City of Roseville Environmental Utilities

United States Bureau of Reclamation

2010 Water Management Plan

October 2011

City of Roseville

United States Bureau of Reclamation
Five Year Water Management Plan
2011 Update

October 2011
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Section 1: Description of the City

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The City of Roseville (City) serves water to most of its residents. There are a few small areas that border with Placer County Water Agency (PCWA), San Juan Water District (SJWD), and Citrus Heights Water District (CHWD) that are served by each respective water agency. Roseville's city boundaries are set in the east area as it is adjacent to City of Rocklin and Granite Bay, and in the south area by Citrus Heights, the Dry Creek West Placer Community Plan boundary, and the Sacramento County line. The north and west city boundaries are bordered by mostly undeveloped land that is slated for eventual development.

1.A. History

The City of Roseville was originally supplied by Hemphill Water which operated a treatment facility in the current Stoneridge Specific Plan near the existing 7.25 and 10 million gallon (MG) reservoirs. The water supply to this plant was from PG& E through the Boardman Canal. This water was supplemented by water wells connected directly to the City distribution system. The Roseville Water District was formed in 1934 when the City purchased the privately owned Hemphill treatment facility.

Due to reliability issues of the Boardman Canal, Roseville elected to pursue separate water supplies through USBR when the option became available. Upon successful negotiations of a USBR contract for 40,000 acre feet, this became the primary source of City water. This was reduced to 32,000 AF in 1976 per conditions in the contract at the time based on the ramp up of wateruse.

The City's water source has historically been from surface sources. Folsom Lake has been the primary source since the Roseville water treatment plant came on-line in 1971. Through this intake Roseville receives water from the USBR as well as PCWA raw water that is wheeled through the Folsom USBR facilities. Groundwater in the past has only been used for short term back-up supply. However, the City intends to integrate more groundwater usage into its supply portfolio to meet demands during surface water shortages. Groundwater supply strategy is discussed in Section 2.

1.A.1. Date City formed: July 24, 1934 Date of first Reclamation contract: July 1971
Original size (acres): 960 Current year (last complete calendar year): 2010

1.A.2. Current size, population, and irrigated acres

	Year 2010
Size (acres)	20,133
Population served	114,078
Irrigated acres	0

1.A.3. Water supplies received in current year

Water Source	acre-feet
Federal urban water - USBR	28,524
Federal agricultural water	0
State water	0
PCWA	52
Upslope drain water	0
City ground water	0
Recycled water	2,222
Other (SJWD)	168
Total	28,744

Note: Values based on Water Inventory Table 1 at end of Section 2. Recycled water source is not included in total.

1.A.4. Annual entitlement under each right and/or contract

	acre-feet/year	Source	Contract #	Contract Restrictions
USBR Urban	32,000	Central Valley Project, Folsom Lake	14-06-200-3474A	25 percent reduction during "dry year" as determined by USBR.
USBR Agriculture	0	N/A	N/A	N/A
PCWA Urban	30,000	Middle Fork of the American River	10-305	None.
SJWD Urban	4,000	Middle Fork of the American River	04-38	Not available during "dry years" as defined in Water Forum.

The City's current annual surface water supply of 66,000 acre-feet is American River water diverted from Folsom Lake. The City maintains a contract entitlement with the United States Bureau of Reclamation for 32,000 acre-feet for Central Valley Project (CVP) supplies. A contract entitlement with PCWA for 30,000 acre-feet serves Middle Fork Project water through Folsom Lake. The City also has a current contract with SJWD for 4,000 acre-feet. The SJWD supply is served from part of SJWD's contract with PCWA for 25,000 acre-feet of Middle Fork Project water, also served from Folsom Lake. This supply is only available during wet and normal years as defined by the Water Forum.

The City may purchase Section 215 water from the US Bureau of Reclamation when available, but has not done so at this time. Section 215 water is water the Bureau releases from Folsom lake that is in excess of the entitlements and rights of downstream users, and is usually only available during winter months.

The only legal constraints on the current surface water entitlements are contract stipulations. The Water Forum includes a signed agreement that is not legally binding, but the City intends to

comply with all conditions negotiated and agreed to. The USBR CVP contracts are subject to 25 percent reductions during "dry years" as determined by the USBR. The original contract with USBR expired December 31, 2010, so the City negotiated and signed a two-year Interim Contract for the 32,000 AF that beneficial use was established for. The PCWA contract does not include restrictions and is considered 100 percent reliable, absent a catastrophic event. The City completed negotiations in 2010 for the long-term supply contract with PCWA for the full 30,000 acre-feet/year. The contract with SJWD for 4,000 acre-feet/year of PCWA water limits the availability to only during wet or normal years as defined by the Water Forum.

1.A.5. Anticipated land-use changes

Land use characteristics have followed the employment characteristics for the City. Historically, there were a few industries with large land holdings for their manufacturing facilities and future expansions. As industrial jobs have relocated, the larger industrial tracts have and are being split and put back on the market with rezoning to allow development of residential and non-residential uses. New planning areas that are, or are planning to be, annexed into the City also have similar land use plans, with large portions of commercial and retail space to meet the projected demands. However, Roseville anticipates an industrial sector demand that is much smaller and more specialized than past industrial employers. Roseville is therefore planning for smaller parcels of industrial land use located near existing industrial-zoned land.

With an increase in commercial and office related employment demands, Roseville is also planning for increased residential land use requirements. Due to high housing demands near places of employment and recent market trends for smart growth promoted by the Sacramento Area Council of Governments (SACOG) and the market, Roseville is planning for an increase of medium and high density residential land uses in the new development areas. Overall, it is anticipated that the older residential areas of Roseville will maintain their low to medium density character, and the newer areas will have the signature of a smart growth development with high density residential units close to commercial and office space land uses.

1.A.6. Cropping patterns (Agric only)

There are no significant agricultural users in the City's service area.

1.A.7. Major irrigation methods (by acreage) (Agric only)

Irrigation Method	Acres
N/A	N/A

1.B. Location and Facilities

Appendix A shows the water service area boundary, transmission mains, pressure zones, storage reservoirs, booster pump locations, wells, interties, and reducing stations.

1.B.1 Incoming measurement methods and locations

The following table provides incoming flow locations to the City, type of measurement device, and accuracy.

Incoming Location		Type of Measurement Device	Accuracy
Intertie Agency	**Facility**		
Placer County Water Agency	Stoneridge	Electronic meter	+/- ½ %
	5 Star	Mechanical meter	+/- 1½ %
	Highland Park	Mechanical meter	+/- 1½ %
	Pleasant Grove	Mechanical meter	+/- 1½ %
	Tinker Road	Electronic Meter	+/- ½ %
	Bianchi Estates	Mechanical meter	+/- 1½ %
San Juan Water District	WTP	Electronic Meter	+/- ½ %
	Eureka[1]	Mechanical meter	+/-1 ½ %
	Cavitt Stallman	Mechanical meter	-/-1 ½ %
Cal-Am	Crowder	Electronic meter	+/- ½ %
	PFE	Electronic meter	+/- ½ %
	Vernon Oaks[1]	Mechanical meter	+/- 1½ %
Citrus Heights Water District	Orlando[1]	Mechanical meter	+/- 1½ %
	Blossom Hill[1]	Mechanical meter	+/- 1½ %
Sacramento Suburban Water District	PFE/North Antelope	Electronic meter	+/- ½ %

Note:
[1] Local zone feed only due to zone hydraulic grade line matching. Zone isolation required to move water between agencies.

1.B.2. Current year Agricultural Conveyance System

Miles Unlined - Canal	Miles Lined - Canal	Miles Piped	Miles - Other
N/A	N/A	N/A	N/A

1.B.3 Current year Urban Distribution System

The following table describes the length of PVC, iron, steel and concrete pipe in the City's distribution system. The City is working on improving data with GIS to address the large number of unknown lengths of pipe material.

Miles of pipe					
PVC	Cast Iron	Ductile Iron	Steel	Reinforced Concrete	Other/ Unknown
95.1	3.8	45.5	0.6	61.1	363.1

1.B.4. Storage facilities

The City has five storage tanks for a total of 28 million gallons (MG) of storage.

Facility	Pressure Zone Served	Capacity, AF	Type	Year Constructed
WTP 2 MG	1, 2, 4, 5	6.1	Steel	1971
WTP 4 MG	1, 2, 4, 5	12.3	Pre stressed concrete	1990
WTP 6 MG	1, 2, 4, 5	18.4	Pre stressed concrete	2004
Northeast 7.5 MG	1-5	23	Pre stressed concrete	2009
Northeast 10 MG	1-5	30.7	Pre stressed concrete	1998
Halverson 2.9 MG	2	8.9	Pre stressed concrete	2008

1.B.5. Description of the agricultural spill recovery system

There are no agricultural users, or spill recovery systems in the City.

1.B.6. Agricultural delivery system operation

There are no agricultural users, or delivery system operation in the City.

1.B.7. Restrictions on water source(s)

Source	Restriction	Cause of Restriction	Effect on Operations
Central Valley Project, Folsom Lake	25 percent reduction during dry years.	USBR contract No. 14-06-200-3474A	12% reduction of overall supplies
Middle Fork of the American River	4,000 acre-feet not available in dry years.	SJWD	6% reduction of overall supplies

1.B.8. Proposed changes or additions to facilities and operations for the next 5 years

The City anticipates the following changes to the City's facilities over the next five years which includes the implementation of a variety of water supply projects to increase reliability and provide dry year supplies.

- The City intends to construct ten new wells for dry weather supply only. The total new supply from the wells will be limited to only the volume required to meet the dry year demands; it is assumed total groundwater production during dry years will be 6,790 acre-feet/year. Future well projects are summarized in the table below.

Project name	Production, gpm	Projected completion date
West Roseville Specific Plan (Annexation Area) – 4 Wells	1,800 x 4	2013-2015
Sun City Well	1,800	2016
Sierra Vista Specific Plan (Annexation Area) – 2 Wells	1,800 x 4	2018-2020
Creekview Specific Plan	1,800	2020
Total new supply anticipated for dry year use	14,400 acre-feet[1]	

Notes:
[1] Groundwater wells will only be used for backup or dry year supply, it is assumed total groundwater production during dry years will be 14,400 acre-feet/year based on estimates of surface water available and system demands.
gpm = gallons per minute

- The City has some wastewater force mains for use in the recycled water distribution system, and is adding recycling infrastructure as new developments are constructed to meet the projected system demands.
- Roseville's water treatment plant was recently expanded from from 60 mgd to 100 mgd in 2008. The expansion provides increased system reliability, daily peaking requirements, and regional conjunctive use opportunities.
- The water system currently has 32.15 MG of storage and is projected to need a total of 49 MG at system build out. Storage projects currently in the capital plan along with the anticipated schedule are listed in the table below. None of the storage projects are expected to increase total water supplies.

Project name	Tank Volume, MG	Projected completion date
West Side Tank	12	2015
Sierra Vista Tank	5	2022

- Annexation area infrastructure has been conceptually designed, sized, and timing identified in a phasing plan linked to development. This infrastructure will be constructed by the developer with design approval and construction oversight by the City of Roseville. Infrastructure improvements will be made through the 15-year build out of the annexation area and will include looped transmission and distribution mains to meet the needs to the community.
- Changes in operation will primarily be relative to implementation of the conjunctive use program when permitted.

1.C. Topography and Soils

1.C.1. Topography of the City and its impact on water operations and management

The topography of the City is best described as moderate rolling valley floor. Elevations range from 100 feet near the northwest boundary to 250 feet in the eastern portion of the service area. The City's terrain does not pose any specific topography related water management difficulties.

1.C.2. City soil associations (Agric only)

Soil Association	Estimated Acres	Effect on Water Operations and Management
N/A	N/A	N/A

1.C.3. Agricultural limitations resulting from soil problems (Agric only)

Soil Problem	Estimated Acres	Effect on Water Operations and Management
N/A	N/A	N/A

1.D. Climate

1.D.1. General climate of the City service area

The Southern Sacramento Valley, including the City of Roseville, experiences a mild climate. During the winter "rainy season" (November through February), over half the total annual precipitation falls, yet rain in measurable amounts occurs only about 10 days monthly during the winter. Mountains surround the Sacramento Valley to the west, north, and east. The Sierra Nevada snowfields are only 70 miles east of Sacramento and usually provide a plentiful supply of water to the valley streams during the dry season. Because of the shielding influence of the high mountains, winter storms reach the valley in a modified form. However, torrential rain and heavy snow frequently fall on the Western Sierra Slopes, the Southern Cascades, and to a lesser extent, the Coastal Range. As a result, flood conditions occasionally occur along the Sacramento River and its tributaries. Excessive rainfall and damaging wind storms occur infrequently.

Thunderstorms in the region are few in number and usually occur in the late fall or in the spring. Dense fog occurs mostly in mid-winter. Light and moderate fog is more frequent and may happen anytime during the wet, cold season. Fog is usually of the radiational cooling type and is confined to the early morning hours. Under stagnant atmospheric conditions, winter fog can become very persistent and may continue for several days.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg Precip.	3.69	3.2	2.64	1.39	0.62	0.16	0.01	0.03	0.31	0.93	2.02	3.14	1.52
Avg Temp.	46	51	54	59	65	72	77	77	73	66	54	47	62
Max. Temp.	73	78	86	94	106	112	115	114	108	102	86	74	115
Min. Temp	17	19	26	30	35	43	50	45	46	32	26	16	16
Avg ET_o	1.59	2.2	3.66	5.08	6.83	7.8	8.67	7.81	5.67	4.03	2.13	1.59	4.8

Note: Above data obtained from the Western Region Climate Center, Sacramento 5 ESE (047633) Year 1890 to Year 2005. ETo was obtained from the CIMIS website: http://www.cimis.water.ca.gov/cimis/welcome.jsp. ETo averages were based on the Fair Oaks site.

Weather station ID 047633 Data period: Year 1890 to Year 2005

Average wind velocity 8.0 Southwest Average annual frost-free days: 356

The prevailing wind in the region is southerly all year. This is due to the north-south orientation of the valley and the deflecting effects of the towering Sierra Nevada on the prevailing oceanic wind that moves through the Carquinez Strait near the Delta, at the junction of the Sacramento and San Joaquin Rivers. No other tidewater gap exists in the Coastal Mountains to admit significant marine air into the Sacramento or the San Joaquin Valleys. Occasionally, a strong north or northeasterly barometric pressure gradient develops, forcing air south or southwestward down the Siskiyou Mountains or the Sierra Nevada. This air is warmed by compression as it descends, reaching the valley floor as a hot, dry north wind. Heat waves in the summer are produced by these winds and fortunately, are usually followed within two or three days by the normally cool southwest delta breezes, especially at night.

Average annual frost-free days: There are on average nine days with temperatures below 32

degrees Fahrenheit. The number of average annul frost-free days is 356.

1.D.2. Impact of microclimates on water management within the service area

There are no known microclimates within the City's water supply watershed and, therefore, microclimates have no known impact on water management within the City's service area.

1.E. Natural and Cultural Resources

The City of Roseville features substantial amounts of natural habitat, wetlands, and riparian (stream corridor) areas. Pictured below, these important open space areas help provide a much-needed balance between urban development and nature. They also provide important water quality functions for our streams and creeks and are home to endangered plants and animals that are protected by federal and state laws.

Highland Reserve South

Miners Ravine

1.E.1. Natural resource areas within the service area

Name	Estimated Acres	Description
Creek Woodlands	600	No water demands to support this area
Linda Creek	N/A	Supplemental water @ 1 cfs during dry times of the year (approx. 4 months) - mitigation
Dry Creek	N/A	No water demands to support this area

1.E.2. Description of City management of these resources in the past or present

The City has approximately 3,300 acres of open space and preserves including:

- Approximately 2,500 acres of Preserve Areas, which are restricted-use areas to protect natural resources, primarily wetland and riparian oak woodland habitats.
- 800 acres of non-Preserve open space, primarily the floodway areas along our creeks and streams.

Open space areas are free from development or are developed with low-intensity uses that maintain the natural environmental beauty. This publicly owned open space provides:

- Preservation of natural and cultural resources
- Important habitat for endangered plants and animals
- Important water quality functions
- Passive outdoor recreation with low impact bike and pedestrian trails
- Public health and safety
- Scenic and visual enjoyment

Restrictions in open space preserve areas include:

- No dumping: 374.3(b) Public Resources Code (PC)
- No removal of natural resources: 8.02.230 Roseville Municipal Code (RMC)
- No dogs: 8.02.240 Roseville Municipal Code (RMC)
- No camping: 10.56.010 RMC
- No alcohol: 10.30.010 RMC and 647(e) PC
- No littering: 10.38.010 RMC and 374.4(a) PC
- No motorized vehicles: 602(m) PC
- No destruction or alternation of public property: 8.02.030 RMC

1.E.3. Recreational and/or cultural resources areas within the service area

Name	Estimated Acres	Description
Public parks	239	Maintenance irrigation
Golf courses	118	Maintenance irrigation
Maidu Open Space	100	Non-irrigated cultural resource area
Creeks	N/A	Supplemental water demands (see previous table). Recreational fishing.

Maidu Park is a 152-acre regional park located off of Rocky Ridge Drive in East Roseville. The developed area of the park (approximately 52 acres) includes the Maidu Community Center, Maidu Branch Library, Veteran's Memorial Rose Garden and Maidu Indian Museum. Additional features of the park include a four diamond lighted softball complex, a five field lighted soccer complex, a six station batting cage, a regulation size lighted covered soccer arena, a skate track, one full basketball court, a pedestrian and bike path, numerous picnic areas and children's play equipment. The undeveloped areas of this park are native, un-irrigated landscape.

1.F. Operating Rules and Regulations

1.F.1. Operating rules and regulations

See Appendix B and C for Roseville's Water and Water Conservation Municipal Codes.

1.F.2. Agricultural water allocation policy

No Ag.

1.F.3. Official and actual lead times necessary for water orders and shut-off (Agric only)

No Ag.

1.F.4. Policies regarding surface and subsurface drainage from farms (Agric only)

No Ag.

1.F.5. Policies on water transfers by the City and its customers

The City maintains direct treated water interties with five surrounding jurisdictions. The City can transfer water between jurisdictions through these interties or access water to supplement its distribution system. These facilities are designed to be used for wheeling water through the service area or for short-term demand shortage assistance. Currently, the City only exchanges water with PCWA in two specific areas where each respective agency can more easily service the other's small service area. The assumed net exchange between agencies is 0.0. Transfer policies are developed on a case by case basis with each individual purveyor.

1.G. Water Measurement, Pricing, and Billing

Agricultural Customers

1. Number of farms No Ag.
2. Number of delivery points (turnouts and connections) No Ag.
3. Number of delivery points serving more than one farm No Ag.
4. Number of measured delivery points (meters and measurement devices) No Ag.
5. Percentage of delivered water that was measured at a delivery point No Ag.
6. Delivery point measurement device table (Agric only) No Ag.

Urban Customers (2010 data)

1. Total number of connections 39,525
(Value differs from 2010 UWMP due to alternate data accounting procedures)

2. Total number of metered connections 38,049
(Value differs from 2010 UWMP due to alternate data accounting procedures)

3. Total number of connections not billed by quantity 4,180
(Value differs from 2010 UWMP due to alternate data accounting procedures.)

4. Percentage of water that was measured at delivery point 95.9%

5. Percentage of delivered water that was billed by quantity 88%
(Value does not include metered accounts not yet billed by quantity due to one-year grace period prior to metered billing.)

6. Measurement device table

Meter Size and Type	Number	Accuracy (+/-percentage)	Reading Frequency (Days)	Calibration Frequency (Months)	Maintenance Frequency (Months)
5/8-3/4"	34,950	+/- 1½	Monthly	Every 10 years	Every 10 years
1"	987	+/- 1½	Monthly	Every 10 years	Every 10 years
1 ½"	734	+/- 1½	Monthly	Every 10 years	Every 10 years
2"	1,083	+/- 1½	Monthly	Every 10 years	Every 10 years
3"	141	+/- 1½	Monthly	Every 10 years	Every 10 years
4"	110	+/- 1½	Monthly	Every 2 years	Every 10 years
6"	25	+/- 1½	Monthly	Every 2 years	Every 10 years
8"	11	+/- 1½	Monthly	Every 2 years	Every 10 years
10"	8	+/- 1½	Monthly	Every 2 years	Every 10 years
12" or larger	5	+/- 1½	Monthly	Every 2 years	Every 10 years
Total	38,054				

Total number of meters in the table above differs from the total number of metered connections as reported in item 1.G.2 previously due to the inclusion of 5 intertie meters between adjoining water agencies. The total number of connections (1.G.1) differs from the total number of metered connections (1.G.2) due to 1,476 residential accounts that were in mock bill status, meaning that these customers were not being billed a metered rate and thus were not classed as a metered connection.

Agriculture and Urban Customers

1.G.1. Current year agriculture and/or urban water charges - including rate structures and billing frequency

The City does not have any agriculture water charges. The City's rate structure is attached in Appendix B with sample water bills attached in Appendix D. As a component of development of the meter retrofit program, the City adopted conservation pricing for water on all metered accounts. This includes an inclining block rate structure for residential water accounts based on the measured water through the meter on top of a service charge for operational fixed costs. Current residential rates (effective August 2011) are based on water use units of 100 cubic feet and are:

- $0.39 per unit for the first 1,200 cubic feet
- $0.78 per unit for the next 3,000 cubic feet
- $1.17 per unit for the next 3,300 cubic feet
- $1.74 per unit for water over 7,500 cubic feet

For non-residential accounts, water usage is billed on top of a monthly service charge for fixed operational costs. Current uniform non-residential rates are based on 100 cubic foot units as follows:

- 0.78 per unit for all water on non-residential accounts

The City adopted an inclining block rate structure in May 2003. Rates are evaluated annually to ensure appropriate revenue collection. A copy of the City's Municipal Water Code 14.08 that outlines these rates is included in Appendix B.

1.G.2. Annual charges collected from customers (2010 data)

Charges	Charge units	Units billed during year, CCF	$ collected
Fixed Charges			
Comm Flat	$/customer	19,445,495	228,177
Res Flat	$/customer	99,901,340	1,172,260
Volumetric charges			
Comm Dom	$/ccf	206,412,861	3,184,839
Comm Irr	$/ccf	242,176,430	2,671,107
Res Metered	$/ccf	671,234,997	9,423,453

1.G.3. Water-use data accounting procedures

The City's consumption information is housed in their Customer Information System (CIS). The software used is provided by Indus International. The system contains all of the customer and premise information related to the utility account, owner, and tenant. Customers can see their usage from the "same month last year" on the bill. See Appendix D for a sample of the City's bills. Additionally, the City will provide additional consumption information to the account holder if requested. There is at least five years of customer use data currently available.

1.H. Water Shortage Allocation Policies

1.H.1. Current year water shortage policies or shortage response plan - specifying how reduced water supplies are allocated

See Appendix C Roseville Municipal Water Conservation Code 14.09 for the City's water shortage policies.

1.H.2. Current year policies that address wasteful use of water and enforcement methods

See Appendix C Roseville Municipal Water Conservation Code 14.09 for the City's water waste and enforcement policies.

Section 2: Inventory of Water Resources

2.A. Surface Water Supply

2.A.1. Acre-foot amounts of surface water delivered to the City by each of the City sources

See Water Inventory Tables, Table 1 located at end of Section 2.

2.A.2. Amount of water delivered to the City by each of the City sources for the last 10 years

See Water Inventory Tables, Table 8 located at end of Section 2.

2.B. Ground Water Supply

2.B.1. Acre-foot amounts of ground water pumped and delivered by the City

See Water Inventory Tables, Table 2 located at end of Section 2.

2.B.2. Ground water basin(s) that underlies the service area

Name	Size (Square Miles)	Usable Capacity (acre-feet)	Safe Yield (acre-feet/year)
Sacramento Valley, North American River Subbasin (5-21.64)	548	70,200,000	To be determined

2.B.3. Map of City-operated wells and managed ground water recharge areas

See Appendix A for a map of the City's water system.

2.B.4. Description of conjunctive use of surface and ground water

The City maintains groundwater wells for backup supply and dry year supply. The City currently operates five groundwater wells, and has plans to construct ten more. The City's groundwater wells are currently maintained primarily for backup water supply and to improve water supply reliability during drought and emergency conditions. The City is in process of developing an Aquifer Storage and Recovery (ASR) program that would allow storage of surplus surface water in underground aquifers injected through these production wells. All future wells will also be ASR-capable to maximize the City's options for its conjunctive use program.

2.B.5. Ground Water Management Plan

The groundwater management plan was updated in 2007 in cooperation with PCWA, City of Lincoln, and California American Water, as included in Appendix E. The Plan can be viewed at www.roseville.ca.us/placergroundwater/documents.asp. The Groundwater Management Plan is summarized below as it pertains to the City of Roseville's water supply.

Groundwater elevation levels in the basin along the Placer/Sacramento County line have been steadily declining 1 to 1.5 feet per year through 1998 (the date of the groundwater management plan). The steady decline in groundwater levels has resulted in a decrease in quality for some wells. Quality concerns can be attributed to increased movement in known contaminant areas (such as McClellan AFB or the Union Pacific rail yard), or due to areas of natural occurring contaminants influencing the pumping zone of wells. However, the City has not lost any wells due to water quality issues from these two known contaminant areas.

The basin has historically been pumped by agricultural and urban users. Over the past ten years, agriculture land is being developed and converted to urban uses. With this conversion, the agriculture pumping demand will decrease. If the demand is not replaced by other pumping demands, it is anticipated that the basin pumping demands will decrease, potentially improving the condition of the basin

2.B.6. Ground Water Banking Plan

The City has participated in a pilot groundwater banking and exchange program in conjunction with the Regional Water Authority. This pilot program has the potential to transfer surface water to the California Department of Water Resources' environmental water account on a short-term basis by pumping more groundwater. The City intends to utilize its ASR program to work with the RWA to identify both short-term and long-term exchange and transfer opportunities with other RWA members. The City approved the final Environmental Impact Report for the ASR project on March 21, 2012 and has submitted a permit request to the Regional Water Quality Control Board. The report can be viewed at:
http://www.roseville.ca.us/eu/water_utility/aquifer_storage_n_recovery.asp.

2.C. Other Water Supplies

2.C.1. "Other" water used as part of the water supply

See the Water Inventory Tables, Table 1 located at end of Section 2.

2.D. Source Water Quality Monitoring Practices

2.D.1. Surface water and/or ground water quality problems, and how the quality problems limit the use of that source or affect customer use decisions

The quality of existing surface water and groundwater supply sources over the next 25 years is expected to be adequate. Surface water will continue to be treated to drinking water standards, and no raw water quality deficiencies are foreseen to occur in the next 25 years.

Although there have been instances of localized groundwater quality issues, it is anticipated these will continue to be local and that overall, the groundwater quality will remain above potable water standards. All groundwater supplies currently meet or exceed current drinking water standards, including secondary standards regulated for aesthetic qualities. Iron and

manganese are two metals that occur naturally within the geological formations from which the groundwater is extracted, and are known to be at elevated levels in wells of surrounding water systems. The City does not anticipate that iron and/or manganese will impact their groundwater supply availability.

Water quality affects the City's water management strategies through the City's efforts to be in compliance with Federal and State regulations. These regulations require rigorous water quality testing, source assessments, and treatment compliance. When permitted, the ASR system will conduct the required testing as defined by the State. No other special water management strategies due to water quality are anticipated.

2.D.2. Potable Water Quality (Urban only)

See Appendix F – City Annual Water Quality Report

2.D.3. Agricultural water quality concerns: Yes _____ No ____X____

2.D.4. Description of the agricultural water quality testing program and the role of each participant, including the City, in the program

No Ag.

2.D.5. Current water quality monitoring programs for surface water by source (Agric only)

No Ag.

2.D.6. Current water quality monitoring programs for groundwater by source (Agric only)

No Ag.

2.D.7. Current year total dissolve solid range for surface water and ground water (Agric only)

No Ag.

2.E. Water Uses Within the City

2.E.1. Agricultural

No Ag.

2.E.2. Types of irrigation systems used for each crop in current year

No Ag.

2.E.3. Urban use by customer type in 2010

Customer Type	Number of Connections	(Acre-feet)
Single-family	34,801	15,836
Multi-family	1,650	2,196
Commercial	1,509	2,261
Industrial	26	891
Institutional	248	667
Landscape irrigation	1,218	5,534
Wholesale	0	0
Recycled	73	2,222
Unaccounted for		1,195
Total	39,525	30,802

Note: Values differs from UWMP due to use of different customer accounting methodologies.

2.E.4. Urban Wastewater Collection/Treatment Systems serving the service area

The City of Roseville wastewater treatment plants serve an area that is larger than the City of Roseville. The service area also encompasses areas served by Placer County and the South Placer MUD (SPMUD). Wastewater is generated both in and outside the City from a combination of residential and commercial sources. The quantities of wastewater generated are proportional to the population and the water use in the service area. The City of Roseville currently operates two regional wastewater treatment facilities. The Dry Creek wastewater treatment plant (DCWWTP) is located on Dry Creek. The DCWWTP collection system is primarily gravity. Tertiary treated effluent that is not reclaimed is discharged into Dry Creek. The DCWWTP average dry weather flow capacity is currently 18 MGD.

The Pleasant Grove wastewater treatment plant (PGWWTP) discharges to the Pleasant Grove Creek. The PGWWTP wastewater collection system is also primarily gravity flow. Tertiary treated effluent that is not recycled is discharged into Pleasant Grove Creek. The PGWWTP average dry weather flow capacity is currently 12 MGD.

Both the DCWWTP and PGWWTP are activated sludge treatment plants that produce disinfected tertiary-treated effluent (Title 22). This treatment level is achieved through screening, grit removal, primary clarification, aeration, secondary clarification, filtration, UV disinfection, and chlorination for residual maintenance of recycled water.

