED					
	1975	1980	1985	1990	1995	2000		2005	2010	2015	2020	2025	2030
SERVICE AREA INFORMATION													
Service area size (square miles)	5	5	6	6	7.6	7.6	7.6	8	8	8	8	8	8
Population	8317	9490	11014	12434	13050	13154	13500	13685	13958	14273	14558	14849	14849
Growth Rate %					4.9	0.8	2	2	2	2	2	2	2
Average per capita water use (GPD)	371	268	310	322	290	311	311	311	311	311	311	311	311
CONNECTIONS													
Number of service connections	3121	3362	3419	3660	3869	4467	4503	4593	4685	4779	4874	4972	4972
Number of metered connections	523	1156	1632	2000	2454	3796	4280	4593	4685	4779	4874	4972	4972
Percentage of services which are metered	17	34	48	55	63	85	95	100	100	100	100	100	100
TOTAL WATER DELIVERIES (Indicate units)													
Wholesale Water Deliveries													
Drinking Water Deliveries (MG/yr)	1126	927	1258	1465	1379	1495	1525	1555	1586	1617	1649	1681	1681

CITY OF RED BLUFF												
2005 URBAN WATER MANAGEMENT PLAN UPDATE												
APPENDIX B-3 - WATER USE PROJECTIONS WORKSHEET												
RETAIL WATER DELIVERIES	PAST (ACTUAL)				CURRENT				PROJECTED			
	1990	1995	2000	2005	2010	2015	2020	2025	2030			
RESIDENTIAL												
% of water delivered												
number of connections	3100	3236	4153	4565	4314	4393	4488	4578	4669			
number of metered connections	1569	1932	3530	4229	4314	4393	4488	4578	4669			
deliveries												
average use/connection (cf/mo)												
Single Family Homes	2995	3077	3153	3216	3280	3345	3413	3481	3551			
built before 1983												
built after 1983												
development density (indicate high/medium/low)												
average lot size (SF)	6000	6000	6000									
average # of people/household		2.5	2.5									
Multi-Family Units (Apts)		1519	1556	1587	1618	1650	1684	1718	1752			
Are units on individual meters?	No	No	No	No	No	No	No	No	No			
COMMERCIAL (including Industrial)												
% of water delivered												
number of connections (including industrial)	258	266	296	302	308	315	320	327	333			
number of metered connections	189	200	252	302	308	315	320	327	333			
deliveries												
average use/connection												
VISITOR FACILITIES												
Motel/Hotel rooms	544	611	617	629	641	654	668	681	694			
Visitor/Day/Year												
Public Restrooms	5	6	8	9	10	10	10	10	10			
GOVERNMENTAL (schools, parks, public safety)												
% of water delivered												
number of connections		18	18	25	25	25	25	25	25			
number of metered connections		12	18	25	25	25	25	25	25			
deliveries												
average use/connection												

CITY OF RED BLUFF													
2005 URBAN WATER MANAGEMENT PLAN UPDATE													
APPENDIX B-4													
CLIMATE - STANDARD MONTHLY AVERAGE													
CLIMATE	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	Annual
Standard Monthly Average Eto	1.55	2.24	3.72	5.10	6.82	7.80	8.68	7.75	5.70	4.03	2.10	1.55	57.00
Average Rainfall (inches)	4.2	3.4	2.7	1.5	0.8	0.5	0.1	0.2	0.6	1.4	3.4	3.7	22.4
Average Temperature (Fahrenheit)	45	49	53	59	67	76	81	80	75	65	53	47	63

