

CITY OF BLYTHE

2010 Urban Water Management Plan



June 2011

City of Blythe
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Blythe, CA 92225

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City of Blythe

2010 Urban Water Management Plan Contact Sheet

Date plan submitted to the Department of Water Resources:

July 22, 2011

Name of person preparing this plan:

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The Water supplier is a: **Municipality, retailer**

Utility services provided by the water supplier include: **Water, Sewer**

This Agency a Bureau of Reclamation Contractor? **No**

Is This Agency a State Water Project Contractor? **No**

Introduction/Executive Summary

The UWMP Act (California Water Code §10610 et seq.) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses
- Water supply sources
- Efficient water uses
- DMMs, including implementation strategy and schedule

In addition, the Water Conservation Bill of 2009 requires urban water suppliers to report in their UWMPs base daily per capita water use (baseline), urban water use target, interim urban water use target, and compliance daily per capita water use, defined as the total amount of water withdrawn and pumped into the distribution system divided by the population served by the water system. The consecutive 10 year average per capita per day use for Blythe Proper is 274 gallons since 2001:

| Table 14 | | | | |
|---|----------------------|---------------------------------------|---|---|
| Base daily per capita water use — 10- to 15-year range | | | | |
| Base period year | | Distribution System Population | Daily system gross water use (mgd) | Annual daily per capita water use (gpcd) |
| Sequence Year | Calendar Year | | | |
| Year 1 | 2001 | 12,545 | 4.112 | 328 |
| Year 2 | 2002 | 13,028 | 4.323 | 332 |
| Year 3 | 2003 | 12,724 | 3.786 | 298 |
| Year 4 | 2004 | 13,540 | 3.673 | 271 |
| Year 5 | 2005 | 13,619 | 3.431 | 252 |
| Year 6 | 2006 | 13,334 | 3.706 | 278 |
| Year 7 | 2007 | 13,461 | 3.480 | 259 |
| Year 8 | 2008 | 13,958 | 3.325 | 238 |
| Year 9 | 2009 | 13,647 | 3.289 | 241 |
| Year 10 | 2010 | 13,839 | 3.357 | 243 |
| Base Daily Per Capita Water Use¹ | | | | 274 |

¹Add the values in the column and divide by the number of rows.

Figure 1 - City of Blythe Average Per Capita per Day Use Since 2001
 *population estimates from the State of California Department of Finance

| | |
|---|------------|
| METHOD 1: City of Blythe Urban Water Use Target for 2020 (80 percent of the 10 year average per capita per day use in gallons) | 218 |
|---|------------|

Figure 2 - City of Blythe 2020 Urban Water Use Target

The Interim Urban Water Use Target for 2015 was calculated using the average of the base line (274gcpd) and 2020 Urban Water Use Target (218gcpd):

| | |
|---|------------|
| Interim Urban Water Use Target for 2015 (average between the Base Line and Urban Water Use Target) | 246 |
|---|------------|

Figure 3 - Interim Urban Water Use Target for 2015

The City's Urban Water Use Target for 2020 is **218** gallons per day per capita (gpdc). In 2010, the average was 243gpdc. The City will be required to meet the goal of 218 gpdc by 2020 to be eligible for future state funding unless revised in the 2015 UWMP update.

The UWMP Act directs water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future demands (CWC 10612 (b)). Urban water suppliers are required to assess current demands and supplies over a 20-year planning horizon and consider various drought scenarios.

The UWMP Act also requires water shortage contingency planning and drought response actions be included in a UWMP. UWMPs are to be prepared every five years by urban water suppliers with 3,000 or more service connections or supplying 3,000 or more acre-feet of water per year. Public and private utilities with multiple service areas within their districts should follow the guidelines below.

- Public utilities above the UWMP submittal threshold should include all service areas regardless of size.
- For private utilities, if a utility's district is above the threshold then all the service areas within that district should be included. If the utility district is below the UWMP threshold, a UWMP is not required for that district.
- One urban water use target should be determined for each UWMP.

The normal UWMP submittal cycle requires that they be prepared and submitted in December of years ending in five and zero. However, because of recent changes in UWMP requirements, State law has extended the deadline for the 2010 Plans to July 1, 2011. Although submitted in 2011, 2010 UWMPs will be referred to as 2010 UWMPs

because they include 2010 water data and to retain consistency with the five-year submittal cycle.

Based on legislative changes resulting from the November 2009 passage of SBX7-7 (hereafter referred to as the Water Conservation Bill of 2009), development of UWMPs will also enable water agencies and, in turn, the State of California to set targets and track progress toward decreasing daily per capita urban water use throughout the state.

A UWMP, including discussion of the status of a water supplier's implementation of DMMs, is required for an urban water supplier to be eligible for a water management grant or loan administered by DWR, the State Water Resources Control Board (State Water Board), or the Delta Stewardship Council (CWC §10631.5(a)). A current UWMP must also be maintained by the water supplier throughout the term of any grant or loan administered by DWR.

Changes to California law require that, beginning in 2016, water suppliers comply with water conservation requirements established by the Water Conservation Bill of 2009 in order to be eligible for State water grants or loans.

Purpose of the UWMP

The purpose of this report is to review the overall supply and demand of water for the City of Blythe, identify any possible deficiencies in the water supply for the next 25 years, and prepare mitigation strategies. There is no foreseeable water shortage in the City of Blythe for the next 25 years. The City of Blythe uses ground water that can supply the City with sufficient water to meet all projected demands. Irrigation of farm land with water from the Colorado River and the Colorado River itself recharges the ground water, and thus the City is not affected by climatic related supply shortages.

California experienced a prolonged drought from 1987 through 1992 and 2007 to 2009 and in 2010 below normal runoff. The Governor declared a statewide drought and proclaimed a state of emergency in nine counties on June 4, 2008 and a statewide emergency due to the drought on February 27, 2009. The drought, however, did not affect the City's water supply.

An awareness of the importance of a sound Water Policy is important in recognizing that water in California is becoming a scarce resource. Land use decisions based in

part upon water resources have significant effects on the physical, social, and economic character of the county. Although the Urban Water Management Plan is concerned with long range goals and objectives, attention should also be given to currently existing conditions and issues. This approach will enable the City to face important issues today, thereby avoiding problems in the future.

In addition to the statement of goals, objectives and policies, the Urban Water Management Plan includes discussions, data, and water conservation programs which provide for the prudent and conscientious management and utilization of water resources for future development in the City. The implementation of the Urban Water Management Plan is meant to assure that water resources are conserved and utilized as possible, and to provide for the long-term viability and availability of this precious resource.

This Urban Water Management Plan follows the outline in order of the “Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan” Final, March 2011.

***** Following Paragraphs in italicized text are verbiage from the law.**

Section 1 - Plan Preparation

Coordination

Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable (10620(d)(2)).

Table 1 - Coordination with appropriate agencies

| Coordinating Agencies ^{1,2} | Participated in developing the plan | Commented on the draft | Attended public meetings | Was contacted for assistance | Was sent a copy of the draft plan | Was sent a notice of intention to adopt | Not involved / No info |
|--------------------------------------|-------------------------------------|------------------------|--------------------------|------------------------------|-----------------------------------|---|------------------------|
| Planning Commission | X | | X | X | X | X | |
| Building Department | | | X | X | X | X | |
| Palo Verde Irrigation District | | X | X | X | X | X | |
| Public Works | X | X | X | X | X | X | |
| General public | | | X | | X | X | |
| County of Riverside | | | | | X | X | |

Figure 4 - TABLE 1 - Coordination with appropriate agencies

The development of this plan was coordinated with the City Staff, the Mayor’s Office, City Planning, Fire, Building, Police, and local Emergency Services offices. The City of Blythe completed a Master Plan of Water study in December 1997 which examined and forecasted reliable water supplies and demands for the city to 2040. Data from this study were utilized in this document.

Every urban water supplier required to prepare a plan pursuant to this part shall, at least 60 days prior to the public hearing on the plan required by Section 10642, notify any city or county within which the supplier provides water supplies that the urban water supplier will be reviewing the plan and considering amendments or changes to the plan. The urban water supplier may consult with, and obtain comments from, any city or county that receives notice pursuant to this subdivision (10621(b)).

The City provides water to connections within its service boundary only. However, the city sent notifications to all the cities and other agencies listed in Table 1 at least 60 days prior to the UWMP public hearing that the plan was being reviewed and changes

were being considered.

The urban water supplier shall provide that portion of its urban water management plan prepared pursuant to this article to any city or county within which it provides water supplies no later than 60 days after the submission of its urban water management plan (10635(b)).

A copy of The 2010 UWWMP will be provided to each city, county and agency within or containing the city's boundary no later than 60 days after submission to DWR.

Each urban water supplier shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the service area prior to and during the preparation of the plan (10642).

The City reached out to the agencies listed in Table 1 during the development and adoption of the UWMP.

Prior to adopting a plan, the urban water supplier shall make the plan available for public inspection and shall hold a public hearing thereon. Prior to the hearing, notice of the time and place of hearing shall be published within the jurisdiction of the publicly owned water supplier pursuant to Section 6066 of the Government Code. The urban water supplier shall provide notice of the time and place of hearing to any city or county within which the supplier provides water supplies. A privately owned water supplier shall provide an equivalent notice within its service area (10642).

The City of Blythe encourages community participation in its urban water management planning efforts.

Legal public notices for this meeting were published in the local newspaper. Copies of the draft plan were available at City Hall. Public notice was given declaring the availability of the Management Plan for public inspection and stating the public hearing date and time. A public hearing for the Management Plan was held by the Blythe City Council. The final Management Plan will be issued after the public hearing. The final Management Plan will be distributed to the public library.

The City published notice in the local newspaper of the availability of the draft UWMP and the public hearing to adopt the UWMP. The hearing time and place was included in the notice. The notice was published once a week for two successive weeks.

The hearing took place on July 12th, 2011 at 6:00pm at City Hall located at:

235 N. Broadway
Blythe, CA 92225

Before adoption of the Urban Water Management Plan, a public meeting was held. A formal public session was held during a regular meeting of the City Council for review and comment on the draft plan before the City Council's approval.

The plan was adopted by City Council in July 12th 2011 and submitted to the California Department of Water Resources within 30 days of Council approval.

Plan Adoption, Submittal and Implementation

The amendments to, or changes in, the plan shall be adopted and filed in the manner set forth in Article 3 (commencing with Section 10640) (10621(c)).

If changes are necessary to the UWMP after adoption by the city, the City will hold another public hearing to readopt the plan.

After the hearing, the plan shall be adopted as prepared or as modified after the hearing (10642). An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan (10643).

An urban water supplier shall implement its plan adopted pursuant to this chapter in accordance with the schedule set forth in its plan (10643).

The City plans to implement the UWMP after adoption. Procedures to implement will include annual reviews of progress on the Demand Management Measures, use of the UWMP in developing a revised Water Master Plan and in the planning process of new development within the City. The City shall also use this document to coordinate with the Palo Verde Irrigation District (PVID). There are no other nearby water purveyors.

An urban water supplier shall submit to the department, the California State Library, and any city or county within which the supplier provides water supplies a copy of its plan no later than 30 days after adoption. Copies of amendments or changes to the plans shall be submitted to the department, the California State Library, and any city or county within which the supplier provides water supplies within 30 days after adoption (10644(a)).

Within 30 days of submitting the UWMP to DWR, the adopted UWMP will be submitted to the California State Library and any city or county to which the city provides water.

Not later than 30 days after filing a copy of its plan with the department, the urban water supplier and the department shall make the plan available for public review during normal business hours. (10645).

Within 30 days of submitting the UWMP to DWR, the adopted UWMP has been or will be available for public review during normal business hours.

Section 2 - System Description

Describe the service area of the supplier (10631(a)).

Service Area Physical Description

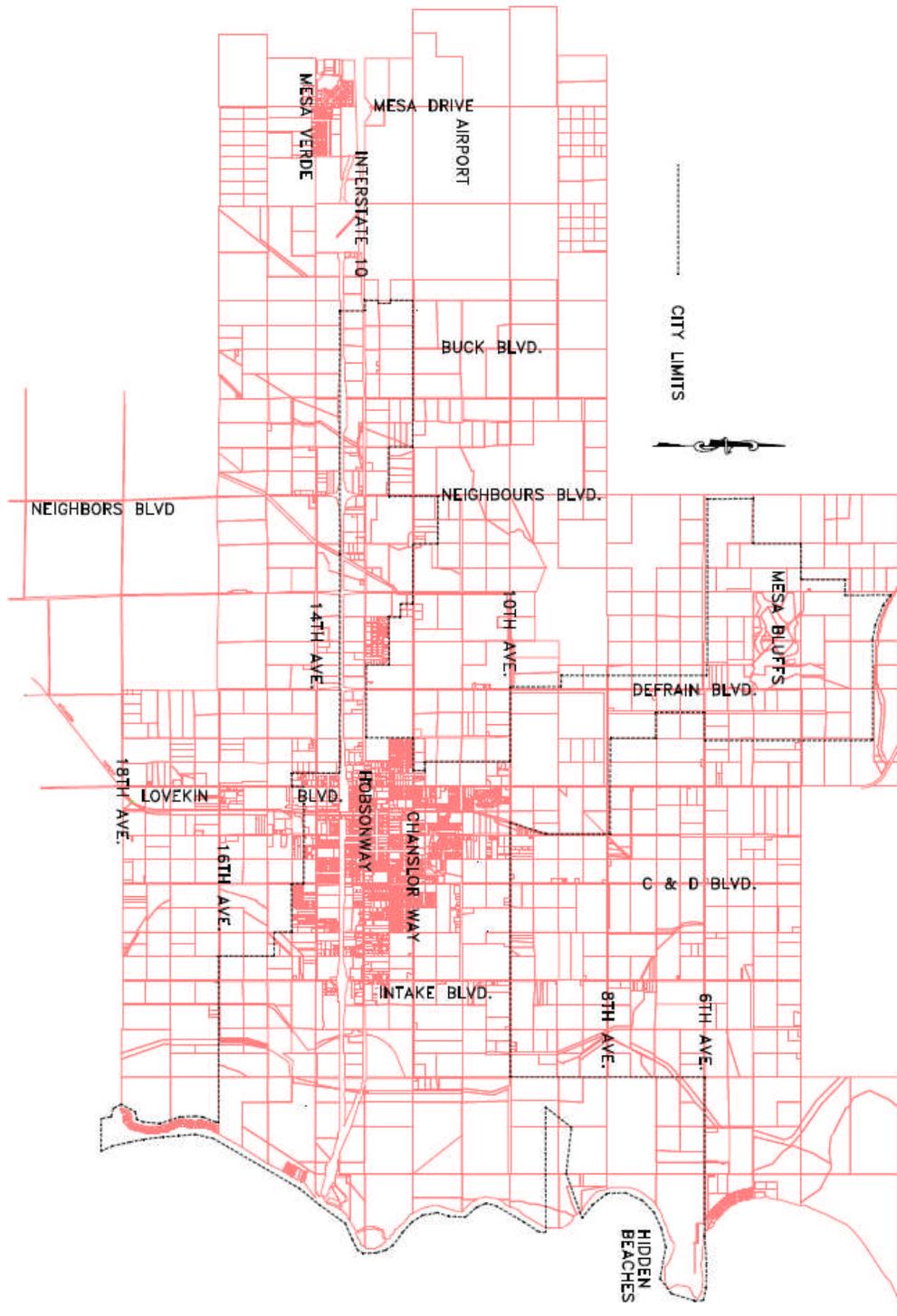


Figure 5 - City Limits of the City of Blythe

The City of Blythe is located in the Palo Verde Valley in eastern Riverside County, along Interstate 10 Freeway, on the western bank of the Colorado River. It occupies an area of about 26.8 square miles (13,489 acres). Incorporation of the City occurred in July, 1916, and water service is provided to all residential, commercial, industrial, and fire protection uses.

The first commercial activity in the area was cattle grazing, but due to the temperate climate and plentiful water farming soon followed. The community soon became the economic center of the region.

During the 1940s, 1950s and 1960s the following features were constructed: (1) a Federal Interstate Highway, (2) a commercial airport, and (3) Palo Verde Community College. The completion of the Interstate Highway 10 between Los Angeles and Phoenix increased tourist traffic and brought a business boom to the downtown area.

Between 1920 and 2005, population increases for Blythe were low. Winter-time population of Blythe and the region increases significantly due to tourists from cold northern climates. The area has a large number of RV parks which are filled with transient visitors each winter.

The City has undergone major annexations - the Hidden Beaches area to the northeast, the Mesa Ranch area to the northwest and the East Blythe area to the East, and most recently the new Blythe power plant area near the Blythe airport. Water use averages 276 gallons per capita per day. All water used in the City is groundwater. Because the groundwater levels are maintained by water directly and indirectly from the Colorado River, groundwater supply should always be sufficient to meet projected demands.

Description of City Facilities

The City of Blythe Water System can be categorized into three (3) parts:

- City of Blythe Proper Water System (includes East Blythe)
- Mesa Ranch Water System
- Hidden Beaches Water System

The City of Blythe Proper Water System is the principal water system that serves the area within the former City Limits before the recent annexations. The Mesa Ranch and

Hidden Beaches Water Systems, and the East Blythe County Water District (EBCWD) are each existing small community water systems within the areas annexed by the City of Blythe. The City of Blythe is currently responsible for the operation and maintenance of the Blythe Proper (including East Blythe), Mesa Ranch, and Hidden Beaches. Each of the above listed water systems are independent water systems.