Wastewater collection is handled through individual agency staffs. Roseville handles collection within the service area corresponding to the City incorporated boundaries. Other surrounding agencies that are also part of the regional facility collect wastewater which is conveyed through trunk sewers to the regional treatment facilities. Metering stations are located at service area boundaries to account for the wastewater treated for each entity.

Treatment Plant	Treatment Level (1, 2, 3)	Acre-feet (2010)	Disposal to / uses
Dry Creek wastewater treatment plant (DCWWTP)	3	11,481	Dry Creek / landscape
Pleasant Grove wastewater treatment plant (PGWWTP)	3	8,440	Pleasant Grove Creek / landscape
	Total	19,921	
Total discharged to ocean and/ or saline sink		0	

2.E.5. Ground water recharge / management / banking in current year (2010) (Table 6)

Recharge Area	Method of Recharge	(Acre-feet)	Method of Retrieval
N/A	N/A	N/A	N/A

No groundwater recharge through ASR was conducted in 2010. For those future times when excess water is available, the City plans to recharge the groundwater basin through ASR and through natural recharge of the basin, so that water is available during "dry" years. It is assumed groundwater quantity is generally unaffected by short-term drought conditions and therefore does not impact this conjunctive use strategy employed by the City.

2.E.6. Transfers and exchanges into or out of the service area in 2005 (Table 6)

Transfers from PCWA and SJWD have been converted to contracts and are listed as contract water supply previously. The two interconnections with PCWA are considered "Trades" as listed below in item 7.

From Whom	To Whom	(Acre-feet)	Use
N/A	N/A	N/A	N/A

2.E.7. Trades, wheeling, wet/dry year exchanges or other transactions in current year (Table 6)

Currently, the City only exchanges water with PCWA in two specific areas where each respective agency can more easily serve each other's system pressure needs. The annual anticipated net exchange between agencies is 0.0. In 2010 the net exchange was 52 acre-feet.

2.E.8. Other uses of water in current year

Other Uses	Acre-feet
None	0

2.F. Irrigation Drainage from the Service area (Table 7) (Ag only)

2.F.1. Surface and subsurface drain / return flows in current year

Drain Location	(Acre-feet)	Types of Uses
N/A	N/A	N/A

2.F.2. Description of the Drainage water quality testing program and the role of each participant in the program.

No Ag.

2.F.3. Drainage Water (surface and subsurface) Quality Testing Program

No Ag.

Analyses Performed	Concentration Range	Frequency Range	Average
N/A	N/A	N/A	N/A

2.F.4. Usage limitation resulting from drainage water quality

No Ag.

Constituent	Usage Limitation
N/A	N/A

2.G. Water Accounting (Inventory)

2.G.1. Water Supplies Quantified

a. Surface water supplies, imported and originating within the service area, by month (Table 1)
b. Ground water extracted by the City, by month (Table 2)
c. Effective precipitation by crop (Table 5) – not applicable
d. Estimated annual ground water extracted by non-district parties (Table 2)
e. Recycled urban wastewater, by month (Table 3)
f. Other supplies, by month (Table 1)

Tables are located at end of Section 2.

2.G.2. Water Used Quantified

a. Agric. conveyance losses, including seepage, evaporation, and operational spills in canal systems (Agric. Table 4 – not applicable) or
   Urban leaks, breaks and flushing/fire uses in piped systems (Urban Table 4)
b. Consumptive use by riparian vegetation or environmental use (Table 6)
c. Applied irrigation water - crop ET, water used for leaching / cultural practices (e.g., frost protection, soil reclamation, etc.) (Table 5) – not applicable
d. Urban water use (Table 6)
e. Ground water recharge (Table 6)
f. Water exchanges and transfers (Table 6)
g. Estimated deep percolation within the service area (Agric. Table 6) – not applicable
h. Flows to perched water table or saline sink (Agric. Table 7) – not applicable
i. Irrigation spill or drain water leaving the City (Agric. Table 6) – not applicable
j. Other

Tables are located at end of Section 2.

2.G.3. Overall Water Inventory

a. Table 6

Tables are located at end of Section 2.

Table 1

Surface Water Supply

2010 Month	Federal Urban Water (USBR) (acre-feet)	Federal Agric. Water (acre-feet)	State Water (acre-feet)	Local Water (PCWA)* (acre-feet)	Other Water (SJWD) (acre-feet)	Total (acre-feet)
January	1,154	0	0	21	0	1,17
February	1,031	0	0	20	3	1,05
March	1,280	0	0	0	124	1,40
April	1,688	0	0	0	0	1,68
May	2,495	0	0	9	40	2,54
June	3,474	0	0	0	0	3,47
July	4,349	0	0	0	0	4,34
August	4,174	0	0	0	0	4,17
September	3,517	0	0	0	0	3,51
October	2,670	0	0	2	1	2,67
November	1,544	0	0	0	0	1,54
December	1,148	0	0	0	0	1,14
TOTAL	28,524	0	0	52	168	28,74

Table 2

Ground Water Supply

2010 Month	City groundwater (acre-feet)	Private groundwater (acre-feet)
January	0	0
February	0	0
March	0	0
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	0	0
October	0	0
November	0	0
December	0	0
TOTAL	0	0

Table 3

Total Water Supply

2010 Month	Surface Water Supply (acre-feet)	City Groundwater (acre-feet)	Recycled M&I Wastewater (acre-feet)	Total City Water Supply (acre-feet)
January	1,175	0	46	1,221
February	1,054	0	36	1,090
March	1,404	0	44	1,453
April	1,688	0	59	1,750
May	2,544	0	211	2,793
June	3,474	0	385	3,927
July	4,349	0	503	4,943
August	4,174	0	442	4,686
September	3,517	0	336	3,901
October	2,673	0	110	2,805
November	1,544	0	38	1,583
December	1,148	0	12	1,161
TOTAL	28,744	0	2,222	31,313

Note: Recycled wastewater is treated urban wastewater that is reused

Table 4

Distribution System

2010 Area or Line	Length (feet)	Leaks (acre-feet)	Breaks (acre-feet)	Flushing/Fire (acre-feet)	Total (acre-feet)
Distribution system	567	14	1093	88	1,1
TOTAL	567	14	0	88	1,1

Breaks also include unaccounted for water

Section 4: Water Conservation

The unpredictable water supply and ever increasing demand on California's complex water resources have resulted in a coordinated effort by the DWR, water utilities, environmental organizations, and other interested groups to develop a list of best management practices for conserving water. This consensus-building effort resulted in a Memorandum of Understanding Regarding Urban Water Conservation in California (MOU), which formalizes an agreement to implement these practices and makes a cooperative effort to reduce the consumption of California's water resources.

The City of Roseville is a signatory to the California Urban Water Conservation Council (CUWCC) MOU and a United States Bureau and Reclamation (USBR) contractor that is required to develop and maintain a water conservation plan consistent with the requirements of the Central Valley Project of 1992. In addition, Roseville is a member and signatory to the Water Forum which also includes requirements for water conservation programs. The USBR and the Water Forum use the CUWCC MOU method of compliance to satisfy the requirements of their agreements.

The City has chosen to utilize the Gallons Per Capita Per Day (GPCD) compliance option offered by the CUWCC, thus committing to reduce its GPCD water use by 18% by the year 2018 from the established baseline (shown in Table 4-1). The City chose this compliance option to be consistent with the efforts and reporting structure of the SBx7 7 requirement of a 20% reduction by the year 2020. Table 4-1 represents the City's CUWCC compliance baseline representing a 10-year average for years 1997 through 2006, as specified by the CUWCC MOU. This data is also presented in the CUWCC coverage report included in Appendix G.

Table 4-1. 10-year average baseline calculation

Year	Population	AF	Gallons	GPCD	10-yr Avg GPCD
1997	62,315	23,000	7,494,582,857	329.5	--
1998	65,765	20,462	6,667,571,931	277.8	--
1999	69,518	24,177	7,878,109,989	310.5	--
2000	77,627	25,646	8,356,785,737	294.9	--
2001	79,564	27,427	8,937,127,131	307.7	--
2002	82,586	29,718	9,683,652,754	321.2	--
2003	87,442	29,743	9,691,799,040	303.7	--
2004	92,856	32,325	10,533,133,575	310.8	--
2005	99,164	31,480	10,257,789,480	298.5	--
2006	100,545	33,636	10,960,324,236	298.7	305.3

Table 4-2 presents the City's compliance table to satisfy the implementation schedule of the CUWCC GPCD compliance option. The City has developed a strategy for achieving an interim target. The reduction in usage will come from landscape water budget billing, tiered rate structures, creative landscape programs and incentives for commercial and residential customers,

education and outreach, community based marketing efforts, CII process water reduction rebates, water audits, system water loss audits, high-efficiency toilet and high-efficiency washing machine rebates, school education programs, and aggressive water waste patrols.

Table 4-2 CUWCC GPCD Compliance table

Year	Compliance Report	Target GPCD (% of baseline)	Highest acceptable GPCD bound (% baseline)
2010	1	294.3	305.3
2012	2	283.3	294.3
2014	3	272.3	283.3
2016	4	261.4	272.3
2018	5	250.4	250.4

4.1 Current Water Conservation Program

The City's conservation program is summarized in Table 4-3. Because the City is using the gpcd compliance method, the City only needs to implement CUWCC BMP's 1 and 2. However, the City has chosen to also implement other BMP programs as indicated in the table under the "Optional" heading. Each program is described below.

Table 4-3. City of Roseville Conservation Program

CUWCC BMP No.	USBR No.	BMP Name
		Required Programs with gpcd Compliance
1.1	12	Conservation coordinator.
1.1	13	Water waste prohibition.
1.1	10	Wholesale agency assistance programs – Not applicable
1.2	3	System water audits, leak detection and repair.
1.3	4	Metering with commodity rates for all new connections and retrofit of existing connections.
1.4	11	Conservation pricing.
2.1	7	Public information programs.
2.2	8	School education programs.
		Optional Programs
3.0	1	Water survey programs for single-family residential and multi-family residential connections.
3.0	2	Residential plumbing retrofit.
3.0	6	High-efficiency washing machine rebate programs.
3.0	14	Residential HET replacement programs.
3.0	N/A	WaterSense specifications for residential development.
4.0	9	Conservation programs for commercial, industrial, and institutional accounts.
5.0	5	Large landscape conservation programs and incentives.

BMP 1.1 - Conservation coordinator
The City has a full time water conservation administrator, water conservation specialist, three full time field personnel, one full time administrative clerk, one part time temporary administrative clerk, and two part-time temporary water waste patrol officers. The Conservation Division also pulls assistance from the utility service staff to perform water leak detection and leak repair. The conservation administrator is Lisa Brown who can be reached at lbrown@roseville.ca.us or by phone at 916-746-1710.

The City has no method to quantify the savings but believes that this program is in the public's interest.

BMP 1.1 - Water waste prohibition
Roseville currently restricts water waste within the service area. Roseville Municipal Code Chapter 14.09 (presented in Appendix C) defines water waste and associated penalties of continued infractions. Per Water Division policy, water wasters are provided a notice at the location (3 notices in non-shortage conditions, 2 notices in water shortage conditions, and 1 notice with an immediate remedy in urgent water shortage conditions). If the situation is not remedied by the specified time additional measures can be taken to gain compliance. This includes fines, water restrictions, transition to a metered water rate (if applicable), low flow devices or discontinued service.

The City employs two 1,500 hour temporary workers to constantly patrol the Roseville city limits looking for water waste. In addition, full time City staff patrol for waste between appointments. They look for any violation of the City's ordinance and then makes attempt to contact the customer to educate them on the ordinance, give them information about the City's programs and services and leaves a door hanger notice with notification of the problem. The patrols significantly increase the number of Water Wise House Calls the conservation division performs as staff promotes the service at the time the notice is given. The driver of the program is customer contact and education. It is the City's intent to speak with customers before leaving a notice.

The City has an anonymous on-line reporting mechanism that allows customers to report water waste at their convenience. Customers can visit www.roseville.ca.us/waterwaste and submit an electronic form. All reports are investigated upon receipt.

All citations and violations are tracked annually. Over the period of implementation the City has increased patrols and marketing budgets to increase awareness of the program. The increasing population within the City requires continuous education efforts.

BMP 1.2 - System water audits, leak detection and repair
The City has had a long-standing system leak detection and repair program in place. However, in 2009 the City used the AWWA Water Loss software to develop a water loss baseline of the current system. An audit using this software will be conducted annually. In addition, an annually updated "system map" indicating pipe size, pipe material, connection points and leak history is

maintained within the City's maintenance database. When areas of high leak incidences are identified, corrective action is taken. System leaks are repaired as they are identified. This includes corrosion monitoring programs, service cathodic protection and/or replacement. This may also include doing a detailed leak detection survey to identify leaks in the system. The infrastructure management system is updated with repair information. This enables the City to query for leak prone areas in order to prioritize future rehabilitation programs.

Methods to Evaluate Effectiveness:
The City focuses on the older areas of town that are more leak prone. The City will continue to monitor the system for areas that have high incidences of leaks. This evaluation will improve as more customers are converted to metered usage. When a leak is discovered and repaired, it is logged in the City's asset management system. The amount of water loss from each leak found are estimated based on the assessment of the operation crews that responded to the leak.

BMP 1.3 - Metering with commodity rates for all new connections and retrofit of existing connections
The City has completed a meter retrofit program. The retrofit program addressed metering of all pre-1992 residential services in Roseville as well as a transition of all residential accounts to an inclining block rate structure. Implementation of metered rates began immediately on all residential metered connections established after January 1, 2002, with the remaining retrofitted homes transitioned in large blocks as retrofits are completed. During program development, it was requested that customers be provided water use information for a period of one year before transitioning to a metered rate. This has been incorporated into the plan, and the first block of homes transitioned began receiving comparative data in March 2003 with transition to metered rates in April 2004. Other blocks of homes will have metered rates implemented after completion of meter installation and following a year of comparative bill information.

The meter retrofit program was completed in October 2011 and all residential customers will be billed on a metered rate by October 2012. Having a fully metered service territory will help staff better understand usage patterns making for better program management.

Effectiveness of this program will be evaluated by comparison of prior water use to future water use once the system is completely metered.

BMP 1.4 - Conservation pricing
As a component of development of the meter retrofit program Roseville adopted conservation pricing for water on all metered accounts. This includes an inclining block rate structure for residential water accounts based on the measured water through the meter on top of a service charge for operational fixed costs. Current residential rates (August 2011) are based on water use units of 100 cubic feet and are:

- $0.39 per unit for the first 1,200 cubic feet
- $0.78 per unit for the next 3,000 cubic feet
- $1.17 per unit for the next 3,300 cubic feet
- $1.74 per unit for water over 7,500 cubic feet

In addition to the tiered rate structure, effective on billings as of May 1, 2009, all quantity rates identified in Municipal Code Section 14.08.090 will be subject to the water shortage surcharges and excess water use charges when the drought stages identified and set forth in Sections 14.09.070 through 14.09.110 are declared. These charges further incentivize the need to conserve in times of water supply limitations. These water shortage rate structures are provided in Table 4-4.

Table 4-4 Summary of Water Shortage Rate Charges and Conservation Pricing

Summary of Water Shortage Rate Charges			
Stage	**Water Use Restriction**	**Water Shortage Surcharge (*1)**	**Excess Water Use Charge (*2)**
First Year of a Water Shortage			
Stage 1	10%	None	None
Stage 2	20%	15%	None
Stage 3	30%	33%	25%
Stage 4	40%	45%	50%
Stage 5	50%	60%	100%
Subsequent Year(s) of a Water Shortage			
Stage 1	10%	15%	None
Stage 2	20%	20%	25%
Stage 3	30%	40%	50%
Stage 4	40%	50%	100%
Stage 5	50%	75%	200%

Notes:
1 The water shortage surcharge shall be added to all quantity rates as applicable, according to drought stage.
2 In addition to the applicable water shortage surcharge, an excess water use charge shall be added to Tier 3 and Tier 4 water quantity rates, according to drought stage.

For non-residential accounts, water usage is billed on top of a monthly service charge for fixed operational costs. Current uniform non-residential rates are based on 100 cubic foot units at $0.78 per unit for all water on non-residential accounts.

The City currently bills its commercial domestic customers on a metered wastewater rate. A quantity based wastewater rate structure for residential customers was not possible as the City was not metered. With the completion of the meter retrofit program the City will start to evaluate metered wastewater rate options for its residential customers and will present these options to the City Council for their review.

The City monitors the annual revenue and water usage for its customers and adjusts revenue requirements as necessary to cover operational costs as water use reductions occur resulting from the new rates. As the metering program is fully implemented, the City will be able to better collect and analyze data to track the effectiveness of this program.

BMP 2.1 - Public information programs

The City promotes water conservation and other resource efficiencies in coordination with the US EPA, the Regional Water Authority (RWA), Roseville Electric, and Roseville's Public

Information Department. The City distributes information through paid advertisements, television commercials, featured segments on the local government access channel, website (includes streaming video), the City's Utility Exploration Center, several water efficient workshops each year, movie theater ads, newsletters, bill inserts, bill messages, brochures, vehicle decals, community outreach events, community speaker bureaus, and many special events every year.

In 2005, water bills were redesigned to show historical water usage on individual accounts. This information allows businesses and homeowners to monitor water usage as it varies through the year and can be used to reinforce the conservation message.

Roseville's regional waste water treatment plant located at 1800 Booth Road, installed a recycled water garden to demonstrate the benefits of using recycled water as an alternative. This facility is open for tours and can be scheduled through plant staff.

In 2008, the City created the Roseville Utility Exploration Center housed within the Martha Riley Library building, which was awarded Gold LEED (Leadership in Energy and Environmental Design) Certification by the U.S. Green Building Council. It is the first building in Placer County to be so honored. Designed for active community use, the center provides a lively combination of hands-on exhibits with a Learning Lab for demonstrations, presentations and workshops. Future plans include an outdoor extension called the Ideascape, which will feature exhibits on water-wise landscaping, irrigation and construction innovations, solar energy, watershed protection and more. Created out of the city's belief that sustainability is a principle to live by, the Exploration Center is a one-of-a-kind environmental learning center focused on bringing visitors information on protecting natural resources in a fun, engaging way. Topics covered include energy efficiency, renewable technology, water conservation and recycling.

The City also is a member of the Regional Water Authority (RWA). RWA has an active public outreach campaign in which the City contributes to. The program consists of paid advertising campaigns to market the Blue Thumb program, public service announcements, partnerships with big box stores to co-market our conservation message, as well as with the local baseball team the RiverCats. RWA hosts an interactive website that contains blogs on water use efficiency, garden tours and program information.

The City will monitor the effectiveness of the conservation message through planned customer surveys.

BMP 2.2 - School education programs

The City continues to work with the Regional Water Authority (RWA) and the school districts to promote water conservation and other resource efficiencies at school facilities and to educate students about these issues. This is accomplished through full participation in the school education program coordinated by RWA on behalf of all the member agencies. In addition to being a participating member in RWA, Roseville also contributes to the education programs that are focused directly on in-school education. School outreach, media advertising campaigns, promotional materials, community events and fairs, and a Web site are all a part of this program.

In addition to RWA participation, Roseville supports requests from local schools for presentations, conservation related materials, and facility tours. These are offered to any school within the service area and supported as requested. The City's program also includes presentations to after school and summer programs, such as Adventure Club. The City also works with 6th grade classrooms throughout Roseville to implement the Living Wise program, which is a water and energy efficiency lesson plan that students incorporate into their home life. Through the City's Utility Exploration Center, grade specific water efficiency workshops and activities are given to participating students and the City contributes to the Placer Nature Center which offers tours and educational programs to local students about water use efficiency.

The City receives a report from RWA on the number of programs, materials distributed and attendance at water conservation activities by grade level. This same information is collected and evaluated for City supported activities as well as activities at the Placer Nature Center.

BMP 3.0 - Water Wise House Calls (single-family residential and multi-family residential connections)

This water conservation measure involves inspecting the interior and exterior of single-family and multi-family residential water customers' homes by trained surveyors. Surveys identify water-savings potential and provide incentives to reduce water demand. Single-family surveys are about two hours in length and are conducted by a one to two-member team. During the interior portion of the survey the team measures flow rates of existing plumbing fixtures and tests for toilet leakage with dye tablets, checks all water using appliances and fixtures for leaks, offers high-efficiency showerheads and faucet aerators (if necessary), and provides information on the City's rebate programs.

The team then conducts a landscape survey. This involves testing the sprinkler system for irrigation efficiency and distribution uniformity, teaching the customer how to set the irrigation controller, suggesting a four-season irrigation schedule (based on the individual landscape demographics and irrigation system), recommending sprinkler system repairs or improvements, reviewing water bill information, and providing rebate information and brochures on water efficiency methods and ideas. Multi-family surveys are similar, but require coordination with owners/managers, tenants, and landscaping services. Soil moisture probes are also provided to help schedule irrigation times based on soil moisture content. This has proven to be a valuable incentive to reduce water run off. The City receives calls from customers who have seen the House Call program advertised but the City schedules most of its House Calls through solicitation. Staff sets aggressive water use limits in the billing system and then receives abnormal water use and high water use work orders from the Finance Department. Staff also uses door hangers to promote the House Call program.

The City also distributes showerheads, aerators, water shutoff nozzles, toilet flappers, moisture meters, toilet tank leak detection tablets, and toilet displacement devices at local events as well as during in-home water audits. At these events the City also emphasizes availability of all programs, including water use surveys, washing machine rebates, and toilet replacement rebates. Through these methods the City will offer retrofit materials to no less than 10 percent of the 15,010 pre-1992 single-family homes each year for 10 years or until 75 percent have been reached with these materials. The City will reach this target through programs, events, and

aggressive public outreach newsletters and mailings, including offers to all customers receiving meter retrofits. Saturation for single-family homes has been reached. A stronger emphasis is being placed on multi family properties.

The City uses the CUWCC estimated water savings projections to track the programs level of effectiveness. City staff can also review the surveyed customers' water use records, if available, and compare historic with current use for one year after the survey.

BMP 3.0 - High-efficiency washing machine rebate programs
In addition to providing water service to customers within the Roseville service area, the City is also responsible for providing electric service within the service area and wastewater collection and treatment on a much larger, regional area. A cooperative program is in place that provides for rebates toward the purchase of a high-efficiency washing machine. Through 2009, the City's electric department contributed financially to this program. As of 2010, funding from the electric department is no longer available. Funding from the wastewater utility is still available and being utilized. This program is run much the same way as the current toilet replacement program, utilizing a set budget based on contributions from the participating utilities and provided to applicants on a first come, first serve basis.

The City will monitor program success through the number of rebates requested. Expansion of the program is considered annually based on the previous years' participation levels, available grant funding, or any budget constraints.

BMP 3.0 - Residential toilet replacement programs
The City established a ULFT (ultra low flush toilet) replacement program in 1999 and an HET (high efficiency toilet) rebate program in 2008. Because of changes to the CUWCC MOU only offering compliance credit for the replacement of high flush toilets with HETs, the City began phasing out its ULFT rebate program. In 2010, the City stopped rebating ULFTs for CII customers and in 2011, the City stopped rebating ULFT's for residential customers and now only offers rebates for HETs. Rebates are offered on a first come/first service basis to customers on an annual basis.

The toilet rebate program is advertised regularly on Roseville's Channel 11, within bill inserts, conservation articles, newsletters, and the City Conservation Web site which includes a rebate application that can be downloaded. Customers can also obtain an application by request through the mail or at special events and City office public counters.

The City will continue to maintain the replacement program and monitor its success through rebate requests. Expansion of the program will be considered annually based on the previous years' participation.

BMP 3.0 - WaterSense Specification for residential development
The City adopted the California Green Building Code standard effective January 1, 2011. The code requires a 20 percent reduction in indoor water use. Contractors can achieve this reduction by installing high-efficiency fixtures in new construction. The Code also requires the installation of smart irrigation timers at each newly developed property.

BMP 4.0 - Conservation programs for commercial, industrial, and institutional accounts
For the last several years, the City has provided water use surveys to commercial industrial/institutional (CII) customers upon request. The City also conducts an analysis of all CII customers by monthly and annual water usage to identify the top 10 percent of the commercial customers. The City contacts these customers, by phone, letter or site visit to offer surveys. In addition, the City offers incentives to CII customers to improve their water use efficiency. Programs are evaluated annually but in 2010 the City offered high efficiency toilet rebates, high efficiency washing machine rebates, a pre-rinse spray valve exchange program, and a customized incentive program that can be tailored to a site's needs.

For new commercial and industrial development, the City Planning Department coordinates the implementation of this program at the request of the Environmental Utilities Department. Water usage and required conservation measures are currently reviewed during the project approval process. This is due to the complexity of many commercial/industrial operations that require savings to be identified by design professionals associated with the project. When projects come in that can potentially require high levels of usage, a requirement is placed on the applicant to review the process for water saving opportunities. Suggested methods may be included in the project conditions if sufficient information is available. This can include items such as requiring recycle capability in car wash facilities, or other conservation measures. In addition, it is expected that the Building Department review the applicable conservation requirements of the Uniform Plumbing Code (UPC) and require compliance.

The City will continue to implement this program by annual review of customers' water use data, and by offering on-site follow-up evaluations to customers whose total water use increases or stays the same after an initial survey. All new commercial and industrial water applicants will be reviewed for potential savings. In addition, staff will be tracking CII water use in GPCD and working towards a downward trend.

BMP 5.0 - Landscape conservation programs and incentives
The City has developed water budgets for 93% of its dedicated irrigation accounts, large and small. These budgets were created using the City's graphical information system (GIS) and then field sampled for accuracy. The budget reports, produced monthly, show the customer what their water use was for the month as compared to what the water budget calculation estimated the water use to be based on their sites demographics. Staff requests meetings with landscape contractors and/or property managers/owners when a water budget is 20% or more out of budget. City locations, including parks, streetscapes and lighting and landscape districts fall under this program and are contacted if out of budget. City staff is working to create a budget based rate structure to further incentivize adherence to the established water budget. Phase II will include the development of water budgets for mixed use meters.

In 2008, Roseville created a turf replacement program titled "Cash for Grass" that provides incentive for customers to replace their turf with water efficient landscaping. Turf is purchased at $1 per square foot up to $1,000 per residential site. To comply, participants must not only remove their turf but install a low volume irrigation system to irrigate their new water efficient landscape.

In 2008, Roseville created a pool cover rebate program that provides incentive to pool owners to cover their swimming pool. The intent of the program is to minimize evaporation and save water during the summer months.

In 2010, Roseville created programs that provide incentive for upgrading an inefficient irrigation system with new high efficiency equipment. The program includes the installation of weather based irrigation controllers, conversion of high use pop up spray heads to low volume spray heads, conversion of high use pop up spray heads to a low volume drip irrigation system, replacing a leaking irrigation valve, installation of check valves to eliminate low head drainage, and installation of pressure regulating valves.

In 2010, Roseville adopted a water efficient landscape ordinance pursuant to the requirements of AB 1881. These requirements apply to all landscapes installed after January 1, 2010 for industrial, commercial, office, institutional, multi-family residential common areas, model homes and developer installed landscaping for single-family residences. Roseville will continue to enforce these landscape requirements through submittals to the Planning Department. Developer landscape architect self-certification, along with periodic spot checks of plans, ensures compliance with landscape requirements. The water utility will be running water budget reports monthly on the affected landscapes confirming compliance.

Roseville provides free landscape audit services for any customer in need. Staff evaluates the irrigation system and makes recommendations for improvement. Rebates are available to further incentivize the customer to make improvements to their irrigation systems.

For most commercial metered accounts, large irrigation accounts and large lot residential accounts, financial savings due to water conservation are realized directly on monthly water bills. Roseville staff can help identify these savings through water use reviews, incentives and resulting education opportunities. In most instances, helping customers understand the savings that can be achieved and methods available to achieve these savings can be enough to motivate changes. The City continually works with the Parks Department, area school districts, and landscape contractors and property managers to improve water use efficiency.

Roseville has 119 commercial mixed use meters in service. These customers are offered all of our programs and services as well as given the opportunity to separate their irrigation use from their domestic use. These customers are offered and eligible for toilet, washing machine, irrigation and custom rebates, and indoor and outdoor audits.

The City will continue to implement this program by annual review of customers' water use and by offering on-site follow-up evaluations to customers whose total water use is thought to exceed normal patterns. Review of the landscape requirements is initiated as required, and spot checking for compliance by the Planning Department determines compliance supplemented by the monthly review of water budget compliance. Continued reduction in the per capita water consumption for the City also indicates the effectiveness in these requirements.

4.2 3-Year BMP Budget for Expenditures and Staff Effort

2010 Year Cost and Staff Time Summary

BMP No.	BMP Name	Cost $	Estimated Staff Time (Hours)
1.1	Conservation coordinator.	523,488	14,900
1.1	Water waste prohibition.	92,953 (1)	2,977(2)
1.2	System water audits, leak detection and repair.	356,642	4,335
1.3	Metering with commodity rates for all new connections and retrofit of existing connections.	1,766,036	10,559
1.4	Conservation pricing.	20,000	30
2.1	Public information programs.	98,296	371(2)
2.2	School education programs.	21,556	908(2)
3.0	Water survey programs for single-family residential and multi-family residential connections.	28,489(1)	867(2)
3.0	Residential plumbing retrofit.	12,066	22(2)
3.0	High-efficiency washing machine rebate programs.	50,463	118(2)
3.0	Residential toilet replacement programs.	88,430	360(2)
3.0	WaterSense Specification for new development	0(3)	0(3)
4.0	Conservation programs for commercial, industrial, and institutional accounts.	34,165	98(2)
5.0	Large landscape conservation programs and incentives.	63,178	197(2)
	Total:	**3,034,320**	**28,824**

Note:
(1) Cost included in conservation coordinator costs.
(2) Hours included in conservation coordinator hours.
(3) Costs and hours included in operational costs for Building and Planning Department functions.