CITY OF RED BLUFF												
2005 URBAN WATER MANAGEMENT PLAN UPDATE												
APPENDIX B-5												
Past, Current and Projected Water Deliveries												
	2000				2005				2010			
	metered		unmetered		metered		unmetered		metered		unmetered	
Water Use Sectors	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY
Single family	2,878	2,878	1,115	1,115	3,693	3,693	180	180	3,950			
Multi-family					167	167			170			
Commercial	208	208	66	66	363	363	40	40	411			
Industrial												
Institutional/gov												
Landscape		1,502				400				408		
Agriculture												
other												
Total	3,086	4,588	1,181	1,181	4,280	4,680	220	220	4,531	408	0	0
	2015				2020				2025			
	metered		unmetered		metered		unmetered		metered		unmetered	
Water Use Sectors	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY	# of accnts	Divrys AFY
Single family	4,029				4,110				4,192			
Multi-family	173				176				180			
Commercial	419				427				436			
Industrial												
Institutional/gov												
Landscape		408				416				424		
Agriculture												
other												
Total	4,639	4,867	0	0	4,709	4,966	0	0	4,779	5,065	0	0
	2030 - opt											
	metered		unmetered									
Water Use Sectors	# of accnts	Divrys AFY	# of accnts	Divrys AFY								
Single family	4,276											
Multi-family	184											
Commercial	445											
Industrial												
Institutional/gov												
Landscape		432										
Agriculture												
other												
Total	4,851	5,166	0	0								

APPENDIX C

CITY OF RED BLUFF ORDINANCE NO. 961

WATER CONSERVATION ORDINANCE

The City Council of the City of Red Bluff hereby ordains that Section 24.19, Chapter 24, Article I of the Red Bluff Municipal Code is amended in its entirety to read as follows:

24.19 Intent

It is the intent of the City of Red Bluff to encourage the conservation of the city's water supply for the greatest public benefit to minimize the wasteful use of water and to make provisions for emergency rationing of water when necessary.

24.19.1 Declaration of Water Shortage Emergency

The Director of Public Works, with the concurrence of the City Manager, may declare a Stage Two, Stage Three or Stage Four water system operation for water conservation and rationing for a period not to exceed ten (10) calendar days. Any such declared stage to be extended beyond ten (10) days must be done by action of the city council.

24.19.2 Conservation and Rationing Stages

The City Council of the City of Red Bluff is vested with the authority to invoke the various "stages" of action described in the City's Water Shortage Contingency Plan, based upon the recommendation of the Director of Public Works.

The City developed a four stage rationing plan to invoke during declared water shortages. The action stages and trigger levels have been developed to implement the Water Shortage Contingency Plan. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage. The rationing stages are triggered by water levels in the City's Village Drive and Mendenhall Road storage facilities.

Unforeseeable circumstances may cause declaration of a higher action stage or postponement of an action stage other than when trigger levels occur. The Director of Public Works will determine the action stage. All restrictions under each applicable action stage will be implemented immediately upon declaration of such stage. Lifting of an emergency action stage and resumption to the normal operating stage will be determined by the Director of Public Works based on current conditions affecting the water supply. The rationing stages are described in detail below.

Stage 1 – Voluntary Conservation Measures. Voluntary compliance with conservation measures.

The City may initiate a water conservation program to provide public information on ways to reduce water use. Water customers and the community will be made aware of the emergency action stages and restrictions under the Water Shortage Contingency Plan.

Customers are encouraged to reduce water usage by taking the following voluntary water conservation measures:

1. Refrain from landscape watering between the hours of 10:00am and 6:00pm;
2. Refrain from allowing water run off from any lawns, landscapes, or garden into adjoining streets, gutters, sidewalks, parking lot or alley;
3. Refrain from hosing or washing sidewalks, walkways, driveways, parking lots, or other hard surfaced areas;
4. Refrain from washing cars, boats, trailers, or other vehicles except by hose with a shutoff nozzle and bucket;
5. Equip any hose with a shutoff nozzle and bucket;
6. Promptly repair all leaks in plumbing fixtures, water lines, and sprinkler systems;
7. Equip ornamental fountains, ponds or lakes with a water recycling system;
8. Equip commercial car washes with a water recycling system;
9. Refrain from filling or refilling a swimming pool, spa, or hot tub;
10. Install low flow shower heads, low flush water closets, and faucet aerators;
11. Operators of restaurants provide on each table a notice of water emergency and refrain from serving drinking water except upon specific request of a customer;
12. Operators of hotels and motels provide in each room a notice of water emergency.

This will be the normal operating stage for the water system.

Stage II – Mandatory Conservation Measures. Mandatory implementation of conservation measures.

Customers shall comply with all provisions of Stage I measures 1. – 12, plus the following.

Customers will be notified via news media and other methods of this stage of water shortage emergency and implementation of mandatory conservation measures.

Industrial water users will be specifically notified via telephone and City staff will make every attempt to keep them informed of the status of the water emergency so they can prepare for a possible shutdown of production.