The water systems consist of the following components:

- Groundwater supply well(s).
- Water storage facilities.
- Booster pumps.
- Water distribution pipeline system.

CITY OF BLYTHE PROPER WATER SYSTEM

The existing City of Blythe Proper Water System is the principal water system of the region which provides water service to the area within the former City Limits before the recent annexations, including East Blythe.

The supply wells not located at the new water treatment facility pump water directly into the distribution pipeline system. The well pumps are activated by pressure reductions within the water distribution pipelines of the area surrounding each well. Water storage is provided for the system by two 2.2 million gallon reservoirs, and a 500,000 gallon reservoir at Birch Street in East Blythe. The reservoirs are filled by relief of high water pressure within the distribution system pipeline network. The reservoir is also filled by an altitude valve and a supply well dedicated to filling the reservoir. Water from the reservoir is pumped into the distribution pipeline network by a VFD booster pump station. The VFD pumps are adjusted to maintain pressure throughout the distribution system.

The Blythe Proper Water System is equipped with a 2.2 million gallon steel ground storage reservoir. The reservoir is located in the center section of the City on Murphy Street near Commercial Drive. The minimum storage reservoir capacity for a water system is normally determined from the peak day demand plus a fire reserve volume.

The water distribution pipeline network of the Blythe Proper Water System consists of water mains and laterals ranging in diameter size from 4 inches to 14 inches. All

service connections and fire hydrants of the system are connected in accordance with the City of Blythe Standards and Specifications. The configuration of the Blythe Proper Water System with eleven (11) pressure-activated supply wells located throughout the system. The system operating pressure is increased in order to provide the minimum required fire flow and pressure in areas of the distribution pipeline network with 4 inch diameter pipelines.

NEW WATER TREATMENT FACILITY IN BLYTHE PROPER

The City installed a new water treatment plant facility in 2007 with a 2.2 million gallon steel reservoir. The new water treatment plant replaced wells No. 1 and 16 with two new 1500 gpm groundwater supply wells, filtration treatment equipment, and a reservoir storage tank on one new facility site. Having all new water facilities on one site will be more efficient and will minimize costs with respect to design, construction, operation and maintenance of the facilities. The new facility is located in the northeast area of the City in an area where the water quality has historically been of better quality than the surrounding areas.

The following were major components of the project:

- A 40 acre facility site in the northeasterly part of the City.
- Two 1500 (GPM) high capacity groundwater supply wells.
- A manganese and iron filtration system. This system would be expandable for connection of future wells.
- Two booster pump stations.
- Adding a second 2.2 million gallon steel storage reservoir to the system.
- Control building, including a laboratory and chemical storage and shop building.
- Stand-by generator sets.
- Distribution piping.
- Site electrical and site piping.

The new water plant provides new groundwater supply wells for the system constructed in accordance with the California Well Standards. The supply wells, were all constructed on one site with protection from encroaching sewer pipelines or other potential sources of contamination. The new wells were constructed with stainless steel casings to prevent infection from iron reducing bacteria.

The new, high capacity supply wells allowed the City to begin shutting down existing

wells that have bacteriological contamination problems. An iron and manganese filtration system was constructed to ensure final water delivered was in conformance with the California Safe Drinking Water Act. The new steel reservoirs provide the necessary storage volume for the community, and allow the City to shut down the 41 year old existing reservoir for maintenance and repairs without putting the community at risk for extended periods of time with no emergency fire reserve water.

MESA RANCH WATER SYSTEM

The Mesa Ranch Water System, (which now includes the Palo Verde College (PVC) water production facility), was formerly owned by the Mesa Ranch Mutual Water Company. It provides water service to the Mesa Ranch community and the PVC are located approximately 2.5 miles northwest of the City of Blythe Proper. The Mesa Ranch community was annexed into the City of Blythe. The water system consists of a groundwater supply well, storage tank, hydropneumatic pressure tank, booster pump station, and a distribution pipeline network. PVC production facility includes a 1,000 gpm well with a 2,500 gpm booster pump station. The supply well pumps into the storage tank. Water from the storage tank is pressurized into the distribution system by the hydropneumatic tank. The booster pumps are activated to pump water from the storage tank into the distribution system during periods of high demand.

The Mesa Ranch Water System is equipped with a 150,000 gallon steel water storage tank. The water distribution pipeline network of the Mesa Ranch Water System consists of water mains and laterals ranging in diameter size from 6 inches to 10 inches.

HIDDEN BEACHES WATER SYSTEM

The Hidden Beaches Water System provides water service to the Hidden Beaches community approximately 3.0 miles northeast of the City of Blythe Proper along the Colorado River. The Hidden Beaches community was annexed into the City of Blythe. The water system consists of two 1,800 gpm groundwater supply wells, a steel storage reservoir, booster pump station, and a distribution pipeline network. The supply wells pump into the storage reservoir, or directly into the distribution pipeline network. The booster pumps are activated to pump water from the storage reservoir into the distribution system during periods of high demand. The Hidden Beaches Water System is equipped with a 355,000 gallon steel water storage reservoir. The water distribution pipeline network of the Hidden Beaches Water System consists of 6 inch and 8 inch diameter size water mains and laterals.

(Describe the service area) climate (10631(a)).

Climate Factors

Blythe has a desert climate. Summers are hot and winters are cool, with an annual average of 3.9 inches of precipitation, occurring throughout the year. From 1913 through December 2010 the average precipitation is 3.80 inches per year. This data was collected by the National Weather Service at Station 040924, Blythe, California.

| City of Blythe Climate Data | | | | | | | | | | | | | |
|------------------------------------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|
| | Jan | Feb | Mar | Apr | May | Jun | July | Aug | Sept | Oct | Nov | Dec | Total |
| Avg. temp | 52.5 | 57.4 | 63.0 | 70.1 | 77.7 | 85.8 | 92.3 | 91.1 | 84.6 | 72.7 | 60.1 | 52.7 | 71.7 |
| Avg. max temp | 67.6 | 73.0 | 79.4 | 87.4 | 95.5 | 104.2 | 108.4 | 106.8 | 101.8 | 90.5 | 76.7 | 67.7 | 88.3 |
| Avg. min temp | 37.4 | 41.8 | 46.5 | 52.7 | 59.9 | 67.4 | 76.1 | 75.4 | 67.3 | 54.8 | 43.4 | 37.6 | 55.0 |
| Avg. precip. | 0.51 | 0.46 | 0.34 | 0.12 | 0.03 | 0.05 | 0.19 | 0.61 | 0.39 | 0.27 | 0.27 | 0.57 | 3.80 |

Figure 6 - City Climate Data

Source: <http://www.wrcc.dri.edu/CLIMATEDATA.html>, accessed June 4, 2011.

(Describe the service area) current and projected population . . . The projected population estimates shall be based upon data from the state, regional, or local service agency population projections within the service area of the urban water supplier . . . (10631(a)).

(Population projections) shall be in five-year increments to 20 years or as far as data is available (10631(a)).

Service Area Population

The DoF develops population estimates for Riverside County through 2050. The 2010 Census data was also available at the time of this report.

Population data obtained from *State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2010, with 2000 Benchmark. Sacramento, California, May 2008*, and the 2010 Census show the population of the City of Blythe including the two large state prisons located nearby. The City does not serve the prisons with water or sewer services, so the population of the prisons was subtracted. The population of the prisons for each year (December populations) was obtained from the State’s website located at:

http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Monthly/Monthly_Tpop1a_Archive.asp

| COUNTY/CITY | 1/1/2001 | 1/1/2002 | 1/1/2003 | 1/1/2004 | 1/1/2005 | 1/1/2006 | 1/1/2007 | 1/1/2008 | 1/1/2009 | 1/1/2010 |
|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Blythe (CA Department of Finance and 2010 Census Data) | 20,832 | 21,294 | 21,364 | 22,170 | 22,054 | 22,238 | 21,340 | 21,621 | 21,346 | 20,817 |
| Ironwood Prison | 4,664 | 4,545 | 4,615 | 4,650 | 4,610 | 4,782 | 4,736 | 4,163 | 4,213 | 3,064 |
| Chuckawala Valley State Prison | 3,623 | 3,721 | 4,025 | 3,980 | 3,825 | 4,122 | 3,143 | 3,500 | 3,486 | 3,914 |
| | | | | | | | | | | |
| Total City of Blythe Estimates | 12,545 | 13,028 | 12,724 | 13,540 | 13,619 | 13,334 | 13,461 | 13,958 | 13,647 | 13,839 |

| Base period year | | Distribution System Population |
|------------------|---------------|--------------------------------|
| Sequence Year | Calendar Year | |
| Year 1 | 2001 | 12,545 |
| Year 2 | 2002 | 13,028 |
| Year 3 | 2003 | 12,724 |
| Year 4 | 2004 | 13,540 |
| Year 5 | 2005 | 13,619 |
| Year 6 | 2006 | 13,334 |
| Year 7 | 2007 | 13,461 |
| Year 8 | 2008 | 13,958 |
| Year 9 | 2009 | 13,647 |
| Year 10 | 2010 | 13,839 |

Figure 7 – Department of Finance Population Estimates for Blythe 2001-2010

1 - State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2008, with 2000 Benchmark. Sacramento, California, May 2008.

The average annual population growth rate was 1.25 percent per year. This growth rate was used to estimate the population growth through 2030.

| Table 2 Population — current and projected | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|--------------------------------|
| | 2010 | 2015 | 2020 | 2025 | 2030 | Data source² |
| Service area population¹ | 13,839 | 14,653 | 15,569 | 16,542 | 17,576 | Department of Finance |

¹ Service area population is defined as the population served by the distribution system. See Technical Methodology 2: Service Area Population (2010 UWMP Guidebook, Section M).
² Provide the source of the population data provided.

Figure 8 - Forecasts Through 2035 based on Department of Finance Population Projections

Describe . . . other demographic factors affecting the supplier's water management planning (10631(a)).

The median household income in California is estimated to be \$56,134 in 2009 and \$46,816 in the year 2000 per U.S. Census Bureau. Please visit:

<http://www.census.gov/hhes/www/income/data/statemedian/index.html>)

In comparison, the median household income in the City was \$39,069 in the year 2009, with a per capita income of \$20,066. The City is a disadvantaged community (68% of the median household income). The 2010 US Census data is not yet currently available.

The City of Blythe has a 17.1% unemployment rate. The following information is from the California Employment Development Department. The information can be found at: <http://www.labormarketinfo.edd.ca.gov/?pageid=1006>

Section 3 – System Demands

Baselines and Targets

An urban retail water supplier shall include in its urban water management plan. . . due in 2010 the baseline daily per capita water use, urban water use target, interim urban water use target, and compliance daily per capita water use, along with the bases for determining those estimates, including references to supporting data (10608.20(e)).

Using Department of Finance, 2010 Census, State of California prison populations and city pumping records, the 2010 average daily per capita consumption is approximately 243 gallons per day (gpd). Per Capita water usage is very seasonally dependent, largely due to increased landscape irrigation during the hot summer months. Winter usage by all residences is only 55% of that during summer months. Residences consume more than all other users and have the most fluctuation in monthly usage. Commercial and Governmental customers reduce water consumption during cooler months. Industrial consumption increases substantially during winter; however, industrial usage accounts for approximately 0.15% of the total annual usage. As a result, it appears that nearly all of the summer increase in consumption is caused by irrigation for parks and residential landscaping.

| 2010 Pumping Records | Total Flow Into the Distribution System (gallons) | Per Capita Per Day (gallons) |
|------------------------|---|------------------------------|
| January | 62,210,000 | 145 |
| February | 55,559,000 | 143 |
| March | 75,629,000 | 182 |
| April | 86,677,000 | 202 |
| May | 110,914,000 | 259 |
| June | 141,531,000 | 341 |
| July | 153,553,000 | 370 |
| August | 151,290,000 | 353 |
| September | 125,064,000 | 301 |
| October | 105,347,000 | 246 |
| November | 85,255,000 | 205 |
| December | 72,276,000 | 168 |
| | | |
| Total Flows | 1,225,305,000 | |
| Average Monthly | 188,508,462 | 243 |

Figure 9 - Monthly Fluctuation of the Per Capita Use - 2010 Pumping Records

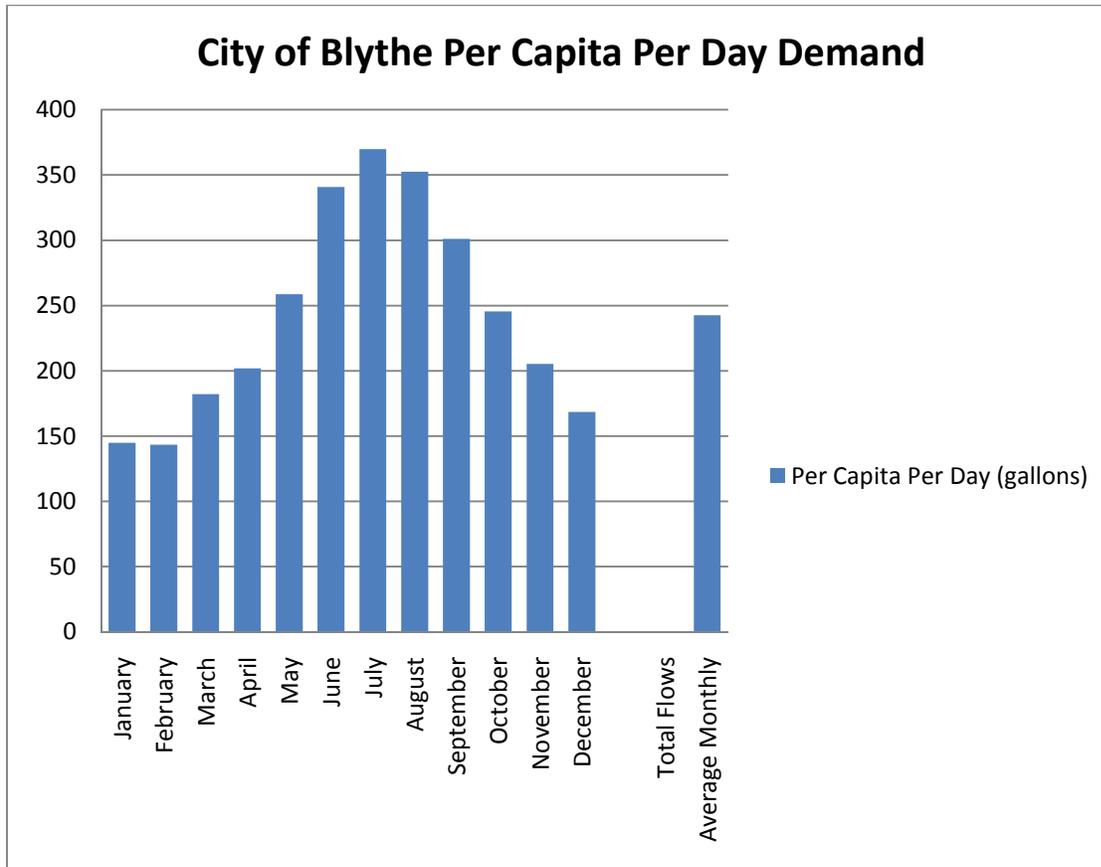


Figure 10 - Chart of the Monthly Fluctuation of the Per Capita Use - 2010 Pumping Records

The existing City’s water billing system identifies customers’ categories, so that accounts can be classified by use class and can identify each customer by sector and usage category. The total amount of water delivered into the system is metered at the water treatment plant. Un-metered flows include fire hydrant testing and system losses. It is anticipated that the un-metered flows will decrease over time.

Currently un-metered flows and system losses account for approximately 6.6% of the total flows. It is anticipated that this will be reduced to 3% over the next 20 years. The treated water flows from 2005 to 2010 decreased 13%.

Residential water usage comprises approximately 55% of the total amount of water that is billed by the city. Multiple family housing units (apartments, duplexes) use a further 20%, thereby bringing the portion consumed by residences to approximately 75% of the total water.

Figure 10 shows the total average daily water demand by month for 2010. During winter months, production levels average less than 2 mgd, but climbs to nearly 5 mgd during summer months. Figure 9 shows the average daily per capita demand by month. Summer water usage frequently exceeds 300 gpcd while winter consumption is less than 180 gpcd.

Water Conservation Bill of 2009 (SBX7-7)

The Water Conservation Bill of 2009 (SBX7-7) is one of four policy bills enacted as part of the November 2009 Comprehensive Water Package (Special Session Policy Bills and Bond Summary). The Water Conservation Bill of 2009 provides the regulatory framework to support the statewide reduction in urban per capita water use described in the 20x2020 Water Conservation Plan (DWR and others 2010). It also addresses agricultural water and commercial, industrial, and institutional (CII) water use.

Method 1 was used to calculate the target per capita water use.

Before California can achieve the Final 2020 Statewide Target of 154 GPCD, each water supplier must determine and report its existing baseline water consumption and establish either its own or cooperative targets. This reporting is to begin with the 2010 UWMP, which is required by the Water Conservation Bill of 2009.