2011 Year Cost and Staff Time Summary

BMP No.	BMP Name	Cost $	Estimated Staff Time (Hours)
1.1	Conservation coordinator.	759,499	17,180
1.1	Water waste prohibition.	93,000 (1)	3,000(2)
1.2	System water audits, leak detection and repair.	393,552	4,784
1.3	Metering with commodity rates for all new connections and retrofit of existing connections.	1,389,980	8,320
1.4	Conservation pricing.	20,000	30
2.1	Public information programs.	98,900	135(2)
2.2	School education programs.	14,490	2,120(2)
3.0	Water survey programs for single-family residential and multi-family residential connections.	25,000(1)	750(2)

3.0	Residential plumbing retrofit.	13,957	22(2)
3.0	High-efficiency washing machine rebate programs.	40,500	94(2)
3.0	Residential toilet replacement programs.	53,750	240(2)
3.0	WaterSense Specification for new development	0(3)	0(3)
4.0	Conservation programs for commercial, industrial, and institutional accounts.	75,000	395(2)
5.0	Large landscape conservation programs and incentives.	70,000	300(2)
	Total:	**2,929,628**	**30,314**

Note:
(1) Cost included in conservation coordinator costs.
(2) Hours included in conservation coordinator hours.
(3) Costs and hours included in operational costs for Building and Planning Department functions.

2012 Year Cost and Staff Time Summary

BMP No.	BMP Name	Cost $	Estimated Staff Time (Hours)
1.1	Conservation coordinator.	736,761	17,080
1.1	Water waste prohibition.	93,000(1)	3,000(2)
1.2	System water audits, leak detection and repair.	393,552	4,784
1.3	Metering with commodity rates for all new connections and retrofit of existing connections.	565,000	6,932
1.4	Conservation pricing.	20,000	30
2.1	Public information programs.	98,900	135(2)
2.2	School education programs.	7,700	2,100(2)
3.0	Water survey programs for single-family residential and multi-family residential connections.	25,000(1)	750(2)
3.0	Residential plumbing retrofit.	5,000	10(2)
3.0	High-efficiency washing machine rebate programs.	40,500	94(2)
3.0	Residential toilet replacement programs.	53,750	240(2)
3.0	WaterSense Specification for new development	0(3)	0(3)
4.0	Conservation programs for commercial, industrial, and institutional accounts.	75,000	395(2)
5.0	Large landscape conservation programs and incentives.	50,000	233(2)
	Total:	**2,046,163**	**28,826**

Note:
(1) Cost included in conservation coordinator costs.
(2) Hours included in conservation coordinator hours.
(3) Costs and hours included in operational costs for Building and Planning Department functions.

2013 Year Cost and Staff Time Summary

BMP No.	BMP Name	Cost $	Estimated Staff Time (Hours)
1.1	Conservation coordinator.	773,599	17,080
1.1	Water waste prohibition.	93,000(1)	3,000(2)
1.2	System water audits, leak detection and repair.	393,552	4,784
1.3	Metering with commodity rates for all new connections and retrofit of existing connections.	0	0
1.4	Conservation pricing.	20,000	30
2.1	Public information programs.	98,900	135(2)
2.2	School education programs.	7,700	2,100(2)
3.0	Water survey programs for single-family residential and multi-family residential connections.	25,000(1)	750(2)
3.0	Residential plumbing retrofit.	5,000	10(2)
3.0	High-efficiency washing machine rebate programs.	40,500	94 (2)
3.0	Residential toilet replacement programs.	53,750	240(2)
3.0	WaterSense Specification for new development	0(3)	0(3)
4.0	Conservation programs for commercial, industrial, and institutional accounts.	75,000	395(2)
5.0	Large landscape conservation programs and incentives.	50,000	300(2)
	Total:	**1,518,001**	**21,894**

Note:
(1) Cost included in conservation coordinator costs.
(2) Hours included in conservation coordinator hours.
(3) Costs and hours included in operational costs for Building and Planning Department functions.

2014 Year Cost and Staff Time Summary

BMP No.	BMP Name	Cost $	Estimated Staff Time (Hours)
1.1	Conservation coordinator.	812,279	17,080
1.1	Water waste prohibition.	93,000(1)	3,000(2)
1.2	System water audits, leak detection and repair.	393,552	4,784
1.3	Metering with commodity rates for all new connections and retrofit of existing connections.	0	0
1.4	Conservation pricing.	20,000	30
2.1	Public information programs.	98,900	135(2)
2.2	School education programs.	7,700	2,100(2)
3.0	Water survey programs for single-family residential and multi-family residential connections.	25,000(1)	750(2)
3.0	Residential plumbing retrofit.	5,000	10(2)
3.0	High-efficiency washing machine rebate programs.	40,500	94(2)
3.0	Residential toilet replacement programs.	53,750	240(2)
3.0	WaterSense Specification for new development	0(3)	0(3)
4.0	Conservation programs for commercial, industrial, and institutional accounts.	75,000	395(2)
5.0	Large landscape conservation programs and incentives.	50,000	233(2)
	Total:	**1,556,681**	**22,137**

Note:
(1) Cost included in conservation coordinator costs.
(2) Hours included in conservation coordinator hours.
(3) Costs and hours included in operational costs for Building and Planning Department functions.

Section 5: Plan Implementation

Roseville reports plan implementation annually through the CUWCC reporting website.

Section 6: Exemption Process

Roseville is not requesting exemptions at this time.

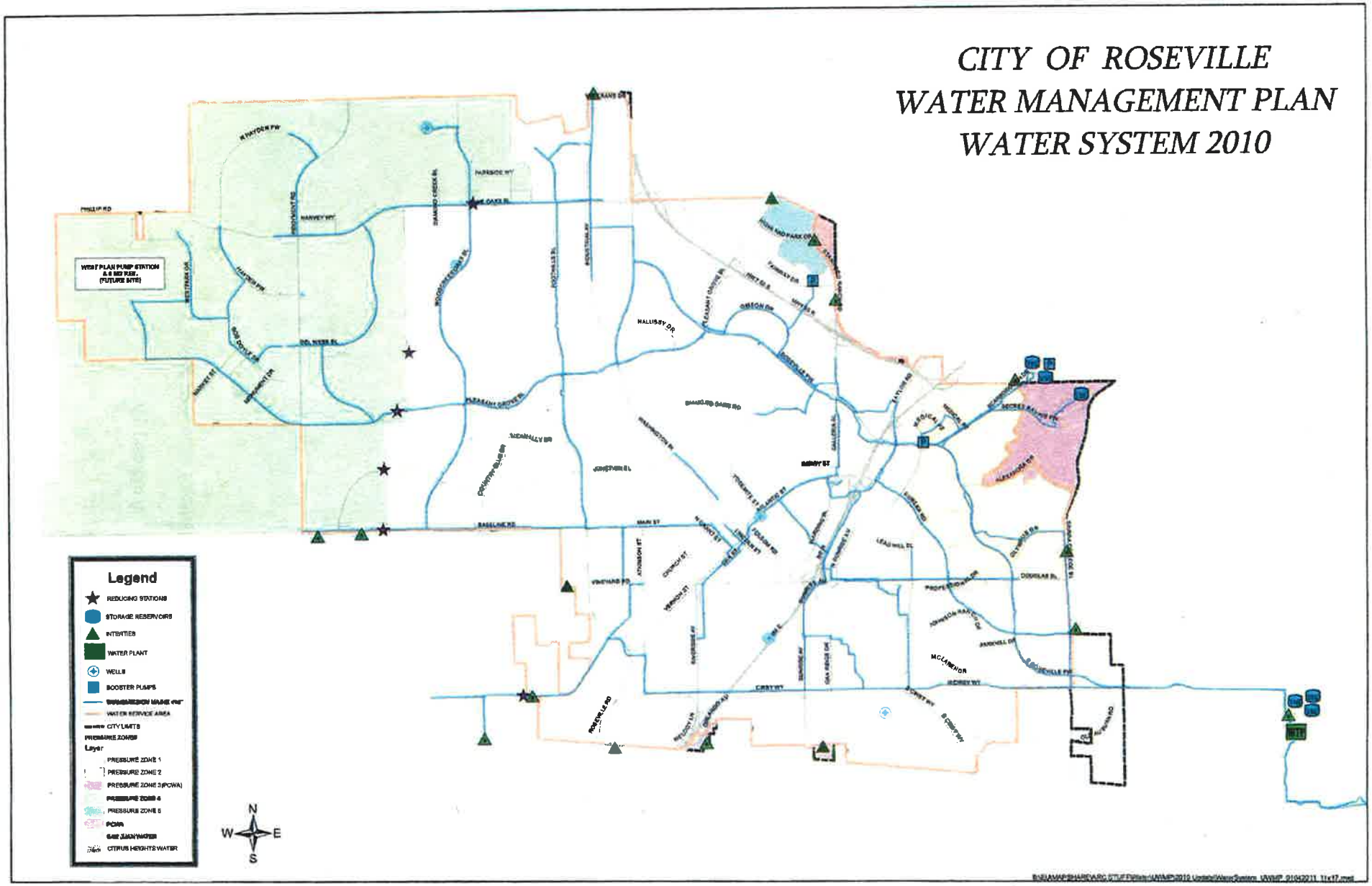
Section 7: Regional Criteria

There are no Regional Criteria at this time. If in the future regional criteria are considered, they will be developed as a separate document.

Appendix A

City of Roseville Facilities Map

CITY OF ROSEVILLE
WATER MANAGEMENT PLAN
WATER SYSTEM 2010



Appendix B

City of Roseville Water Code 14.08 and Rate Structure

Chapter 14.08 WATER*

* CodeAlert: This topic has been affected by 5070. To view amendments and newly added provisions, please refer to the CodeAlert Ordinance List.

14.08.010 Liability for services rendered.

The owner of single and multifamily residential property served by the city shall be charged with, and shall be personally responsible for, the water bills incurred for water service to such property. The owner of non-residential property served by the city may assign responsibility for the water bills incurred for water service to such property to the owner's tenants or lessees. (Ord. 3994 § 1, 2003: Ord. 1418 § 1, 1978: prior code § 27.1.)

14.08.020 Service connections—Application—Costs.

A. The water division shall install service connections and lay service pipes up to the coterminous of the public easement or interest in land and the property of the applicant, except in the case of improvements installed pursuant to the subdivision regulations, all of which improvements shall be the sole responsibility of the developer. Ordinarily, such service pipes shall terminate within two feet in back of a sidewalk. Where there is no sidewalk, the location of the terminal of the service pipes shall be determined by the environmental utilities director based upon where a sidewalk would ordinarily be located. The responsibility of the city with respect to maintenance of such service connections and service pipes shall not extend, in any case, beyond the terminal of the service pipes or located of the water meter if one is installed.

B. The size of such service connections and pipes shall be determined by the applicant by reference to the Uniform Plumbing Code. The environmental utilities director is not responsible for verifying the calculations and is not responsible for any pressure problems related to improperly sized services.

C. Prior to the installation of such service connections and pipes, the applicant shall pay to the city the estimated costs of installation.

D. The cost of installation shall be established by the environmental utilities director or designee, based upon the estimated costs of labor, materials, equipment costs and rentals, and administrative costs. Upon the completion of an installation and approving inspection of any connection, the director or designee shall refund any amounts collected with the application which exceed the actual costs. (Ord. 4001 § 3 (part), 2003: Ord. 3834 § 2 (part), 2002: Ord. 3798 § 4 (part), 2002: Ord. 1387 § 1, 1978: prior code § 27.3.)

14.08.025 Water connection fees.

A. In order that appropriate provision be made for sharing the costs of the maintenance and expansion of the raw water supply, water treatment, storage, and distribution facilities of the city by those who receive the benefits thereof, there are established connection fees to such facilities, which fees shall be imposed in addition to the service connection costs charged pursuant to Section 14.08.020. Such additional water connection fees include a "standard connection fee" and an "irrigation connection fee." The fees shall be set so that they are equal to, but not greater than, the cost of service.

B. The water connection fees shall be based upon the applicable "dwelling unit equivalent" ("DUE"). The fee for one DUE shall be $4,675.00.

C. The connection fee amount set forth above shall be adjusted annually on July 1st of each year by three percent or by a percentage equal to the inflation rate for the prior year for construction costs as determined by the environmental utilities director in the preceding June, whichever is greater. The director's determination of the percentage equal to the inflation rate for the prior year for construction costs shall be based upon the Engineering News Record, Construction Cost Index for the prior 12 months ending in May. The environmental utilities director shall report the amount of the adjustment in percentage terms and the dollar amount due per DUE to the city council annually at the first regular meeting of the council following the adjustment of the fee. Notwithstanding the foregoing, the fee for one DUE shall increase by $750.00 on July 1, 2008 and $750.00 on July 1, 2009.

D. Except as otherwise provided, all water connection fees established by this chapter shall be payable upon issuance of a building permit. Connection fees will be determined using the amount in effect on the date of building permit issuance. (Ord. 4608 § 1, 2008: Ord. 3952 § 7 (part), 2003: Ord. 3309 § 2, 1998: Ord. 2981 § 2, 1996: Ord. 2953 § 2, 1996: Ord. 2090 § 1, 1988: Ord. 1387 § 2, 1978.)

14.08.026 Standard connection fee.

A. The standard connection fee for various types of service and applicable DUEs are based upon water service sizes required by the Uniform Plumbing Code and DUEs as shown in Section 14.08.029. Should a smaller water service be installed than that required by the Uniform Plumbing Code, then the fee shall be not less than one DUE. The standard connection fee shall be calculated as follows:

1. For single-family and two-family dwellings, as defined in Roseville Municipal Code Section 19.08.080 (E)(2) and (E)(3), respectively, the connection fee shall be based upon the water service size required by the Uniform Plumbing Code and the equivalent DUE as shown in Section 14.08.029. The minimum service size shall be three-quarter-inch and the equivalent dwelling unit shall be one DUE.

2. For multifamily dwellings, which include apartments, townhomes, rowhouses, triplexes, fourplexes and condominiums, as defined by Roseville Municipal Code Section 19.08.080(E)(1), the connection fee shall be 45 percent of the cost of one DUE for each dwelling unit. Fees shall not be based on the size of the master meter to the multifamily dwelling.

B. For single-family residential services that require automatic fire protection systems pursuant to Roseville Municipal Code Section 16.16.120, the increased connection size will not be assessed an additional fee associated with the fire protection system requirement. Connection fees shall be based on the required service size as determined by the Uniform Plumbing Code without consideration for any fire protection system required by Roseville Municipal Code Section 16.16.120.

C. If, after construction of a "spec" or "shell" building, a tenant improvement building permit is requested, the standard connection fee for the entire building will be redetermined. If as a result of the tenant improvements a greater number of DUES are applicable for the building then originally charged and paid for, then the applicant for the tenant improvement building permit must pay for the number of DUEs not previously paid. If the redetermination of fees results in less DUEs required, no refund will be given. If a building complex is divided into separate units, the standard connection fee shall likewise be redetermined and repaid based upon DUEs for all of the separate units.

D. No additional water connection fee shall be charged for facilities located within a multifamily dwelling complex that are appurtenant to the general function of the multifamily dwelling complex. Such facilities include, but shall not be limited to, community centers, recreational centers, rental offices, maintenance offices and fire systems.

E. No additional irrigation connection fee shall be charged for multifamily dwellings, as defined in Roseville Municipal Code Section 19.08.080(E)(1), when the standard connection fee is based on the number of

living units. (Ord. 4608 § 2, 2008: Ord. 4473 § 1 (part), 2006: Ord. 3834 § 2 (part), 2002: Ord. 2090 § 2 (part), 1988.)

14.08.027 Irrigation connection fee.

Separate connections for irrigation purposes will be charged a fee based upon service size of the connection and DUEs as shown in Section 14.08.029. Separate irrigation connections shall be required on all landscape areas other than single-family dwelling units or duplexes. (Ord. 3834 § 2 (part), 2002: Ord. 2090 § 2 (part), 1988.)

14.08.028 Fire connection fee.

Separate connections for fire suppression purposes will not be charged a fee. (Ord. 4608 § 3, 2008: Ord. 2090 § 2 (part), 1988.)

14.08.029 Dwelling unit equivalents.

DUEs for water connection fees are:

Service Size	DUEs
5/8 in.	0.7
3/4 in.	1.0
1.0 in.	1.7
1.5 in.	3.3
2.0 in.	5.3
3.0 in.	11.7
4.0 in.	20.0
6.0 in.	41.7
8.0 in.	60.0
10.0 in.	96.7
12.0 in.	143.3

(Ord. 2090 § 2 (part), 1988.)

14.08.030 Connection fee—Exception.

If a lot or other parcel of property has an existing connection to the public water system which was in use, and can be documented as an active account at any time preceding application for a building permit, the connection fee, as provided in Section 14.08.025, shall not be required upon issuance of the building permit; provided, however, that the permit is for a use that does not require additional system capacity.

The intent of this section is to exempt connection fees for new construction after demolition on the same site. (Ord. 3834 § 2 (part), 2002: Ord. 1472 § 1, 1980.)

14.08.031 Special area water connection fee.

A. A special area water connection fee (for example, but not limited to, water pressure zone, waterline

reimbursement and water benefit fees) shall be charged for each water unit connected to the city-owned public water system for infrastructure for areas of special benefit as identified and in amounts as set forth by the city council by resolution, from time to time.

B. Water Pressure Zone #2 and #4, Dr. Ranch Supplemental Water Benefit Area, Foothills Business Park Annex Benefit Area, N. Industrial for North Central Waterline Reimbursement, and N. Urban Reserve for North Central Waterline Reimbursement. The Construction Cost Index (CCI) inflationary fee adjustment shall become effective July 1, 2012. The fee established by this chapter shall be adjusted annually July 1st beginning on July 1, 2011 by a percentage equal to the adjustment rate for the prior year for construction costs as determined by the director in the preceding June. The director's determination shall be based upon averaging the Construction Cost Index (CCI) for 20 cities and for San Francisco, as published in the Engineering News Record publication for the preceding 12 months ending in May. The resultant fee shall be rounded to the nearest dollar figure. (Ord. 4947 § 8, 2011; Ord. 4854 § 8, 2010; Ord. 4739 § 10, 2009; Ord. 3952 § 7 (part), 2003: Ord. 3334 § 2, 1999.)

14.08.040 Service connections—Refusal to install.

The city may refuse to install service when the environmental utilities director determines that an adequate return on capital will not be made in the immediate future, or when the environmental utilities director determines that service will not be taken in the immediate future. (Ord. 3798 § 4 (part), 2002: Ord. 1418 § 3, 1978: prior code § 27.5.)

14.08.050 Control of water system.

The distribution system, its valves, gates, reservoirs, and all appurtenances and appurtenant properties shall be under the control of the city at all times. (Ord. 1418 § 4, 1978: prior code § 27.7.)

14.08.060 Tampering with city property—Bypassing meters.

It is unlawful for any person not authorized by the city to do so to tamper with any gates, valves, service cocks, fire hydrants, meters, or any of the city's property accessory or appurtenant to the water distribution system, to break the seal on any water meter, or to cause water to bypass any water meter. (Ord. 2668 § 1 (part), 1993: (Ord. 14.18 § 5, 1978: prior code § 27.8.)

14.08.070 Tapping distribution system.

It is unlawful for any person, unless authorized by the city, to tap any part of the water distribution system. The environmental utilities director may authorize a person to tap a main or lateral of the distribution system by a permit issued in writing. (Ord. 3798 § 4 (part), 2002: Ord. 1418 § 6, 1978: prior code § 27.9.)

14.08.080 Turning water on without permit.

It is unlawful for any person to turn on or open water service for any building or premises without the prior approval of the environmental utilities director. (Ord. 3798 § 4 (part), 2002: Ord. 1418 § 7, 1978: prior code § 27.10.)

14.08.090 Service charges for metered service.

There shall be due and payable the following monthly charges, upon submission of the bill by the city to the

owner of the property supplied with service, for all treated water measured by meters for residential, commercial, industrial and manufacturing or other purposes:

A. Monthly Quantity Rates. Effective August 1, 2011 and July 1, 2012, the monthly quantity rates on billings shall be as follows:

		Inside City Service Area (per 100 cu. ft.)*	
		Effective 8/1/2011	**Effective 7/1/2012**
1.	**Residential Accounts**		
	First 1,200 cu. ft.	$0.39	$0.43
	Next 3,000 cu. ft.	$0.78	$0.84
	Next 3,300 cu. ft.	$1.17	$1.27
	Over 7,500 cu. ft.	$1.74	$1.89
2.	**Nonresidential Accounts**		
	All water use	$0.78	$0.84

* Charges for water service delivered outside the City of Roseville water service area are set forth in Section 14.08.091.

B. Monthly Service Charges. Effective August 1, 2011 and July 1, 2012, the monthly service charges on billings shall be as follows:

Meter Size (Inches)	Peak Flow Rate (gallons per minute)	Inside City Service Area*	
		Effective 8/1/2011	**Effective 7/1/2012**
5/8	20	$18.05	$19.60
3/4	30	$18.05	$19.60
1	50	$29.05	$31.50
1-1/2	100	$56.10	$60.85
2		$88.70	$96.25
3		$164.75	$178.75
4		$274.35	$297.65
6		$544.20	$590.45
8		$871.55	$945.65
10		$1,252.20	$1,358.65
12		$2,338.30	$2,537.05

* Charges for water service delivered outside the City of Roseville water service area are set forth in Section 14.08.091.

C. The total amount due and payable shall be the sum of the monthly service charge plus the quantity rate. The monthly service charge is due and payable regardless of whether water has been consumed. The service charge shall be the greater of the charge based on the meter size or flow rate, with the following exceptions.

1. No service charge shall be made for fire service that has backflow prevention with detector check devices approved by the environmental utilities director.

2. No service charge shall be made for recycled water utility back-up systems that are required for reliability only and have backflow prevention and meter-

ing approved by the environmental utilities director. This exclusion does not extend to systems that are regularly required as part of normal operation. The recycled water operation shall be responsible for water volumetric charges for these services and any costs associated with meter maintenance.

D. For purposes of charging for treated water measured by meters:

1. A residential account is defined as a single metered water service which serves three or less dwelling units.

2. A nonresidential account is defined as a single metered water service which serves more than three dwelling units, or serves commercial, industrial, manufacturing, irrigation or other nonresidential land uses.

E. For single-family residential services that require automatic fire protection systems pursuant to Section 16.16.120, the increased meter size will not be assessed an additional charge associated with the fire protection system requirement. Service charges shall be based on the required service size as determined by the Uniform Plumbing Code without consideration for any fire protection system required by Section 16.16.120. (Ord. 4957 § 1, 2011; Ord. 4724 § 2, 2009; Ord. 4680 § 1, 2008; Ord. 4639 § 1, 2008; Ord. 4508 § 1, 2007: Ord. 4473 § 1 (part), 2006: Ord. 4263 § 2 (part), 2005: Ord. 4001 § 3 (part), 2003: Ord. 3964 § 1 (part), 2003: Ord. 3756 § 1, 2001; Ord. 3687 § 1 (part), 2001: Ord. 3101 § 1 (part), 1997: Ord. 2708 § 1 (part), 1993: Ord. 1953 § 1, 1986: Ord. 1918 § 1 (part), 1985: Ord. 1418 § 8, 1978: Ord. 1239 § 1, 1974: prior code § 27.14.)

14.08.091 Service charge outside city water service area.

Charges for water service delivered outside the City of Roseville water service area, including flat water rates, monthly quantity rates, monthly service charges and recycled water service, will be at a rate 60 percent higher than charges for water delivered within the City of Roseville water service area. (Ord. 4724 § 2, 2009; Ord. 4001 § 3 (part), 2003: Ord. 3834 § 1, 2002.)

14.08.095 Water rate surcharge and excess water use charge.

Effective on billings as of May 1, 2009, all quantity rates identified in Section 14.08.090 will be subject to the water shortage surcharges and excess water use charges identified as follows when the drought stages identified and set forth in Sections 14.09.070 through 14.09.110 are declared.

Summary of Water Shortage Rate Charges			
Stage	**Water Use Restriction**	**Water Shortage Surcharge (*1)**	**Excess Water Use Charge (*2)**
First Year of a Water Shortage			
Stage 1	10%	None	None
Stage 2	20%	15%	None
Stage 3	30%	33%	25%
Stage 4	40%	45%	50%

Stage 5	50%	60%	100%
Subsequent Year(s) of a Water Shortage			
Stage 1	10%	15%	None
Stage 2	20%	20%	25%
Stage 3	30%	40%	50%
Stage 4	40%	50%	100%
Stage 5	50%	75%	200%

Notes:
(*1) The water shortage surcharge (identified hereafter) shall be added to all quantity rates identified in Section 14.08.090 as applicable, according to drought stage.
(*2) In addition to the applicable water shortage surcharge, an excess water use charge shall be added to Tier 3 and Tier 4 water quantity rates identified in Section 14.08.090, according to drought stage.

(Ord. 4724 § 2, 2009; Ord. 3101 § 1 (part), 1997: Ord. 2414 § 1, 1991.)

14.08.100 Flat water rates.

The following service charges shall apply to flat rate consumers that the environmental utilities director determines are not cost effective to assign metered rates. The environmental utilities director shall conduct a water use study for consumers whom he or she determines may not be reasonably metered, and the director shall assign such consumers to an appropriate service rate level as set forth in this section. Water service

rates for flat rate residential consumers shall be due and payable on a monthly basis according to the appropriate grouping set out in this section.

A. Effective August 1, 2011 and July 1, 2012, the flat rates on billings shall be as follows:

Nonmetered or Flat Service Charges	Inside City Service Area	
	Effective 8/1/2011	Effective 7/1/2012
Single-family lots under 4,900 square feet; each mobile home unit not within a park maintaining its own distribution system and service; each dwelling unit of duplexes, triplexes, fourplexes, unmetered apartments and other multiple living units; other detached living units; and offices and stores with less than peak use of 250 gallons per day	$20.80	$22.55
Single-family lots 4,901 to 8,900 square feet	$27.20	$29.50
Single-family lots 8,901 to 12,000 square feet	$33.90	$36.80
Single-family lots 12,001 to 15,000 square feet	$40.30	$43.75
Single-family lots existing before July 1, 1977, which are in excess of 15,000 square feet	$39.75	$43.15
For each 1,000 square feet or portion over 15,000 square feet	$2.12	$2.30
Mobile home parks, per living unit	$19.25	$20.90
All those single-family lots over 15,000 square feet, created on or after July 1, 1977, shall be metered pursuant to Section 14.08.105		

* Charges for water service delivered outside the City of Roseville water service area are set forth in Section 14.08.091.

(Ord. 4957 § 1, 2011; Ord. 4724 § 2, 2009; Ord. 4508 § 1, 2007: Ord. 4263 § 2 (part), 2005: Ord. 3964 § 1 (part), 2003: Ord. 3756, § 2, 2001; Ord. 3687 § 1 (part), 2001: Ord. 3101 § 1 (part), 1997: Ord. 2708 § 1 (part), 1993: Ord. 1918 § 1 (part), 1985: Ord. 1418 § 9, 1978: Ord. 1239 § 2, 1974: prior code § 27.15.)

14.08.105 Installation of water meters.

A. New Construction. A water meter shall be required for all residential dwelling units for which a building permit was issued after January 1, 1992.

B. Installation and Location.

1. All water meters and metering equipment will be supplied and installed by the city upon the servicepremises at a location approved by the environmental utilities director.

2. The following charges for water meter installation shall be made:

a. A $75.00 labor charge for installation shall be paid by the applicant for service prior to installation. The labor charge shall be increased by the finance director as labor costs increase, as reflected in the adoption of the city's salary ordinances.

b. A meter supply charge shall be paid by the applicant for service prior to installation. The meter supply charge shall be equal to the per meter amount of the most recent water meter bid awarded by the city.

c. In addition to the direct meter supply charge, additional charges may apply for meter appurtenances as required by the environmental utilities director. This includes, but is not limited to, features required to make

meter ready for remote reading.

d. A $75.00 water quantity charge per unit for water use during construction of residential units shall be paid by the applicant prior to meter installation. The water quantity charge shall be increased by the environmental utilities director to reflect increases in water supply rates.

3. All water meters shall be safely accessible to authorized employees of the city at all times for inspection, testing and reading.

4. The city may require a customer to relocate a metering installation, at customer's expense, if any existing water meter location becomes inaccessible or for other operational needs.

5. Property owners of condominium and apartment complexes are liable for costs to install meters on their property upon receipt of bill for such services.

C. Rights of Access.

1. The city shall have the right of access to the customer's premises, at all reasonable hours for any purpose related to the furnishing of water service including, but not limited to, meter reading, testing, inspection, construction, maintenance and repair of meter.

2. Service may be refused or disconnected if permanent safe accessibility is not provided by the customer.

3. Upon termination of service, the city shall have the right of access to the service premises to remove the water meter.

D. Customer Responsibilities. It shall be the duty of each customer upon whose premises the city has installed a water meter to ensure that such meters are not damaged, destroyed or interfered with and, in the case of any defect in any such meter, to notify the city. The customer is also responsible for keeping the meter box clear and accessible for reading and maintenance by keeping landscape and other improvements from covering or encroaching over the meter box.

E. Metered Water Rate. New services installed after January 1, 2002 will be placed on a metered water rate. (Ord. 4001 § 3 (part), 2003: Ord. 3834 § 2 (part), 2002: Ord. 2668 § 1 (part), 1993: Ord. 2645 § 1, 1992: Ord. 1418 § 10, 1978.)