Stage III – Serious Water Shortage. Mandatory Reduction

Customers will be notified via news media and other methods of this stage of water shortage emergency. Industrial users will be notified specifically via telephone and will be asked to voluntarily shutdown production during a Stage III water emergency.

City staff will make every attempt to keep the industrial users informed of the status of a water emergency prior to the declaration of a Stage III water emergency so they can prepare for a possible shutdown of production.

The following water uses will be prohibited for all water users:

1. Landscape irrigation or watering of lawns or gardens;
2. Washing of cars, boats, trailers or other vehicles;
3. Washing down of driveways, sidewalks, buildings, windows, or any outdoor surface;
4. Filling of swimming pools, spas, or hot tubs;
5. Serving of drinking water at restaurants unless requested;
6. Filling or operating ornamental fountains, ponds, or lakes;
7. Sewer system maintenance, fire protection training, or flushing of hydrants;
8. Street cleaning or dust control;
9. Use of hydrant meters for construction purposes.

Stage IV – Disaster Shortage/Rationing. Major catastrophe or contamination of the water supply. Priorities for all water use will be for human consumption, sanitation, and fire protection.

All water users will be limited to amounts required for human consumption, sanitation, and fire protection. No water will be available for nonessential use or for commercial or industrial processes.

Customers will be notified via news media and other methods of this stage of water shortage emergency.

If contamination of the water supply occurs, the City has developed a Public Drinking Water Emergency Response Plan, which defines how to respond to contamination, emergencies and disasters.

Water Shortage Stages Triggering Mechanisms – The City of Red Bluff must provide the minimum health and safety water needs to the community at all times. The rationing program triggering levels shown below were established to ensure that this goal is met.

Stage I This will be the normal operating stage for the water system.

Stage II This stage will take effect when the tank levels at the Village Drive and/or Mendenhall Road storage facilities fall below 50% of their storage capacity.

Stage III This stage will take effect when the tank level at the Village Drive and/or Mendenhall Road storage facilities fall below 35% of storage capacity.

Stage IV This stage will take effect when a disaster related event impacting the water supply occurs.

24.19.3 Enforcement

Any customer violating the water conservation and rationing provisions regulations set forth in this chapter, shall receive a written warning for the first violation. Upon a second violation, the customer shall receive a second written warning and the City may, at its discretion, install a flow-restricting device on the customer's water service. All costs to install and remove the flow-restricting device shall be paid by the violating customer. Any willful violation after issuance of the second written warning shall constitute a misdemeanor and the City may, at its discretion, disconnect the water service.

24.19.4 Water Service Surcharge

In addition to those provisions set forth in Section 24.19.2, any violator receiving a second written notice will be assessed a water service use surcharge for any "excessive use of water" which is defined as water use that exceeds the average water use for the account for the prior 24 months. The surcharge for the "excessive use of water" shall be double the account billing rate.

24.19.5 Termination of Service

For violations resulting in third written notices and continued excessive use of water, the City may, at its discretion, disconnect water service and not reinstate service until a specific water conservation plan has been developed with the violating customer.

24.19.6 Appeals

Any decision or declaration made by the Director of Public Works under this section may be appealed to the City Manager. Any decision made by the City Manager under this section may be appealed to the City Council. Any appeal shall be made in writing, setting forth the nature of the disagreement with the decision or declaration made, the reasons to support the disagreement, and the relief sought. Any determination by the City Council shall be final.

24.19.7 Cumulative Remedies

The remedies available to the City to enforce this ordinance are in addition to any other remedies available under the City's municipal code or any state statutes or regulations and do not replace or supplant any other remedy but are cumulative.

This Ordinance shall be published in the Red Bluff Daily News, a newspaper of general circulation in the City of Red Bluff, in the manner provided by Section 36933 of the Government Code of the State of California, and shall be effective 30 days after its passage.

The foregoing Ordinance was introduced at a regular meeting of the City Council of the City of Red Bluff held on August 2, 2005 and adopted at an adjourned meeting of the City Council of the City of Red Bluff held on August 16, 2005.