SBX7-7 describes what is required of water suppliers to identify their water conservation targets and track their progress toward achieving those targets. It also requires that water suppliers document and report targets and progress in UWMPs (CWC §10608.20(e)).

| Table 14 | | | | |
|---|----------------------|---------------------------------------|---|---|
| Base daily per capita water use — 10- to 15-year range | | | | |
| Base period year | | Distribution System Population | Daily system gross water use (mgd) | Annual daily per capita water use (gpcd) |
| Sequence Year | Calendar Year | | | |
| Year 1 | 2001 | 12,545 | 4.112 | 328 |
| Year 2 | 2002 | 13,028 | 4.323 | 332 |
| Year 3 | 2003 | 12,724 | 3.786 | 298 |
| Year 4 | 2004 | 13,540 | 3.673 | 271 |
| Year 5 | 2005 | 13,619 | 3.431 | 252 |
| Year 6 | 2006 | 13,334 | 3.706 | 278 |
| Year 7 | 2007 | 13,461 | 3.480 | 259 |
| Year 8 | 2008 | 13,958 | 3.325 | 238 |
| Year 9 | 2009 | 13,647 | 3.289 | 241 |
| Year 10 | 2010 | 13,839 | 3.357 | 243 |
| Base Daily Per Capita Water Use¹ | | | | 274 |

Figure 11 - Ten Year Average Per Capita per Day Use Data

The City does not use recycled water and therefore no deductions for recycled water was used. The Base Daily Per Capita Water Use is 274.

| Table 13 | | | |
|----------------------------|--|--------------|--------------|
| Base period ranges | | | |
| Base | Parameter | Value | Units |
| 10- to 15-year base period | 2008 total water deliveries | 1,213.76 | see below |
| | 2008 total volume of delivered recycled water | 0 | see below |
| | 2008 recycled water as a percent of total deliveries | 0 | percent |
| | Number of years in base period ¹ | 10 | years |
| | Year beginning base period range | 2001 | |
| | Year ending base period range ² | 2010 | |
| 5-year base period | Number of years in base period | 5 | years |
| | Year beginning base period range | 2003 | |
| | Year ending base period range ³ | 2007 | |

Units (circle one): acre-feet per year

¹If the 2008 recycled water percent is less than 10 percent, then the first base period is a continuous 10-year period. If the amount of recycled water delivered in 2008 is 10 percent or greater, the first base period is a continuous 10- to 15-year period.

²The ending year must be between December 31, 2004 and December 31, 2010.

³The ending year must be between December 31, 2007 and December 31, 2010.

Figure 12 – TABLE 13 Base period ranges

The following is a map of the California Hydrologic Regions and 2020 Conservation Goals. The City is located in the Colorado River Region with a goal of 211gpcd by 2020.



Figure 13 - California Hydrologic Regions and 2020 Conservation Goals

| | |
|--|------------|
| METHOD 1: City of Blythe Urban Water Use Target (80 percent of the 10 year average per capita per day use in gallons) | 218 |
|--|------------|

Figure 14 - 2020 Urban Water Use Target for the City of Blythe – METHOD 1

The State of California determined that the minimum conservation goals among the different hydrologic areas. For the Colorado River Region, in which the city resides, the per capita per day is 211gcpd. The following table lists five consecutive years of per capita use from 2003-2007. The 5-year Base Daily Per Capita Use is 274:

| Table 15 | | | | |
|--|---------------|--------------------------------|------------------------------------|--|
| Base daily per capita water use — 5-year range | | | | |
| Base period year | | Distribution System Population | Daily system gross water use (mgd) | Annual daily per capita water use (gpcd) |
| Sequence Year | Calendar Year | | | |
| Year 1 | 2003 | 12,942 | 3.786 | 292 |
| Year 2 | 2004 | 13,059 | 3.673 | 281 |
| Year 3 | 2005 | 13,325 | 3.431 | 258 |
| Year 4 | 2006 | 13,278 | 3.706 | 279 |
| Year 5 | 2007 | 13,333 | 3.480 | 261 |
| Base Daily Per Capita Water Use¹ | | | | 274 |

Figure 15 TABLE 15 Base daily per capita water use – 5-year range

| | |
|---|------------|
| METHOD 3: 5-Year Base Daily Per Capita Water Use (95 percent of the five year average per capita per day use in gallons) | 260 |
|---|------------|

Figure 16 - Method 3: 95% of Average Per Capita Use (Five Year Period)

Since 95% of the five year running average is 260, which is more than 80% of the 10 year per capita use. The Urban Water Use Target is the lower of the two, **218 gallons** per day per capita. The City will elect to use Method 1 to determine the Urban Water Use Target.

The Interim Urban Water Use Target for 2015 was calculated using the average of the base line (274gcpd) and 2020 Urban Water Use Target (218gcpd):

| | |
|---|------------|
| Interim Urban Water Use Target for 2015 (average between the Base Line and Urban Water Use Target) | 246 |
|---|------------|

Figure 17 - Interim Urban Water Use Target for 2015

Water Demands

Quantify, to the extent records are available, past and current water use, and projected water use (over the same five-year increments described in subdivision (a)), identifying the uses among water use sectors, including, but not necessarily limited to, all of the following uses: (A) Single-family residential; (B) Multifamily; (C) Commercial; (D) Industrial; (E) Institutional and governmental; (F) Landscape; (G) Sales to other agencies; (H) Saline water intrusion barriers, groundwater recharge, or conjunctive use, or any combination thereof; (I) Agricultural (10631(e)(1) and (2)).

| Table 3 | | | | | |
|---|----------------|--------|--------------------|--------|--------------|
| Water deliveries — actual, 2005 in MG/year | | | | | |
| | 2005 | | | | |
| | Metered | | Not metered | | Total |
| Water use sectors | # of accounts | Volume | # of accounts | Volume | Volume |
| Single family | 2741 | 636.5 | 0 | | 636.5 |
| Multi-family | 205 | 217.5 | 0 | | 217.5 |
| Commercial | 354 | 243.9 | 0 | | 243.9 |
| Industrial | 3 | 3.5 | 0 | | 3.5 |
| Institutional/governmental | 0 | 0.0 | 0 | | 0.0 |
| Landscape | 88 | 63.0 | 2 | 68.0 | 131.0 |
| Agriculture | 0 | 0.0 | 0 | | 0.0 |
| Total | 3398 | 1165 | 2 | 68 | 1233 |

Units (circle one): million gallons per year

Figure 18 - TABLE 3 Water deliveries - actual, 2005

| Table 4 | | | | | |
|--|----------------------|---------------|----------------------|---------------|---------------|
| Water deliveries — actual, 2010, in MG/year | | | | | |
| | 2010 | | | | |
| | Metered | | Not metered | | Total |
| Water use sectors | # of accounts | Volume | # of accounts | Volume | Volume |
| Single family | 2752 | 539.7 | 0 | | 539.7 |
| Multi-family | 207 | 121.5 | 0 | | 121.5 |
| Commercial | 334 | 171.0 | 0 | | 171.0 |
| Industrial | 3 | 1.6 | 0 | | 1.6 |
| Institutional/governmental | 0 | 0.0 | 0 | | 0.0 |
| Landscape | 102 | 70.2 | 2 | 169.0 | 239.2 |
| Agriculture | 0 | 0.0 | 0 | | 0.0 |
| Other | 4 | 0.7 | 0 | | 0.7 |
| Total | 5436 | 904.7 | 0 | 169.0 | 1073.7 |

Units (circle one): million gallons per year

Figure 19 - TABLE 4 Water deliveries - actual, 2010

| Year | DoF Blythe Population Estimates | Average Per Capita Per Day Use (Gallons) | Calculated Gross Water Use (Million Gallons) | Calculated Estimated Daily Water Use (Gallons Per Day) Average |
|------|---------------------------------|--|--|--|
| 2015 | 14,653 | 246 | 1,315.693 | 3,604,638 |
| 2020 | 15,569 | 218 | 1,238.825 | 3,394,042 |
| 2025 | 16,542 | 218 | 1,316.247 | 3,606,156 |
| 2030 | 17,576 | 218 | 1,398.522 | 3,831,568 |

Figure 20 – Calculated Projected Gross Water Use using Per Capita

The projected gross water use through 2030 was calculated using the calculated reduced demand SB7x7 per capita values.

| Table 5 | | | | | |
|--|----------------------|---------------|----------------------|---------------|---------------|
| Water deliveries — projected, 2015 in MG/year | | | | | |
| | 2015 | | | | |
| | Metered | | Not metered | | Total |
| Water use sectors | # of accounts | Volume | # of accounts | Volume | Volume |
| Single family | 2,924 | 665 | 0 | | 665 |
| Multi-family | 220 | 147 | 0 | | 147 |
| Commercial | 355 | 205 | 0 | | 205 |
| Industrial | 3 | 2 | 0 | | 2 |
| Institutional/governmental | 0 | 0 | 0 | | 0 |
| Landscape | 108 | 245 | 0 | | 245 |
| Agriculture | 0 | 0 | 0 | | 0 |
| Other | 4 | 1 | 0 | | 1 |
| Total | 3,615 | 1,264 | 0 | 0 | 1,264 |

Units (circle one): million gallons per year

Figure 21 - TABLE 5 Water deliveries - projected, 2015

| Table 6 | | | | | |
|--|----------------------|---------------|----------------------|---------------|---------------|
| Water deliveries — projected, 2020 in MG/year | | | | | |
| | 2020 | | | | |
| | Metered | | Not metered | | Total |
| Water use sectors | # of accounts | Volume | # of accounts | Volume | Volume |
| Single family | 3,107 | 626 | 0 | | 626 |
| Multi-family | 234 | 135 | 0 | | 135 |
| Commercial | 377 | 195 | 0 | | 195 |
| Industrial | 3 | 2 | 0 | | 2 |
| Institutional/governmental | 0 | 0 | 0 | | 0 |
| Landscape | 115 | 245 | 0 | | 245 |
| Agriculture | 0 | 0 | 0 | | 0 |
| Other | 5 | 1 | 0 | | 1 |
| Total | 3,841 | 1,204 | 0 | 0 | 1,204 |

Units (circle one): million gallons per year

Figure 22 - TABLE 6 Water deliveries - projected, 2020

| Table 7 | | | | |
|---|----------------------|---------------|----------------------|---------------|
| Water deliveries — projected 2025, 2030 in MG/year | | | | |
| | 2025 | | 2030 | |
| | metered | | metered | |
| Water use sectors | # of accounts | Volume | # of accounts | Volume |
| Single family | 3,301 | 655 | 3,507 | 698 |
| Multi-family | 248 | 155 | 264 | 165 |
| Commercial | 401 | 213 | 426 | 242 |
| Industrial | 4 | 4 | 4 | 7 |
| Institutional/governmental | 0 | 0 | 0 | 0 |
| Landscape | 122 | 260 | 130 | 264 |
| Agriculture | 0 | 0 | 0 | 0 |
| Other | 5 | 1 | 5 | 1 |
| Total | 4,081 | 1,288 | 4,336 | 1,376 |

Figure 23 - TABLE 7 Water deliveries - projected 2025, 2030

| Table 9 | | | | | | |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| Sales to other water agencies, in MG/year | | | | | | |
| Water distributed | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| None | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 |

Units (circle one): million gallons per year

Figure 24 – TABLE 9 Sales to other water agencies

| Table 10 | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Additional water uses and losses, in MG/year | | | | | | |
| Water use¹ | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Saline barriers | 0 | 0 | 0 | 0 | 0 | 0 |
| Groundwater recharge | 0 | 0 | 0 | 0 | 0 | 0 |
| Conjunctive use | 0 | 0 | 0 | 0 | 0 | 0 |
| Raw water | 0 | 0 | 0 | 0 | 0 | 0 |
| Recycled water | 0 | 0 | 0 | 0 | 0 | 0 |
| System losses | 19 | 151 | 62 | 51 | 46 | 42 |
| Other (define) | | | | | | |
| Total | 19 | 151 | 62 | 51 | 46 | 42 |

Figure 25 – TABLE 10 Additional water uses and losses

| Table 11 | | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| Total water use, in MG/year | | | | | | |
| Water Use | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Total water deliveries (from Tables 3 to 7) | 1,233 | 1,074 | 1,264 | 1,204 | 1,288 | 1,376 |
| Sales to other water agencies (from Table 9) | 0 | 0 | 0 | 0 | 0 | 0 |
| Additional water uses and losses (from Table 10) | 19 | 151 | 62 | 51 | 46 | 42 |
| Total | 1,252 | 1,225 | 1,326 | 1,255 | 1,334 | 1,418 |

Figure 26 - TABLE 11 Total water use

The water use projections required by Section 10631 shall include projected water use for single-family and multifamily residential housing needed for lower income households, as defined in Section 50079.5 of the Health and Safety Code, as identified in the housing element of any city, county, or city and county in the service area of the supplier (10631.1(a)).

There are 536 very low income and 249 extremely low income units in the City of Blythe, according to the Housing Element adopted November 17, 2009. These are anticipated to increase by 1.25% each year. The demand was projected using the 2015 and 2020 per capita demand calculated in this document. Flows for 2025 and 2030 were estimated using a 1.25% growth per year.

To estimate the projected water demands the units are multiplied by 3.0 (# of capita per household per Census data) and the Urban Water Target for 2015 and 2020 respectively.

2015

Extremely low income:

536 units * 3.0 cap/unit * 246 gallon/cap/day = 395,568 gallon/day or

144.3 million gallons per year

Very low income:

249 units * 3.0 cap/unit * 246 gallon/cap/day = 183,762 gallon/day or

67.1 million gallons per year

2020

Extremely low income:

570 units * 3.0 cap/unit * 218 gallon/cap/day = 372,780 gallon/day or
136 million gallons per year

Very low income:

264 units * 3.0 cap/unit * 218 gallon/cap/day = 172,656 gallon/day or
63 million gallons per year

Growth for both extremely low and very low incomes was estimated at 1.25% per year, and the Urban Water Target is 218gpcd.

According to the City of Blythe, the extremely low income was attributed to Multi-Family housing, and very low income was attributed to Single-Family housing.

| Table 8 | | | | |
|---|-------------|-------------|-------------|-------------|
| Low-income projected water demands | | | | |
| Low Income Water Demands¹ | 2015 | 2020 | 2025 | 2030 |
| Single-family residential | 67 | 63 | 67 | 71 |
| Multi-family residential | 144 | 136 | 145 | 154 |
| Total | 211 | 199 | 211 | 225 |
| <i>Units (circle one): million gallons per year</i> | | | | |
| <i>¹Provide demands either as directly estimated values or as a percent of demand.</i> | | | | |

Figure 27 - TABLE 8 Low-income projected water demands

Water Demand Projections

Urban water suppliers that rely upon a wholesale agency for a source of water shall provide the wholesale agency with water use projections from that agency for that source of water in five-year increments to 20 years or as far as data is available. The wholesale agency shall provide information to the urban water supplier for inclusion in the urban water supplier's plan that identifies and quantifies, to the extent practicable, the existing and planned sources of water as required by subdivision (b), available from the wholesale agency to the urban water supplier over the same five-year increments, and during various water-year types in accordance with subdivision (c). An urban water supplier may rely upon water supply information provided by the wholesale agency in fulfilling the plan informational requirements of subdivisions (b) and (c) (10631(k)).

| Table 12 Retail agency demand projections provided to wholesale suppliers Units are in MG per Year | | | | | | |
|--|--------------------------------|------|------|------|------|------|
| Wholesaler | Contracted Volume ³ | 2010 | 2015 | 2020 | 2025 | 2030 |
| None | No Contract | 0 | 0 | 0 | 0 | 0 |

Figure 28 - TABLE 12 Retail agency demand projections provided to wholesale suppliers

The above table includes estimates for demand projections for the City until 2030. The City does not anticipate purchasing water from a wholesale supplier.

Water Use Reduction Plan

Urban wholesale water suppliers shall include in the urban water management plans . . . an assessment of their present and proposed future measures, programs, and policies to help achieve the water use reductions required by this part (10608.36). Urban retail water suppliers are to prepare a plan for implementing the Water Conservation Bill of 2009 requirements and conduct a public meeting which includes consideration of economic impacts (CWC §10608.26).

Implementation of the Water Conservation Bill of 2009 Requirements

The City's implementation shall consist of a number of the following actions:

- 1) Conservation Coordinator – The City shall designate a person as the City's responsible conservation coordinator for program management, tracking, planning, and reporting on BMP implementation. This may be a regional position.
- 2) Water waste prevention

- a) New development – The City shall enact, enforce, or support legislation, regulations, ordinances, or terms of service that (1) prohibit water waste such as, but not limited to: single-pass cooling systems; conveyer and in-bay vehicle wash and commercial laundry systems which do not reuse water; non-recirculating decorative water fountains and (2) address irrigation, landscape, and industrial, commercial, and other design inefficiencies.
 - b) Existing users – The City shall enact, enforce, or support legislation, regulations, ordinances, or terms of service that prohibit water waste such as, but not limited to: landscape and irrigation inefficiencies, commercial or industrial inefficiencies, and other misuses of water.
 - c) Water shortage measures – The City shall Enact, enforce, or support legislation, regulations, ordinances, or terms of service that facilitate implementation of water shortage response measures.
- 3) Public Information Program - The City will implement a public information program to promote water conservation and water conservation-related benefits. Implementation shall consist of at least the following actions:
- a) The program shall include, when possible, but is not limited to, providing speakers to employees, community groups and the media; using paid and public service advertising; using bill inserts; providing information on customers' bills showing use for the last billing period compared to the same period the year before; providing public information to promote water conservation measures; and coordinating with other government agencies, industry groups, public interest groups, and the media.
 - b) The program shall include, when possible, social marketing elements which are designed to change attitudes to influence behavior. This includes seeking input from the public to shape the water conservation message; training stakeholders outside the utility staff in water conservation priorities and techniques;

and developing partnerships with stakeholders who carry the conservation message to their target markets.