14.08.130 Use of water for construction purposes.

It is unlawful for any person to use the water service of another for construction purposes without first obtaining a permit from the environmental utilities director and the consent of the other person. All water service for construction purposes shall be metered as provided by Section 14.08.090, unless the environmental utilities director approves alternate measuring methods. All persons doing work on the public streets, public easements or rights-of-way, existing or proposed, shall apply for and be issued a permit prior to drawing water or obtaining service for construction purposes such as for the settling of earth, rock, gravel or dust. Service for such purposes shall be charged at a rate of $0.40 per 100 cubic feet of water and for a connection charge of $100.00 per connection to a fire hydrant. Each temporary connection shall be protected against potential cross connection and resulting contamination of the water distribu-tion system. Water meters and backflow preventors are available from the water/sewer division with a $500.00 deposit and $50.00 per month rental charge. The environmental utilities director, in the director's discretion, may establish related requirements for the use of all construction water and service. (Ord. 3834 § 2 (part), 2002: Ord. 3687 § 1 (part), 2001: Ord. 2770 § 1, 1994: Ord. 1418 § 12, 1978: prior code § 27.20.)

14.08.150 Maintenance and repair.

All consumers, whether owners or not, shall maintain and keep in good repair the water pipes on the interior and exterior of the property served. Such persons shall not allow faucets or water closets to leak. (Ord. 1418 § 14, 1978: prior code § 27.22.)

14.08.160 Right of entry.

Any authorized agent or employee of the city, with the consent of the owner, occupant, or consumer, or pursuant to court order, shall be allowed free access at any reasonable hour to any premises where water is served for the purpose of inspecting the conditions of the water pipes or service or for the purpose of establishing the rate to be charged under the provisions of this chapter. (Ord. 1418 § 15, 1978: prior code § 27.23.)

14.08.170 Installation of facilities in subdivisions and other developments.

A. Any person requesting the provision of water service from the mains of the city for subdivisions or any other improvement, whether residential, commercial, or industrial, in which mains, laterals or distribution systems have not heretofore been placed shall apply to the environmental utilities director. Applications shall contain plans and specifications for the proposed distribution system which shall conform to the standards and requirements of the environmental utilities director as to size, type and quality of materials and location of mains, including fire hydrants, service lines and valve boxes. If such plans and specifications are approved in writing by the environmental utilities director, the applicant may cause the water distribution system to be installed. The city may install such facilities after the applicant has deposited the estimated cost of construction with the city. The estimated cost of construction shall include the estimated costs of labor, materials, equipment costs and rentals, and administrative costs. Should the cost of construction be less than the estimate, such difference between estimated and actual cost shall be refunded to the applicant.

B. The environmental utilities director shall have the right to inspect all work performed and all work must be approved by the director before said mains, laterals or distribution system shall be connected to the water system of the city.

C. Upon acceptance of the mains, laterals or distribution system, it shall become the property of the city. The city may require, pursuant to the Subdivision Map Act and the subdivision regulations of the city, oversized capacity, in which case the city shall reimburse the applicant pursuant to the provisions of law then in effect for such oversized capacity, based on the prevailing costs of materials and labors for such work. (Ord. 3798 § 4 (part), 2002: Ord. 1418 § 21, 1978: prior code § 27.30.)

14.08.190 Siphons prohibited.

It is unlawful to employ a siphon of any type for any purpose connected to the water distribution system. (Ord. 1418 § 23, 1978.)

14.08.200 Heating and cooling devices.

It is unlawful for any heating or cooling device to use water that is not recirculated. The only water added to such systems shall be limited to the purpose of making up losses in the process. Under no circumstances shall water be returned to the distribution system of the city. This prohibition shall apply to all devices for heating or cooling whether used for residential, commercial, industrial, or manufacturing purposes. (Ord. 1418 § 24, 1978.)

14.08.210 Resale of water.

It is unlawful for any person to resell any water received from the system, except that a landlord may charge a tenant the amount which the landlord must pay for water. (Ord. 2668 § 2, 1993.)

Appendix C

City of Roseville Water Code 14.09

Chapter 14.09 WATER CONSERVATION

14.09.010 Short title.

This chapter may be cited as the Water Conservation and Drought Mitigation Ordinance. (Ord. 2413 § 2 (part), 1991.)

14.09.020 General provisions.

A. Purpose. The purpose of this chapter is to ensure compliance with all federal, state and local requirements relating to water conservation and drought mitigation for the protection of public health, safety and welfare by:

1. Reducing the per capita water consumption throughout the City of Roseville (the "city") during years of normal precipitation and during years of drought;

2. Protecting and conserving the city's supply of water during specified times of emergency and/or crisis; and

3. Minimizing and/or eliminating the waste of water through voluntary compliance or punitive action, if necessary.

B. Scope. The provisions of this chapter shall apply to all water use within the city's territorial limits and shall apply to all customers, users and/or recipients (hereinafter "users") of the city's water service within the city's territorial limits.

C. Administration and Enforcement. The environmental utilities director (the "director"), or designee, including but not limited to an enforcement officer as defined herein, shall administer, implement, and enforce the provisions of this chapter. For purposes of this chapter an "enforcement officer" means any city employee or agent of the city with the authority to enforce any provision of this chapter and the authority to make any decision on behalf of the director required or called for by this chapter.

D. Compliance. All provisions of this chapter are subject to the compliance procedures set forth in this chapter unless otherwise expressly stated herein.

E. Notification. The director, or designee, shall determine the means by which the city shall notify its water users of drought stage determinations and any applicable upgrade or downgrade of such determinations. Notification may be achieved though newspaper, public notice, mailings, utility billings or by any combination of such notice, or by other means as determined by the director, or designee. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.030 Definition of water waste.

Any of the following acts or omissions, whether willful or negligent, shall constitute the waste of water:

A. Causing or permitting water to discharge, flow or run to waste into any gutter, sanitary sewer, watercourse or storm drain, or to any adjacent property, from any tap, hose, faucet, pipe, sprinkler, or nozzle. In the case of irrigation, "discharge," "flow" or "run to waste" means that the earth intended to be irrigated has been saturated with water to the point that excess water flows over the earth to waste. In the case of washing, "discharge," "flow" or "run to waste" means that water in excess of that necessary to wash, wet or clean the dirty

or dusty object, such as an automobile, sidewalk, or parking area, flows to waste.

B. Allowing water fixtures or heating or cooling devices to leak or discharge.

C. Maintaining ponds, waterways, decorative basins or swimming pools without water recirculation devices.

D. Backwashing so as to discharge to waste swimming pools, decorative basins or ponds in excess of the frequency necessary to ensure the healthful condition of the water or in excess of that required by standards for professionally administered maintenance or to address structural considerations, as determined by the director or his or her designee.

E. Operation of an irrigation system that applies water to an impervious surface or that is in disrepair.

F. Use of a water hose not equipped with a control nozzle capable of completely shutting off the flow of water except when positive pressure is applied.

G. Irrigation of landscaping during rainfall.

H. Overfilling of any pond, pool or fountain which results in water discharging to waste. (Ord. 4629 § 1, 2008; Ord. 3834 § 3 (part), 2002: Ord. 2413 § 2 (part), 1991.)

14.09.040 Water conservation and drought stages.

The following water conservation and drought stages are hereby established:

A. Basic Water Conservation Stage ("Basic Stage"). The basic stage shall exist when the city's water supply is adequate to meet all projected demands as determined by the director or designee.

B. Stage One Drought. A stage one drought shall exist when the city's water supply is adequate to meet 90 percent of projected demands as determined by the director or designee. An objective of a stage one drought condition is to reduce water usage by 10 percent. Water shortage surcharges shall be implemented as set forth in Section 14.08.095.

C. Stage Two Drought. A stage two drought shall exist when the city's water supply is adequate to meet 80 percent of projected demands as determined by the director or designee. An objective of a stage two drought condition is to reduce water usage by 20 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.

D. Stage Three Drought. A stage three drought shall exist when the city's water supply is adequate to meet 70 percent percent of projected demands as determined by the director or designee. An objective of a stage three drought condition is to reduce water usage by 30 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.

E. Stage Four Drought. A stage four drought shall exist when the city's water supply is adequate to meet 60 percent percent of projected demands as determined by the director or designee. An objective of a stage four drought condition is to reduce water usage by 40 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.

F. Stage Five Drought. A stage five drought shall exist when the city's water supply is adequate to meet 50 percent or less of projected demands as determined by the director or designee. An objective of a stage five drought condition is to reduce water usage by 50 percent. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.050 Determination of drought staging—Effect of well water.

In determining the water conservation and drought stage in effect, the director, or his or her designee, shall take into account only surface water available from the Bureau of Reclamation and the Placer County water agency. Well water shall not be considered. In the event that this would result in a determination of a stage three drought or higher, water wells may be activated to increase the supply to a stage two drought level. However, in no case shall well water be considered as an alternative to declaration of a stage one or stage two drought. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.060 Basic stage restrictions.

During the basic water conservation stage, the following restrictions shall be in force:

Water shall be used for beneficial purposes only; all unnecessary and wasteful uses of water are prohibited.

A. Water shall be confined to the user's property and shall not be allowed to runoff to adjoining properties, or to the roadside or to the gutter. Care shall be taken not to water past the point of saturation.

B. Free-flowing hoses for all uses are prohibited. Automatic shut-off devices shall be attached on any hose or filling apparatus in use.

C. Leaking pipes or faulty sprinklers shall be repaired within five calendar days or less if warranted by the severity of the problem as determined in the discretion of the director or his or her designee.

D. All pools, spas, and ornamental fountains/ponds shall be equipped with a recirculation pump and shall be constructed to be leak-proof. Pool draining and refilling shall be allowed only to the extent required for health, maintenance, or structural considerations, and must otherwise comply with all applicable federal, state and local stormwater management program requirements, including, but not limited to, the urban stormwater quality management and discharge control ordinance set forth in Chapter 14.20 of Title 14 of the City of Roseville Municipal Code.

E. Landscaping.

1. All landscaping installed in the City of Roseville shall comply with the water efficient landscape requirements adopted by resolution of the city council.

2. This section shall not apply to landscaping installed for single-family homes, except for developer-installed landscaping, or to landscaping for cemeteries.

F. Water Reclamation. All site reviews shall include an evaluation of water reclamation and recycling, and use of reclaimed water from the city shall be required if economically feasible. (Ord. 4629 § 1, 2008; Ord. 2762 § 1 (part), 1993: Ord. 2413 § 2 (part), 1991.)

14.09.070 Stage one drought restrictions.

During a stage one drought, the following restrictions shall be enforced:

A. All basic stage restrictions required by Section 14.09.060 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. All city users are to reduce water use by 10 percent.

C. Washing streets, parking lots, driveways, sidewalks or buildings, except as necessary for health or sanitary purposes, is prohibited.

D. Restaurants. Water shall not be served at restaurants except by request.

E. Water shortage surcharges shall be implemented as set forth in Section 14.08.095. (Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2817 § 1 (part), 1994: Ord. 2636 § 1, 1992: Ord. 2413 § 2 (part), 1991.)

14.09.080 Stage two drought restrictions.

During a stage two drought, the following restrictions shall be enforced:

A. All basic stage and stage one restrictions required by Sections 14.09.060 and 14.09.070 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users shall reduce water usage by 20 percent.

C. Nonresidential users (including without limitation, commercial, industrial, church and publicly-owned users) shall reduce irrigation by 30 percent percent for existing landscaping.

D. Washing of vehicles or boats is prohibited except:

1. When using a hose that is equipped with a control nozzle capable of completely shutting off the flow of water except when positive action or pressure to maintain the flow of water is applied, or

2. When washed in either an automatic or manual commercial car wash. This exemption does not apply to temporary car washes, held for fundraising purposes, or to any car wash in which the water is applied via a hand held garden type (non-pressure) hose.

E. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2611 § 1, 1992.)

14.09.090 Stage three drought restrictions.

During a stage three drought, the following restrictions shall be enforced:

A. All basic stage, stage one, and stage two restrictions required by Sections 14.09.060, 14.09.070 and 14.09.080 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users are to reduce water usage by 30 percent.

C. Nonresidential users (including without limitation, commercial, industrial, church, and publicly owned users) shall reduce irrigation by 50 percent for existing landscaping.

D. New or expanded landscaping is limited to drought-tolerant trees, shrubs, and ground-cover. No new turf or grass shall be planted, hydroseeded, or laid.

E. Except where reclaimed water is used, golf course fairways shall not be watered. One-half of the turf areas in all city parks and median strips shall not be watered.

F. All decorative fountains, decorative (i.e., nonswimming) pools, and decorative waterways shall be drained and made dry. Such fountains, pools, and waterways shall not be refilled until the city has returned to the basic water conservation stage.

G. Construction Water. Except where reclaimed water is used, use of water for dust control shall be augmented by hardened, temporary travel routes. Nonpotable water shall be used to the greatest extent possible.

H. Swimming Pools. If drained, such swimming pools shall not be refilled until the city has returned to the basic water conservation stage.

I. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.100 Stage four drought restrictions.

During a stage four drought, the following restrictions shall be enforced:

A. All basic stage, stage one, stage two, and stage three restrictions required by Sections 14.09.060, 14.09.070, 14.09.080 and 14.09.090 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential customers are to reduce water usage by 40 percent.

C. All nonresidential users (including without limitation, commercial, industrial, church, and publicly-owned users) shall reduce irrigation by 75 percent for existing landscaping.

D. Installation of any new landscaping is prohibited.

E. Automobiles or equipment shall be washed only at commercial establishments that use recycled water.

F. No commitments shall be made to provide service for new water service connections until the city has returned to a stage two drought restriction.

G. Except where recycled water is used, no turf in city parks or medians shall be irrigated.

H. Construction Water. Except where recycled or other nonpotable water is used, use of water for dust control is prohibited.

I. Swimming Pools. Filling pools and spas is prohibited.

J. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095.(Ord. 4724 § 3, 200`9; Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.110 Stage five drought restrictions.

During a stage five drought, the following restrictions shall be in force:

A. All basic stage, or stage one, stage two, stage three and stage four restrictions required by Sections 14.09.060, 14.09.070, 14.09.080, 14.09.090 and 14.09.100 shall continue in place, except to the extent they are replaced by more restrictive conditions imposed by this section.

B. Residential users are to reduce water usage by 50 percent.

C. Except where recycled water is used, turf or grass shall not be irrigated.

No persons shall irrigate any landscaping except a tree, shrub, or drought-tolerant groundcover. No irrigation shall be done except by handheld hose equipped with a nozzle capable of completely shutting off the flow of water except when positive action or pressure to maintain the flow of water is applied.

D. Water shortage surcharges and excess water use charges shall be implemented as set forth in Section 14.08.095. (Ord. 4724 § 3, 2009; Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.120 Determination of drought tolerance.

Where this chapter permits or prohibits acts based upon whether or not a planting, tree, shrub, or groundcover is "drought tolerant" the determination shall be made based upon Sunset's *Western Garden Book* (most recent edition), or UC Davis Arboretum's "All Stars" plant database (www.arboretum.ucdavis.edu). Where this chapter permits or prohibits acts based upon whether a form of irrigation is "drip irrigation" the determination shall be made by the director, or his or her designee, whose determination shall be final. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.130 Determination of landscape water consumption reductions.

Whenever this chapter requires a reduction in consumption of water for irrigation purposes, the base year for

measurement shall be the last year that the basic water conservation stage was in effect. If that data is not available for a property, allocations will be based on water use for similar properties. The director, or his or her designee, may elect to base a reduction on the base year or on a landscape water consumption calculation if use was, in the director's, or his or her designee's, sole opinion, either excessive or extraordinarily low. For landscaping installed subsequent to the base year, the calculations shall be based on landscape water consumption calculations submitted with the landscape plan, or water consumption the previous year, whichever is less. (Ord. 4629 § 1, 2008; Ord. 2817 § 1 (part), 1994: Ord. 2413 § 2 (part), 1991.)

14.09.140 Violations.

It is unlawful for any user and/or person to violate any provision or fail to comply with any of the requirements of this chapter. Causing, permitting, aiding, abetting or concealing a violation of any provision of this chapter shall constitute a violation of this chapter. A violation of the provisions of this chapter shall occur irrespective of the negligence or intent of the violator and a violation of or failure to comply with any of the requirements of this chapter may be charged as either an infraction or a misdemeanor in the discretion of the city attorney. (Ord. 4629 § 1, 2008; Ord. 3834 § 3 (part), 2002: Ord. 2413 § 2 (part), 1991.)

14.09.150 Enforcement authority.

A. Whenever the director, or designee (including, but not limited to, an enforcement officer), determines that a user and/or person has violated any provision of, or failed to meet a requirement of, this chapter, an administrative citation pursuant to Chapter 2.50 or a written compliance order pursuant to Chapter 2.52 may be issued to any user and/or person responsible for the violation.

B. Any compliance order issued may require without limitation any or all of the following:

1. The allocation of a particular amount of water to a given user and/or person responsible for the violation;

2. Requiring an unmetered user to immediately be metered and transitioned to the metered rate at the sole cost and expense of the user and/or person responsible for the violation;

3. The installation of a flow restriction device;

4. The performance of monitoring, analyses, and reporting;

5. That violations shall cease and desist; and/or

6. The discontinuation of water service.

The compliance order shall set forth a deadline within which the requirements of the compliance order must be completed. Said compliance order shall further advise that, should the violator fail to comply with the compliance order within the established deadline, a hearing on the compliance order shall be set. (Ord. 4629 § 1, 2008; Ord. 3034 § 3 (part), 2002: Ord. 2817 § 1 (part), 1994: Ord. 2413 § 2 (part), 1991.)

14.09.160 Hearing.

If full compliance is not achieved within the time specified in the compliance order, a hearing on the compliance order shall be set pursuant to Chapter 2.52. All penalties and remedies authorized by Chapter 2.52 shall apply to violations of this chapter. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.170 Appeal.

Any user and/or person receiving a compliance order under Section 14.09.150 may appeal the determination of the director, or his or her designee, to a hearing panel drawn from the membership of the board of appeals. The notice of appeal must be received by the city's environmental utilities department within 10 days from the date of the compliance order. Notice of hearing and hearing on the appeal will be conducted pursuant to the requirements of Chapter 2.52. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.180 Separate offense for each day.

Any user and/or person that violates any provision of this chapter shall be guilty of a separate offense for each and every day during any portion of which any such user and/or person commits, continues, permits, or causes a violation thereof, and shall be punished accordingly. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.190 Public nuisance.

In addition to the enforcement processes and penalties hereinbefore provided, any condition caused or permitted to exist in violation of any of the provisions of this chapter is a threat to public health, safety, and welfare, and is declared and deemed a nuisance, and may be summarily abated or restored by the city at the violator's expense, and/or a civil action to abate, enjoin, or otherwise compel the cessation of such nuisance may be initiated and/or taken by the city. (Ord. 4629 § 1, 2008; Ord. 2413 § 2 (part), 1991.)

14.09.200 Remedies not exclusive.

Remedies under this chapter are in addition to and do not supersede or limit any and all other remedies, civil or criminal. The remedies provided for herein shall be cumulative and not exclusive. (Ord. 4629 § 2, 2008.)

14.09.210 Judicial review.

Any decision of the hearing panel shall be final. Any user and/or person aggrieved by an order of the hearing panel may obtain review of the order in the superior court by filing with the court a petition for writ of mandate within 90 days pursuant to California Code of Civil Procedure Section 1094.6. (Ord. 4629 § 2, 2008.)

14.09.220 Chapter severable.

The provisions of this chapter are severable. The city council declares that it would have adopted the remainder of this chapter even if any of its provisions are declared unlawful or unenforceable. (Ord. 4629 § 2, 2008.)

Appendix D

City of Roseville Sample Water Bill

ROSEVILLE
www.roseville.ca.us/billpay

CITY OF ROSEVILLE
UTILITIES ACCOUNT SUMMARY

Customer Name: [redacted]

Billing Inquiries 24/7: 916-774-5300
Electric Outage Hotline: 916-774-5428
Water Outage Hotline: 916-774-5750

Account Number	Service Address	Bill Date:	Due Date:	Page:
[redacted]	[redacted]	09/19/2011	10/12/2011	1 of 2

Previous Balance	Payments	Adjustments	Balance Forward	Current Charges	Account Balance
$191.31	$191.31	$0.00	$0.00	$205.55	**$205.55**

GENERAL INFO - RATE ADJUSTMENTS
According to the City of Roseville Municipal Code all utility rate changes (Electric, Water, Sewer, & Refuse) are determined by the customer's bill date not the consumption date. For additional information on rates please visit www.roseville.ca.us/eurates or www.roseville.ca.us/electric

PARTNERING WITH ROSEVILLE ELECTRIC PAYS OFF!
Join the Power Partners AC cycling program and get paid to help us manage electric demand. As a Power Partner, you receive $10 to enroll plus an additional $10 every summer you participate. Call 1-877-754-3566 or visit www.roseville.ca.us/PowerPartners

REMEMBER TO WATER WITH THE WEATHER
As the cooler weather approaches you can adjust your irrigation timer to water your landscape less. Your landscape will appreciate it. Call 774-5761 or visit www.roseville.ca.us/savewater to find out more information on efficient watering tips.

Electric	$126.09
Water	$27.41
Wastewater	$29.00
Solid Waste	$23.05
Sub Total	$205.55
Current Charges	**$205.55**

Current Charges due on or before 10/12/2011

Late Payments are subject to a $10 late fee.

Return this portion with your remittance. To pay by phone or for account changes, please call 916, 774-5300 or view and pay your bill online at www.roseville.ca.us/billpay

ROSEVILLE
City of Roseville Utilities
311 Vernon St
Roseville, CA 95678

Account Number	[redacted]
Billing Date	09/19/2011
Account Balance	**$205.55**
Current Charges due by	10/12/2011
Amount Paid	$

ROS0919A AUTO 5-DIGIT 95678
7000011878 01 0005.0067 1878 L

[redacted]

CITY OF ROSEVILLE
P.O. BOX 45807
SAN FRANCISCO CA 94145-0807

16408211084000002055508

Roseville Electric

Meter Number	Register Type	From	To	DOS	Previous	Reading Current	Type	Usage
37201	KWH	08/15/2011	09/15/2011	31	31513	32385	A	872.0000
This month last year				33				799.0000

Description	Usage	Rate	Amount
Electric Residential kWh	500.000	0.1083000	$ 54.15
Electric Residential kWh	372.000	0.1541000	$ 57.33
Basic Service Charge			$ 10.00
Hydroelectric Adjustment	872.000		$ 0.00
Elec Res Environmental Compliance	872.000	0.0050000	$ 4.36
State Energy Surcharge	872.000	0.0002900	$ 0.25
Charges - Electric			**$ 126.09**

Environmental Utilities

Water

Meter Number	Register Type	From	To	DOS	Previous	Reading Current	Type	Usage
11115588	WTR	08/15/2011	09/15/2011	31	290300	292100	A	1,800.0000
This month last year				33				1,600.0000

Description	Usage	Rate	Amount
Water Metered Residential 3/4"	1200.000	0.0039000	$ 4.68
Water Metered Residential 3/4"	600.000	0.0078000	$ 4.68
Cost of Basic 3/4" Water Service			$ 18.05
Charges - Water			**$ 27.41**

Waste water

Description	From	To	Amount
Sewer Residential Flat Rate	08/15/2011	09/15/2011	$ 29.00
Charges - Wastewater			**$ 29.00**

Solid Waste

Description	From	To	Amount
Solid Waste Res. 90 Gallon	08/15/2011	09/15/2011	$ 23.05
Charges - Solid Waste			**$ 23.05**

The following information is provided for utility customers facing economic challenges.

- HEAP - Project Go administers the Home Energy Assistance Program (HEAP). They can be reached by telephone at 1-888-524-5705.
- ERAP - The City of Roseville offers a 15% discount to current residential electric customers who meet certain income guidelines. For more information, call 916-774-5300.
- Payment Arrangements - The City of Roseville offers payment arrangements on past-due balances. The arrangements require valid identification and customer signature in the office. Call 916-774-5300 for more information.
- Salvation Army - This organization offers assistance with payment of utility bills. For more information call 916-784-3382.

If you feel that these services were billed in error or wish to submit a comment or complaint, please contact our office at (916) 774-5300 or (800) 767-3142. Monday - Thursday 7:30am-5:30pm and Friday from 8:00am-5:00pm. Written disputes related to utility charges may be submitted to City of Roseville Utilities, Attn: Administrative Services Director, 311 Vernon Street, Roseville, CA 95678.

Appendix E

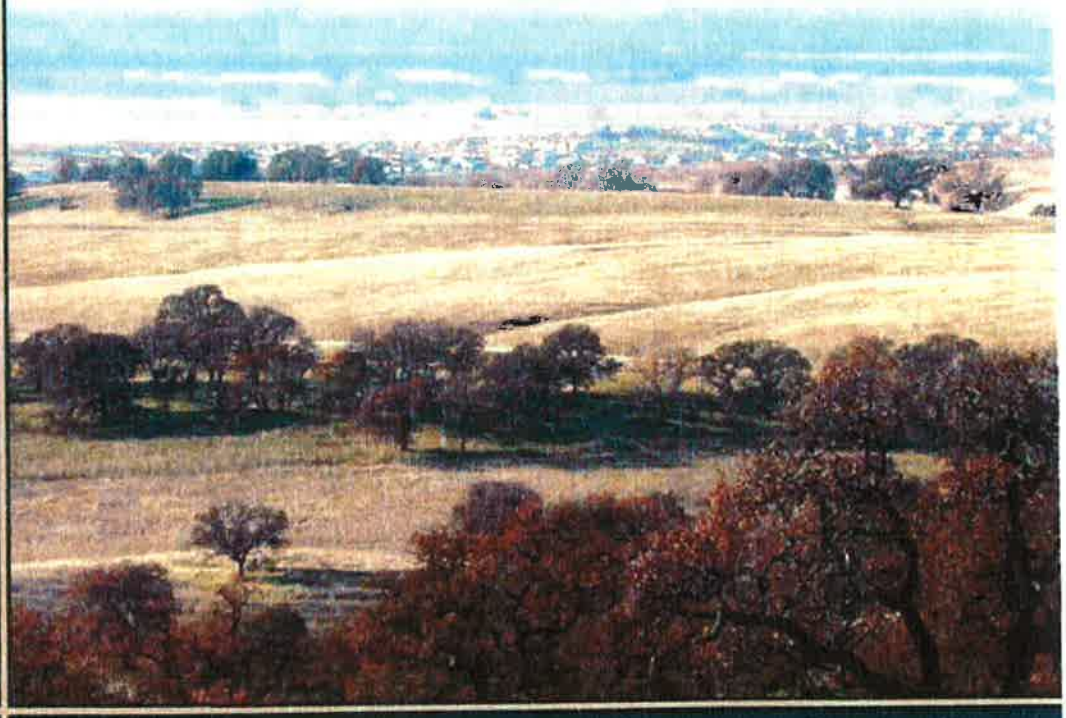
Groundwater Management Plan

Cover and Table of Contents

See http://www.roseville.ca.us/placergroundwater/documents.asp for complete report

ROSEVILLE CALIFORNIA | PCWA | Lincoln | California American Water

WESTERN PLACER COUNTY GROUNDWATER MANAGEMENT PLAN



NOVEMBER 2007

MWH

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Appendix F

Annual Potable Water Quality Report

California's drought is officially over but we still need to use our water wisely!

In March 2011, following above normal statewide rainfall and mountain snowpack, Governor Jerry Brown proclaimed an end to the state's drought, but urged Californians to keep conserving water as we move into the spring and summer months. This is especially true in Roseville as the City continues to strive to meet its regional, state and federally mandated efficiency requirements. Even though Roseville received its full water allocation for 2011, we still urge you to be water smart and use this precious resource wisely. We have several programs and services that make saving water easy. Take advantage of our generous rebates when you install a high-efficiency toilet, install a high-efficiency washing machine, remove your lawn to plant water efficient plants, or upgrade your irrigation system.

Visit us online at **www.roseville.ca.us/savewater** for program information and to download an application today. If you would like our help to diagnose problems in your irrigation system, need help programming your irrigation controller, or you think you have a leak in or around your home contact us at 774-5761 to schedule a Water Wise House Call. Appointments are scheduled Monday through Friday from 7:30 am to 4:00 pm. Our services are free and informative and our staff is professionally trained with techniques that will teach you how to use water wisely. Call us. We can help.

CITY OF ROSEVILLE CALIFORNIA
Environmental Utilities
2005 Hilltop Circle
Roseville, CA 95747

Este informe contiene información muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.

Water Quality Report 2010

Environmental Utilities-Water

CITY OF ROSEVILLE CALIFORNIA

Drinking Water

The City of Roseville is pleased to present you with this annual report on city provided drinking water. As in past years, compliance with all state and federal regulations regarding water quality have been met or exceeded by the water provided. The safety and protection of the water system also continues as a top priority, with vulnerability assessment and security measures being implemented on an ongoing basis.

Under the guidelines provided by the U.S. Environmental Protection Agency (EPA) and the California Department of Public Health (State), the City of Roseville monitors and tests the drinking water from source to tap. Information provided in this report is for the water provided January through December 2010, and includes details about where your water comes from, what it contains, and how it compares to the standards set by the regulatory agencies.

We hope this report will provide the answers to any questions you may have about the drinking water supplied by the City of Roseville. Additional information may be obtained by contacting the Roseville Water Utility at 916-774-5750, or through the city website at **www.roseville.ca.us/eu.**

Water Sources

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. In 2010, only surface water was used in Roseville.

Roseville maintains a water distribution system covering the entire city with pipelines ranging in size from four inches to over five feet in diameter. Water samples are collected throughout the system and tested on a weekly basis to ensure quality maintained during delivery to customers.