AYES:

NOES:

ABSENT OR NOT VOTING:

Mayor, City of Red Bluff

ATTEST:

City Clerk, City of Red Bluff

APPROVED AS TO FORM:

City Attorney, City of Red Bluff

APPENDIX D

City of Red Bluff

Rates effective August 1, 1997

Pursuant to City Ordinance 832, the following is a list of Sanitary Sewer Service Fees effective February 1, 1997.

SEWER RATES

USER CLASS	MONTHLY RATE
Single Family	\$25.00
Mobile Homes on Individual lots	\$25.00
Condominiums	\$25.00
Townhouses	\$25.00
Mobile Homes (in park), per unit	\$17.50
Apartments, per unit	\$17.50
Commercial:	
Minimum *	\$25.00
Bakery/Ccf	\$2.66**
Restaurant/Ccf	\$2.19**
All Other/Ccf	\$1.97**

* The minimum rate for sewage service is based upon the sewer discharge of 400 cubic feet per month for bakeries, 500 cubic feet per month for restaurants and 1.100 cubic feet per month for all other commercial users.

** Per 100 cubic feet of sewage discharge, or fraction thereof, exceeding the minimum discharge allowance.

APPENDIX E

City of Red Bluff

Rates effective June 1, 2006

WATER RATES

Flat Rates - Please ask for your rate.

BASE METER RATES

3/4"	Meter			12.40
1"	Meter			21.26
1 1/2"	Meter			39.86
2"	Meter			49.68
3"	Meter			68.19
4"	Meter			169.73
6"	Meter			374.73

FIRST	2500	CU FT	0.71	\$17.75
NEXT	1500	CU FT	0.66	\$9.90
NEXT	2000	CU FT	0.62	\$12.40
NEXT	2000	CU FT	0.59	\$11.80
NEXT	4000	CU FT	0.56	\$22.40
NEXT	8000	CU FT	0.54	\$43.20
NEXT	16000	CU FT	0.49	\$78.40
NEXT	32000	CU FT	0.48	\$153.60

APPENDIX D

City of Red Bluff
Rates effective August 1, 1997

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Restaurant/Ccf	\$2.19**
All Other/Ccf	\$1.97**

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**Per 100 cubic feet of sewage discharge, or fraction thereof, exceeding the minimum discharge allowance.

City of Red Bluff
 Rates effective June 1, 2006
 WATER RATES

Flat Rates - Please ask for your rate.

BASE METER RATES

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NEXT	16000	CU FT	0.49	\$78.40
NEXT	32000	CU FT	0.48	\$153.60

Fakunding, Chriss

From: darnett@ci.red-bluff.ca.us
Sent: Friday, March 16, 2007 9:17 AM
To: Fakunding, Chriss
Subject: 2005 UWMP

Attachments: Attachment information.; 2005 UWMP Final.DOC; Attachment information.; 2005 AppendixA.xls; Attachment information.; 2005 Appendix B.XLS; Attachment information.; Appendix C Ordinance 961.doc; Attachment information.; Appendix D Sewer Rates.xls; Attachment information.; Appendix E Water Rates.XLS; Attachment information.; Final Review.xls

						
Attachment information..txt (5...Final.DOC (111 KB)	2005 UWMP information..txt (5...	Attachment information..txt (5...	2005 AppendixA.xls (20 KB)	Attachment information..txt (5...	2005 Appendix B.XLS (64 KB)	Attachment information..txt (5...
						
Appendix C rdinance 961.doc (.information..txt (5...	Attachment information..txt (5...	Appendix D Sewer Rates.xls (22...	Attachment information..txt (5...	Appendix E Water Rates.XLS (62...	Attachment information..txt (5...	Final Review.xls (263 KB)

Hi

Chris!

I am attaching a revised copy of our 2005 UWMP and the review that you e-mailed to me. I was a little confused at first but I figured out why rather quickly. We had our metered year as 2006. We have not completed the residential and commercial metering as of yet and the Public Works Director anticipates by year end, 2008. I have change this in our plan and on the review. I also included in our plan, the sewer and water rates for the City. I also included these rates as worksheets on the review. I am not sure what else I should do at this point. Please let me know when you get a chance. Thank you so very much for your assistance with this. I really appreciate it.

Dawn Arnett
City of Red Bluff
Administrative Assistant
Public Works Department
(530) 527-2605 ext. 3067
(530) 529-6878 fax