- 4) Residential assistance program – The City shall provide site-specific leak detection assistance that may include, but is not limited to, the following: a water conservation survey, water efficiency suggestions, and/or inspection.
- 5) Landscaping water survey – The City shall perform site-specific landscape water surveys that shall include, but are not limited to, the following: check irrigation system and timers for maintenance and repairs needed; estimate or measure landscaped area; develop customer irrigation schedule based on precipitation rate, local climate, irrigation system performance, and landscape conditions; review the scheduling with customer; provide information packet to customer; and provide customer with evaluation results and water savings recommendations.
- 6) High-efficiency clothes washers (HECWs) – The City shall provide incentives or institute ordinances requiring the purchase of high-efficiency clothes washing machines (HECWs) that meet an average water factor value of 5.0. If the WaterSense specification is less than 5.0, then the average water factor value will decrease to that amount.
- 7) WaterSense Specification (WSS) toilets – The City shall provide incentives or ordinances requiring the replacement of existing toilets using 3.5 or more gpf (gallons per flush) with a toilet meeting WSS.
- 8) WaterSense Specifications for residential development – The City shall provide incentives such as, but not limited to, rebates, recognition programs, or reduced connection fees, or ordinances requiring residential construction meeting WSS for single-family and multi-family housing until a local, state or federal regulation is passed requiring water efficient fixtures.
- 9) Standard Water Audit and Water Balance. The City shall quantify their current volume of apparent and real water loss. The City shall complete the standard water audit and balance using the AWWA Water Loss software to determine their current volume of apparent and real water loss and the cost impact of these losses on utility operations at no less than annual intervals.

- a. Validation. The City may use up to four years to develop a validated data set for all entries of their water audit and balance. Data validation shall follow the methods suggested by the AWWA Software to improve the accuracy of the quantities for real and apparent losses.
 - b. Interventions. The City shall reduce real losses to the extent cost-effective. The City shall refer to the AWWA's 3rd Edition M36 Publication, *Water Audits and Loss Control Programs* (2009) for specific methods to reduce system losses.
 - c. Customer Leaks. The City shall advise customers whenever it appears possible that leaks exist on the customer's side of the meter.
 - d. The City shall seek training in the AWWA water audit method and component analysis process (offered by CUWCC or AWWA) during the first four years of BMP implementation. They shall complete a component analysis of real losses by the end of the fourth year, and update this analysis no less frequently than every four years.
- 10) The City shall repair all reported leaks and breaks to the extent cost effective. By the end of the second year, The City shall establish and 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. By the end of the fourth year, The City shall include estimated leakage volume from report to repair, and cost of repair (including pavement restoration costs and paid-out damage claims, if any).
- 11) The City shall locate and repair unreported leaks to the extent cost effective.

Implementation Schedule

- 1) Implementation shall commence upon adoption of the 2010 UWMP.
 - a) July 1, 2011 through June 30, 2012 will be the first year of implementation;
- 2) A benchmark for the performance indicator in terms of water loss standards will be determined after the first 4 years data collected based upon the data reported by the City.

The Water Wiser Software can be found at:

<http://www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=48511&navItemNumber=48158&showLogin=N>

Description of AWWA's Free Water Audit Software

The AWWA Water Loss Control Committee is pleased to offer Version 4.2 (June 2010 release) of its own Free Water Audit Software, available to all users. This page provides a gateway for water utility personnel and any other interested parties to download and use the software and provide feedback to the Water Loss Control Committee. The committee hopes you will find this software, in Microsoft Excel format, to be a useful and easy way to compile a basic audit of water supply and billing operations.

The Free Water Audit Software is not intended to provide a full and detailed water audit. For guidance on comprehensive auditing procedures see AWWA's M36 publication Water Audits and Loss Control Programs. However, the software allows water utilities to quickly compile a preliminary audit in the standardized and transparent manner advocated by AWWA.

How the Water Audit Software Works

The Free Water Audit Software includes ten worksheets in a spreadsheet file. The first worksheet provides instructions on the use of the software. The majority of data is entered on the second worksheet – The Reporting Worksheet – which prompts the user to enter standard water supply information such as the volume of water supplied, customer consumption, distribution system attributes and quantities of losses. Knowing that many water utilities don't typically tabulate all of this data, the software allows the user to enter either known (measured) or estimated (quantities that must be approximated) values. The software then calculates a variety of performance indicators which are useful in making performance comparisons among water utilities.

Data Grading Capability

The most important new functionality upgrade in Version 4.2 is the data grading capability. This feature provides a basic validation of the results from the Reporting Worksheet. Each of the data inputs on the Reporting Worksheet has an input box to accept a grading value ranging from 1 to 10. A grading of 10 represents highly

reliable, well validated data, while a grade of 1 reflects very crude data such as rough estimates. Each grading is identified by specific criteria listed on the Grading Matrix Worksheet, or the auditor may simply hover over the data grading input cell to display the criteria.

Once all the grading cells have been entered, a composite grading score is calculated and displayed at the bottom of the Reporting Worksheet. The composite grading is based upon a scale of 100; this score can then be used to assess a basic validation for the audit. The auditor can determine the status of the utility's data quality by reviewing the Loss Control Planning Worksheet. This worksheet provides planning guidance to the water utility. Utilities with a lower composite grading should focus program efforts on data collection and validation until the overall data quality becomes more reliable. Utilities with higher composite gradings can trust their data to serve as the basis for budgetary decisions on major loss control initiatives such as leakage management controls or wholesale customer meter replacement. Reliable data can also be benchmarked against data from other utilities with reliable data.

An additional function on the Reporting Worksheet includes a priority listing of the most important three variables to target to improve the validity of the water audit data.

Section 4 - System Supplies

Water Sources

Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a) (10631(b)).

| Table 16 Water supplies — current and projected | | | | | | |
|--|-------------------------------------|-------------|-------------|-------------|-------------|-------------|
| Water Supply Sources | | 2010 | 2015 | 2020 | 2025 | 2030 |
| Water purchased from ¹ : | Wholesaler supplied volume (yes/no) | | | | | |
| | None | No | 0 | 0 | 0 | 0 |
| Supplier-produced groundwater ² | | 2500 | 2500 | 2500 | 2500 | 2500 |
| Supplier-produced surface water | | 0 | 0 | 0 | 0 | 0 |
| Transfers in | | 0 | 0 | 0 | 0 | 0 |
| Exchanges In | | 0 | 0 | 0 | 0 | 0 |
| Recycled Water | | 0 | 0 | 0 | 0 | 0 |
| Desalinated Water | | 0 | 0 | 0 | 0 | 0 |
| Other | | | | | | |
| Other | | | | | | |
| Total | | 2500 | 2500 | 2500 | 2500 | 2500 |

Units (circle one): Million Gallons per year

¹ Volumes shown here should be what was purchased in 2010 and what is anticipated to be purchased in the future. If these numbers differ from what is contracted, show the contracted quantities in Table 17.

² Volumes shown here should be consistent with Tables 17 and 18.

Figure 29 - TABLE 16 Water supplies - current and projected

The water supply available to the city is determined by the well 18 and 19 output (only one operating at a time at 1,500 gpm), the water treatment plant capacity and well 11 (1,000 gpm). The other active wells (15 and EB-4) were not counted in the capacity because the city is unsure at this time whether those wells will continue to be active.

| Table 17 Wholesale supplies — existing and planned sources of water | | | | | |
|--|--------------------------------|------|------|------|------|
| Wholesale sources ^{1,2} | Contracted Volume ³ | 2015 | 2020 | 2025 | 2030 |
| None | No Contract | 0 | 0 | 0 | 0 |

Units (circle one): acre-feet per year

¹Water volumes presented here should be accounted for in Table 16.
²If the water supplier is a wholesaler, indicate all customers (excluding individual retail customers) to which water is sold. If the water supplier is a retailer, indicate each wholesale supplier, if more than one.
³Indicate the full amount of water

Figure 30 – TABLE 17 Wholesale supplies – existing and planned sources of water

Groundwater

(Is) groundwater . . . identified as an existing or planned source of water available to the supplier . . . (10631(b))?

The City obtains its own groundwater from the Palo Verde Valley Groundwater Basin.

(Provide a) copy of any groundwater management plan adopted by the urban water supplier, including plans adopted pursuant to Part 2.75 (commencing with Section 10750), or any other specific authorization for groundwater management (10631(b)(1)).

The City does not have a groundwater management plan.

(Provide a) description of any groundwater basin or basins from which the urban water supplier pumps groundwater (10631(b)(2)).

Palo Verde Valley Groundwater Basin

Groundwater Basin Number: 7-38

Surface Area: 128,000 acres (200 square miles)

Basin Boundaries and Hydrology

The Palo Verde Valley Basin is located in the southeastern part of California along the state border with Arizona. The eastern boundary of the basin is the Colorado River, which also defines the state border. The Palo Verde Dam and the Big Maria Mountains bound the basin on the north. The Palo Verde Mesa abuts the western boundary and the Palo Verde Mountains bound the southern part of the basin. Surface and groundwater drain to the Colorado River.

Hydrogeologic Information

The principal water-bearing deposits in this basin are alluvium, the Bouse Formation, and a fanglomerate deposit (Metzger 1973).

Alluvium. The alluvial deposits range in age from Pliocene to Holocene, compose the shallow floodplain aquifer, and are the principal source of groundwater in the basin (Owen-Joyce 1984). The alluvium is composed of sand, silt, and clay with lenses of gravel, and ranges in thickness from 160 to 600 feet. Most wells in the basin are screened in the coarser grained deposits and have moderate to high yields (Metzger 1973).

Bouse Formation. The upper Miocene to Pliocene age Bouse Formation underlies the alluvial deposits. Few wells produce from the formation except near the City of Blythe. The upper Bouse Formation ranges from 500 to 600 feet below land surface and consists of interbedded clay, silt, and sand. The upper Bouse Formation is considered an aquifer while the lower formation is considered an aquitard. Well yields can be variable depending on the degree of formation consolidation and stratigraphic location of the perforations (Metzger 1973).

Fanglomerate. A Miocene age fanglomerate is considered a water bearing deposit, though no wells are known to have been completed in it because of its relative depth to other water bearing deposits. Estimated depth to the top of fanglomerate can be greater than 800 feet below land surface but varies widely throughout the basin (Metzger 1973).

Restrictive Structures

Some small scale normal faulting has occurred in the area; however, the affects on groundwater movement by faulting is unknown.

For those basins for which a court or the board has adjudicated the rights to pump groundwater, (provide) a copy of the order or decree adopted by the court or the board (10631(b)(2)).

The Palo Verde Irrigation District (PVID) contains almost 131,300 acres of rural agricultural land, land within the City of Blythe, and undeveloped desert land. Every taxable parcel within the PVID boundaries pays an annual tax assessment for the operation of the district and for protection of the district's water right. Valley land feasible to irrigate and mesa land using water diverted from the River pay PVID a per acre water toll in addition to the annual assessment.

PVID's right to use water from the Colorado River in California dates from 1877 when Thomas Blythe started making water filings to develop land in the Palo Verde Valley. That right was reaffirmed by the California agencies that signed the August 18, 1931 Seven Party apportionment agreement. PVID does not hold a "water right" as that term is commonly used. Instead, PVID is a party to a 1933 Water Delivery Contract with the United States. The contract grants to the land within the district a priority among California agencies to use water from the Colorado River. Other legislation, contracts, compacts, and court rulings known collectively as the "Law of the River" confirm the rights of various states and agencies, including PVID, to the waters of the Colorado River.

The Supreme Court's decree in Arizona v. California in 1964 and later decisions legally defined the ground water under the Palo Verde Valley and a portion under the Palo Verde Mesa, as "Colorado River" water thus requiring a contract with the Bureau of Reclamation to legally use it. Since PVID's contract does not specifically pertain to groundwater, PVID has no obligation to restrict or regulate non-agricultural wells, including those wells operated by the City of Blythe. It can be argued that there is no material difference if the City of Blythe takes ground water from its wells or takes essentially the same water from PVID's delivery system. However, PVID and the City of Blythe have not entered a formal agreement pertaining to the city's groundwater pumping.

(Provide a) detailed description and analysis of the location, amount, and sufficiency of groundwater pumped by the urban water supplier for the past five years. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(3)).

Groundwater Storage

The total storage capacity of the Palo Verde Valley Groundwater Basin is estimated at 4,960,000 acre feet. In addition, the Colorado River recharges the shallow aquifer by seepage in some reaches and by diversions from the Colorado River in the form of seepage from canals and irrigated land (Metzger 1973).

In the 1960's PVID installed a deep drainage system that lowered the groundwater from an average of five feet to the present day valley average of 10 feet. The groundwater levels have tended to remain relatively stable in the basin due to PVID's drainage system (Owen-Joyce 1984). The City has not seen any reduction in the groundwater table from approximately 10 feet.

Bulletin 118 – Update 2003 does not indicate any potential overdraft of the Palo Verde Valley Groundwater Basin.

| Table 18 | | | | | | |
|---|---|-------------|-------------|-------------|-------------|-------------|
| Groundwater — volume pumped | | | | | | |
| Basin name(s) | Metered or Unmetered¹ | 2006 | 2007 | 2008 | 2009 | 2010 |
| Palo Verde Valley Groundwater Basin | Metered | 1,353 | 1,270 | 1,214 | 1,201 | 1,225 |
| Total groundwater pumped | | 1,353 | 1,270 | 1,214 | 1,201 | 1,225 |
| Groundwater as a percent of total water supply | | 100% | 100% | 100% | 100% | 100% |

Units (circle one): million gallons per year
¹Indicate whether volume is based on volumetric meter data or another method

Figure 31 - TABLE 18 Groundwater - volume pumped

(Provide a) detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the urban water supplier. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historic use records (10631(b)(4)).

| Table 19 | | | | |
|--|-------------|-------------|-------------|-------------|
| Groundwater — volume projected to be pumped | | | | |
| Basin name(s) | 2015 | 2020 | 2025 | 2030 |
| Palo Verde Valley Groundwater Basin | 1,225 | 1,316 | 1,239 | 1,316 |
| Total groundwater pumped | 1,225 | 1,316 | 1,239 | 1,316 |
| Percent of total water supply | 100% | 100% | 100% | 100% |

Units (circle one): million gallons per year
 Include future planned expansion

Figure 32 - TABLE 19 Groundwater - volume projected to be pumped

| Water Supply Groundwater Wells - Active and Standby | | | | | |
|--|---------------------|-------------------|-----------------------|-------------------------------|---------------|
| Well # | Year drilled | Depth (ft) | Capacity (gpm) | Quality | Status |
| 7 | 1956 | 350 | 398 | high Mn | STANDBY |
| 8 | 1950 | 382 | 401 | high Mn | STANDBY |
| 10 | 1958 | 400 | 348 | high Mn | STANDBY |
| 11 | 1965 | 725 | 1,000 | High Mn, Fe, turbidity, color | ACTIVE |
| 12 | 1972 | 554 | 500 | high Mn, Fe | STANDBY |
| 13 | 1973 | 602 | 589 | high Mn, Fe, color | STANDBY |
| 14 | 1973 | 682 | 550 | high Mn | STANDBY |
| 15 | 1974 | 568 | 428 | high Mn | ACTIVE |
| EB - 4 | 1966 | 472 | 450 | high Mn | ACTIVE |
| EB - 5 | 1966 | 470 | 375 | high Mn, Fe, color | STANDBY |
| 18 | 2006 | 600 | 1,500 | Treatment Facilities | ACTIVE |
| 19 | 2006 | 600 | 1,500 | Treatment Facilities | ACTIVE |
| | | | 4,878 | Active Flow | |