Surface Water - Roseville

The surface water source from Folsom Lake is snow melt water that originates in the Sierra Nevada Mountains. The melting snow flows into the north, middle, and south forks of American River and is ultimately stored in Folsom Lake.

The Folsom Lake water is conveyed to and treated at Roseville's 100 million gallon per day water treatment plant. The treatment process consists of coagulation, sedimentation, filtration and disinfection. Fluoride is added for the health of residents and pH is adjusted to reduce corrosion.

Surface Water - PCWA

As part of a regional water use agreement, the City of Roseville receives up to 10 million gallons per day (MGD) of treated surface water from Placer County Water Agency's (PCWA) Foothill – Sunset water treatment plant. Water from PCWA originates in the Sierra snow pack from the Yuba-Bear and American River watersheds.

The source water travels through a network of canal systems operated and maintained by PCWA and PG&E before it reaches the water treatment plant. The Foothill – Sunset water treatment plant utilizes coagulation, high rate settling via microsand flocculation, filtration, and disinfection. Water is fluoridated at the entry port to Roseville.

Roseville Groundwater Sources

Currently, the city operates and maintains four permanent (regular) groundwater wells and one standby well for emergency and backup supply. Groundwater supply is important because it will provide added water reliability to Roseville's customers in case of droughts and other water supply challenges facing Roseville. The wells are equipped with Aquifer Storage and Recovery (ASR) capabilities. ASR stores treated surface water into the ground for retrieval at a later date when water is needed. Groundwater is typically rain and snow that soaks through the ground and continues to move downward through pore (small openings) space in the soil until it reaches the aquifer under the city. The groundwater meets all water quality and health standards just like treated surface water, but may have aesthetic differences and sometimes is noticeable to some consumers. Two-thirds of the Californians along with half of all Americans (more than 95 percent for rural Americans) get their household water supplied from groundwater.

In 2010, no groundwater was used for the city.

Source Water Protection

A community's drinking water supply is valuable and needs protection. The quality and reliability of source water can have a significant impact on a community's economy and quality of life. The city actively participates in several source water protection programs.

Drinking Water Source Assessment Program

In March 2002, the City of Roseville completed a source water assessment on our water supply from Folsom Lake to determine if there were any potentially contaminating activities present.

The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: Folsom Lake State Recreation Area facilities (marina, restrooms, recreational areas, parking lots, and storm drains) and residential sewer and septic systems.

The source is also considered vulnerable to the following activities not associated with any detected contaminants: illegal activities and dumping, fertilizer, pesticide and herbicide application, and high-density housing developments.

The city also has completed source water assessments on the groundwater wells to determine if there were any potentially contaminating activities present. There have been no contaminants detected in the water supply for the groundwater wells; however, all wells are still considered vulnerable to activities located near the water source. The source is considered most vulnerable to the following activities not associated with any detected contaminants: sewer collection systems and chemical/petroleum processing/storage.

American River Watershed Sanitary Survey

This is an ongoing project in partnership with the San Juan Water District, El Dorado Irrigation District, Placer County Water Agency, City of Sacramento, Carmichael Water District, and County of Sacramento and keeps us up to date on developments in the American River watershed. The most recent American River Watershed Sanitary Survey - 2008 update assessed the potential water quality contamination activities in the watershed and evaluated treatment processes and source water protection programs to remove these contaminants from our drinking water.

Keep the Waters Clean Campaign

The source water protection program protects water quality by encouraging boaters and other recreational users of the Sacramento River to use pump outs and public restrooms rather than the river to dispose of wastes. This program is in partnership with the City of Sacramento, County of Sacramento, and the East Bay Municipal Utility District.

Public Participation

The Environmental Utilities Department routinely reports at the City of Roseville Public Utility Commission meetings held on the fourth Tuesday of each month at 7 p.m. in the City of Roseville Council Chambers. The public is welcome to attend.

For additional information about the City of Roseville, please visit our Website www.roseville.ca.us/eu. If you would like to have more information on items related to water quality issues visit the EPA Website (www.epa.gov/safewater/dwhts.html) or the California Department of Health Website (www.dhs.ca.gov/ps/dd/ehs/dfault.htm).

What Is In The Water?

Last year, as in years past, your tap water met all EPA and State drinking water health standards. Roseville vigilantly safeguards its water supplies and once again we are proud to report that our system has never violated a maximum contaminant level or any other water quality standard. This brochure is a snapshot of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State Standards. We are committed to providing you with information because informed customers are our best allies.

Terms & Abbreviations Used In This Report

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Primary Drinking Water Standard (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Maximum Residual **Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Things You Should Know About Drinking Water

• Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

• Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

• The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.
- In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems.
- If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The City of Roseville is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

Footnotes

(1) Fluoride is added in order to help prevent dental cavities. The optimal fluoride level is 0.8 ppm.

(2) For Total Coliform Bacteria the highest percentage of positive samples collected in any month is reported as the average. The MCL is 5% of monthly samples are positive. Coliforms are bacteria that are naturally present in the environment and are used as indicators that other, potentially harmful, bacteria may be present.

(3) There are no PHGs, MCLGs, or mandatory standard health effects language for constituents with secondary drinking water standards because secondary MCLs are set on the basis of aesthetics.

Results of Monitoring for Primary Drinking Water Standards

Substance	MCL	PHG (MCLG)	Folsom Lake Avg	Folsom Lake Rng	Year of Sampling	Violation	Typical Source
Fluoride natural (ppm)	2.0	1	0.19	0.08-0.51	2010	No	Erosion of natural deposits; discharge from fertilizer and aluminum factories
Fluoride - added (ppm)	2.0	1	0.79	0.05-1.28	2010	No	Water additive which promotes strong teeth
Turbidity (ntu)	TT=1.0 NTU TT = 95% of samples 0.3 NTU	N/A	0.04	0.02-0.24 Highest single read =0.24	2010	No	Soil runoff
Total Coliform Bacteria (%)	>5%	(0)	0	100	2010	No	Naturally present in the environment
Barium (ppm)	1	2	0.11	0.11	2010	No	Erosion of natural deposits; discharge of oil drilling wastes and from metal refineries

Results of Monitoring for Secondary Drinking Water Standards

Substance	MCL	PHG (MCLG)	Folsom Lake Avg	Folsom Lake Rng	Year of Sampling	Violation	Typical Source
Color (ACU)	15	none	ND	ND	2010	No	Naturally occuring organic matter
Chloride (ppm)	500	none	3.8	3.8	2010	No	Runoff/leaching from natural deposits; seawater influence
Odor (TON)	3	none	2.0	2.0	2010	No	Naturally occuring organic materials
Specific Conductance (uS/cm)	1600	none	68	68	2010	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	500	none	6.2	6.2	2010	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	1000	none	39	39	2010	No	Runoff/leaching from natural deposits; Substances that form ions when in water; seawater influence

Additional Monitoring Results

Substance	MCL	PHG (MCLG)	Folsom Lake Avg	Folsom Lake Rng	Year of Sampling	Violation	Typical Source
Alkalinity as CaCO3 (ppm)	none	none	22.8	18 - 31	2010	No	Runoff/leaching from natural deposits
Bicarbonate Alkalinity (ppm)	none	none	32	32	2010	No	Runoff/leaching from natural deposits
Calcium (ppm)	none	none	7.0	7.0	2010	No	Runoff/leaching from natural deposits
Magnesium (ppm)	none	none	1.5	1.5	2010	No	Runoff/leaching from natural deposits
pH (pH units)	none	none	7.5	7.5	2010	No	Runoff/leaching from natural deposits
Sodium (ppm)	none	none	4.1	4.1	2010	No	Runoff/leaching from natural deposits; generally found in ground
Total Hardness	none	none	24	24	2010	No	Runoff/leaching from natural deposits; generally found in ground and surface waters
Total Organic Carbon (ppm)	none	none	1.03	0.91-1.2	2010	No	Various natural and man-made sources

Results of Monitoring Lead and Copper from 54 Sample Sites

Substance	Action Levels	PHG	90th Percentile (level detected)	No. of sites exceeding AL	Sample Date	Violation	Typical Source
Copper (ppm)	1.3	0.17	0.038	0	2008	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Lead (ppb)	15	2	0.99	0	2008	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

Distribution System Monitoring Results for Disinfection Byproducts and Disinfectants

Substance	MCL or [MRDL] or [AL]	PHG (MCLG)	City Avg	Range	Sample Date	Violation	Typical Source
Total Trihalomethanes (ppb)	80	none	23	16-48	2010	No	Byproduct of drinking water disinfection
Haloacetic Acids 5 (ppb)	60	none	23	15-36	2010	No	Byproduct of drinking water disinfection
Chlorine	[4.0]	[4]	0.76	Trace - 1.19	2010	No	Drinking water disinfectant added for treatment

Appendix G

CUWCC Annual Reporting and Coverage Report

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: City of Roseville **District Name:** City of Roseville **CUWCC Unit #:**

Retail

Primary Contact Lisa Brown **Telephone** 916-746-1710 **Email:** lbrown@roseville.ca.us

Compliance Option Chosen By Reporting Agency:
(Traditional, Flex Track or GPCD)
GPCD if used:

GPCD in 2010	225
GPCD Target for 2018	250

Year	Report	Target		Highest Acceptable Bound	
		% Base	GPCD	% Base	GPCD
2010	1	96.4%	294	100%	305
2012	2	92.8%	283	96%	294
2014	3	89.2%	272	93%	283
2016	4	85.6%	261	89%	272
2018	5	82.0%	250	82%	250

Not on Track if 2010 GPCD is ≥ than target

GPCD in 2010	225
Highest Acceptable GPCD for 2010	305

On Track

Agency: City of Roseville
Retail

District Name: City of Roseville

CUWCC Unit #:

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Foundational BMPs

BMP 1.1 Operational Practices

Conservation Coordinator provided with necessary resources to implement BMPs?

		2009	2010
1.Conservation Coordinator provided with necessary resources to implement BMPs?	Name	Lisa Brown	Lisa Brown
	Title	Water Conservation Administrator	Water Conservation Administrator
	Email		lbrown@roseville.ca.us
		On Track	On Track

On Track if any one of the 6 ordinance actions done, plus documentation or links provided

	2009	2010
2. Water waste prevention documentation		
Descriptive File	0	0
Descriptive File 2010		
URL	City of Roseville Municipal Code Title 14 Public Utilities Chapter	
URL 2010		http://qcode.us/codes/roseville/;http://www.roseville.ca.us/planning/water_efficient_landscape_ordinance
Describe Ordinance Terms	City of Roseville Municipal Code Title 14 Public Utilities Chapter	
Describe Ordinance Terms 2010		City of Roseville Municipal Code Title 14 Public Utilities Chapter 14.09 (link included)
	On Track	On Track

Agency: City of Roseville
Retail

District Name: City of Roseville

CUWCC Unit #:

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 1.2 Water Loss Control

	2009		
Complete a prescreening Audit	Yes	On Track	On Track if Yes
Metered Sales	33,598		
Verifiable Other Uses	151		
Total Supply	33,749		
(Metered Sales + System uses)/ Total Supply >0.89	1.00	On Track	On Track if =>.89, Not on Track if No
If ratio is less than 0.9, complete a full scale Audit in 2009?	N/A	On Track	On Track if Yes
Verify Data with Records on File?	Yes	On Track	On Track if Yes
Operate a system Leak Detection Program?	Yes	On Track	On Track if Yes

	2010		
Compile Standard Water Audit using AWWA Software?	Yes	On Track	On Track if Yes, Not on Track if No
AWWA file provided to CUWCC?	2010 audit	On Track	On Track if Yes, Not on Track if No
AWWA Water Audit Validity Score?	69		Info only until 2012
Completed Training in AWWA Audit Method?	yes		
Completed Training in Component Analysis Process?	No		Info only until 2012
Complete Component Analysis?	No		Info only until 2012
Repaired all leaks and breaks to the extent cost effective?	Yes	On Track	On Track if Yes, Not on Track if No
Locate and repair unreported leaks to the extent cost effective.	Yes	On Track	On Track if Yes, Not on Track if No
Maintain a record-keeping system for the repair of reported leaks, including time of report, leak location, type of leaking pipe segment or fitting, and leak running time from report to repair.			Info only until 2012
Provided 7 types of Water Loss Control Info			Info only until 2012

Leaks Repaired	Value Real Losses	Value Apparent Losses	Miles Surveyed	Press Reduction	Cost of Interventions	Water Saved
186	$ 125,301	$ 20,344	0	Off	$ -	0

Agency: City of Roseville
Retail

District Name: City of Roseville

CUWCC Unit #:

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

1.3 METERING WITH COMMODITY RATES FOR ALL NEW CONNECTIONS AND RETROFIT OF EXISTING CONNECTIONS

	2009		2010		
Exemption or 'At least as Effective As' accepted by CUWCC					If signed MOU prior to 31 Dec 1997, On Track if all connections metered; If signed after 31 Dec 1997, complete meter installations by 1 July 2012 or within 6 yrs of signing and 20% biannual reduction of unmetered connections.
Number of Unmetered Accounts	3861	On Track	2829	On Track	On Track if no unmetered accounts
Metered Accounts billed by volume of use	Yes	On Track	Yes	On Track	Volumetric billing required for all connections on same schedule as metering
Number of CII accounts with Mixed Use meters	124		119		Info only
Conducted a feasibility study to assess merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters?	No		No		Info only
Feasibility Study provided to CUWCC?	No		No		Info only
Completed a written plan, policy or program to test, repair and replace meters	Yes	On Track	Yes	On Track	On Track if Yes, Not on Track if No

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Agency: City of Roseville
Retail

District Name: City of Roseville

CUWCC Unit #: 5992

Coverage Report Date: May 19, 2011

Primary Contact Lisa Brown

Email: [redacted]eville.ca.us

1.4 Retail Conservation Pricing

Metered Water Rate Structure

Date 2009 data received May 26, 2011
Date 2010 data received May 26, 2011

On Track if: Increasing Block, Uniform, Allocation, Standby Service; Not on Track if otherwise

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Increasing Block	Yes	Single-Family	Increasing	Yes
Commercial	Uniform	Yes	Commercial	Uniform	Yes
Single-Family	Non-Volumetric Flat Rate	No	Single-Family	Non-Volumetric Flat Rate	No
Commercial	Non-Volumetric Flat Rate	No	Commercial	Non-Volumetric Flat Rate	No
Dedicated Irrigation	Uniform	Yes	Dedicated Irrigation	Uniform	Yes

Year Volumetric Rates began for Agencies with some Unmetered Accounts

Info only

Agencies with Partially Metered Service Areas: If signed MOU prior to 31 Dec. 1997, Implementation starts no later than 1July 2010. If signed MOU after 31 Dec. 1997, implementation starts no later than 1July 2013, or within seven years of signing the MOU,

Agency: City of Roseville
Retail

District Name: City of Roseville

CUWCC Unit #: 5992
Coverage Report Date: May 19, 2011

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

Adequacy of Volumetric Rates) for Agencies with No Unmetered Accounts

Customer Class	2009 Rate Type	2009 Volumetric Revenues $1000s	2010 Rate Type	2010 Volumetric Revenues $1000s
Single-Family	Increasing Block	$ 2,971	Single-Family	$ 3,331
Commercial	Uniform	$ 1,410	Commercial	$ 1,479
Single-Family	Non-Volumetric Flat Ra	$ 1,728	Single-Family	$ 1,226
Commercial	Non-Volumetric Flat Ra	$ 224	Commercial	$ 228
Dedicated Irrigation	Uniform	$ 1,775	Dedicated Irrigation	$ 1,715
Other		$ 452		$ 428
Other		$ -		$ -
Total Revenue Commodity Charges (V):		$ 8,559		$ 8,407
Total Revenue Fixed Charges (M):		$ 8,660		$ 8,722
Calculate: V / (V + M):		57%		
		On Track		

Agency Choices for rates:

A) Agencies signing MOU prior to 13 June2007, implementation starts 1 July2007: On Track if (V / (V + M) ≥ 70% x .8 = **56% for 2009** and 70%x0.90 = **63% for 2010**; Not on track if (V / (V + M)) < 70%; Info only until 2011

B) Use Canadian model. Agencies signing MOU after 13June2007, implementation starts July 1 of year following signing.

Canadian Water & Wastewater Rate Design Model Used and Provided to CUWCC

If Canadian Model is used, was 1 year or 3 year period applied?

No

Wastewater Rates

Does Agency Provide Sewer Service?

2009

If 'No', then wastewater rate info not required.

2010

Customer Class	2009 Rate Type	Conserving Rate?	Customer Class	2010 Rate Type	Conserving Rate?
Single-Family	Non-Volumetric Flat Rate	No	Single-Family	Non-Volumetric Flat Rate	No
Commercial	Non-Volumetric Flat Rate	No	Commercial	Non-Volumetric Flat Rate	No
Commercial	Allocation Based	No	Commercial	Allocation Based	No
	Info Only			Info Only	

On Track if: 'Increasing Block', 'Uniform', 'based on long term marginal cost' or 'next unit of capacity'

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

Foundation Best Management Practices for Urban Water Efficiency

BMP 2. EDUCATION PROGRAMS

BMP 2.1 Public Outreach Actions Implemented and Reported to CUWCC

	2009	2010
1) Contacts with the public (minimum = 4 times per year)		6
2) Water supplier contacts with media (minimum = 4 times per year, i.e., at least quarterly).		
3) An actively maintained website that is updated regularly (minimum = 4 times per year, i.e., at least quarterly).		
4) Description of materials used to meet minimum requirement.	Newsletter articles on conservation Website Email Messages Newsletter articles on conservation Articles or stories resulting from outreach Newspaper contacts Radio contacts Television contacts	Newsletter articles on conservation Website General water conservation information Newsletter articles on conservation Articles or stories resulting from outreach News releases Newspaper contacts Radio contacts
5) Annual budget for public outreach program.		
6) Description of all other outreach programs	Description is too large for text area. Data will be stored in the BMP Reporting database when online.	Description is too large for text area. Data will be stored in the BMP Reporting database when online.
	On Track for 6 Actions	On Track for 6 Actions

All 6 action types implemented and reported to CUWCC (to be 'On Track')

CUWCC BMP RETAIL COVERAGE REPORT 2009-2010

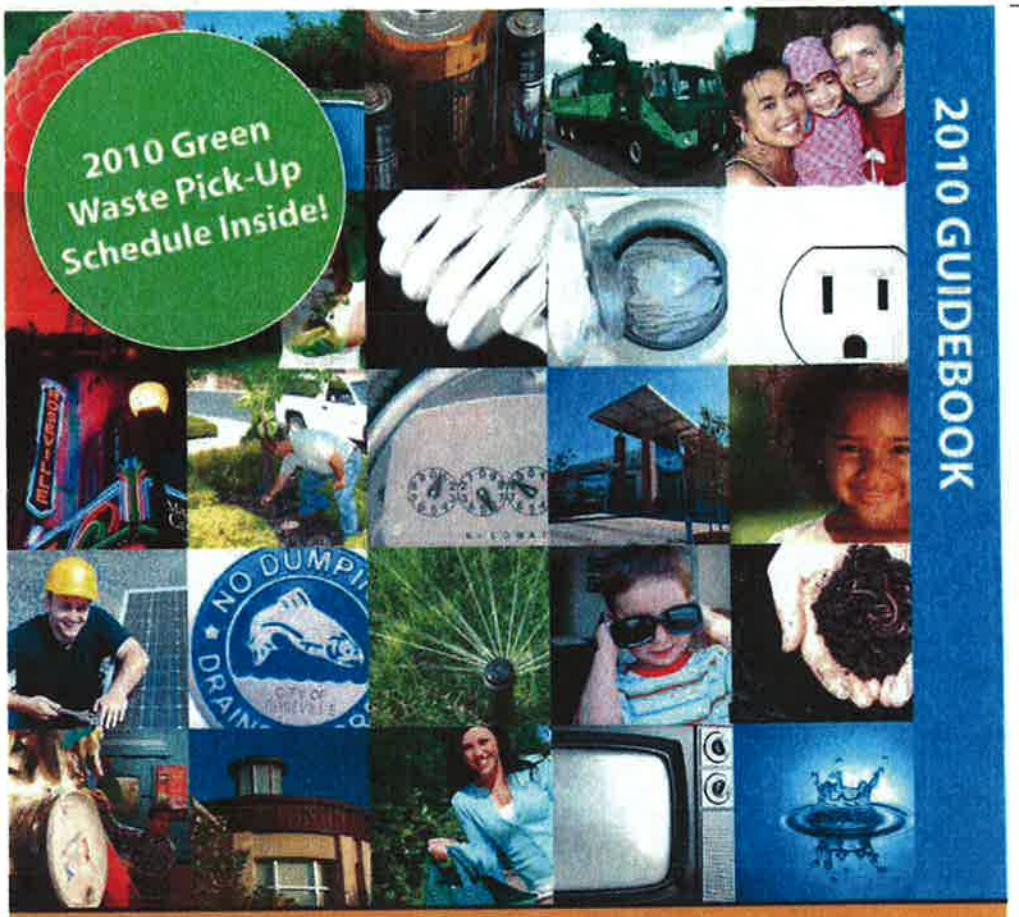
Foundation Best Management Practices for Urban Water Efficiency

2.2 School Education Programs Implemented and Reported to CUWCC

	2009	2010	
Does a wholesale agency implement School Education Programs for this unility's benefit?	Yes	Yes	
Name of Wholesale Supplier?	Regional Water Authority	Regional Water Authority	
1) Curriculum materials developed and/or provided by agency	Newspaper In Education program insert, California water way map, student contests, watershed workshop and water cycle/water conservation workshops	Project WET	Yes/ No
2) Materials meet state education framework requirements and are grade-level appropriate?			All 5 actions types implemented and reported to CUWCC to be 'On Track'
3) Materials Distributed to K-6?			
Describe K-6 Materials	Newspaper In Education program insert, California water way map, student contests, watershed workshop and water cycle/water conservation workshops	Newspaper In Education program insert to participating schools, California water way map, student contests, watershed and water cycle/conservation workshops, LivingWise 6th grade program	Describe materials to meet minimum requirements
Materials distributed to 7-12 students?		No	Info Only
4) Annual budget for school education program.		$ 39,657	
5) Description of all other water supplier education programs	Roseville Utility Exploration Center exhibit tours (water conservation/watershed); Adventure Club presentations; Banana Slugs String Band (singing of water conservation, ecology and energy); Placer Nature Center (conservation and watershed)	Roseville Utility Exploration Center exhibit tours (conservation/watershed); Adventure Club presentations; Banana Slug String Band (songs about water conservation/energy/ecology); Placer Nature Center (conservation/watershed);	
	See Wholesale Report	See Wholesale Report	
	On Track	On Track	

Appendix H

Examples of Outreach/Marketing Material



2010 GUIDEBOOK

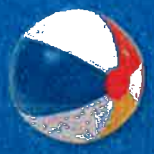
YOUR GUIDE TO CITY SERVICES

working to make your life easier

(916) 774.5200
www.roseville.ca.us

CITY OF ROSEVILLE CALIFORNIA

SAVE MONEY



Pool Cover Rebates—Up to $200

Save water and keep your pool clean by installing a pool cover. Customers can receive a $50 rebate, or 50% of the purchase price of a pool cover, whichever is less. Or get up to a $200 rebate if a permanent mechanical pool cover is installed.
www.roseville.ca.us/savewater | 774.5761

Toilet Rebates—Up to $175 for High Efficiency Models

Receive a rebate for replacing your older (pre-1992), non-conserving toilet with a new high-efficiency model. Reduce your water use today!
www.roseville.ca.us/savewater | 774.5761

Energy Efficiency Rebate Programs

Roseville Electric offers rebates to customers who retrofit their homes and businesses with new appliances that are more economical to operate when compared to refrigerators, air conditioners, heat pumps and pool pumps that are more than 10 years old.

Visit www.roseville.ca.us/yourhome for rebate details. We also have many no to low cost tips on other ways you can save energy and reduce your bills at www.roseville.ca.us/saveenergy.

Water-Wise House Calls

Call us to schedule a weekday appointment for one of our water-use specialists to come to your home and analyze your indoor and outdoor water use. Our trained specialist will provide suggestions, rebate information, low-flow devices (if needed) and an irrigation schedule for your lawn.
Call to schedule your appointment today.
www.roseville.ca.us/savewater | 774.5761

RE-View Energy and Water Audit

For tips and advice on saving water and energy while reducing your monthly utility bill, take this informative online audit. The audit will take about 20 minutes to complete.
www.roseville.ca.us/energyaudit

High-Efficiency Clothes Washer Rebates

Receive up to a $75 rebate on the purchase of an ENERGY STAR® High Efficiency Washing Machine. Rebates will be given on machines that have a water factor of 5.0 or better. To download your rebate application and to learn more about the City of Roseville's Washing Machine Rebate Program, how it saves water and energy, and how it can save you money, visit www.roseville.ca.us/electric.

Your **CITY CONTACTS**

Report Illegal Dumping of Solid Waste
774.5786

Electric Outage Hotline
774.5428

Water and Wastewater Emergencies
774.5750

Recycled Water Program
746.1812

Information on Water Conservation/ Report Water Waste
774.5761

Report Illegal Discharges to a Storm Drain
746.1000

New Service/Change in Service for Water, Wastewater, Solid Waste (Garbage) and Electric
774.5300

Utility Billing Questions
774.5300

Additional Solid Waste Services (Bin Repairs, Temporary Bin Rentals, etc.)
774.5780

Something **YOU NEED TO REPORT?**

Electricity Outages
Roseville citizens and businesses are fortunate to have one of the most reliable utilities in the nation meeting its energy needs. Our statistics show Roseville Electric customers experience an outage once every few years. Despite our best efforts, equipment failure, accidents or storms can cause temporary outages. If you experience an outage or see a power line down, call the Outage Hotline at 774.5428 to report the situation.

Reporting Water Waste
The City of Roseville takes water conservation seriously and appreciates any information from concerned residents about apparent water waste that is observed. Please report water waste by calling 774.5761 or use our online reporting tool located at www.roseville.ca.us/ waterwaste.

Illegal Discharges in Storm Drains
Call 746.1000 . For more information email us at stormwater@roseville.ca.us or call 774.5751.

Dial **911 IN AN EMERGENCY**

TOP 10 PRODUCTS
for Saving Water at Home

Available at The Home Depot

Inside Your Home

WaterSense labeled products are at least 20% more water-efficient without sacrificing performance or quality. Learn more at www.epa.gov/watersense

ask about WaterSense

1. **WaterSense labeled toilets**
2. **WaterSense labeled showerheads** *New!*
3. **WaterSense labeled bathroom sink faucets and aerators**

Outside Your Home

Most water use—and water waste—occurs outside the home. The following products can help maximize landscape water efficiency:

4. **Mulch**
   Adding 2–3 inches of organic mulch reduces evaporation and can save 20–30 gallons each time you water (per 1,000 square feet)

5. **Automatic shut-off nozzle for hoses**
   This simple tool can save 8–18 gallons of water per minute
6. **Low water-use plants and trees**
   Installing low water-use plants can save 30–60 gallons each time you water (per 1,000 square feet)

7. **Rotary sprinkler nozzles**
   High-efficiency sprinkler heads help reduce water waste by limiting irrigation run-off
8. **Drip and inline irrigation kits**
   Starter kits make it easy to install a water-efficient drip irrigation system

9. **Automatic hose timer**
   Hose timers can automatically turn drip or hose-end sprinklers on or off
10. **Rain sensor**
    Rain sensors save water and money by stopping the irrigation system from watering in the rain

BLUE THUMB
Be Water Smart

BeWaterSmart.info

In partnership with The Home Depot and the Regional Water Authority

You have better things to do than mow the lawn....

Lose the Turf.

Sign up for the City of Roseville's Cash for Grass Program and receive $1 for every square foot of turf you remove up to $1,000.

916-774-5761

www.roseville.ca.us/cashforgrass

CITY OF ROSEVILLE CALIFORNIA

2 clicks to save .com

Local Coupons The Easy Way!

No Sign-Ups
No Gimmicks
Just Coupons

Hundreds of great local coupons for Dining, Home, Kids, Cars, Pets, Health ...and more!

2clickstosave.com

Brought to you by the publishers of *Style* Magazine and *Style Savings Guide*.

Scan this MS Tag with your iPhone or other smart phone to directly connect with *2 Clicks to Save!*

Get the free app for your phone at http://gettag.mobi

Style
Apr 2011

In Partnership with the Cresthaven Neighborhood Association

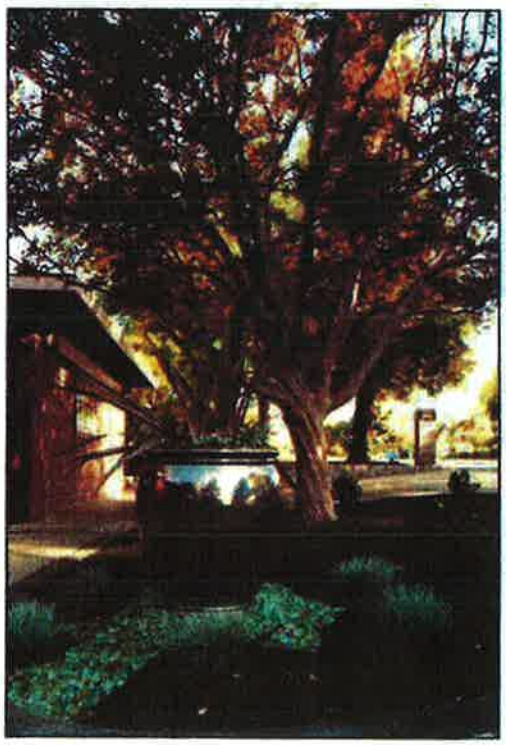
Learn How to Create a Beautiful, Water-Efficient Landscape

Cresthaven has been selected for a unique pilot program designed to help residents create beautiful, water-efficient landscapes that benefit both the environment and each neighbor's pocketbook!