Figure 33 – Water Supply Groundwater Wells Active and Standby

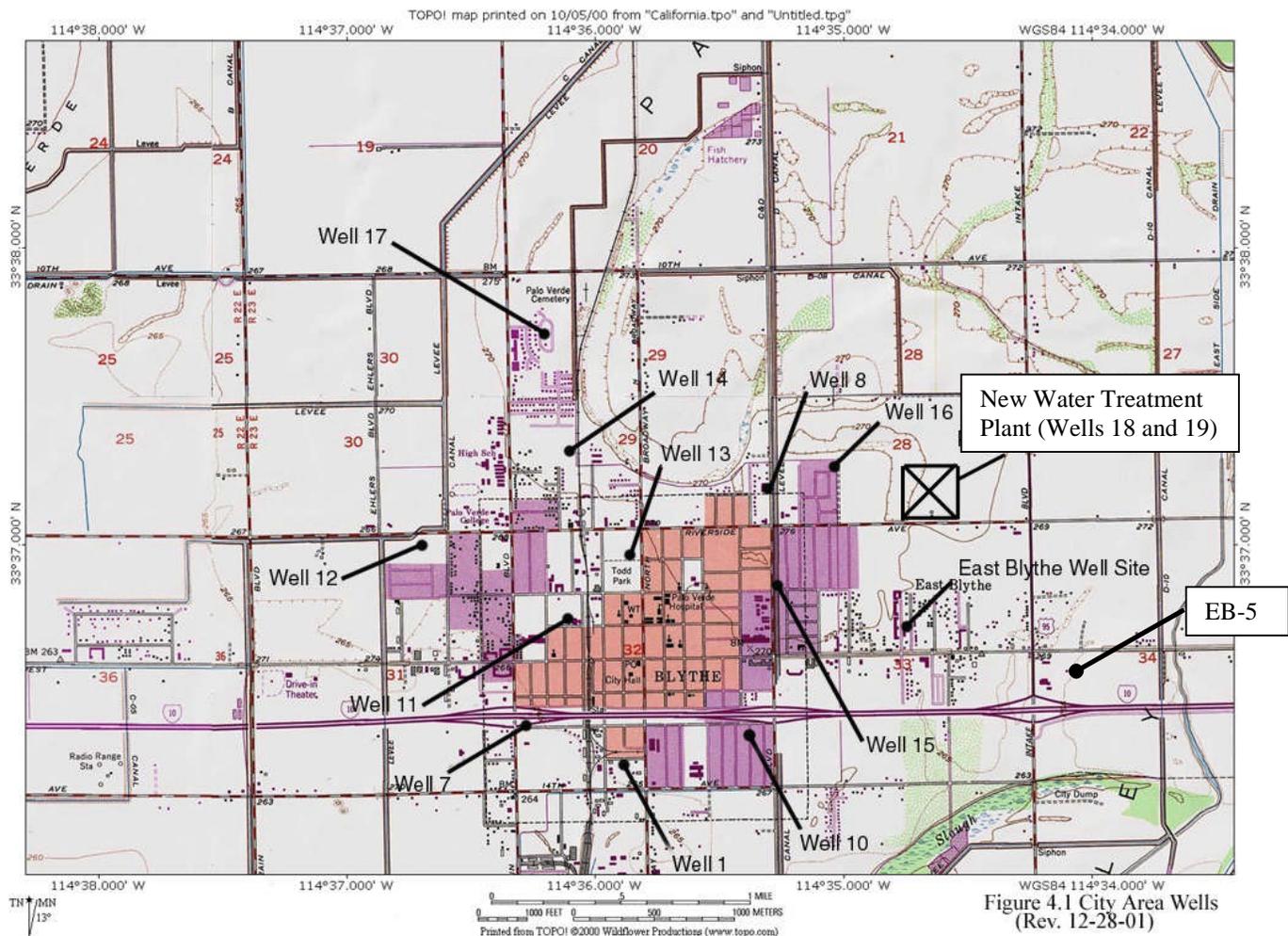


Figure 34 - Locations of Groundwater Wells Blythe Proper

The “Proposed Well Site” shown in this illustration is the location of the new water treatment plant and Wells 18 and 19. Well numbers not shown in Figure 33 have been abandoned. The “East Blythe Well Site” is EB-4.

Transfer or Opportunities

Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (10631(d))

The City does not have plans to exchange or transfer water, and there are no known exchange opportunities.

| Table 20 | | | |
|---|-----------------------------|--------------------------------|------------------------|
| Transfer and exchange opportunities | | | |
| Transfer agency | Transfer or exchange | Short term or long term | Proposed Volume |
| None | 0 | 0 | 0 |
| Total | 0 | 0 | 0 |
| <i>Units (circle one): acre-feet per year</i> | | | |

Figure 35 - TABLE 20 Transfer and exchange opportunities

Development of Desalinated Water

Describe the opportunities for development of desalinated water, including, but not limited to, ocean water, brackish water, and groundwater, as a long-term supply (10631(i)).

There are no known opportunities for development of desalinated water for a long-term supply in the Blythe area.

Recycled Water Opportunities

Provide, to the extent available, information on recycled water and its potential for use as a water source in the service area of the urban water supplier. The preparation of the plan shall be coordinated with local water, wastewater, groundwater, and planning agencies that operate within the supplier's service area (10633).

Recycled Water Feasibility

The City of Blythe provides sewer service and has a wastewater treatment plant which produces secondary (includes de-nitrification) treatment level wastewater. Treated waste water is discharged to percolation ponds. The use of recycled water in the City of Blythe is unlikely to be cost-effective in the near future.

The treated wastewater does not meet Title 22 Standards, and no wastewater is recycled within the City's service boundary. No wastewater is recycled for other uses. The WWTP discharges the treated waste water to percolation ponds, where it returns to the groundwater on the downslope groundwater gradient, southeast of the City. All of the City's potable water supply is pumped from the upslope groundwater gradient, northwest of the City. A groundwater aquifer receives the City's treated wastewater effluent and is used downstream.

There are no other wastewater treatment, discharge or recycle facilities or agencies within the City's service area.

(Describe) the wastewater collection and treatment systems in the supplier's service area, including a quantification of the amount of wastewater collected and treated and the methods of wastewater disposal (10633(a)).

Wastewater Collection and Treatment in Blythe

The WWTP began treating wastewater in the 1940's. The WWTP was upgraded in 1977 to a secondary level of treatment. In 1995, the WWTP was further upgraded, so that all wastewater is now treated to a secondary level with denitrification.

The City Waste Water Treatment Plant (WWTP) manages wastewater collection and treatment for the City. All of the wastewater flows from the City (including some storm water run-off) is collected and treated at the WWTP. The WWTP treats an average of 1.2 million gallons per day (mgd).

| Wastewater Treatment | | | | | |
|-----------------------------|------------------------|-----------------------------|-----------------------------|----------------------------------|-------------------------------------|
| Treatment Plant Name | Location (City) | Average Daily (2010) | Maximum Daily (2010) | Year of Planned Build-out | Planned Maximum Daily Volume |
| WWTP | Blythe | 1.2 MGD | 2.4 MGD | 2040 | 9 MGD |

(Describe) the quantity of treated wastewater that meets recycled water standards, is being discharged, and is otherwise available for use in a recycled water project (10633(b)).

| Table 21 | | | | | | |
|---|-------------|-------------|-------------|-------------|-------------|-------------|
| Recycled water — wastewater collection and treatment | | | | | | |
| Type of Wastewater | 2005 | 2010 | 2015 | 2020 | 2025 | 2030 |
| Wastewater collected & treated in service area | 460.8 | 427.6 | 510.0 | 545.5 | 615.2 | 665.1 |
| Volume that meets recycled water standard | 0 | 0 | 0 | 0 | 0 | 0 |

Units (circle one): million gallons per year

Figure 36 - TABLE 21 Recycled water - wastewater collection and treatment

(Describe) the recycled water currently being used in the supplier's service area, including, but not limited to, the type, place, and quantity of use (10633(c)).

| Table 22 | | | | | | |
|--|------------------------|-------------|-------------|-------------|-------------|-------------|
| Recycled water — non-recycled wastewater disposal | | | | | | |
| Method of disposal | Treatment Level | 2010 | 2015 | 2020 | 2025 | 2030 |
| No method currently used | None | 0 | 0 | 0 | 0 | 0 |
| Total | | 0 | 0 | 0 | 0 | 0 |

Units (circle one): acre-feet per year

Figure 37 – TABLE 22 Recycled water – non-recycled wastewater disposal

There is no current recycled water use in Blythe.

(Describe and quantify) the potential uses of recycled water, including, but not limited to, agricultural irrigation, landscape irrigation, wildlife habitat enhancement, wetlands, industrial reuse, groundwater recharge, indirect potable reuse, and other appropriate uses, and a determination with regard to the technical and economic feasibility of serving those uses (10633(d)).

| Table 23 | | | | | | |
|--|--------------------|--------------------------------|-------------|-------------|-------------|-------------|
| Recycled water — potential future use | | | | | | |
| User type | Description | Feasibility¹ | 2015 | 2020 | 2025 | 2030 |
| Agricultural irrigation | | Low | 0 | 0 | 0 | 0 |
| Landscape irrigation² | | Low | 0 | 0 | 0 | 0 |
| Commercial irrigation³ | | Low | 0 | 0 | 0 | 0 |
| Golf course irrigation | | Potential | 0 | 0 | 0 | 0 |
| Wildlife habitat | | Low | 0 | 0 | 0 | 0 |
| Wetlands | | Low | 0 | 0 | 0 | 0 |
| Industrial reuse | | Possible | 0 | 0 | 0 | 0 |
| Groundwater recharge | | Low | 0 | 0 | 0 | 0 |
| Seawater barrier | | None | 0 | 0 | 0 | 0 |
| Geothermal/Energy | | Possible | 0 | 0 | 0 | 0 |
| Indirect potable reuse | | None | 0 | 0 | 0 | 0 |
| Other (user type) | | | | | | |
| Total | | 0 | 0 | 0 | 0 | 0 |

Units (circle one): acre-feet per year

¹Technical and economic feasibility.

²Includes parks, schools, cemeteries, churches, residential, or other public facilities)

³Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries, nurseries, etc)

Figure 38 - TABLE 23 Recycled water - potential future use

Although it is not currently financially feasible for the City to provide the facilities for recycling wastewater, it may be for new industry and solar energy plants.

The City does not currently have the resources for administration, design and construction of the required facilities at the wastewater plant to treat the water to Title 22 reuse standards and distribute the water. However if the required facilities are funded by private industry and an agreement can be made with said industry over the lifespan of the facilities it may be feasible.

(Describe) the projected use of recycled water within the supplier's service area at the end of 5, 10, 15, and 20 years, and a description of the actual use of recycled water in comparison to uses previously projected pursuant to this subdivision (10633(e)).

There are currently no planned recycled water projects or recycled water use in the City for the next 20 years. It is technically feasible to treat the City's wastewater to Title 22 standards and distribute for recycled use. There are a number of uses that the recycled water can be used for locally, including golf courses, agriculture, irrigation, and industrial use.

It is not, however, currently economically feasible for the city to construct recycled water facilities. Any potential to upgrade the wastewater facilities to produce recycled water depends completely upon private financing and approved agreements between the City and developer(s).

| Table 24 | | |
|--|------------------------|---|
| Recycled water — 2005 UWMP use projection compared to 2010 actual | | |
| Use type | 2010 actual use | 2005 Projection for 2010¹ |
| Agricultural irrigation | 0 | 0 |
| Landscape irrigation ² | 0 | 0 |
| Commercial irrigation ³ | 0 | 0 |
| Golf course irrigation | 0 | 0 |
| Wildlife habitat | 0 | 0 |
| Wetlands | 0 | 0 |
| Industrial reuse | 0 | 0 |
| Groundwater recharge | 0 | 0 |
| Seawater barrier | 0 | 0 |
| Geothermal/Energy | 0 | 0 |
| Indirect potable reuse | 0 | 0 |
| Other (user type) | 0 | 0 |
| Other (user type) | | |
| Total | 0 | 0 |

Units (circle one): acre-feet per year
¹From the 2005 UWMP.
²Includes parks, schools, cemeteries, churches, residential, or other public facilities)
³Includes commercial building use such as landscaping, toilets, HVAC, etc) and commercial uses (car washes, laundries, nurseries, etc)

Figure 39 - TABLE 24 Recycled Water - 2005 UWMP use projection compared to 2010 actual

(Describe the) actions, including financial incentives, which may be taken to encourage the use of recycled water, and the projected results of these actions in terms of acre-feet of recycled water used per year (10633(f)).

| Table 25 | | | | | |
|--|--------------------------|-------------|-------------|-------------|-------------|
| Methods to encourage recycled water use | | | | | |
| Actions | Projected Results | | | | |
| | 2010 | 2015 | 2020 | 2025 | 2030 |
| Financial incentives | | | | | |
| None | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 |

Units (circle one): acre-feet per year

Figure 40 - TABLE 25 Methods to encourage recycled water use

There are no financial incentives because the city does not have the facilities to provide recycled water.

The city is open to discussions with future developers and industry regarding upgrading the wastewater treatment plant for recycled use; provided the cost of such improvements are covered by the developer and/or industry and a contract for services can be agreed upon by all involved parties for the life of the facility.

(Provide a) plan for optimizing the use of recycled water in the supplier's service area, including actions to facilitate the installation of dual distribution systems, to promote recirculating uses, to facilitate the increased use of treated wastewater that meets recycled water standards, and to overcome any obstacles to achieving that increased use (10633(g)).

A recycled water master plan has not been prepared for the City to date. Recycled water is not financially feasible at this time unless funded completely by a developer or industry. There are no current plans for installation of dual distribution systems, promotion of recirculating uses or to facilitate the increased use of treated wastewater that meets recycled water standard because it is not financially feasible at this time. The main obstacle for recycled water use is financial; upgrading the wastewater treatment facility and installing a dual distribution system is beyond the City's current resources.

The city will work with future (high water demand) developers and industry to promote the potential of funding the wastewater treatment plant upgrades and new purple pipe distribution systems.

Future Water Projects

(Describe) all water supply projects and water supply programs that may be undertaken by the urban water supplier to meet the total projected water use as established pursuant to subdivision (a) of Section 10635. The urban water supplier shall include a detailed description of expected future projects and programs, other than the demand management programs identified pursuant to paragraph (1) of subdivision (f), that the urban water supplier may implement to increase the amount of the water supply available to the urban water supplier in average, single-dry, and multiple-dry water years. The description shall identify specific projects and include a description of the increase in water supply that is expected to be available from each project. The description shall include an estimate with regard to the implementation timeline for each project or program (10631(h)).

| Table 26 Future water supply projects | | | | | | | | |
|--|----------------------|---------------------------|--|---------------------------------|-------------------------------------|--|---|--|
| Project name ¹ | Projected start date | Projected completion date | Potential project constraints ² | Normal-year supply ³ | Single-dry year supply ³ | Multiple-dry year first year supply ³ | Multiple-dry year second year supply ³ | Multiple-dry year third year supply ³ |
| No planned projects | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |
| Total | | | 0 | 0 | 0 | 0 | 0 | 0 |

Units (circle one): acre-feet per year

¹Water volumes presented here should be accounted for in Table 16.

²Indicate whether project is likely to happen and what constraints, if any, exist for project implementation.

³Provide estimated supply benefits, if available.

Figure 41 - TABLE 26 Future water supply projects

The City does not have any future water supply projects planned to increase the amount of the water supply available to the city.

Section 5 – Water Supply Reliability and Water Shortage Contingency Planning

Water Supply Reliability

An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions (10620(f)).

For any water source that may not be available at a consistent level of use, given specific legal, environmental, water quality, or climatic factors, describe plans to supplement or replace that source with alternative sources or water demand management measures, to the extent practicable (10631(c)(2)).

The main factors that can cause water supply shortages for the City are water pollution, and long term energy outages at the treatment and pumping facilities. Earthquakes are generally not a concern in the City due to its location.

| Factors resulting in inconsistency of supply | | | | | | | |
|--|------------------------------|---------------------------|-------|---------------|---------------|----------|------------------------|
| Water supply sources ¹ | Specific source name, if any | Limitation quantification | Legal | Environmental | Water quality | Climatic | Additional information |
| Palo Verde Valley Groundwater Basin | None | None | None | None | None | None | None |

Units (circle one): acre-feet per year
¹From Table 16.

Figure 42 - TABLE 29 Factors resulting in inconsistency of supply

Water Shortage Contingency Planning

Actions to be undertaken by the urban water supplier to prepare for, and implement during, a catastrophic interruption of water supplies including, but not limited to, a regional power outage, an earthquake, or other disaster (10632(c)).

Water Shortage Emergency Response

In 1991, in accordance with the requirements of Assembly Bill 11X, the City water, fire, and emergency services departments developed a comprehensive water shortage contingency plan, which was incorporated into the City’s Emergency Response Plan in early 1992. The City’s plan is consistent with provisions in the

County's Emergency Response Plan. Both plans contain procedures for the distribution of potable water in a disaster; these procedures are consistent with guidelines prepared by the California State Office of Emergency Services.

Specific water-critical customers (such as hospitals, nursing facilities, schools, and a few individual customers with medical conditions dependent on continuous water availability) have been identified. Likely potable water distribution sites have been identified. Standby procurement documents have been developed for emergency bulk purchase of bottled water; standby arrangements have also been made with several local trucking firms to provide tankers to distribute potable water (certified by the California Department of Health Services for safe transportation of potable water). All existing water supply storage, treatment, and distribution, and wastewater treatment facilities are now inspected monthly.

During a shortage the City would increase media attention to the water supply situation and would step up public water education programs, encourage property owners to apply for landscape and interior water use surveys and continue to advertise the importance of customers installing efficient plumbing fixtures.

During declared shortages, or when a shortage declaration appears imminent, the Public Works Director, who serves as chair, activates a City water shortage response team. The team includes: water, fire, planning, health, emergency services, public affairs, parks and recreation, and the Mayor's Office. The team has reviewed this 2010-updated Urban Water Management Plan. During a declared water shortage, the City will accept applications for new building permits but will not issue permits until the shortage declaration is rescinded. An appeal process is available and ends at the City Council.

Supplemental Water Supplies

The City is located on the banks of the Colorado River and a water shortage is almost inconceivable. The City is geographically isolated, has no water system connections to other areas, and has no opportunity for water transfers, wheeling or other exchanges. Other than the Colorado River and the local groundwater basin (continuously recharged by the Colorado River) the City has no possible supplemental water supplies.

In the event of extended regional power outages, the City will attempt to attain diesel fuel to maintain the operation of the standby generators that power critical functions at

the water treatment plant. The fuel would be brought in every two days. In this way the residents of Blythe would not lose supply of potable water.

In the event of an earthquake that damages critical components of the water treatment plant, the City will utilize standby wells and generators. The water could be delivered by diesel powered pumps to the City's distribution system.

Upon a catastrophic water supply reduction, mandatory provisions to reduce individual urban consumer water use will be placed into effect. During a shortage the City would increase media attention to the water supply situation and would step up public water education programs, encourage property owners to apply for landscape and interior water use surveys and continue to advertise the importance of customers installing efficient plumbing fixtures.

Additional, mandatory prohibitions against specific water use practices during water shortages, including, but not limited to, prohibiting the use of potable water for street cleaning (10632(d)).

The following restrictions shall be effective during a declared Water-Shortage Emergency:

1. There shall be no water used for irrigation or landscaping purposes.
2. There shall be no private or commercial car washing.
3. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless requested.
4. Use of potable water for construction, compaction, dust control, street or parking lot sweeping, building wash down shall be prohibited.
5. Use of potable water for sewer system maintenance or fire protection training shall be prohibited without prior approval by the Mayor;
6. Use of potable water for any purpose in excess of the amount allocated shall be prohibited.
7. Other restrictions and prohibitions may become necessary during a declared Water Shortage Emergency, to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

| Table 36 Water shortage contingency — mandatory prohibitions | |
|--|---|
| Prohibitions | Stage When Prohibition Becomes Mandatory |
| Using potable water for street washing | III |
| Serving drinking water unless requested | I |
| Use of potable water for construction, compaction, dust control and building wash down | II |
| Use of potable water for sewer system maintenance or fire protection training | III |
| Use of potable water in excess of amount allocated | IV |
| Prohibit Landscaping Irrigation and Car Washing | III |
| Other as necessary | IV |

Figure 43 - TABLE 36 Water shortage contingency - mandatory prohibitions

Consumption reduction methods in the most restrictive stages. Each urban water supplier may use any type of consumption reduction methods in its water shortage contingency analysis that would reduce water use, are appropriate for its area, and have the ability to achieve a water use reduction consistent with up to a 50 percent reduction in water supply (10632(e)).

Water Shortage Stages and Triggering Mechanisms

As the water purveyor, the City of Blythe must provide the minimum health and safety water needs of the community at all times. The water shortage response is designed to provide a minimum of 50% of normal supply during a severe or extended water shortage. The rationing program triggering levels shown below were established to ensure that this goal is met.

Rationing stages may be triggered by groundwater contamination, power failure, earthquake or other natural disaster. The City's only potable water source is the groundwater.

| Water Shortage Stages and Triggering Mechanisms | | | | |
|--|---|---|---|---|
| Percent Reduction of Supply | Stage I Up to 15% | Stage II 15 - 25% | Stage III 25 - 35% | Stage IV 35 - 50% > |
| Water Supply Condition | | | | |
| Supply | Projected supply insufficient to provide 80% of "normal" demand, Or | Projected supply insufficient to provide 75% of "normal" demand, Or | Projected supply insufficient to provide 65% of "normal" demand, Or | Projected supply insufficient to provide 50% of "normal" demand, Or |
| Water Quality | Contamination of 10% of water supply (exceeds primary drinking water standards) | Contamination of 20% of water supply (exceeds primary drinking water standards) | Contamination of 30% of water supply (exceeds primary drinking water standards) | Contamination of 40% of water supply (exceeds primary drinking water standards) |

Figure 44 – Water shortage stages and triggering mechanisms

Water Allotment Methods

The City has established the following allocation method for each customer type. See the city ordinance for sample water shortage rationing allocation method.

- Single Family Hybrid of Per-capita and Percentage Reduction
- Multifamily Hybrid of Per-capita and Percentage Reduction
- Commercial Percentage Reduction
- Industrial Percentage Reduction
- Gov't/Institutional Percentage Reduction
- Recreational Percentage Reduction - vary by efficiency

Water Shortage Rationing Allocation Method

Single-family account allocations may be determined as follows: assuming 4 persons or less per home, an account would receive 8,000 gallons total per month (67 gpcd) plus 55% of their historic use, not to exceed an upper limit. The upper limit on additional water may be 23,000 gallons per year (i.e., 96,000 gallons + 50% historic ≤ 119,000 gallons a year). Appeals would be available for additional people. For each additional person at a home the allotment is increased by 1,500 gallons per billing

period (50 gcd).

Multi-residential account allocations may be determined as follows: assuming 3 persons or less per unit, accounts receive 4,500 gallons per unit per month (50 gcd), plus 40% of their historic use, not to exceed an upper limit. The upper limit on additional water may be 8,000 gallons per year per unit (i.e., 54,000 gallons + 40% historic \leq 62,000 gallons a year). Appeals would be available for additional people. For each additional person at a home the allotment is increased by 1,500 gallons per billing period (50 gcd).

Increased allocations for residential accounts would be limited to the following:

- Greater number of residents than assumed by plan.
- Medical conditions requiring additional water.

Commercial, Industrial and Institutional would receive a percentage reduction from historical use. The historical use period used to determine the baseline amount may vary based on specific factors. Appeals would be available for increased business, census or other factors.

There shall be no allocation for new landscaping during a water shortage.

Based on current and projected customer demand, the city ordinance indicates the water allocated to each customer type by priority and rationing stage during a declared water shortage.

Individual customer allotments are based on a five-year period. This gives the City a more accurate view of the usual water needs of each customer and provides additional flexibility in determining allotments and reviewing appeals. However, no allotment may be greater than the amount used in the most recent year of the five-year base period.

The Water Department Manager shall classify each customer and calculate each customer's allotment according to the Sample Water Rationing Allocation Method. The allotment shall reflect seasonal patterns. Each customer shall be notified of their classification and allotment by mail before the effective date of the Water Shortage Emergency. New customers will be notified at the time the application for service is made. In a disaster, prior notice of allotment may not be possible; notice will be provided by other means. Any customer may appeal the Water Department Manager's classification on the basis of use or the allotment on the basis of incorrect calculation.

Rationing Stages and Reduction Goals

The City has developed a four stage rationing plan to invoke during declared water shortages. The rationing plan includes voluntary and mandatory rationing, depending on the causes, severity, and anticipated duration of the water supply shortage.

| Water Rationing Stages and Reduction Goals | | | |
|---|--------------|-----------------------|----------------------------------|
| Shortage Condition | Stage | Reduction Goal | Type of Rationing Program |
| Up to 15% | I | 15% | Voluntary |
| 15 – 25% | II | 25% | Mandatory |
| 25 - 35% | III | 35% | Mandatory |
| 35 - 50% | IV | 50% or > | Mandatory |

Figure 45 - Water rationing stages and reduction goals

Mandatory Prohibitions on Water Use

The Blythe "No Waste" Ordinance prohibits certain types of water uses during water shortage emergencies. The following are the stages at which water use prohibitions become active:

| Table 37 Water shortage contingency — consumption reduction methods | | |
|--|---------------------------------------|--------------------------------|
| Consumption Reduction Methods | Stage When Method Takes Effect | Projected Reduction (%) |
| Education Program | All Stages | Yes |
| Demand Reduction Program | All stages | Yes |
| Voluntary Plumbing Fixture Replacement | All stages | Yes |
| Use Prohibitions | All stages | Yes |
| Water Shortage Pricing | All stages | Yes |
| Voluntary Rationing | I | No |
| Restrict Building Permits | II, III, IV | No |
| Mandatory Rationing | II, III, IV | No |
| Percentage Reduction by Customer Type | II, III, IV | No |
| Per Capita Allotment by Customer Type | IV | No |
| Flow Restriction for Wasters | IV | No |

Figure 46 - TABLE 37 Water shortage contingency - consumption reduction methods

Priority by Use

Priorities for use of available potable water during shortages were based on input from the City Emergency Response Team, citizen groups, and legal requirements set forth in the California Water Code, Sections 350-358. Water allocations are established for all customers according to the following ranking system:

- Minimum health and safety allocations for interior residential needs (includes single family, multi-family, hospitals and convalescent facilities, retirement and mobile home communities, and student housing, and fire fighting and public safety)
- Commercial, industrial, institutional/governmental operations (where water is used for manufacturing and for minimum health and safety allocations for employees and visitors), to maintain jobs and economic base of the community (not for landscape uses)
- Existing landscaping
- New customers, proposed projects without permits when shortage declared.

Health and Safety Requirements

Based on commonly accepted estimates of interior residential water use in the United States, Figure 47 indicates per capita health and safety water requirements. In Stage I shortages, customers may adjust either interior or outdoor water use (or both), in order to meet the voluntary water reduction goal.

However, under Stage II, Stage III and Stage IV mandatory rationing programs, the City has established a health and safety allotment of 50 gpcd (which translates to approximately 18,000 gallons per person per year), because that amount of water is sufficient for essential interior water with no habit or plumbing fixture changes. If customers wish to change water use habits or plumbing fixtures, 50 gpcd is sufficient to provide for limited nonessential (i.e. outdoor) uses.

Stage IV mandatory rationing, which is likely to be declared only as the result of a prolonged water shortage or as a result of a disaster, would require that customers make changes in their interior water use habits (for instance, not flushing toilets unless “necessary” or taking less frequent showers).

| Per Capita Health and Safety Water Quantity Calculations | | | | | | |
|--|---------------------|----|----------------------------|------|----------------------------------|------|
| | Non-Conserving | | Habit Changes ¹ | | Conserving Fixtures ² | |
| Toilets | 4 flushes x 3.5 gpf | 14 | 3 flush x 3.5 gpf | 10.5 | 4 flush x 1.6 gpf | 6.4 |
| Shower | 5 min x 3.0 gpm | 15 | 4 min x 3.0 gpm | 12 | 5 min x 2.0 | 10 |
| Washer | 12.0 gpcd | 12 | 11.0 gpcd | 11 | 10.0 gpcd | 10 |
| Kitchen | 4 gpcd | 4 | 4 gpcd | 3 | 4 gpcd | 3 |
| other | 4 gpcd | 4 | 4 gpcd | 4 | 4 gpcd | 4 |
| Gallons per person per day | | 49 | | 40.5 | | 33.4 |
| CCF per person per year | | 24 | | 20 | | 16 |
| <p>¹ Reduced shower use results from shorter length of shower and reduced flow. Reduced washer use results from fuller loads.</p> <p>² Fixtures include ULF 1.6 gpf toilets, 2.0 gpm showerheads, faucet aerators and efficient clothes washers.</p> | | | | | | |

Figure 47 - Per Capita Health and Safety water quantity calculations

An analysis of the impacts of each of the actions and conditions described in subdivisions (a) to (f), inclusive, on the revenues and expenditures of the urban water supplier, and proposed measures to overcome those impacts, such as the development of reserves and rate adjustments (10632(g)).

Mechanism to Determine Reductions in Water Use

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the Water Treatment Facility Supervisor. Totals are reported monthly to the Water Department Manager and incorporated into the water supply report.

During a Stage I or Stage II water shortage, daily production figures are reported to the Supervisor. The Supervisor compares the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports are forwarded to the Water Department Manager and the Water Shortage Response Team. Monthly reports are sent to the City Council. If reduction goals are not met, the Manager will notify the City Council so that corrective action can be taken.

During a Stage III or Stage IV water shortage, the procedure listed above will be followed, with the addition of a daily production report to the Manager. During emergency shortages, production figures are reported to the Supervisor hourly and to the Manager and the Water Shortage Response Team daily. Daily reports will also be provided to the City Council.

All surplus revenues that the City collects are currently used to fund the Rate Stabilization Fund, conservation, recycling, and other capital improvements. The City estimated projected ranges of water sales by shortage stage to best understand the impact each level of shortage will have on projected revenues and expenditures by each shortage stage.

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

Any customer violating the regulations and restrictions on water use set forth in the "No Waste" Ordinance shall receive a written warning for the first such violation. Upon a second violation, the customer shall receive a written warning and the City may cause a flow-restrictor to be installed in the service. If a flow-restrictor is placed, the violator shall pay the cost of the installation and removal. Any willful violation occurring subsequent to the issuance of the second written warning shall constitute a misdemeanor and may be referred to the Office of the City Attorney for prosecution. If water service is disconnected, it shall be restored only upon payment of the turn-on charge fixed by the City Council.

There shall be rate increases starting with a 25% rate increase at Stage II; 50% at Stage III, and a 100% increase at Stage IV.

| Table 38 | |
|---|--|
| Water shortage contingency — penalties and charges | |
| Penalties or Charges | Stage When Penalty Takes Effect |
| 25% Rate Increase | II |
| 50% Rate Increase | III |
| 100% Rate Increase | IV |
| Penalty for Excess Use | II |
| 200% Charge for Excess Use | III |

Figure 48 - TABLE 38 Water shortage contingency - penalties and charges

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

A draft water shortage contingency resolution follows.

Draft Resolution to Declare a Water Shortage Emergency

CITY OF BLYTHE
RIVERSIDE COUNTY,
CALIFORNIA

Date

The City Council of Blythe does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Council has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS, the Council finds, determines and declares as follows:

- (a) The City is the water purveyor for the property owners and inhabitants of Blythe;
- (b) The demand for water service is not expected to lessen.
- (c) When the potable water supply available to the City falls at or below the Stage II triggering levels described in the most current Urban Water Management Plan, the City will declare a water shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers and there may be insufficient water for human consumption, sanitation, fire protection, and environmental requirements. This condition is likely to exist until groundwater contamination is remedied and/or water system damage resulting from a disaster are repaired and normal water service is restored.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Blythe hereby directs the Mayor to find, determine, declare and conclude that a water shortage emergency condition exists that threatens the adequacy of water supply, until the City's water supply is deemed adequate and potable. After the declaration of a water shortage emergency, the Mayor is directed to determine the appropriate Rationing Stage and implement the City's Water Shortage Emergency Response.

FURTHERMORE, the Council shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy and quality of the water supply for domestic, sanitation, fire protection, and environmental requirements.

Moratorium on New Connections during a Water Shortage

CITY OF BLYTHE
RIVERSIDE COUNTY,
CALIFORNIA

Date

The City Council of Blythe does hereby resolve as follows:

The Municipal Code of the City of Blythe is hereby amended to read as follows:

XX-5 MORATORIUM ON SERVICE COMMITMENTS AND CONNECTIONS

1. When the City declares a water shortage emergency, the following regulations shall become effective immediately and shall continue in full force and effect to prohibit the following while it remains in full force and effect:
 - a. The City shall not issue oral or written commitments to provide new or expanded water service, including will-serve letters.
 - b. The City shall not sell meters for water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments, unless building permits have been issued.
 - c. The City shall not provide new or expanded water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments and meters, unless building permits have been issued.
 - d. The City shall not provide water for use on any new plantings installed after the declaration of a Water Shortage Emergency.
 - e. The City shall not annex territory located outside the City's service boundary.

2. The following uses are exempt from the moratorium and upon application to the City shall receive necessary water service commitments and connections to receive water from the City:
 - a. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a building permit has been issued by the City on or before the declaration of a Water Shortage Emergency.
 - b. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a retail meter had been purchased from the City before the declaration of a Water Shortage Emergency, as evidenced by a written receipt and for which a building permit has been issued and remains in full force and effect.
 - c. Publicly owned and operated facilities, including but not limited to schools, fire stations, police stations, and hospitals and other facilities as necessary to protect the public health, safety and welfare.

Water Quality

The plan shall include information, to the extent practicable, relating to the quality of existing sources of water available to the supplier over the same five-year increments as described in subdivision (a) of Section 10631, and the manner in which water quality affects water management strategies and supply reliability (10634).

Groundwater Quality

Groundwater in the basin is constantly being mixed with Colorado River water that is used for irrigating large parts of the valley. Colorado River water is generally of a calcium-sodium chloride-sulfate type. Colorado River water in this reach has historically averaged about 600 mg/L for TDS (USGS 1971). Groundwater in the shallow alluvial aquifer is generally of poorer quality than Colorado River water; however, water quality improves at depth in some parts of the basin, such as beneath Blythe (USGS 1971). Data for 10 public wells in the basin show TDS concentrations ranging from 658 to 1,030 mg/L with an average of 840 mg/L. Impairments. Because of higher than recommended values of TDS, some groundwater in the basin is unsuitable for domestic and irrigation purposes.

The City of Blythe samples the well water for TDS. The average TDS concentrations of the potable well water were 1,088 in 2010.

| Table 30 Water quality — current and projected water supply impacts | | | | | | |
|--|--------------------------|------|------|------|------|------|
| Water source | Description of condition | 2010 | 2015 | 2020 | 2025 | 2030 |
| Palo Verde Valley Groundwater Basin | Water Pollution | 0 | 0 | 0 | 0 | 0 |

Units (circle one): *acre-feet per year*

Figure 49 - TABLE 30 Water quality - current and projected water supply impacts

It is not anticipated that there will be any major raw water quality disruptions.