Every participating household will receive:

- Free at-home consultation from landscaping and irrigation experts*
- Free training at educational workshops
- Free educational literature
- Free consultation with landscape experts during the spring and summer

See reverse for more information



Learn more!

at the Cresthaven Neighborhood Association meeting on **March 23, 7 p.m.** at the Placer County Center, 100 Cirby Hills Way.

BLUE THUMB

The pilot program is sponsored by the Regional Water Authority (RWA), representing 19 water providers in the Sacramento region, and the city of Roseville. It is funded in part by a Department of Water Resources 2008 Urban Drought Assistance Grant.

**Program is for educational purposes only; landscape experts will not try to sell services.*

MARKETPLACE | HOMES | JOBS | COUPONS | CARS | CLASSIFIEDS

Roseville

Subscriber Services

COMSTOCK
Your Locally Owned Direct Lender
Since 1989

5/14/10 | 1063 views

SHARE

Change Location: Roseville

RATE THIS

Spread the water-conservation word

Design the top of your umbrella with the message "Water Gives Life" for Water Awareness Month

Courtesy of Jen Sbaffi, City of Roseville

The City of Roseville is hosting a contest in which umbrellas with the best water-conservation designs will be displayed around Roseville.

Roseville's Environmental Utilities Department wants you to bust out your umbrellas once again to promote May as Water Awareness Month.

As part of the city's water-conservation contest, create artwork that delivers the message "Water Gives Life" on the top of your umbrella. In your design, include a word, phrase, sentence or short poem that supports your visual message.

Use any media you choose — fabric paint, pens and markers, outdoor latex paint, pieces of material, trim or embroidery and found objects. Then paint, draw, glue, stencil, silkscreen and stamp all over your umbrella canvas. Umbrella size must measure between 32 to 48 inches in diameter when open.

This educational art project includes all age groups and will help take the message of water conservation into the community. A panel of five judges will select winners based on theme, creativity, originality and visual effectiveness. Winning entries will be showcased in a traveling exhibit this summer around Roseville.

Designed umbrellas must be dropped off by 5 p.m. Friday, May 21, at the Environmental Utilities Department, 2005 Hilltop Circle. For more information, contact Jen Sbaffi at jsbaffi@roseville.ca.us or (916) 746-5761.

~ Sena Christian

Potential themes for umbrella designs:

- Protect, preserve and conserve our limited resource
- All those drips add up
- Fish need water too
- Plant wisely, use drip
- Be water smart outside

$50 for $100 worth of hair services

You Pay: $50

Value: $100

Savings: 50%

Hurry! Deal Ends: Fri May 20, 2011

Welcome!

my Roseville

Post your stories, blogs, photos, videos and events

Share

Blogs | Vids | Stories | User

Queens of the Strawberry ...

Happy Mother's Day

A few of my favorites

All American Speedway 4-30-11

More Pix »

NorCal Marketplace
Your Local Business Directory
Time for an Oil Change?
Your Search Starts Here
CLICK HERE
www.NorCalMarketplace.com

Keywords

Environmental Utilities Department, City of Roseville

Post a comment

You must be logged in to post a comment. click here to log in.

2010-11 Green Living Workshop Schedule (7.9.10 draft)						
Date	Working Title	Time	Instructor	Working Title	Time	Instructor
9/11/2010	Composting A-Z	10-11:30	PCMG	Going Native - California Native Plants	1:00-3:00	Applebaum
9/18/2010	Save Some Green - School Supplies	11:00-12:00	Arroyo	Drip Irrigation - Introduction	1:00-3:00	Palmquist
9/25/2010	School Book Bag Making	10:00-12:00	Jones	Beginning Gardener's Almanac - Autumn	1:00-3:00	Bartish
10/2/2010	Water Smart Landscaping	10:00-3:30	Buckwalter/ Palmquist/ Applebaum			
10/9/2010	Composting A-Z	10:00-11:30	PCMG	Vermicomposting	1:00-2:00	Bigley
10/16/2010	Save Some Green - Lighting	11:00-noon	Garrison	How-tos of a Landscape Overhaul	1:00-3:00	Buckwalter
10/23/2010	Save Some Green - Smart Shopping	11:00-noon	Arroyo	Sustainable Gardening	1:00-3:00	PCMG
10/30/2010	Trick or Treat Bag Making	10:00	Jones			
11/6/2010	Save Some Green - Holiday Decorating	11:00-12:00	Arroyo	Save Some Green - Furoshiki - Japanese Gift Wrapping with Cloth	1:00-2:00	Bigley
11/13/2010	Composting A-Z	10-11:30	PCMG			
11/20/2010	Thanksgiving Art From Earth	10:00-12:00	Jones	Save Some Green - Heating/Insulation	1:00-2:30	Morrison
11/27/2010	THANKSGIVING WEEKEND					
12/4/2010	Save Some Green - Furoshiki - Japanese Gift Wrapping with Cloth	11:00-12:00	Bigley	Beginning Gardener's Almanac - Winter	1:00-3:00	Bartish
12/11/2010	Holiday Green Gift Making	10:00-1:00	Jones			
12/18/2010	Blue Bird Nest Boxes	10:00-12:00	Garrison			
12/25/2010	CLOSED					
1/1/2011	CLOSED					
1/8/2011						
1/15/2011	Save Some Green - Solar Power Options	11:00-12:30	Morrison			
1/22/2011	Blue Bird Nest Boxes	10:00-12:00	Garrison	Tree Pruning	1:00-3:30	Houch
1/29/2011	Selecting and Growing Fruit Trees	10:00-12:00	Houch			
2/5/2011	Composting A-Z	10:00-11:30	PCMG	Vermicomposting	1:00-2:00	Bigley
2/12/2011	Valentine's Day Gift Making	10:00-12:00	Jones			

2/19/2011	Green Gardening for the Black Thumb	10:00-12:00	Applebaum	Organic Vegetable Gardening Soils/Prep	1:00-3:00	Applebaum
2/26/2011	Sprinkler System Tune-up	10:00-11:30	Water Cons. Staff	How-tos of a Landscape Overhaul	1:00-3:00	Buckwalter
3/5/2011	Irrigation System Installation - Introduction	10:00-noon	Palmquist	Irrigation System Installation - Advanced	1:00-3:00	Palmquist
3/12/2011	Wearing of the Green St. Patrick's Day	10:00-12:00	Jones	Beginning Gardener's Almanac - Spring	1:00-3:00	Bartish
3/19/2011	WATER AWARENESS DAY			WATER AWARENESS DAY		
3/19/2011	Water Smart Landscaping	10:00-3:30	Buckwalter/ Palmquist/ Bartish			
3/26/2011	Composting A-Z	10:00-11:30	PCMG	Vermicomposting	1:00-2:00	Bigley
4/2/2011	Organic Vegetable Gardening - Beginning	10:00-12:00	Applebaum	Organic Vegetable Gardening - Advanced	1:00-3:00	Applebaum
4/9/2011	Earth Day T-shirt Making	10:00-12:00	Murphy	Going Native - California Native Plants	1:00-3:00	Applebaum
4/16/2011	Celebrate the Earth Festival	10:00-3:00		Celebrate the Earth Festival		
4/23/2011	Composting A-Z	10:00-11:30	PCMG	Save Some Green - Smart Shopping	1:00-2:00	Arroyo
4/30/3011	Save Some Green - Air Conditioning/Cooling	11:00-12:30	Morrison	Sustainable Lawn Care	1:30-3:00	Bartish
5/7/2011	Sprinkler System Tune-up	10:00-11:30	Water Cons. Staff	Vermicomposting	1:00-2:00	Bigley
5/14/2011	Go Green With Uki Girl Scouts	10:00-5:00		Go Green With Uki Girl Scouts		
5/21/2011	Kid's Art - TBA (tech lab)	10:00-12:00	Jones			
5/21/2011	Save Some Green - Solar Power Options (Mtg Room 1)	11:00-12:30	Morrison	Solar Power for the Garden	1:00-2:30	Bartish/ Garrison
5/28/2011	MEMORIAL DAY WEEKEND					
6/4/2011	Composting A-Z	10:00-11:30	PCMG	Vermicomposting	1:00-2:00	Bigley
6/11/2011	Irrigation Controllers - Beginning	10:00-11:30	Water Cons. Staff	Beginning Gardener's Almanac - Summer	1:00-3:00	Bartish
6/18/2011	ALL THINGS SOLAR DAY	11:00 - 2:00		ALL THINGS SOLAR DAY		

Do Your Part.
Be Water Smart.
Let Us Help.

Check out the latest programs and services offered by the City of Roseville.

I am interested in the following:

- ☐ *Free* Water Wise House Call
- ☐ Irrigation Efficiency Rebate ($400 for irrigation upgrades)
- ☐ High Efficiency Washing Machine Rebate
- ☐ Cash for Grass Program (rebate to trade lawn for low water plants/hardscape)
- ☐ Pool Cover Rebate
- ☐ E-mail me regarding water saving tips, new programs and rebates

Name _____

Address _____

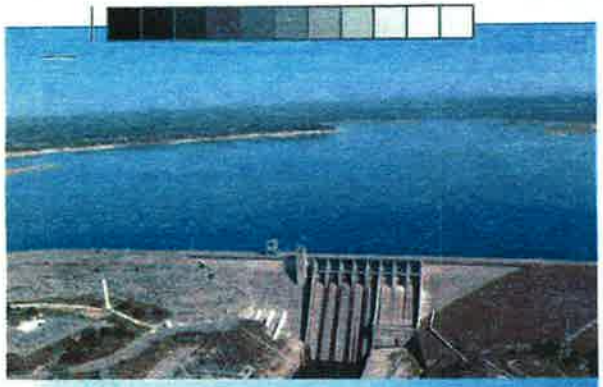
Phone _____

E-Mail _____

You can either include this form with your utility bill or mail this form separately to:
Water Conservation Division, c/o Jen Sbaffi,
2005 Hilltop Circle, Roseville, CA 95747

CITY OF ROSEVILLE CALIFORNIA

Bill insert



Water Awareness Day is May 8, 2010
Celebrate water and all of its uses!

Experience a fun-filled day of activities, interactive booths, and free half-hour workshops on landscape design, irrigation troubleshooting, leak detection, plant health and new water saving technologies.

When: Saturday, May 8, 2010; 11 a.m. to 2 p.m.

Where: Roseville Utility Exploration Center located at 1501 Pleasant Grove Blvd.

Visit **www.roseville.ca.us/savewater** or call 774-5761 for more information about the event. See you there!

CITY OF ROSEVILLE CALIFORNIA

Bill insert

Water with the Weather.

Cooler weather is here! Time to turn off your irrigation.

www.roseville.ca.us/savewater

"I always adjust my irrigation timer to follow the weather. When cooler weather comes and the moisture in the air irrigates my landscape for me, I shut my system down. I know how important it is to Be Water Smart."

Steve

CITY OF ROSEVILLE CALIFORNIA

Bill insert

ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

Today

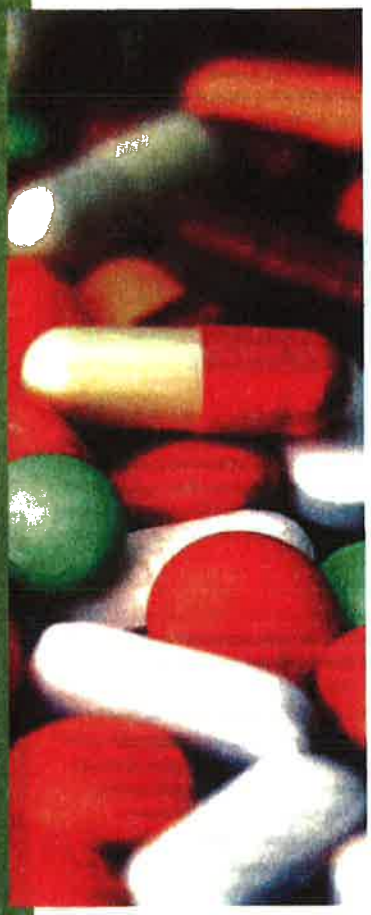
February 2010

CITY OF ROSEVILLE CALIFORNIA

WATER • WASTEWATER • RECYCLED WATER • STORMWATER • SOLID WASTE

Windy weather often results in tipped over refuse bins.

Help us keep Roseville litter free by bagging your trash before you place it in your refuse bin.



What Should I Do with Old Medications?

Many of us grew up hearing we should flush unused medications down the toilet, but scientific evidence has since shown that flushing medications may not be the best way to dispose of these medications. Wastewater treatment plants simply aren't designed to handle pharmaceutical drugs (prescription or over-the counter medications).

Unfortunately, putting old medications in the trash is not a good idea, either. The drugs end up in landfills and may eventually run off in the rain or seep into the ground water.

Instead of flushing or tossing medications, we ask that you do one of the following:

- Ask your pharmacy if they will take back your medications. Some pharmacies will dispose of unused medications, but they will typically only take back those medications they sold.
- Gather up all old medications and take them to the household hazardous waste (HHW) facility at the Western Placer Waste Management Authority, where they will be disposed of properly.

For now, disposal at the HHW Center is the best idea. The city is working on finding a more convenient way for residents to dispose of unused medications, but has not finalized another option at this time. Until we can, we ask that you take medications—along with hypodermic needles (sharps), household chemicals, paint products, acids, poisons and other hazardous waste items—to the HHW Center at 3033 Fiddyment Road. Disposal is free and the center is open every day from 8:00 a.m. until 5:00 p.m.

BIGGER, BOLDER, BETTER!
Don't Miss *Celebrate the Earth 2010*

Reduce, reuse and recycle are the three r's of conservation, but innovate, improve and inspire are the three i's of this year's Earth Day event. Join us for the third annual Celebrate the Earth event taking place April 17, 2010 from 10:00 a.m. until 3:00 p.m. This year's event will stretch out across the Mahany Park complex at 1501 Pleasant Grove Boulevard. We've invited back your favorite information booths and green-product vendors, as well as a host of new ones, to update you on the latest ideas and technologies for conserving resources and reducing carbon emissions.

New for this year, we're creating themed zones in different areas of the complex—including an energy products zone for renewable energy (including solar) and energy efficiency, a water conservation and green gardening zone, a local foods zone, reuse and reduce zone and other earth-minded zones. You'll be able to enjoy performances in the stage area and learn from the experts at different demonstration sites.

Mark your calendar for April 17 and plan to come out and learn what's new on the rapidly advancing green frontier. To find out more, call the Utility Exploration Center at 746-1550 or visit www.roseville.ca.us/explore.

Living Green

Green Gardening Classes—and More!

Get a jump on spring with a great selection of green gardening and other classes at the Utility Exploration Center. Sign up today to learn the secrets of creating a high-yield organic vegetable garden, controlling weeds and pests naturally, producing nutrient-rich soil through composting and vermicomposting, installing water-saving drip irrigation, and much, much more.

Classes fill up quickly, so visit www.roseville.ca.us/explore today to view or download the latest class schedule. Choose your classes and register online or by phone, fax, mail, or in person at the Utility Exploration Center. And remember, a single fee covers an entire family, making the classes a fun and affordable way to involve every member.

Green Volunteers Wanted

If you'd like to get involved and help protect the environment, we'd love to see you at our monthly Green Volunteer meetings. From 6:00 to 8:00 p.m. on the first Wednesday of every month, our volunteers meet at the Utility Exploration Center at 1501 Pleasant Grove Blvd. During the informal get together, you'll hear about opportunities available that month and get to know others on our earth advocacy team who are helping our community take action to conserve resources and protect the planet.

Free Compost Bins Available

You probably know that your 90-gallon trash container is "One Big Bin" and that we take care of sorting out recyclable materials for you. What you may not know is that when the 90-gallon containers wear out, we recycle them, too. We routinely collect broken or worn out containers, transform them into compost bins, and give them away to residents at no charge. Compost bin supplies are limited, but if you call our Solid Waste Division at 774-5780, we'll put your name on a list and deliver your compost bin (also at no charge) when one becomes available.

Green Gardening Special Events

Environmental Utilities is teaming up with local nurseries Green Acres and Sierra Nurseries in hosting special events geared toward helping you learn more about caring for lawns and gardens without using harmful chemicals that may contaminate our local creeks. Mark your calendars and plan to attend the following events:

- **Saturday, April 3, 2010, 9:00 a.m. until 1:00 p.m., Green Acres Nursery, 901 Galleria Boulevard**
  City employees from Environmental Utilities will be on hand offering valuable information on green gardening, water conservation, composting, and other timely topics. Well-known Master Gardener Annie Joseph will also be on hand to answer questions about less toxic alternatives for healthy, chemical-free gardening.
- **Saturday, April 24, 2010, 9:00 a.m. until 1:00 p.m., Sierra Nursery, 3985 Douglas Boulevard**
  Gisele Schoniger from Kellogg Garden Products will be giving a seminar on organic gardening and Environmental Utilities employees will be at the nursery providing information you can use to grow a water-wise, creek-friendly lawn and garden.

To find out more about these and other creek-friendly events, visit www.roseville.ca.us/eu.

Rate Increase Takes Effect April

The second of two scheduled water, sewer and refuse rate increases will take effect in April 2010. Roseville City Council approved the increases last spring to cover the costs of meeting new regulatory requirements, renewing and repairing aging infrastructure, and higher operating costs. While any rate increase is unwelcome, the city has been working hard to bring costs down where possible. These efforts resulted in a lower-than-expected rate increase of 5.2 percent in 2009 and 5.3 percent in 2010, compared to the originally planned increase of 8 percent in both years. In addition, the rates Roseville collects for water, sewer and refuse collection services are among the lowest in region. www.roseville.ca.us/eurates

Impact on a Typical Residential Household*

	2008 Current Monthly Bill	Typical 2009 Rate Adjustment %	Typical 2009 Incremental $ Increase	Typical 2009 Combined Monthly Bill	Typical 2010 Rate Adjustment %	Typical 2010 Incremental $ Increase	Typical 2010 Combined Monthly Bill
Water	$21.70	9%	$1.96	$23.66	9%	$2.13	$25.79
Sewer	$26.85	4%	$1.05	$27.90	4%	$1.10	$29.00
Refuse	$21.40	3%	$0.65	$22.05	3%	$0.65	$22.70
Total	$69.95	5.2%	$3.66	$73.61	5.3%	$3.88	$77.49

*rates are for a typical residential customer who uses 1900 cubic feet of water per month

Water Storage Tank Replacement Complete

The city completed two major water storage-tank projects in the past few months. Most recently, the city completed a new 7.25 million-gallon tank to replace a storage tank built in 1969 that had reached the end of its useful life. During summer 2009, the city also completed a new 2.9-million Stoneridge water tank. The new tanks will provide operational reliability water storage to ensure adequate fire protection.

Let Mother Nature water for you, turn off your sprinklers.

Water: The Hot Topic for 2009

2009 was a whirlwind year in the state legislature as they tackled major issues such as creating the Delta Protection Act to help fix the Bay Delta, creating a process to monitor groundwater levels, and formulating a plan to reduce the state's water use by 20 percent by the year 2020. Though water issues in California have been brewing for several years, legislative action was prompted by a continued statewide drought. We have seen the effects of the drought here in Roseville when our water supplies were cut in 2008 and were in jeopardy in 2009. Roseville water customers responded well by reducing their water use when called upon to do so. This recently adopted legislation will bring changes to the way Roseville plans for its water use in the future. We will be working this next year to develop a feasible approach to meet these new requirements to save 20 percent of our water use. We will be working with the City Council, and also regionally, to develop a plan that works for our community. We ask for your continued support through this development process and we ask that you continue to do your part to be water smart.

CITY OF ROSEVILLE CALIFORNIA
ENVIRONMENTAL UTILITIES

www.roseville.ca.us/eu
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Roseville, CA 95747
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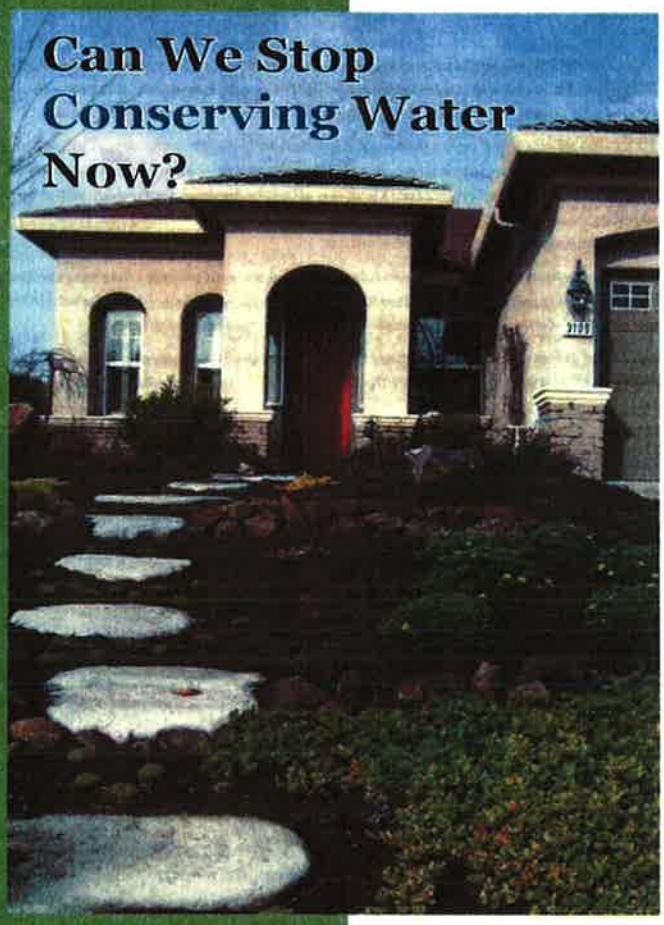
ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

Today

April 2010

WATER • WASTEWATER • RECYCLED WATER • STORMWATER • SOLID WASTE

Can We Stop Conserving Water Now?



THE SHORT ANSWER IS NO. This winter brought more rain and snow than we've seen in the past three years, but this is still a dry region with many demands on a limited water supply. Water is always a precious resource and we should use only the water we need.

One way to do that is to take advantage of the many programs that make water conservation easy and upgrades more affordable, including:

NEW! Irrigation Efficiency | Receive up to a $400 rebate for upgrading to new high-efficiency irrigation equipment. The program covers 100 percent of eligible parts and 25 percent of installation labor.

Cash for Grass | Last year's popular program is back, offering you another chance to replace thirsty grass with low-water use plants and get money back. We will rebate $1 per square foot of turf replaced, up to a maximum of $1,000 per site.

Pool Cover Rebates | Save water and keep your pool clean by installing a pool cover. Receive a $50 rebate, or 50 percent of the purchase price of a pool cover, whichever is less. A rebate of up to $200 is available to customers who install a permanent mechanical pool cover.

Other Services | Learn more about your water and energy use by scheduling a Water-Wise House Call visit and taking our free RE-View Energy and Water Audit. There's no charge for any of these services. You can also get a wealth of free information on water-smart landscaping in the Water-Wise Gardening in the Gold Country Region section of the Regional Water Authority site www.rwah2o.org.

In addition to the programs listed, we offer rebates on ultra-low flush toilets and high-efficiency toilets and clothes washers. All rebates require an application and are available on a first-come, first-serve basis until funds run out.

For more ideas and details on all current programs, rebates and resources, visit www.roseville.ca.us/savewater or call 774-5761.

City Collects More Than 25 Million Pounds of Green Waste

It may seem hard to believe, but the grass and trimmings in your green waste container added up to about 700 pounds last year. Add your 700 pounds to other Roseville residents' green waste and you get a whopping 12,591 tons (more than 25 million pounds) of waste diverted from the landfill in fiscal year 2008-2009—about 34 percent of the city's residential waste stream.

Equally impressive is the finding that Roseville green waste contamination totals less than five percent. That means that you and your neighbors are doing an excellent job of keeping your green waste free of pet waste, dirt, rocks, plastic and other contaminants.

Many people don't know that the green waste we collect becomes part of the community compost pile and that they can buy back their green waste in the form of nutrient-rich compost. You can purchase the compost for a small fee at the Material Recovery Facility (MRF) at 1033 Fiddyment Road at the corner of Athens Avenue. Visit www.wpwma.com to find out more.

Explore Roseville's Secret Neighborhoods

Join Dry Creek Conservancy for this year's Creek Week event from April 9 to 18 and discover the little-seen world of Roseville's waterways. Tucked out of view, our creeks are teaming with native plants and aquatic, bird and animal life. Creek Week offers an opportunity to explore this hidden world with experts who can tell you about these special neighborhoods. In addition to Creek Week activities, the conservancy is holding a special planting project April 24. **www.creekweek.org**

Set a Course for Earth Day 2010

Come out and explore the latest in green living at our third annual Celebrate the Earth Festival. This year's event takes place April 17, 2010 from 10 a.m. until 3 p.m. at the Utility Exploration Center, 1501 Pleasant Grove Boulevard, Roseville.

Admission is free to the family-centered festival of more than 70 organizations divided into venues for alternative transportation, locally grown foods, recycling and waste reduction, water conservation, energy conservation, and nature protection. The zones will be located around the Martha Riley Community Library and attendees will receive passports they can have stamped as they travel through the venues. Full passports will enter attendees in drawings for prizes donated by event vendors and the community.

Parents can be sure children will delight in plenty of fun learning activities, including Dr. Solar's Magical Medicine Show, reCREATE recycled art tables, and the AGROart™ Produce Playgarden. Shoppers will enjoy browsing vendor displays of eco-conscious products, from clothing and jewelry to home and garden products.

Center stage performances in the courtyard feature a colorful performance by the Crane Culture Theater entitled "Grandfather." The play depicts one man's post-war efforts to preserve the Viet Nam wetlands and encourage the cranes' return. Other event highlights include performances by popular STOMP-style percussionists who make great music with humble instruments.

This year's event also features a new locally grown foods zone. The zone will provide information and taste samples of organic foods grown, produced or sold locally. Sponsors include Whole Foods Market, United Natural Foods and Placer Grown, offering information and healthy food for sale and tasting.

There are many other events and activities for every member of the family, so mark your calendars for April 17 and make your destination our Celebrate the Earth Festival! **www.roseville.ca.us/explore**

Sustainability Action Committee Wants to Hear Your Ideas

The city's Sustainability Action Committee is asking for your ideas on ways Roseville can reduce greenhouse gas emissions and create a more environmentally sustainable community. The committee of city staff and volunteers considers community involvement critical to meeting the state's aggressive emission reduction mandates and building a more sustainable future.

You can submit ideas in person during the Celebrate the Earth festival on April 17, 2010 or visit www.roseville.ca.us/greencommittee.

Draining Your Swimming Pool

If you plan to drain your swimming pool this year, remember:

- You need to call the city at 746-1876 to obtain a one-time discharge permit.
- A city inspector will come to your home and test your pool water.
- If no chlorine is detected and no other contaminants are present, you will be permitted to discharge your pool water to the storm drain.
- If chlorine or other contaminants are present, you must pay a $40 fee and discharge the pool water into the sanitary sewer system.

The reason for this requirement is to protect the plants, fish and wildlife that make their homes in and around our creeks. Since all water that enters the storm drain flows directly into city creeks, we want to ensure that water is free of chlorine or other contaminants.

Recycled Water Returns

The numbers are in for the city's recycled water use last year, and we once again topped the billion-gallon mark. We use the recycled water to irrigate parks, golf courses streetscapes and commercial facility landscapes, as well as to provide cooling for Roseville Energy Park. Once wastewater passes through our treatment plants, recycled water travels through special purple pipes leading to the irrigation site. This year, the city added a new ultraviolet system to disinfect water at the Dry Creek Wastewater Treatment Plant, reducing the amount of chemicals used in our water treatment process. Recycled water continues to be a reliable water source adding to our community's water portfolio.

Water Awareness Day

Come celebrate water! Join us at the Water Awareness Day event, Saturday, May 8, 2010 from 11 a.m. until 2 p.m. at the Utility Exploration Center, 1501 Pleasant Grove Boulevard, Roseville.

Meet with "green" certified plumbers, irrigation specialists, landscape professionals and local nurseries to find out about water-saving strategies they use in their professions. At the event, you can have your water usage evaluated, receive drought-tolerant plant information from a number of local nurseries, and see smart new ideas in irrigation. Throughout the day, you can also attend free workshops on landscape design, irrigation, composting, plant health and many other timely topics.

Learn more about Water Awareness Day by visiting www.roseville.ca.us/savewater.

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ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

Today

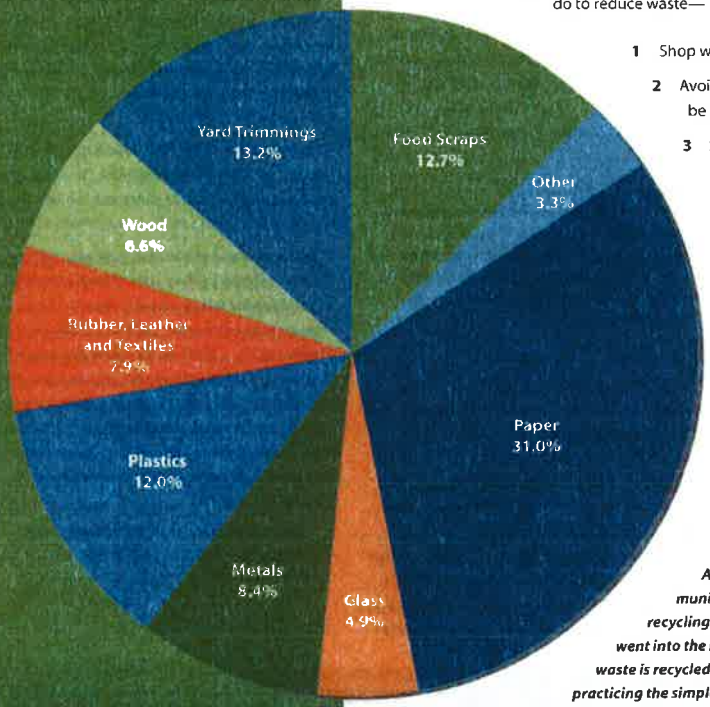
June 2010

CITY OF ROSEVILLE CALIFORNIA

WATER • WASTEWATER • RECYCLED WATER • STORMWATER • SOLID WASTE

Waste Reduction Top Ten Hits

We all want to help keep waste out of the landfill, but you may have wondered what actions you can take to will make a real difference. Here they are—the top ten best things you can do to reduce waste—



1. Shop with reusable shopping bags.
2. Avoid purchasing over-packaged snacks that cannot be recycled.
3. Set up a composting bin at home for yard waste or try vermicomposting.
4. Make a zero waste lunch.
5. Sign-up for electronic bill pay. Visit www.roseville.ca.us/billpay.
6. Print double-sided when you can.
7. Shop garage sales and thrift stores for gently used items.
8. Avoid buying disposable items like plastic plates, cups and silverware.
9. Get off junk mail lists, visit www.dmachoice.org.
10. Instead of bottled water use a reusable water bottle and fill from your tap at home.