Drought Planning

Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage, to the extent practicable, and provide data for each of the following: (A) an average water year, (B) a single dry water year, (C) multiple dry water years (10631(c)(1)).

| Table 27 Basis of water year data | |
|--|---------------------|
| Water Year Type | Base Year(s) |
| Average Water Year | 1990 |
| Single-Dry Water Year | 1956 |
| Multiple-Dry Water Years | 1996-1998 |

Figure 50 - TABLE 27 Basis of water year data

| Table 28 Supply reliability — historic conditions | | | | |
|--|------------------------------|---------------------------------|---------------|---------------|
| Average / Normal Water Year | Single Dry Water Year | Multiple Dry Water Years | | |
| | | Year 1 | Year 2 | Year 3 |
| 1990 | 1956 | 1996 | 1997 | 1998 |
| Under Production | 0.0% | 0.0% | 0.0% | 0.0% |

Figure 51 - TABLE 28 Supply reliability - historic conditions

Stages of action to be undertaken by the urban water supplier in response to water supply shortages, including up to a 50 percent reduction in water supply, and an outline of specific water supply conditions which are applicable to each stage (10632(a)).

| Table 35 Water shortage contingency — rationing stages to address water supply shortages | | |
|---|--|-------------------|
| Stage No. | Water Supply Conditions | % Shortage |
| I | Voluntary Rationing | 15% |
| II | Rate Increases Start | 25% |
| III | Mandatory Rationing | 35% |
| IV | Per Capita Allotment per Customer Type | 50% |

¹One of the stages of action must be designed to address a 50 percent reduction in water supply.

Figure 52 - TABLE 35 Water shortage contingency - rationing stages to address water supply shortages

If the water supplies are reduced by 50 percent for a single year, the City will make an allotment on a per capita basis per connection and customer type.

An estimate of the minimum water supply available during each of the next three water years based on the driest three-year historic sequence for the agency's water supply (10632(b)).

| Table 31 | | | | |
|---|---|---|------------------|------------------|
| Supply reliability — current water sources | | | | |
| Water supply sources¹ | Average / Normal Water Year Supply² | Multiple Dry Water Year Supply² | | |
| | | Year 2011 | Year 2012 | Year 2013 |
| Palo Verde Valley Groundwater Basin | 2,500 | 2,500 | 2,500 | 2,500 |
| Percent of normal year: | 100% | | | |

Units (circle one): million gallons per year
¹From Table 16.
²See Table 27 for basis of water type years.

Figure 53 - TABLE 31 Supply reliability - current water sources

The water supply available to the city is determined by the well 18 and 19 output (only one operating at a time at 1,500 gpm), the water treatment plant capacity and well 11 (1,000 gpm). The other active wells (15 and EB-4) were not counted in the capacity because the city is unsure at this time whether those wells will continue to be active.

Multiple dry water years do not affect the water table or well capacity in the City's water supply.

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

Under normal water supply conditions, potable water production figures are recorded daily. Totals are reported weekly to the Water Treatment Facility Supervisor. Totals are reported monthly to the Water Department Manager and incorporated into the water supply report.

During a Stage I or Stage II water shortage, daily production figures are reported to the Supervisor. The Supervisor compares the weekly production to the target weekly production to verify that the reduction goal is being met. Weekly reports are

forwarded to the Water Department Manager and the Water Shortage Response Team. Monthly reports are sent to the City Council. If reduction goals are not met, the Manager will notify the City Council so that corrective action can be taken.

During a Stage III or Stage IV water shortage, the procedure listed above will be followed, with the addition of a daily production report to the Manager.

During emergency shortages, production figures are reported to the Supervisor hourly and to the Manager and the Water Shortage Response Team daily. Daily reports will also be provided to the City Council.

All surplus revenues that the City collects are currently used to fund the Rate Stabilization Fund, conservation, recycling, and other capital improvements. The City estimated projected ranges of water sales by shortage stage to best understand the impact each level of shortage will have on projected revenues and expenditures by each shortage stage.

Every urban water supplier shall include, as part of its urban water management plan, an assessment of the reliability of its water service to its customers during normal, dry, and multiple dry water years. This water supply and demand assessment shall compare the total water supply sources available to the water supplier with the total projected water use over the next 20 years, in five-year increments, for a normal water year, a single dry water year, and multiple dry water years. The water service reliability assessment shall be based upon the information compiled pursuant to Section 10631, including available data from state, regional, or local agency population projections within the service area of the urban water supplier (10635(a)).

There is no foreseeable water shortage in the City of Blythe for the next 20 years. The City of Blythe uses groundwater recharged by the Colorado River that can supply the City with sufficient water to meet all projected demand. Thus the City is not affected by climatic related supply shortages.

California experienced a prolonged drought from 1987 through 1992 and 2007 to 2009 and in 2010 below normal runoff. The Governor declared a statewide drought and proclaimed a state of emergency in nine counties on June 4, 2008 and a statewide emergency due to the drought on February 27, 2009. The droughts, however, did not affect the City's water supply.

Supply and Demand Comparison Provisions

The City's projected average use over the next 20 years is shown below. The projections are based on the Urban Water Targets as determined in this document.

| Table 32 | | | | |
|---|-------------|-------------|-------------|-------------|
| Supply and demand comparison — normal year | | | | |
| | 2015 | 2020 | 2025 | 2030 |
| Supply totals (from Table 16) | 2,500 | 2,500 | 2,500 | 2,500 |
| Demand totals (From Table 11) | 1,316 | 1,239 | 1,316 | 1,398 |
| Difference | 1,184 | 1,261 | 1,184 | 1,102 |
| Difference as % of Supply | 0.0% | 0.0% | 0.0% | 0.0% |
| Difference as % of Demand | 90.0% | 101.8% | 90.0% | 78.8% |

Units are in million gallons per year.

Figure 54 - TABLE 32 Supply and demand comparison - normal year

| Table 33 | | | | |
|---|-------------|-------------|-------------|-------------|
| Supply and demand comparison — single dry year | | | | |
| | 2015 | 2020 | 2025 | 2030 |
| Supply totals^{1,2} | 2,500 | 2,500 | 2,500 | 2,500 |
| Demand totals^{2,3,4} | 1,316 | 1,239 | 1,316 | 1,398 |
| Difference | 1,184 | 1,261 | 1,184 | 1,102 |
| Difference as % of Supply | 0.0% | 0.0% | 0.0% | 0.0% |
| Difference as % of Demand | 90.0% | 101.8% | 90.0% | 78.8% |

Units are in million gallons per year.

Figure 55 - TABLE 33 Supply and demand comparison - single dry year

The total demand totals through 2030 were calculated using the urban water targets and population growth estimates. The total supply is limited by the amount of water that the water treatment plant can produce and the other active wells only. The City is able to produce 2,500 million gallons of water per year. The City forecasts no supply shortage at any point in the future.

| Table 34 | | | | | |
|--|--------------------------------------|-------------|-------------|-------------|-------------|
| Supply and demand comparison — multiple dry-year events | | | | | |
| | | 2015 | 2020 | 2025 | 2030 |
| Multiple-dry year first year supply | Supply totals^{1,2} | 2,500 | 2,500 | 2,500 | 2,500 |
| | Demand totals^{2,3,4} | 1,316 | 1,239 | 1,316 | 1,398 |
| | Difference | 1,184 | 1,261 | 1,184 | 1,102 |
| | Difference as % of Supply | 0.0% | 0.0% | 0.0% | 0.0% |
| | Difference as % of Demand | 90.0% | 101.8% | 90.0% | 78.8% |
| Multiple-dry year second year supply | Supply totals^{1,2} | 2,500 | 2,500 | 2,500 | 2,500 |
| | Demand totals^{2,3,4} | 1,316 | 1,239 | 1,316 | 1,398 |
| | Difference | 1,184 | 1,261 | 1,184 | 1,102 |
| | Difference as % of Supply | 0.0% | 0.0% | 0.0% | 0.0% |
| | Difference as % of Demand | 90.0% | 101.8% | 90.0% | 78.8% |
| Multiple-dry year third year supply | Supply totals^{1,2} | 2,500 | 2,500 | 2,500 | 2,500 |
| | Demand totals^{2,3,4} | 1,316 | 1,239 | 1,316 | 1,398 |
| | Difference | 1,184 | 1,261 | 1,184 | 1,102 |
| | Difference as % of Supply | 0.0% | 0.0% | 0.0% | 0.0% |
| | Difference as % of Demand | 90.0% | 101.8% | 90.0% | 78.8% |

Units are in million gallons per year.

¹Consider the same sources as in Table 16. If new sources of water are planned, add a column to the table and specify the source, timing, and amount of water.

²Provide in the text of the UWMP text that discusses how single-dry-year water supply volumes were determined.

³Consider the same demands as in Table 3. If new water demands are anticipated, add a column to the table and specify the source, timing, and amount of water.

⁴The urban water target determined in this UWMP will be considered when developing the 2020 water demands included in this table.

Figure 56 - TABLE 34 Supply and demand comparison - multiple dry-year events

Water Demand Management Measures

(Describe and provide a schedule of implementation for) each water demand management measure that is currently being implemented, or scheduled for implementation, including the steps necessary to implement any proposed measures, including, but not limited to, all of the following: (A) water survey programs for single-family residential and multifamily residential customers; (B) residential plumbing retrofit; (C) system water audits, leak detection, and repair; (D) metering with commodity rates for all new connections and retrofit of existing connections; (E) large landscape conservation programs and incentives; (F) high-efficiency washing machine rebate programs; (G) public information programs; (H) school education programs; (I) conservation programs for commercial, industrial, and institutional accounts; (J) wholesale agency programs; (K) conservation pricing; (L) water conservation coordinator; (M) water waste prohibition; (N) residential ultra-lowflush toilet replacement programs (10631(f)(1) and (2).

A description of the methods, if any, that the supplier will use to evaluate the effectiveness of water demand management measures implemented or described under the plan (10631(f)(3)).

An estimate, if available, of existing conservation savings on water use within the supplier's service area, and the effect of the savings on the supplier's ability to further reduce demand (10631(f)(4)).

An evaluation of each water demand management measure listed in paragraph (1) of subdivision (f) that is not currently being implemented or scheduled for implementation. In the course of the evaluation, first consideration shall be given to water demand management measures, or combination of measures, that offer lower incremental costs than expanded or additional water supplies. This evaluation shall do all of the following: (1) Take into account economic and noneconomic factors, including environmental, social, health, customer impact, and technological factors; (2) Include a cost-benefit analysis, identifying total benefits and total costs; (3) Include a description of funding available to implement any planned water supply project that would provide water at a higher unit cost; (4) Include a description of the water supplier's legal authority to implement the measure and efforts to work with other relevant agencies to ensure the implementation of the measure and to share the cost of implementation (10631(g)).

The City is a member of the California Urban Water Conservation Council. A copy of the 2010 annual report is attached as Appendix F.

**Demand management measures and
California Urban Water Conservation Council BMP names**

| CUWCC BMP Organization and Names (2009 MOU) | | | | UWMP DMMs | |
|---|---|-------|--|-----------|--|
| Type | Category | BMP # | BMP name | DMM # | DMM name |
| Foundational | Operations Practices | 1.1.1 | Conservation Coordinator | L | Water conservation coordinator |
| | | 1.1.2 | Water Waste Prevention | M | Water waste prohibition |
| | | 1.1.3 | Wholesale Agency Assistance Programs | J | Wholesale agency programs |
| | | 1.2 | Water Loss Control | C | System water audits, leak detection, and repair |
| | | 1.3 | Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections | D | Metering with commodity rates for all new connections and retrofit of existing connections |
| | | 1.4 | Retail Conservation Pricing | K | Conservation pricing |
| | Education Programs | 2.1 | Public Information Programs | G | Public information programs |
| | | 2.2 | School Education Programs | H | School education programs |
| Programmatic | Residential | 3.1 | Residential assistance program | A | Water survey programs for single-family residential and multifamily residential customers ¹ |
| | | | | B | Residential plumbing retrofit |
| | | 3.2 | Landscape water survey | A | Water survey programs for single-family residential and multifamily residential customers ¹ |
| | | 3.3 | High-Efficiency Clothes Washing Machine Financial Incentive Programs | F | High-efficiency washing machine rebate programs |
| | | 3.4 | WaterSense Specification (WSS) toilets | N | Residential ultra-low-flush toilet replacement programs |
| | Commercial, Industrial, and Institutional | 4 | Commercial, Industrial, and Institutional | I | Conservation programs for commercial, industrial, and institutional accounts |
| | Landscape | 5 | Landscape | E | Large landscape conservation programs and incentives |

¹ Components of DMM A (Water survey programs for single-family residential and multifamily residential customers) applies to both BMP 3.1 (Residential assistance program) and BMP 3.2 (Landscape water survey)

Figure 57 - Demand Management Measures and CUWCC BMP names

APPENDIX A

List of key contacts regarding this plan:

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APPENDIX B

Resolution To Adopt The Urban Water Management Plan

CITY OF BLYTHE
RIVERSIDE COUNTY, CALIFORNIA
July 12, 2011

The City Council of the City of Blythe does hereby resolve as follows:

WHEREAS the California Legislature enacted Assembly Bill 797 (Water Code Section 10610 et seq., known as the Urban Water Management Planning Act) during the 1983-1984 Regular Session, and as amended subsequently, which mandates that every supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre feet of water annually, prepare an Urban Water Management Plan, the primary objective of which is to plan for the conservation and efficient use of water; and

WHEREAS the City is an urban supplier of water providing water to a population under 17,000, and

WHEREAS the Plan shall be periodically reviewed at least once every five years, and that the City shall make any amendments or changes to its plan which are indicated by the review; and

WHEREAS the Plan must be adopted after public review and hearing, and filed with the California Department of Water Resources within thirty days of adoption; and

WHEREAS the City has therefore, prepared and circulated for public review a draft Urban Water Management Plan, and a properly noticed public hearing regarding said Plan was held by the City Council on July 12th, 2011, and

WHEREAS the City of Blythe did prepare and shall file said Plan with the California Department of Water Resources by July 30, 2011;

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Blythe as follows:

The 2010 Urban Water Management Plan is hereby adopted and ordered filed with the City Clerk; The Mayor is hereby authorized and directed to file the 2010 Urban Water Management Plan with the California Department of Water Resources within 30 days after this date;

The Mayor is hereby authorized and directed to implement the Water Conservation Programs as set forth in the 2011 Urban Water Management Plan, which includes water shortage contingency analysis and recommendations to the City Council regarding necessary procedures, rules, and regulations to carry out effective and equitable water conservation programs;

In a water shortage, the Mayor is hereby authorized to declare a Water Shortage Emergency according to the Water Shortage Stages and Triggers indicated in the Plan, and implement necessary elements of the Plan;

The Mayor shall recommend to the City Council additional regulations to carry out effective and equitable allocation of water resources; and

The attached budget is approved and authorized for implementation.

ADOPTED this 12th day of July 2011, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

City Clerk

City Council Members
(indicate names) Mayor

Director, Public Works
Department

Chief, Water Department
Approved as to Form and Legality:

City Attorney

APPENDIX C

No Waste and Water Restrictions Ordinance

CITY OF BLYTHE
RIVERSIDE COUNTY,
CALIFORNIA Date

The City Council of the City of Blythe does hereby resolve as follows:
The Municipal Code of the City of Blythe is hereby amended by adding Section
XX to Chapter XX, to read as follows:

XX-5 PROHIBITING WASTEFUL USE OF WATER AND WATER RESTRICTIONS UPON DECLARATION OF WATER SHORTAGE EMERGENCY REGULATIONS AND RESTRICTIONS ON WATER USE

It is hereby resolved by the City Council that in order to conserve the City's water supply for the greatest public benefit and to reduce the quantity of water used by the City's customers, that wasteful use of water should be eliminated. Customers of the City shall observe the following regulations and restrictions on water use:

1. No customer shall waste water. As used herein, the term "waste" means:
 - a. Use of potable water to irrigate turf, ground-cover, shrubbery, crops, vegetation, and trees between the hours of 10:00 o'clock A.M. and 6:00 o'clock P.M. or in such a manner as to result in runoff for more than five (5) minutes;
 - b. Use of potable water to wash sidewalks, walkways, driveways, parking lots, open ground or other hard surfaced areas except where necessary for public health or safety;
 - c. Allowing potable water to escape from breaks within the customer's plumbing system for more than twenty-four hours after the customer is notified or discovers the break;
 - d. Washing cars, boats, trailers, aircraft, or other vehicles by hose without a shutoff nozzle and bucket except to wash such vehicles at commercial or fleet vehicle washing facilities using water recycling equipment.
 - e. Use of potable water to clean, fill or maintain decorative fountains, lakes or ponds.
2. The following restrictions are effective during a declared Water-Shortage Emergency.
 - a. Use of water to irrigate turf, ground-cover, shrubbery, crops vegetation or trees

- shall be prohibited;
- b. Use of water to wash cars, boats, trailers, aircraft, or other vehicles and other equipment shall be prohibited;
 - c. No restaurant, hotel, cafe, cafeteria or other public place where food is sold, served or offered for sale, shall serve drinking water to any customer unless requested.
 - d. Use of water shall be prohibited for construction, compaction, dust control, street or parking lot sweeping, building wash down where non-potable water is sufficient.
 - e. Use of water for sewer system maintenance or fire protection training shall be prohibited without prior approval by the Mayor;
 - f. Use of water for any purpose in excess of the amount allocated shall be prohibited;
 - g. Other restrictions may be necessary during a declared Water Shortage Emergency, to safeguard the adequacy of the water supply for domestic, sanitation, fire protection, and environmental requirements.