According to the Environmental Protection Agency, U.S. municipal solid waste totaled 250 million tons in 2008, before recycling. This chart shows the percentage of different materials that went into the mix. Only 33 percent (83 million tons) of municipal U.S solid waste is recycled each year. You can help boost that number higher just by practicing the simple top-ten tips. Source: Environmental Protection Agency

How Much Trash Do We Generate Daily?

For many years, California measured how well cities were doing at keeping trash out of the landfills by determining the percentage diverted (the percentage of material that is either recycled or reused), compared to the amount sent to the landfill in 1993. As a whole, California reached a 54 percent diversion rate, exceeding the original 50 percent diversion goal. Roseville had one of the state's best local diversion rates, recycling/reusing (or diverting) 66 percent, or two-thirds, of the amount that would have gone to landfill before 1993.

With the statewide success, that complex measurement used by the state changed recently. Now, the state simply measures the amount of waste taken in by the disposal facility divided by a) the number of Roseville residents and b) the number of people who work here. In other words, the number of pounds of waste per person generated by residents and employees per day. Beginning in 2007, the state set annual target goals for each jurisdiction to measure progress for the new per capita per day measurement. Again, Roseville exceeded the target goals set by a considerable margin. Numbers for 2009 won't be available until August, but the 2007 and 2008 show progress:

YEAR	POPULATION		EMPLOYMENT**	
	Target*	Actual*	Target*	Actual*
2007	8.8 lbs.	5.8 lbs.	14.3 lbs.	9.3 lbs.
2008	8.8 lbs.	5.4 lbs.	14.3 lbs.	9.0 lbs.

**Number represents pounds of waste generated per person per day*
***Waste generated at work, per employee*

Contest is sponsored by the WPWMA.

Compost—Good for the City, Great for the Garden

The city continues to offer its **Green Waste Program**, but composting your own backyard is a great way to produce nutrient rich compost and reduce the amount of green waste that has to be hauled away. Compost is a complex, slow-release fertilizer, which is much better for plants than commercial quick-release types. Compost is also a soil conditioner that opens the soil to allow roots to penetrate easier. It also helps the soil hold onto nutrients and water in healthy amounts, making clay soil retain less water and sandy soil hold more. Earthworms and other beneficial organisms also love compost. Use compost as a soil amendment or as a mulch or top dressing. Your lawn and garden will thank you by growing stronger and healthier.

- **The city recycles its old 90-gallon trash containers into free composting bins that are available by calling 774-5780. Availability is limited, but we keep a list to deliver when bins become available.**

Live Sewer Smart to Avoid Costly, Messy Headaches

Ever think about your sewer system? Probably not. Most people don't give their sewer pipes another thought until there's a problem—often a very messy, very expensive problem.

But take a minute to think about your sewer pipes and what happens when fats, oils and grease (FOG) starts to build up in them. FOG sticks to pipe walls, gradually narrowing the passage until nothing can get through. Sewage that can't move through the pipes and to the city sewer line has to go somewhere, and that somewhere is usually in your house or on your property. Sewage spills can also drain down the curb into the stormwater system, contaminating nearby creeks.

"Living sewer smart" is thinking about the consequences of clogged pipes before they happen and not dumping FOG down the drain to create a buildup.

How can you live sewer smart? It's easy—never dump FOG down the drain. Instead, collect your FOG in a container you can seal and call 774-5780. We'll come pick it up at no charge. While you're at it, don't forget to gather up your spent batteries, CFL bulbs and other universal waste items so we can pick those up too.

- For more information about free FOG and universal waste pickup and a list of eligible items, visit www.roseville.ca.us/batteries.

New! Generous Irrigation-Efficiency Rebates Now Available

Act fast to take advantage of our new rebate program and receive up to $400 for upgrading your existing irrigation system to new high-efficiency equipment. The rebate covers efficiencies that may include converting to drip irrigation and adding pressure regulation equipment, low volume sprinkler nozzles, moisture sensors and rain shut-off devices, and climate-based irrigation controllers that monitor environmental conditions to provide the right amount of water.

- **Details of other included upgrades and a rebate application form are available in the *For the Home* residential rebate section at www.roseville.ca.us/savewater or by calling 774-5761. As with all rebates, funding is limited and rebates are offered on a first-come, first-served basis.**

More Rebates on Tap

In addition to the ever popular Cash for Grass Program and new Irrigation Efficiency rebate, we also have funding for water-saving toilets, high-efficiency clothes washers and swimming pool covers. Funding is limited and rebates are offered on a first-come, first-served basis. If funding is depleted, new funding of water conservation rebates begins on July 1, 2010. You can find information on those and a number of free programs in the *For the Home* residential programs and rebates section at www.roseville.ca.us/savewater.

With H2O in the Normal Range it's a Good Time to Take Advantage of Cash for Grass Rebate Program

The late rains and snowstorms pulled our seasonal totals into the normal range for the first time in four years. As a result, Roseville is receiving its full water allocation from the federal government. That's welcome news for Roseville and means no shortage restrictions on use this year.

"Getting our full water allocation is good news," said Water Utility Manager Ed Kriz, "but we still need to pay attention to water use. We live in a dry region where there's never enough water to waste."

Because we don't know what next year will bring, this year offers a perfect time to take advantage of our **Cash for Grass** rebate program. You can receive up to a dollar per square foot of lawn replaced—up to $1,000—with low-water use plants. This year is a great time to take advantage of the program because even drought-tolerant plants require regular watering their first year. Planting in a year when there are no water shortages makes sense and helps you prepare for years when the news is not as good.

- **To learn more about Cash for Grass, visit www.roseville.ca.us/cashforgrass or call 774-5761.**

Wastewater System Upgrades

Several projects are under way to help protect public health and safety by improving the city's wastewater transport and treatment facilities.

Ultraviolet (UV) Conversion – Dry Creek Wastewater Treatment Plant's conversion to ultraviolet (UV) disinfection system is now complete and fully operational. Pleasant Grove Wastewater Treatment Plant's conversion to ultraviolet (UV) disinfection system is about 50 percent complete. When finished, the UV system will replace the chlorine used to disinfect wastewater, leaving no harmful residue in the treated wastewater.

Flood Control Levee – A levee relocation project is underway to increase flood control protection to the Dry Creek Wastewater Treatment Plant. The project will greatly reduce flooding in Dry Creek and help prevent street flooding.

Influent Pump Station – The city is replacing a 50-year old pumping station that pulls wastewater into the Dry Creek plant. The new pump station will also include a grinder system to further control odors.

Sewer Pipe Rehabilitation – The second phase of the sewer pipe rehabilitation project in the city's older sections will be using a new cost-effective approach. Instead of digging up and replacing old sewer pipes, the city will use a trenchless approach, also called "cured in place" pipe. Crews will insert new pipe sleeve into the existing cracked or deteriorating pipe. The new pipe hardens in place once inserted and acts as a liner inside the old pipe.

The wastewater improvements projects have been designed for several years to comply with federal mandates, upgrade aging components and protect the public health and safety.

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ENVIRONMENTAL UTILITIES
CITY OF ROSEVILLE

Today

October 2010

CITY OF ROSEVILLE CALIFORNIA

WATER • WASTEWATER • RECYCLED WATER • STORMWATER • SOLID WASTE

Looking to Our Financial Future

Every two years, our department undergoes a rate study to look at the current and projected cost of each element that goes into providing water, wastewater treatment and solid waste disposal. Rate studies are especially important for not-for-profit municipal utilities, such as ours, that are required by law to charge customers only what it costs to provide a service. Laws prohibit us from making a profit and from using fees collected for one service to cover the cost of providing another. We can only use the fees collected for water to provide water service, for example. The same is true for wastewater and solid waste.

By conducting rate studies every two years that project costs out across four years, we can avoid surprise rate hikes by ensuring we are charging the right amount to cover our costs for each service. The studies also help us budget and control spending, which has contributed to keeping our rates for utility services the lowest in the region.

During the study, we examine a variety of costs that go into providing each service, including the costs to repair and replace facilities and equipment, pay employees, and cover operational expenses. In addition to those customary service costs, we also factor in how much it will cost us to implement new laws set to take effect. In recent years, for example, new security mandates, universal waste laws, and fats, oils and grease (FOG) disposal rules required us to add staff or incur other costs. In this study, we're looking at how Governor Schwarzenegger's 20x2020 Water Conservation Plan, finalized late last year, will affect our costs. The plan will require us to undertake steps to decrease water use 20 percent by the year 2020 (and decrease water use by 10 percent by 2015), so we're examining how much those steps will cost to implement and what effect that will have on our rates.

PUBLIC INPUT MILESTONES FOR UTILITY RATE PROCESS *(DATES SUBJECT TO CHANGE)*	TARGET DATES
Roseville Coalition of Neighborhood Associations (RCONA)	9/16/10
Public Utilities Commission	9/28/10
Environmental Utilities Today Newsletter Update	10/01/10 – 10/31/10
Public Workshop #1, Maidu Reception Hall	11/16/10
Public Workshop #2, Martha Riley Library	11/18/10
Environmental Utilities Today Newsletter Update	12/01/10 – 12/31/10
Public Utilities Commission Special Meeting	12/14/10
Public Notice (Proposition 218) Mailing	12/27/10
Environmental Utilities Today Newsletter Update	02/01/11 – 02/28/11
Environmental Utilities Rates, City Council Public Hearing	02/06/11
Environmental Utilities Rates, City Council 2nd Public Hearing	03/02/11
Environmental Utilities Today Newsletter Update	04/01/11 – 04/30/11
Fiscal Year 2012 – 2013 Environmental Utilities Rates, Effective Date	04/02/11

If the current rate study determines the need to raise utility rates, Environmental Utilities will conduct an extensive outreach effort to inform our customers and provide opportunities for public feedback. The chart to the left shows tentative outreach opportunities our department is planning. For the latest updates, visit www.roseville.ca.us/eurates.

Did you know?

We provide residents with FREE home pickup of televisions, computers, monitors and printer cartridges; car batteries, oil filters and oil; water heaters; and universal waste, including batteries, fluorescent light tubes and bulbs, and items containing mercury. We'll also pickup your sealed containers of fats, oils and grease at no charge.

For a complete list of items we will pick up, visit www.roseville.ca.us/batteries. To schedule a FREE pickup from your home, call 774-5780.

Roseville Is Turning Water Conservation into a Healthy Habit

Though mild years make it easy to forget the three hot, dry years that came before, Roseville residents and businesses are carrying forward the healthy water habits learned from those years. In 2008, we used 8 percent less water than was projected to be used. In 2009, we used 9 percent less water than in 2008 and 16 percent less than projected. This year, we hit our normal rainfall and snowpack amounts, but remain on track to use less water than we did in 2009.

That's great news in a region prone to droughts. It means that our community is paying attention to water use and taking steps to reduce consumption. That healthy habit could pay off in the years ahead. Experience tells us we can't count on the future to continue bringing wet and cooler than normal years like the one we're enjoying. Making water-wise changes today will ensure we are better prepared for whatever tomorrow brings.

To find out how you can save water, schedule your free in-home Water Wise House Call by calling 774-5761. To learn more about our many additional water conservation programs, visit www.roseville.ca.us/savewater.

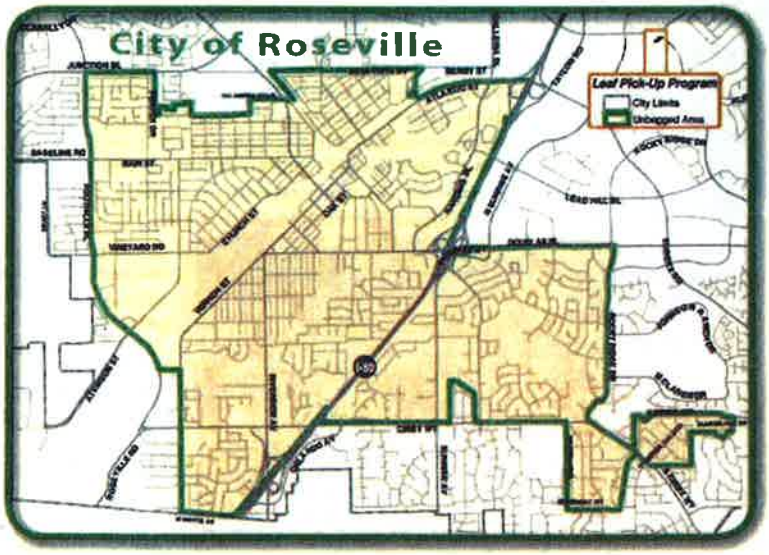
Cresthaven Neighbors Piloting New Water-Wise Landscaping Program

Trying something new is always more fun if you do it with friends. That's the idea behind a unique pilot program in Roseville's Cresthaven neighborhood. The Regional Water Authority (RWA) chose Cresthaven to test the idea that neighbors learning and working together to create water-efficient landscapes is an effective (and fun) way to bring about change.

According to the EPA, most families use about 75 percent of their summertime water on lawns and landscape, so switching to water-efficient landscapes and good irrigation techniques makes sense. Until recently, though, most homes had grassy lawns and overhead sprinklers, and few of us ever thought about how much water a plant required. Making the shift to water-wise landscapes requires learning new techniques for creating beauty the low-water-use way.

Seventeen Cresthaven families agreed to take part in the pilot program sponsored by the RWA, City of Roseville and a Department of Water Resources 2008 Urban Drought Assistance Grant. For their participation, residents receive free consultations with landscape and irrigation experts, custom irrigation schedules, education on checking for irrigation system leaks, written material and workshops on sustainable landscape design, plant selections and efficient watering.

Water providers from throughout the Sacramento region nominated neighborhoods within their service area to participate in the pilot project. Cresthaven earned the honor because of its deep sense of pride and community leaders' enthusiasm for the program. As hoped, the neighborhood has been highly engaged in the program and is making changes that are already lowering water consumption.



Leaf Pickup Program Begins November 1

To keep our waterways flowing freely, we offer Roseville residents two options for fall leaf disposal—our year-around green waste pickup program, and our seasonal leaf pickup that runs from November 1, 2010 through January 14, 2011.

Green Waste Pickup

To take advantage of our green waste pickup, simply place unbagged leaves and other yard clippings in your green waste bin and place it near the curb on your scheduled green waste pickup day.

Bagged Leaf Areas

Starting November 1, Roseville residents can also take advantage of our curbside removal of bagged front-yard leaves by putting the leaves in sealed trash bags weighing less than 40 pounds and placing them near the curb (without blocking the gutter). Call the Community Bulletin Board at 774-5842 and give us your name, address, home phone number, and the number of bags to be removed. Pickup days are Tuesdays and Fridays. Remember, crews cannot pick up leaves in gated or private neighborhoods.

Unbagged Leaf Areas

Roseville provides unbagged leaf-pile removal of front-yard leaves in the city's most densely treed areas, outlined on the map. Rake front-yard leaves into piles onto the street in front of your home. Place the piles at least three feet from parked cars and keep the storm drain inlets clear. Leaf crews will come by with our "Tink" machine and load the piles into a refuse truck for recycling. Bagging leaves is permissible in the map's "Unbagged Area" and you don't need to call the Community Bulletin Board if you live in that area. Our Tink crews will remove the leaves during their normal route that runs from north to south about every two weeks.

Unclogging the FOG

We all know that fats, oils and greases (FOG) can clog arteries and lead to heart attacks, so it comes as no surprise that FOG is also a leading cause of sewer clogs and resulting spills.

To combat FOG, the law requires restaurants to install grease traps and have FOG hauled away. The restaurant program has gone a long way toward eliminating greasy buildup that leads to smelly, costly sewer backups for commercial customers. Residential customers can avoid the same problems by following a few simple steps:

- Scrape greasy pans and dishes into the trash before washing.
- Use sink strainers to catch food items and empty into the trash.
- Pour FOG (cooking oils and shortening, butter and other dairy products, meat fats and juices, salad dressings, sauces and marinades) into a sealable container and call 774-5780 for a free pickup from your home.

People typically use more fats, oils and greases in cooking during the holidays when the cold can cause FOG to congeal, creating a sewer backup that leads to an expensive repair call. Since residents are responsible for sewer pipes on their property, the unhealthy mess can also add up to a very expensive cleanup and repair bill. FOG buildup is easy to avoid by following the steps above and calling us at 774-5780 to carry away your sealed containers of fats, oils and greases—at no charge.

Speakers series coming to the Utility Exploration Center. Get details at—www.roseville.ca.us/explore.

Get Ready for Winter

Before winter sets in, set aside a couple of hours to winterize your plumbing and irrigation system with these quick steps:

- Turn off your irrigation system and drain it to prevent frozen pipes from swelling, cracking or bursting.
- Make sure no outdoor faucets are leaking.
- Prevent cracked garden hoses by draining them and placing indoors.
- Wrap exposed pipes with insulation or heat tape.
- Find your main water shut-off valve so that you can turn off the water quickly if a pipe breaks.
- Now is a good time to flush your water heater to clear out sediment and extend its life.
- Don't come home to a soggy home. Before leaving on an extended vacation, turn off your water to reduce the risk of a broken pipe.

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ENVIRONMENTAL UTILITIES

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TODAY is published for Roseville's residents by the Environmental Utilities Department of the City of Roseville. ©2010.

Comments and suggestions are welcome—please send to the attention of Sean Bigley.

our specialists

Free Water-Wise House Calls

Call us to schedule a weekday appointment for one of our water-use specialists to come to your home and analyze your indoor and outdoor water use.

Our trained specialist will:

- Check toilets and other plumbing fixtures for leaks.
- Help develop proper and efficient water irrigation schedules.
- Provide free water-saving devices, brochures and any current rebate information to help reduce water use.
- Assess irrigation sprinkler uniformity and water runoff characteristics.
- Analyze irrigation and drainage systems and provide maintenance, repair or replacement recommendations.
- Check meter reading and water pressure (if relevant).
- Pressure check exterior plumbing for leaks.

Those of us who call Northern California home must be especially aware of the ways we use water. Drought is always a possibility and the water available must support a growing population, yet continue providing a healthy environment for native fish, plants and wildlife. To balance our water supply against ever-increasing demands, we must all look for ways we can reduce unnecessary use. As a city, Roseville strives to meet that need by constantly improving our operational processes and by creating programs that help you save water and care for the environment.

Water-Wise House Calls are FREE and available weekdays to suit your schedule. Call 774-5761 to schedule your appointment today.

Free is Good. Take advantage of the many FREE programs and generous rebates available to Roseville residents. For the latest information, visit www.roseville.ca.us/savewater or call 774-5761.

Water Conservation

916 774-5761

www.roseville.ca.us/savewater

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residential

Environmental Utilities

2010 Residential Water Rebates and Programs

CITY OF ROSEVILLE CALIFORNIA

www.roseville.ca.us

our rebates

Ultra Low-Flush Toilet (ULFT) Rebates
Receive up to $50 for replacing your older (pre-1992), non-conserving toilet with a new 1.6 gallon per flush model. Visit www.roseville.ca.us/savewater to view the maximum performance testing (MaP) results on more than 200 toilet fixture models and to download your application today.

High Efficiency Toilet Rebates
Receive up to $200 for replacing your older (pre-1992), non-conserving toilet with a new 1.28 gallon per flush model. Visit www.roseville.ca.us/savewater to download an application and visit the US EPA Water Sense website at www.epa.gov/watersense/pp/het.htm to view models approved by the EPA and authorized for a rebate.

Cash for Grass Program
Replace your thirsty grass with low-water use plants and get money back! Roseville will rebate customers $1 per square foot of turf replaced up to a maximum of $1,000 per site. Program funding is limited. View program details on the conservation website at www.roseville.ca.us/cashforgrass.

High-Efficiency Clothes Washer Rebates
Customers who purchase and install a high-efficiency washing machine can receive up to a $75 rebate courtesy of the water conservation division and Roseville's wastewater utility and its regional partners. Rebates will be given on machines that have a water factor of 6.0 or better. Before you buy, view a list of qualifying machines on the Consortium for Energy Efficiency web site at www.cee1.org. Tier 2 and 3 machines meet the necessary water factor requirements. Download your rebate application by visiting www.roseville.ca.us/savewater or call 774-5761 for more information. Funding is limited. Rebates are offered on a first-come, first-serve basis.

Pool Cover Rebates
Save water and keep your pool clean by installing a pool cover. Customers can receive a $50 rebate, or 50% of the purchase price of a pool cover, whichever is less. Or get up to a $200 rebate if a permanent mechanical pool cover is installed. Visit www.roseville.ca.us/savewater or call 774-5761 for program details. Program funding is limited.

Irrigation Efficiency Rebate
Receive up to a $400 rebate for upgrading your irrigation system with new high efficiency equipment. The program covers 100% of eligible parts and 25% of the labor to install them. Download your rebate application by visiting www.roseville.ca.us/savewater or call 774-5761 for more information. Funding is limited. Rebates are offered on a first-come, first-serve basis.

our programs

RE-View Energy and Water Audit
Take this FREE informative online audit to learn how you use energy and water in your home. The audit takes roughly 20 minutes to complete and will give you a comprehensive report with tips and advice on saving precious resources and reducing your monthly utility bill. Have your City of Roseville account number handy and visit www.roseville.ca.us/savewater to begin the audit.

Plumbing Retrofit Devices
Customers with older (pre-1992) plumbing fixtures can call us for FREE, high-quality devices that reduce water use. Devices include low-flow showerheads, faucet aerators, toilet flapper replacements, toilet leak-detection tablets, hose shut-off nozzles, and moisture meters. The Water Conservation Team gives away water-saving devices during Water-Wise House Calls. Schedule your appointment today.

Water-Wise Gardening in the Gold County Region
Looking to install beautiful, low-maintenance landscaping that won't bust your budget? A world of ideas is just a few mouse clicks away. This FREE interactive program allows you to take local garden tours, visit the garden gallery for design ideas, and search by plant names and characteristics. Visit www.rwah2o.org to use this free service.

Help Us Stop Water Waste
Report irrigation problems online at www.roseville.ca.us/waterwaste. Reporting is easy, FREE and anonymous.

save water. save money.

Find out more about our water Conservation programs, services, and rebates at www.roseville.ca.us/savewater or call us at 774-5761.

your savings

Pre-Rinse Spray Valve

An inefficient pre-rinse spray valve wastes energy and water. Replacing standard valves with a high-efficiency model saves water and energy by reducing gas and electric energy required to heat hot water. These valves have a much lower flow rate than standard models which saves water and energy but removes excess food particles just as effectively as standard valves. Call today to receive a FREE pre-rinse spray valve for no charge.

Businesses and the communities they serve depend on clean, reliable water to grow and prosper. As rising demands continue to strain our limited resources, it's increasingly important to support your community and lower your utility costs by incorporating water-efficiency practices into daily operations. Now is the perfect time to start saving water and money by contacting us about the programs and rebates available.

Speakers' Bureau. Find out more about our Water Conservation programs, services, and rebates at www.roseville.ca.us/savewater or call us at 916 774-5761.

Free is Good. We offer many FREE programs and generous rebates to Roseville commercial, industrial and institutional customers. For current program and rebate information, visit www.roseville.ca.us/savewater or call us at 774-5761.

Water Conservation
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commercial

Environmental Utilities
2010 Commercial Water Rebates and Programs

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our programs

Landscape Water-Use Reviews
We'll perform a thorough assessment of irrigated areas to identify inefficiencies and make recommendations for improvement. A water-use specialist will review your water-use history with your landscape manager and prepare a watering schedule that suits your landscape. The specialist follows up with a comprehensive report summarizing all findings and recommendations. Implementing these recommendations will save money on your utility bill and improve the look of your landscape. Call 774-5761 today to schedule your FREE landscape water-use review.

Commercial, Industrial and Institutional Water-Use Reviews
If you're interested in lowering your water, wastewater and energy bills, call us today to schedule your FREE comprehensive facility review. A certified water-use specialist will work with your facility manager to identify equipment inefficiencies and provide you with a detailed report summarizing all findings and improvement recommendations.

our rebates

Irrigation Efficiency Rebate
Receive up to a $4,000 rebate for upgrading your landscape's irrigation system with new high efficiency equipment. The program covers 100% of eligible parts and 30% of the labor to install them. Download your rebate application by visiting www.roseville.ca.us/savewater or call 774-5761 for more information. Funding is limited. Rebates are offered on a first-come, first-serve basis.

High Efficiency Toilet Rebates
Receive up to $250 for replacing your older (pre-1992), non-conserving toilet with a new 1.28 gallon per flush model. Visit www.rosevlle.ca.us/savewater to download an application and visit the US EPA Water Sense website at www.epa.gov/watersense/pp/het.htm to view models approved by the EPA and authorized for a rebate.

Pool Cover Rebates
Save water and keep your pool clean by installing a pool cover. Customers can receive a $50 rebate, or 50% of the purchase price of a pool cover, whichever is less. Or get up to a $200 rebate if a permanent mechanical pool cover is installed. Visit www.roseville.ca.us/savewater or call 774-5761 for program details. Program funding is limited.

Water Brooms
Receive up to a $100 rebate when you purchase a water efficient water broom. When you use a hose and nozzle to clean sidewalks, you can use from 8 to 18 gallons of water per minute. With a pressurized Waterbroom, you will clean more efficiently and use as little as 2.8 gallons of water per minute. Rebates are limited and offered on a first-come, first-serve basis. Download your application today at www.roseville.ca.us/savewater.

Air Cooled Ice Machines
Receive up to $1,500 by replacing your current water-cooled ice machine with a water efficient air-cooled machine. New air-cooled ice machines use less energy and water and make ice more quickly and efficiently. For qualified models and to download an application visit www.roseville.ca.us/savewater.

High-Efficiency Washing Machines
Receive up to $150 by replacing your older, non-efficient machine with a new High-Efficiency Clothes Washer (HEW). HEWs utilize technological advances to deliver excellent wash performance while saving both water and energy. Resource efficient models use 35–50% less water and approximately 50% less energy. Eligible machines must have a water factor of 6.0 or less to qualify for the program. Before you buy, view a list of qualifying machines on the Consortium for Energy Efficiency web site at www.cee1.org. Tier 2 and 3 machines meet the necessary water factor requirements. Download your rebate application by visiting www.roseville.ca.us/savewater or call 774-5761 for more information. Funding is limited. Rebates are offered on a first-come, first-serve basis.

save water.
save money.

Find out more about our Water Conservation programs, services, and rebates at www.roseville.ca.us/savewater or call us at 916 774-5761.

Pests & Disease Management

Plant health is influenced by sufficient water, light, and nutrients—too much or too little of any of these environmental conditions may cause plant stress, making plants more susceptible to insect and disease attack. Using plants seldom attacked or less prone to pest problems can prevent many insect and disease problems from occurring in the first place. When shopping for plants, select healthy, actively growing, well-rooted plants.

Common Plant Problems

Plants in the landscape will show us when they are unhealthy by expressing symptoms such as wilted or discolored leaves, dying branches, and premature leave drop. Sometimes the problem can be created by simply putting a shade-loving plant in full sun—a condition that, if not changed, could result in the death of the plant. Other problems can require a little more detective work.

Do your research. For additional information on common plant problems and assistance in identifying and treatment of pests or diseases, refer to the following sites:

www.ipm.ucdavis.edu
http://ucant.org
www.ourwaterourworld.org

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Environmental Utilities
Identifying Common Plant Problems

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www.roseville.ca.us

Common Plant Problems

Pests
Accurate identification of the pest is essential. Monitor plants for pest problems, especially during the growing season, so pests can be detected early and effectively managed. Careful study of the plant and surrounding environment can help diagnosis problems early.

Diseases
In urban areas, 70–90% of plant problems can be caused by factors such as nutrient deficiency, temperature extremes, vandalism, pollutants, and fluctuations in moisture.

Examine Landscape
To help distinguish between an infectious pathogen (usually microorganism that incites disease) that is more plant-specific or chemical or environmental factors that can affect many species, the number of species of plants affected can help determine the cause. Living pathogens usually take a period of time to spread throughout an area, so if a large percentage of plants become diseased overnight, a pathogen is probably not involved.

Examine Roots
In many, but not all plants, brown or black roots may signal a problem. Brown roots often indicate dry soil conditions or presence of toxic chemicals. Black roots usually reflect overly wet soil or presence of root-rotting organisms. If possible, check roots by probing the root zone or carefully removing soil from around the roots. If the plant is dead, the roots can be more closely examined when it is removed. Check trunks and branches for wounds that provide entrances for pathogens and rotting organisms. Damage can also be caused by weather, fire, lawn mowers, and rodents.

Observe Position and Appearance of Affected Leaves
Dead leaves at tops of trees usually are the result of environmental or mechanical root stress. Twisted or curled leaves may indicate viral infection or insect feeding. Size and uncharacteristic color of foliage may also indicate a plant's conditions. Turf grass, for example, can take on a grayish-green color and blades may fold.

Water Deficit
Sometimes plants wilt during the warmest part of day but rehydrate in the evening due to lack of water. Continued water deficit can be seen as brown tissue along the edges or tips of leaves.

Water deficit that lasts from a few days to several months result in slow to no growth, reduced leaf size, and change in leaf color (changing from deep green to gray-green or blue-green, and leaf drop). Deciduous species may show fall colors earlier than normal. More severe, prolonged water stress can cause shoot and branch dieback and cracking of bark.

It is important to understand the characteristics of healthy plants in your landscape. For example, some drought-tolerant plants may fold or lower their leaves on hot afternoons as a mechanism for conserving water.

Overwatering
The symptoms of overwatering can be similar to a water deficit as leaves tend to wilt and yellow. Understanding plant water requirements (for example, whether the plant is a moderate or low water-use plant) and then probing the soil to determine moisture content will help to identify whether the plants are being over or under watered.

High soil moisture content from overwatering can be responsible for inadequate root zone aeration. Aeration can be improved by managing irrigation properly and improving drainage. For example, allow soil to dry between irrigations and improve surface drainage to avoid areas with standing or pooling water.

Proper watering is not so much a factor of how often you water, but how effectively you water. Ensure the water being applied reaches its target—the root zone of the plant. Generally, deep and infrequent irrigation, allowing the water to reach the entire root zone, will promote plant health and longevity.

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Environmental Utilities

Troubleshooting Your Irrigation System

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www.roseville.ca.us

Our Supply. Roughly half of our water supply is used to water lawns and landscape plants, so it's important to pay attention to how well your irrigation system works. Efficient irrigation saves water, but it also keeps grass, trees, and plants healthier. This brochure is designed to help you identify common problems and offer suggestions for improving your irrigation system and watering practices.

My sprinkler head leaks after the irrigation system shuts off.

Possible cause: Low head drainage
Low head drainage is caused by water siphoning out of the lowest head in a sprinkler zone after watering is completed. When the water flow to the zone has been shut off at the end of its cycle, the remaining water in the lines will drain downhill to the lowest point. If a sprinkler head is located in the lowest part of the system, water will flow out of that head until equilibrium has been reached or all of the water has emptied out of that zone's pipes.

If the sprinklers spit and spew lots of air when the valve is turned on, then you likely have a low head drainage problem. In addition, you may also see algae build-up around the leaking sprinkler and/or on the sidewalk.

Solution: Install a drain check valve
Install a drain check valve between the riser and sprinkler head or replace the entire sprinkler head with one that has a check valve built in, then adjust the sprinkler to the proper height.

Possible cause: Leaking sprinkler valve
If you have water flowing from a sprinkler head continuously, even when the sprinkler system has been off for a while, the likely problem is a leaking control valve. A typical sign of a leaking control valve is moss or algae growing on the sidewalk due to the constant flow of water, or puddles of water around the lowest sprinklers that never dry out. Helpful hint: Because the water never completely shuts off, you may notice that the leak detection device on your water meter is constantly turning.

Solution: Fix leaking valve
To fix a leaking valve, turn off the water supply to the irrigation system and then disassemble the valve. Rinse off the diaphragm and solenoid to clean it, replace any bad parts, and reassemble.

My irrigation system doesn't apply water evenly to my landscape.

Lawn sprinklers should be spaced so that water from each sprinkler reaches the sprinkler next to it, with the goal of applying water evenly without runoff or overspray. This is called head-to-head coverage and will enable you to properly set your irrigation system run time without wasting water. When this doesn't happen, the following could be the reason:

Possible cause: Too little or too much water pressure
For the most part, water pressure at your home will stay consistent. However, if an adjustment has been made to your home's water pressure regulator, or if you do not have a pressure regulator, this can affect your irrigation system's performance. If the pressure to your home was decreased you might experience problems with coverage, leaving dry spots. If the pressure to your home was increased you might experience overlapping coverage or maintenance problems, such as blown sprinkler heads or missing drip emitters.

Solution: Ensure proper water pressure
Verify that you have a pressure regulator on your water supply line. If you don't have one, have one installed so you can control the irrigation system pressure. Adjust the regulator pressure to match your irrigation system, as each irrigation system type has its own recommended pressure. Generally, you want the pressure to be under 40 PSI and even less for a drip system that is properly designed. You may also reduce pressure on individual zones at your irrigation control valve by installing a built in pressure regulator.

Possible cause: Nozzles' radiuses do not match sprinkler head spacing
If the irrigation system was designed correctly and coverage was sufficient in the past, the problem may be due to a pressure reduction in the system. This would cause less water to flow through the irrigation system, resulting in less coverage per sprinkler.

Regular maintenance is key to an efficient irrigation system. Evaluate your system at least monthly during the irrigation season. Most irrigation timers have a test cycle that you can run to look for problems. Once found, be sure to:

- Repair any broken sprinklers
- Adjust misaligned sprinklers
- Straighten leaning sprinklers
- Check drip emitters to make sure they are working correctly
- Check valves for leaks and repair or replace
- Clean/flush drip system filter

Solution: Increase irrigation water pressure

Increase irrigation water pressure to match the recommended pressure for your type of system. If this does not help, reduce the number of heads or nozzles per zone to increase pressure in that zone. This will require adding an additional zone to operate the removed heads/nozzles or adding those removed to a zone that can run additional head/nozzles without pressure issues.

Possible cause: The wrong sprinkler head may be installed

If the system was designed incorrectly, or if sprinkler heads have been replaced over time, the sprinkler head may not work well with the system.

Solution: It's best not to mix and match sprinkler parts

The same brand should be used consistently throughout the system. This helps ensure that the flow rates are the same for all sprinkler heads. If a replacement sprinkler has been installed that has the wrong spray pattern, the sprinkler will need to be replaced, or adjusted if possible, to expand or reduce the spray pattern to appropriately cover the area. Sprinkler heads come in various patterns such as full circle, three quarter circle, half-circle, quarter sprays, and adjustable.

Possible cause: Broken or leaning sprinkler heads

A broken or leaning sprinkler alters the spraying pattern.

Solution: Repair and/or replace sprinklers

Repair and/or replace any broken sprinklers and straighten any leaning sprinklers. Readjust the spray patterns to ensure proper coverage.

Possible cause: Spray pattern blocked by plants

As plants grow, some can interfere with your sprinkler system's original design, blocking the water from getting to other plants.

Solution: Trim back plants

To fix a blocked spray pattern you can: trim back the plant to allow for proper irrigation; increase the length of the sprinkler head by buying one with a taller riser; or convert to a low-volume drip irrigation system to deliver water to the root zone of the plant at the soil surface.

My drip irrigation is watering too much/too little.

You can't always see problems with a drip irrigation system. It should be common practice to evaluate a drip system regularly.

Possible cause: The drip line may be severed or the emitter may be clogged

Solution: Repair any severed lines and replace any clogged emitters

There are puddles of water and/or erosion in my flower bed.

Possible cause: Emitter may be missing or line may be severed

Solution: Check lines and pressure
Check the supply line to ensure that the drip emitter has not blown off and the supply line has not been damaged. Replace emitter if missing and supply line if damaged.

One of my drip emitters easily comes off the tubing.

Possible cause: Hole size is too large

Solution: Replace bad tubing
If original hole in tubing is too large, replace bad section of tubing and use a self piercing insert fitting with barbed connectors to keep the supply line in place.

Our Responsibility. Water is a precious resource that is vital to our existence and used in nearly every aspect of our daily lives. We hope this brochure has provided solutions that will help you use it wisely.

Water Conservation

916 774-5761

www.roseville.ca.us/savewater

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Mixed Sources

our advice

- Adjust your irrigation schedule as the seasons change. For unexpected rain showers, equip your irrigation timer with a rain shut-off sensor.
- Set your timer to water in the early morning when wind and evaporation are at their lowest.
- If plants and shrubs are being irrigated by an overhead sprinkler, shift to a drip system to save water, get water directly to the root zone, and reduce weeds. Drip irrigation systems slowly emit one quarter to two gallons of water per hour rather than the one half to four gallons per minute an overhead sprinkler system puts out.
- Consider installing a smart controller that uses daily weather data to automatically adjust itself to your plants' water needs.
- Water leaks can waste hundreds of gallons of water. Regularly check sprinkler heads, valves and hoses for water leaks.
- Make sure to cover your pool or spa. An uncovered swimming pool can lose from 900 to 3,000 gallons of water through evaporation per month during the summer.

Roughly half of our water supply is used to water lawns and landscape plants, so it's important to pay attention to what you plant and how you irrigate. This brochure is designed to provide good planting and watering techniques to get the best, most water-efficient results.

A Cut Above. Use a higher setting when mowing, leaving a blade height of two and a half to three inches to shade the soil and roots and reduce evaporation.

Water Conservation
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Environmental Utilities
Strategies for Water Efficient Landscapes

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our strategies

Hydro-zone Planting
A hydro zone is a specific area of plants that have similar watering requirements and can be irrigated the same way and at the same time. Grouping plants by watering requirements is healthy for plants. When plants with different water requirements are planted together, some inevitably end up getting too much or too little water and will eventually die.

To learn more about low-water-use plants for grouping into hydro zones, talk to the experts at your local nursery. You can also download a PDF of the state's booklet, "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California" online at: www.owue.water.ca.gov/docs/wucols00.pdf. You can also find information on water-smart planting for our city on our Cash for Grass Program Web site at www.roseville.ca.us/cashforgrass

Proper Irrigation
We may think watering a lot is good for plants and lawns, but the opposite is more often true. Overwatering contributes to up to 90 percent of all plant diseases and most landscapes are watered almost twice as much as the plants need.

Observation goes a long way. Walk through your landscape and look at each plant. If plants are wilted, burnt or dull looking, something isn't right. Probe into the soil to determine if it's too wet or dry and adjust the watering times up or down, as needed.

Once established, plants require the most water in the summer and little to no water during winter months. After July, plants generally need less water each month. By November, they often need little to no irrigation until March or April, depending on the weather.

Compost
Because the organic content of soil affects its ability to hold moisture, adding organic compost will increase its permeability and water-holding capacity. Once or twice a year, add a two- to four-inch layer of compost. (Tilling the compost into the soil isn't necessary). Roseville's Utility Exploration Center offers composting and other workshops to help you learn how to recycle and reuse plant prunings, lawn clippings, and other materials that would otherwise be taken to landfills. In addition, you can buy low-cost compost and woodchips from the Western Placer Waste Management Authority (www.wpwma.com) Buy-Back Center at 3033 Fiddyment Road.

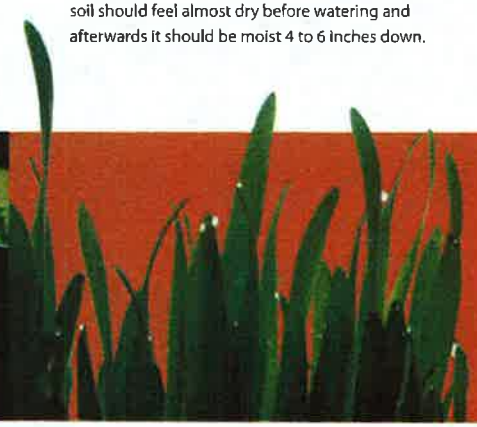
Mulch
There are many benefits of using mulch, including saving time and money, conserving water, and cutting the cost of maintenance. Mulch moderates soil temperature in both summer and winter, protects irrigation system components from the elements, reduces weed growth, and lessens soil compaction.

Soil Moisture
Much of Roseville has clay soil that absorbs water slowly, drains slowly, and causes surface runoff if watered too quickly. Depending on the weather, your landscape may need more or less water. Regularly insert a soil probe or trowel into the soil well into the root zone to check the moisture level. Feel the soil in your hand. If it is dry on top and wet below, no additional water is required. If soil is dry on top and dry below, water is needed. If soil is wet below the root zone you may need to shorten the length of time an irrigation cycle runs or add more time between cycles.

Turf
Check moisture level beneath the surface before and after you irrigate. The top 2 to 3 inches of soil should feel almost dry before watering and afterwards it should be moist 4 to 6 inches down. If it is not, change your irrigation schedule to irrigate in short cycles, with a one hour break in between (known as cycle and soak). Because turf has a relatively shallow root system and requires even coverage, low-volume rotator sprinklers are an efficient way to provide the necessary water. Although the length of watering time may be longer with rotators, less water is ultimately applied and runoff is prevented.

Grass Cycle
Let the nutrients from your grass improve the health of your soil through grass cycling. Simply replace the standard blade on the mower with a mulching blade that cuts clippings into smaller pieces. Remove the bag to send clippings back into the lawn's surface. Cut grass when surface is dry, keep the blade sharp, and mow often enough so that no more than one-third of the grass blade length is cut at any one time. To prevent weed germination or disease, do not leave clippings on the lawn if there is a high percentage of weeds or the lawn has a disease.

Aeration/Dethatching
Aerate and dethatch turf to improve water infiltration. Soil under the turf can become compacted and a buildup of thatch (dead and dying matted grass) can prevent air, water, and nutrients from reaching the soil.



lose the turf

You can expect to save 30 gallons of water per year for every square foot of turf removed and replaced with low-water use plants on a drip irrigation system. For a typical lawn of 700 square feet, this could mean a savings of 21,000 gallons of water per year. The water saved could completely fill a swimming pool!

Water is a precious resource that is vital to our existence and used in nearly every aspect of our daily lives. There are numerous ways we can use this resource wisely and be better stewards of our environment. This brochure gives ideas and suggestions for using water wisely in your home.

A typical non-conserving household follows this pattern:

Outdoor Irrigation	50%
Toilets	14%
Laundry	12%
Showers	9%
Faucets	8%
Leaks	5%
Baths	1%
Dishwashing	1%

280 Gallons Per Day. Roseville customers use an average of 280 gallons per capita every single day. The statewide average is 192 gallons per day. Residential water use amounts to 53 percent of Roseville's total water deliveries.

Water Conservation
916 774-5761
www.roseville.ca.us/savewater

CITY OF ROSEVILLE CALIFORNIA
2005 Hilltop Circle
Roseville, CA 95747

FSC
Mixed Sources

be water smart

Environmental Utilities
Water Saving Tips
for Your Home

CITY OF ROSEVILLE CALIFORNIA
www.roseville.ca.us

our tips

Only Wash Full Loads
When using a dishwasher or washing machine, only wash full loads and use the short cycle whenever possible. Inefficient appliances use the same amount of water regardless of how full the machine is.

Buy Efficient Appliances
High-efficiency washing machines typically use 16 to 25 gallons of water per load, compared to the 40 gallons for a standard machine. This can result in savings of over 8,500 gallons of water per year.

By replacing a 10-year old dishwasher with an ENERGY STAR model, you can save more than 1,000 gallons of water a year. These models reduce water use by including more efficient water cycles and controls that allow you to tailor each wash to the specific characteristics of the load.

Install High-Efficiency Fixtures
Today's high-efficiency toilets are much improved from earlier models and use 1.28 gallons per flush, a 20 percent savings over today's standard low-flush models.

A low-flow showerhead can produce as little as 1.5 gallons per minute. Low-flow showerheads use only 15 gallons for a 10-minute shower, while a high-flow showerhead can use 50 gallons for the same 10-minute shower.

Installing an on-demand hot water recirculation system on your most remote fixture allows you to move the hot water from your water heater to the fixture within seconds, minimizing cold water run off to the drain.

Check for Leaks
If you see a spike in your water bill and you haven't made any changes in your water use habits, it is likely a leak. Check all of your fixtures and piping, looking for standing water under your cabinets.

Don't Let the Water Run

- Instead of running water to get it cold for a drink, use ice or have a pitcher of water cooling in the refrigerator.
- A running faucet can use 1.5 to 5 gallons of water per minute. Turn water off while brushing your teeth, shaving, hand-washing dishes and defrosting food. Clean produce in a partially filled sink or bowl rather than running under water.
- While waiting for the shower to warm up, collect water in a bucket to use for watering plants.
- Don't rinse your dirty dishes before you put them into the dishwasher. Just wipe off excess food and put them in.

typical water use by fixture

Fixture/Appliance	Pre-1992	Current Standard/Code	High-Efficiency Model
Toilet GALLONS PER FLUSH	3.5–7	1.6	1.28
Bathroom Faucet GALLONS PER MINUTE	3–7	2.2	1.5
Kitchen Faucet GALLONS PER MINUTE	3–7	2.5	2.2
Showerhead GALLONS PER MINUTE	3–7	2.5	1.5
Dishwasher GALLONS PER LOAD	14	14	6.5
Washing Machine GALLONS PER LOAD	39–43	40	16

lose the leaks

A leaky toilet can waste up to 50 gallons of water per day. To find out if you have a toilet leak, put 10 drops of food coloring into the tank and wait 10 minutes without flushing. If you see coloring in the bowl, you have a leak! Cleaning or replacing the flush valve flapper inside your tank may fix the problem. These components are easily replaced and can be found at your local hardware store.

Even a small leak adds up

60 DROPS PER MINUTE = 192 GALLONS PER MONTH
90 DROPS PER MINUTE = 310 GALLONS PER MONTH
120 DROPS PER MINUTE = 429 GALLONS PER MONTH

Water Conservation
916 774-5761
www.roseville.ca.us/savewater

CITY OF ROSEVILLE CALIFORNIA
2005 Hilltop Circle
Roseville, CA 95747

FSC 100%

be water smart

Environmental Utilities
Efficient Water Use
with Irrigation Timers

CITY OF ROSEVILLE CALIFORNIA
www.roseville.ca.us

our efficiency

An irrigation timer is a device that controls water flow when your irrigation system turns on and off. There are many makes and models of timers available. An efficient timer has various functions that allow you to adjust watering to the needs of the plants and turf grasses. Efficient timers may have the following:

A rain delay manual feature that delays watering cycle for a specific period of time

A separate rain sensor device attached to the controller that stops the controller from watering when it's raining. Some sensors are mounted on the roof and capture a specified amount of water from rain. This will tell the timer to turn off until the device dries out. Other sensors are installed underground and will reduce the amount of applied water as needed.

Water budget/season adjust allows for an increase or decrease in station run times from none to 200 percent, in 10 percent increments, without reprogramming run times.

Multiple run times for repeat watering in the same area on the same day.

Multiple programs/zones that offer independent programs for watering different parts of the yard on different days.

Battery backup that saves the programmed irrigation schedules in the event of a power outage.

Station run times to support low volume systems (from 1 to 200 minutes).

Odd/even, weekly, and interval program capability up to 45 days for flexibility in which days to water.

Roughly half of our water supply is used to water lawns and landscape plants, so it's important to pay attention to how well your irrigation system works. Efficient irrigation saves water, but it also keeps grass, trees, and plants healthier. This brochure is designed to help you understand your irrigation timer's functions to ensure proper landscape watering.

our time

Smart Timers
Smart controllers reduce outdoor water use by monitoring and using information about specific site conditions (such as soil moisture, rain, wind, slope, soil type, and plant type) obtained from an on-site weather station or a data service. These controllers use the site specific data to apply the right amount of water to a landscape at the right time.

For example: During hot weather, plants require more water than during cooler periods. Smart timers adjust the amount of water delivered to the plant, based on current weather data and plant type. If significant rainfall occurs, rain sensors compensate by reducing the amount of water applied, as appropriate. Much of Roseville has clay soil that absorbs water slowly. For clay soils or a landscape with steep slopes, smart controllers will use that information and apply less water, more frequently, to minimize run off.

How much water for how long?
Additional factors that help determine how often and how long to schedule irrigation for landscapes include:

- Large trees and shrubs may need less frequent and longer watering cycles.
- Turf: Amount and frequency will depend upon soil type, turf species, and sun exposure.
- An established plant will need less water than a newly planted one.
- Initially, newly planted landscapes will need more frequent and shorter run times until plants are established.
- In peak summer months, plants require more water than any other time of year.
- Soil type is a big factor on how much water a landscape needs. Clay soils do not absorb water quickly and are prone to quick runoff. Sandy soils absorb water quickly and hold moisture.
- The weather directly affects plant evapo-transpiration and water cycling demands. **NOTE:** Evapotranspiration is the loss of water to the atmosphere by the combined processes of evaporation (from soil and plant surfaces) and transpiration (from plant tissues).

Keep in mind that even though controllers can simplify watering, it is still important to observe the condition of the landscape and how effectively the water is being applied. Never water during the heat of the day as water evaporates before the soil can absorb it.

Irrigation Timer Functions
Common functions you might find on a typical irrigation timer and their purpose:

Time of day: This feature presets the time into the clock's memory.

Day of the week: This feature presets the day of the week into the clock's memory.

Running time for each individual station: This feature allows you to program the running time through each valve. For example; Valve/Station A has 15 minutes running time, Valve/Station B has 8 minutes running time, etc.

Multi-program watering scheduling: This feature allows you to set some stations to lawns and some stations to shrubs or drip. It also allows you to set a separate day program.

Program times: This feature tells the timer to turn the program on at the preset times. For example; 1:00 a.m., 3:00 a.m., 5:00 a.m. Clocks should have a multiple program schedule.

Advance, manual, switch: This feature allows you to: a) Water the complete program at any given time without losing your previous schedule, and b) turn any given station off or on at any time without interfering with the preset schedule.

Sample Irrigation Schedules

Program A: Turf irrigated by sprinklers:

- Fall and spring: 1 to 2 days per week; summer: 3 days per week
- For each assigned day of watering, water 3 times a day for 4 minutes each
- Schedule start times approximately 1 hour apart

Program B: Moderate water use plants on drip system

Water 1 day per week or less during winter months (if not raining); 2 days per week during spring and fall; and 3 days per week during summer.

Program C: Low water use plants on drip system

- Deep and infrequent water. How much water depends on type of emitter, type of plants and soil conditions
- Observe plants for signs of stress (dull, wilted, burnt foliage). Check to make sure emitters are working properly.

Set it Straight: There are a numerous irrigation clock brands sold today and each has different features. It is best to read the owner's manual of the irrigation clock that runs your system to understand its capabilities. If your manual has been misplaced, we've provided a list of common brands and contact information where you can obtain a manual. Some, but not all, manufacturers offer their manuals online.

Champion www.championirrigation.com
Hunter Industries www.hunterindustries.com
Irritrol Systems www.irritrolsystems.com
Lawn Genie www.lawngeniestore.com
Nelson www.nelson.com
Orbit www.orbitonline.com
RainBird www.rainbird.com
Toro www.toro.com

FOLD

River-Friendly Landscaping vs. Conventional Landscaping

Is your landscape and garden in harmony with the environment? Many conventional landscape practices can damage the environment.

Conventional landscaping often consists of large lawns and non-native plants, which rely on abundant irrigation and the heavy use of fertilizers and pesticides. This approach to landscaping requires significant mowing, blowing, trimming and frequent removal of plant debris. You can avoid much of this unnecessary work and save time, money and energy by following the 7 Principles of River-Friendly Landscaping.

Conventional Landscaping	River Friendly Landscaping
Requires more water, fertilizers, & maintenance	Conserves water & requires less maintenance
Contributes to soil, air, & water pollution	Reduces soil, air, & water pollution
Burdens landfills with green waste	Conserves landfill space by using natural mulch & compost
Consumes fossil fuels	Reduces use of fossil fuels

This landscape features a mix of native and drought-tolerant plants which require less watering than traditional lawns. The variety of plants also make it more appealing.

This landscape has a large lawn, and exotic shrub areas which may require more water and maintenance.

FOLD

Dig Deeper into River-Friendly Landscaping!

Visit *www.riverfriendly.org* for more information about...

- Landscaping and gardening tips and resources
- Upcoming workshops
- Tips on how to choose appropriate plants
- River-Friendly landscaping guidelines for landscape professionals
- Tips on how to choose a landscape professional

This brochure was produced by the River-Friendly Landscaping Coalition Steering Committee, which is a collaboration between public agencies, non-profit organizations, designers, private landscape architects, and contractors. The vision of the committee is to improve the health of communities and ecosystems through sustainable landscaping in the Sacramento Valley and surrounding Foothills.

The mission of the committee is to provide individuals, businesses, and institutions access to information, resources, and ideas so that landscapes are designed, built, and maintained according to sustainable practices of the River-Friendly principles.

www.riverfriendly.org

River-Friendly Landscaping *at Home*

Easy steps for creating healthy, beautiful landscapes while protecting and caring for our environment.

www.riverfriendly.org

What is River-Friendly Landscaping?

River-Friendly Landscaping is

... a holistic approach to landscaping that works with nature to reduce waste, prevent pollution, and that supports the integrity of one of California's key ecosystems, the Sacramento River watershed.

... a method by which you can create and maintain a healthy, beautiful and vibrant landscape using the 7 PRINCIPLES OF RIVER-FRIENDLY LANDSCAPING:

1. Landscape Locally
2. Landscape for Less to the Landfill
3. Nurture the Soil
4. Conserve Water
5. Conserve Energy
6. Protect Water & Air Quality
7. Create & Protect Wildlife Habitat

A well-designed and maintained River-Friendly landscape can cost you less in the long run by consuming fewer resources. You can be part of the solution.

Benefits of River-Friendly Landscaping

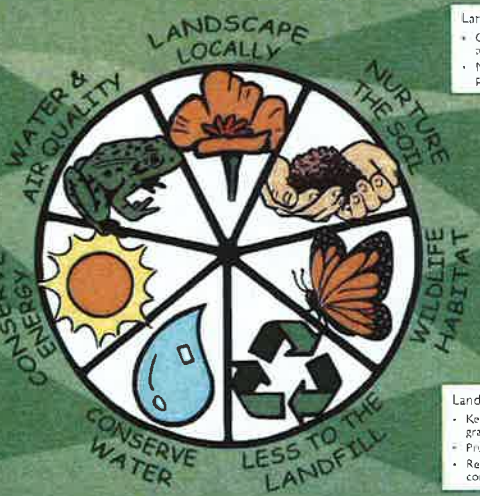
Benefits to YOU...

- Saves money on water, fertilizers, and pesticides
- Reduces green waste in your garden
- Requires less maintenance such as mowing and trimming
- Attracts wonderful birds and butterflies to your garden

Benefits to the Community and the Environment...

- Conserves landfill space
- Reduces air pollution by reducing the amount of green waste that needs to be transported
- Improves water quality by reducing pollution

The 7 Principles of River-Friendly Landscaping



Landscape Locally

- Consider climate, sun exposure and soil type
- Model your landscape after native plant communities

Nurture the Soil

- Amend the soil with compost before planting
- Mulch regularly
- Feed soils naturally; avoid using synthetic and quick release fertilizers

Create & Protect Wildlife Habitat

- Create diversity by choosing California native plants first
- Eliminate the use of pesticides
- Provide water & shelter

Landscape for Less to the Landfill

- Keep plant debris on site by grasscycling, mulching, or composting
- Prune selectively and properly
- Reduce, reuse, and recycle construction waste

Protect Water & Air Quality

- Control pest problems with biological controls
- Use plants that attract beneficial insects
- Use manual tools instead of power tools

Conserve Energy

- Plant and protect trees
- Shade homes, paved areas, and air conditioners

Conserve Water

- Minimize the lawn
- Grow low-water use California natives or Mediterranean plants
- Design, install and maintain high efficiency irrigation systems

www.riverfriendly.org

Four Easy Ways to Get Started!

1. Check Your Irrigation System.
   - Look for broken or out of adjustment heads.
   - Set your controller properly for the season.
   - Ask your water supplier for a Water-Wise House Call 1-888-987-8477 or http://www.mwd.dst.ca.us/mwd/educated/homeowners/
2. Use Mulch in Flower, Vegetable and Shrub Beds.
   - Mulch is a covering of organic material which can prevent water loss, keep weeds down and decomposes to make soil healthy.
   - Use mulch materials such as shredded barks, ground up tree trimmings and even fallen leaves.
   - Apply mulch three inches or more deep. Avoid burying plants.
3. Use Compost to Improve Soil Health and Fertility.
   - Reduces fertilizer needs.
   - Improves water use efficiency.
   - Incorporate when planting or apply to shrubs and lawns.
4. Grasscycle When Mowing Lawns.
   - Grasscycling allows the grass clipping to be recycled to the lawn and eventually becomes natural compost. The nutrients in the grass blades are recycled back to the soil requiring less fertilizer. At the same time there is less waste sent to the landfill.
   - Replace the normal blade on your lawn mower with a mulching blade. Remove the bag and mow as usual.

Appendix I

Council Resolution Adopting Plan

RESOLUTION NO. 11-430

ADOPTING THE WATER MANAGEMENT PLAN 2011 UPDATE

WHEREAS, as a condition of the City's long-term water supply contract with the Bureau of Reclamation, the Water Management Plan (Plan) is to be periodically reviewed at least once every five years; and

WHEREAS, the Plan was last updated in 2006; and

WHEREAS, on October 25, 2011 the Roseville Public Utilities Commission reviewed the plan and recommends City Council approve the plan as presented; and

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Roseville hereby adopts the Water Management Plan 2011 Update and directs staff to submit the Water Management Plan 2011 Update to the United States Bureau of Reclamation for review and authorizes staff to address any United States Bureau of Reclamation recommended changes if not significant.

PASSED AND ADOPTED by the Council of the City of Roseville this 16th day of November, 2011, by the following vote on roll call:

AYES	COUNCILMEMBERS:	Allard, Herman, Garcia, Rohan, Roccucci
NOES	COUNCILMEMBERS:	None
ABSENT	COUNCILMEMBERS:	None

Pauline Roccucci
MAYOR

ATTEST:

Sonia Orozco
City Clerk