Enforcement

Any customer violating the regulations and restrictions on water use set forth in this chapter shall receive a written warning for the first such violation. Upon a second violation, the customer shall receive a written warning and the district may cause a flow-restrictor to be installed in the service. If a flow-restrictor is placed, the cost of installation and removal shall be paid by the violator. Any willful violation occurring subsequent to the issuance of the second written warning shall constitute a misdemeanor and may be referred to the City Attorney's Office for prosecution. The City may also disconnect the water service. If water service is disconnected, it shall be restored only upon payment of the turn-on charge fixed by the City Council.

Penalty for violations

Except as provided in the enforcement section for the first and second violations any person, firm, partnership, association, corporation or political entity violating or causing or permitting the violation of any of the provisions of this section or providing false information to the City in response to City's requests for information needed by the City to calculate consumer water allotments shall be guilty of a misdemeanor punishable by imprisonment in the county jail for not more that thirty days or by a fine not exceeding one thousand dollars or both. Each separate day or portion thereof in which any violation occurs or continues without a good faith effort by the responsible party to correct the violation shall constitute a separate offense and, upon conviction thereof,

shall be separately punishable.

Appeals

Variances from the requirements of this Section may be granted by the City Council only after denial of a variance request by the City Manager. Appeals of variance request denials shall be made in writing to the City Clerk at least 2 weeks prior to the meeting at which they will be heard. Upon granting any appeal, the City Council may impose any conditions it determines to be just and proper. Variances granted by the City Council shall be prepared in writing and furnished to the applicant.

Remedies/Cumulative

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

Resolution to Declare a Water Shortage Emergency

CITY OF BLYTHE
RIVERSIDE COUNTY,
CALIFORNIA Date

The City Council of Blythe does hereby resolve as follows:

PURSUANT to California Water Code Section 350 et seq., the Council has conducted duly noticed public hearings to establish the criteria under which a water shortage emergency may be declared.

WHEREAS, the Council finds, determines and declares as follows:

- (a) The City is the water purveyor for the property owners and inhabitants of Blythe;
- (b) The demand for water service is not expected to lessen.
- (c) When the potable water supply available to the City falls at or below the Stage II triggering levels described in the 2005 Urban Water Management Plan, the City will declare a water shortage emergency. The water supply would not be adequate to meet the ordinary demands and requirements of water consumers and there may be insufficient water for human consumption, sanitation, fire protection, and environmental requirements. This condition is likely to exist until groundwater contamination is remedied and/or water system damage resulting from a disaster are repaired and normal water service is restored.

NOW, THEREFORE, BE IT RESOLVED that the City Council of Blythe hereby directs the Mayor to find, determine, declare and conclude that a water shortage emergency condition exists that threatens the adequacy of water supply, until the City's water supply is deemed adequate and potable. After the declaration of a water shortage emergency, the Mayor is directed to determine the appropriate Rationing Stage and implement the City's Water Shortage Emergency Response.

FURTHERMORE, the Council shall periodically conduct proceedings to determine additional restrictions and regulations which may be necessary to safeguard the adequacy and quality of the water supply for domestic, sanitation, fire protection, and environmental requirements.

Moratorium on New Connections During A Water Shortage

CITY OF BLYTHE
RIVERSIDE COUNTY,
CALIFORNIA Date

The City Council of Blythe does hereby resolve as follows:

The Municipal Code of the City of Blythe is hereby amended to read as follows:

XX-5 MORATORIUM ON SERVICE COMMITMENTS AND CONNECTIONS

- a. Irrigation for landscaping shall be prohibited.
 - b. The City shall not issue oral or written commitments to provide new or expanded water service, including will-serve letters.
 - c. The City shall not sell meters for water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments, unless building permits have been issued.
 - d. The City shall not provide new or expanded water service connections, despite the prior issuance of will-serve letters or other oral or written service commitments and meters, unless building permits have been issued.
 - e. The City shall not provide water for use on any new plantings installed after the declaration of a Water Shortage Emergency.
 - f. The City shall not annex territory located outside the City's service boundary.
2. The following uses are exempt from the moratorium and upon application to the City shall receive necessary water service commitments and connections to receive water from the City:
- a. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a building permit has been issued by the City on or before the declaration of a Water Shortage Emergency.
 - b. Uses, including but not limited to, commercial, industrial, single and multifamily residential, for which a retail meter had been purchased from the City before the declaration of a Water Shortage Emergency, as evidenced by a written receipt and for which a building permit has been issued and remains in full force and effect.
 - d. Publicly owned and operated facilities, including but not limited to schools, fire stations, police stations, and hospitals and other facilities as necessary to

protect the public health, safety and welfare.

Water Shortage Rationing Allocation Method

Single-family account allocations may be determined as follows: assuming 4 persons or less per home, an account would receive 11 HCF per month (68 gpcd) plus 55% of their historic use, not to exceed an upper limit. The upper limit on additional water may be 30 HCF per year (i.e., $132 \text{ HCF} + 50\% \text{ historic} \leq 162 \text{ HCF}$ a year). Appeals would be available for additional people. For each additional person at a home the allotment is increased by 4 HCF per billing period (49 gcd).

Multi-residential account allocations may be determined as follows: assuming 3 persons or less per unit, accounts receive 6 HCF per unit per month (49 gcd), plus 40% of their historic use, not to exceed an upper limit. The upper limit on additional water may be 10 HCF per year per unit (i.e., $72 \text{ HCF} + 40\% \text{ historic} \leq 82 \text{ HCF}$ a year). Appeals would be available for additional people. For each additional person, the allotment increases by 4 HCF per billing period (49 gcd).

Increased allocations for residential accounts would be limited to the following:

1. Greater number of residents than assumed by plan.
2. Medical conditions requiring additional water.

Commercial, Industrial and Institutional would receive a percentage reduction from historical use. The historical use period used to determine the baseline amount may vary based on specific factors. Appeals would be available for increased business, census or other factors.

APPENDIX D

Establishment of a Rate Stabilization Fund

In order to mitigate the financial impacts of a water shortage, the City is establishing an Emergency Fund. The goal is to maintain the fund at 75% of normal water department revenue. This fund will be used to stabilize rates during periods of water shortage or disasters affecting the water supply. The City will not have to increase rates as much or as often during a prolonged or severe shortage.

However, even with the emergency fund, rate increases will be necessary during a prolonged water shortage. As described in this Plan, a Stage II shortage will be accompanied by a 15- 25% reduction in water deliveries while a Stage III will be accompanied by a 25 -35% reduction. The experiences of California water purveyors during the 1990-91 water shortage demonstrated that actual water use reductions by customers are usually considerably larger than those requested by the supplier. During the 1990-91 water shortage it was also politically difficult for many agencies to adopt the rate increases necessitated by a 20% to 50% reduction in sales. When a Water Shortage Emergency is declared, the supply shortage will trigger the appropriate Rationing Stage and rate increase.

Water rates increase by the following percentages when the indicated Stages are implemented:

| | |
|-------------------------------------|--|
| Stage I | no rate increase |
| Stage II | 25% increase over pre-shortage rates |
| Stage III | 50% increase over pre-shortage rates |
| Stage IV | 100% increase over pre-shortage rates |
| End of the Water Shortage Emergency | 15% increase over pre-shortage rates (This rate increase should be re-evaluated every two years) |

Most California water agencies, which experienced water shortages, found that customer demand did not return to pre-shortage levels. After a shortage, water department expenses are expected to drop below pre-shortage levels but water sales are not expected to rebound. In anticipation of reduced sales, after a declared shortage ends, the City's rates will be set for one year at 115% of the pre-shortage rates. Any excess revenues collected as a result of this rate adjustment will be used for the Rate Stabilization Fund.

APPENDIX E

BIBLIOGRAPHY

March 2011, State of California Natural Resources Agency Department of Water Resources, *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 Urban Water Management Plan Final*

2/27/04 - *Palo Verde Valley Groundwater Basin, Hydrologic Region Colorado River*, http://www.water.ca.gov/pubs/groundwater/bulletin_118/basindescriptions/7-38.pdf, accessed March 2011

20x2020 Agency Team on Water Conservation, http://www.swrcb.ca.gov/water_issues/hot_topics/20x2020/index.shtml, accessed March 2011
California Urban Water Conservation Council, <http://www.cuwcc.org/default.aspx>, accessed March 2011

City of Blythe, *Comprehensive General Plan*.

2005 Urban Water Management Plan, City of Blythe

City of Blythe Master Plan of Water, 1997

East Blythe County Water District, Master Plan of Water, 1997

**APPENDIX F - California Urban Water Conservation Council
Annual Report 2010**

The fields in red are required.

Primary contact:

Agency name:

First name:

Reporting unit name
(District name)

Last name:

Reporting unit number:

Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.



Base Year Data

[Link to FAQs](#)

Reporting Unit Base Year

What is your reporting period?

Base Year

BMP 1.3 Metering

Number of unmetered accounts in Base Year

BMP 3.1 & BMP 3.2 & BMP 3.3 Residential Programs

Number of Single Family Customers in Base Year

Number of Multi Family Units in Base Year

BMP 3.4 WaterSense Specification (WSS) Toilets

Number of Single Family Housing Units constructed prior to 1992

Number of Multi Family Units prior to 1992

Average number of toilets per single family household

Average number of toilets per multi family household

Five year average resale rate of single family households

Five-year average resale rate of multi family households

Average number of persons per single family household

Average number of persons per multi family household

BMP 4.0 & BMP 5.0 CII & Landscape

Total water use (in Acre Feet) by CII accounts

Number of accounts with dedicated irrigation meters

Number of CII accounts without meters or with Mixed Use Meters

Number of CII accounts

Comments:

The fields in red are required:

Primary contact:



Agency name: First name:

Reporting unit name (District name): Last name:

Reporting unit number: Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

2010

BMP 1.1 Operations Practices

Comments:

[See the complete MOU:](#) [View MOU](#)

[See the coverage requirements for this BMP:](#)

Conservation Coordinator

Conservation Coordinator Yes No

Contact Information

First Name:

Last Name:

Title:

Phone:

Email:

Note that the contact information may be the same as the primary contact information at the top of the page. If this is your case, excuse the inconvenience but please enter the information again.

Water Waste Prevention

Water Agency shall do one or more of the following:

- a. Enact and enforce an ordinance or establish terms of service that prohibit water waste
- b. Enact and enforce an ordinance or establish terms of service for water efficient design in new development
- c. Support legislation or regulations that prohibit water waste
- d. Enact an ordinance or establish terms of service to facilitate implementation of water shortage response measures
- e. Support local ordinances that prohibit water waste
- f. Support local ordinances that establish permits requirements for water efficient design in new

To document this BMP, provide the following:

- a. A description of, or electronic link to, any ordinances or terms of service
- b. A description of, or electronic link to, any ordinances or requirements adopted by local jurisdictions or regulatory agencies with the water agency's service area.
- c. A description of any water agency efforts to cooperate with other entities in the adoption or enforcement of local requirement
- d. description of agency support positions with respect to adoption of legislation or regulations

You can show your documentation by providing files, links (web addresses), and/or entering a description.

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Enter a description:

The fields in red are required.



Primary contact:

Agency name: First name:

Reporting unit name (District name): Last name:

Reporting unit number: Email:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

[Link to FAQs](#)

[View MOU](#)

2010 BMP 1.2 Water Loss Control

AWWA Water Audit

Agency to complete a Water Audit & Balance Using The AWWA Software Yes No
Email to natalie@cuwcc.org - Worksheets (AWWA Water Audit). Enter the name of the file below:

Water Audit Validity Score from AWWA spreadsheet

Agency Completed Training In The AWWA Water Audit Method Yes No
Agency Completed Training In The Component Analysis Process Yes No

Completed/Updated the Component Analysis (at least every 4 years)? Yes No

Component Analysis Completed/Updated Date

Water Loss Performance

Agency Repaired All Reported Leaks & Breaks To The Extent Cost Effective Yes No

Recording Keeping Requirements:

| | |
|---|---|
| Date/Time Leak Reported | Leak Location |
| Type of Leaking Pipe Segment or Fitting | Leak Running Time From Report to Repair |
| Leak Volume Estimate | Cost of Repair |

Agency Located and Repaired Unreported Leaks to the Extent Cost Effective Yes No

Type of Program Activities Used to Detect Unreported Leaks

Annual Summary Information

Complete the following table with annual summary information (required for reporting years 2-5 only)

| Total Leaks Repaired | Economic Value Of Real Loss | Economic Value Of Apparent Loss | Miles Of System Surveyed For Leaks | Pressure Reduction Undertaken for loss reduction | Cost Of Interventions | Water Saved (AF/Year) |
|----------------------|-----------------------------|---------------------------------|------------------------------------|--|-----------------------|-----------------------|
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |

Comments:

The fields in red are required.

Primary contact:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Agency name:

First name:

Reporting unit name (District name):

Last name:

Reporting unit number:

Email:



BMP 1.3 Metering with Commodity 2010

[Link to FAQs](#)

See the complete MOU: [View MOU](#)

See the coverage requirements for this BMP:

Implementation

Does your agency have any unmetered service connections?

Yes No

If YES, has your agency completed a meter retrofit plan?

Yes No

Enter the number of previously unmetered accounts fitted with meters during reporting year:

Are all new service connections being metered?

Yes No

Are all new service connections being billed volumetrically?

Yes No

Has your agency completed and submitted electronically to the Council a written plan, policy or program to test, repair and replace meters?

Yes No

Please Fill Out The Following Matrix

| Account Type | # Metered Accounts | # Metered Accounts Read | # Metered Accounts Billed by Volume | Billing Frequency Per Year | # of estimated bills/yr |
|---------------------|------------------------------------|------------------------------------|-------------------------------------|--------------------------------------|---------------------------------|
| Single-Family | <input type="text" value="2,752"/> | <input type="text" value="2,752"/> | <input type="text" value="2,752"/> | <input type="text" value="Monthly"/> | <input type="text" value="12"/> |
| Multi-Family | <input type="text" value="207"/> | <input type="text" value="207"/> | <input type="text" value="207"/> | <input type="text" value="Monthly"/> | <input type="text" value="12"/> |
| Commercial | <input type="text" value="334"/> | <input type="text" value="334"/> | <input type="text" value="334"/> | <input type="text" value="Monthly"/> | <input type="text" value="12"/> |
| Industrial | <input type="text" value="3"/> | <input type="text" value="3"/> | <input type="text" value="3"/> | <input type="text" value="Monthly"/> | <input type="text" value="12"/> |
| Dedicated Irrigatic | <input type="text" value="102"/> | <input type="text" value="102"/> | <input type="text" value="102"/> | <input type="text" value="Monthly"/> | <input type="text" value="12"/> |
| Other | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text" value="Other"/> | <input type="text"/> |
| Other | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text" value="Other"/> | <input type="text"/> |
| Other | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text" value="Other"/> | <input type="text"/> |
| Other | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text" value="Other"/> | <input type="text"/> |
| Other | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text" value="Other"/> | <input type="text"/> |

Number of CII Accounts with Mixed-use Meters

Number of CII Accounts with Mixed-use Meters Retrofitted with Dedicated Irrigation Meters during Reporting Period

Feasibility Study

Has your agency conducted a feasibility study to assess the merits of a program to provide incentives to switch mixed-use accounts to dedicated landscape meters? Yes No

If YES, please fill in the following information:

A. When was the Feasibility Study conducted

B. Describe, upload or provide an electronic link to the Feasibility Study Upload File

File name(s): Email files to natalie@cuwcc.org

Web address(s) URL: comma-separated list

Comments:

The fields in red are required.

Primary contact:

You must enter the reporting unit number that we have on record for your agency. Click here to open a table to obtain this number.

Agency name:

First name:

Reporting unit name (District name)

Last name:

Reporting unit number:

Email:



2010

BMP 1.4 Retail Conservation Pricing

[Link to FAQs](#)

[View MOU](#)

If you are reporting more rate structures than this form allows, add the structures to a spreadsheet and send the file to natalie@cuwcc.org.

Implementation (Water Rate Structure)

Enter the Water Rate Structures that are assigned to the majority of your customers, by customer class

| Rate Structure | Customer Class | Total Revenue Commodity Charges | Total Revenue Customer Meter/Service (Fixed Charges) |
|--|---|---|--|
| <input type="text" value="Uniform"/> | <input type="text" value="Single-Family"/> | <input type="text" value="645,306.14"/> | <input type="text" value="663,131.50"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Multi-Family"/> | <input type="text" value="133,022.08"/> | <input type="text" value="70,293.22"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Commercial"/> | <input type="text" value="147,176.44"/> | <input type="text" value="97,240.06"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Industrial"/> | <input type="text" value="1,762.17"/> | <input type="text" value="1,271.22"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Institutional"/> | <input type="text" value="47,999.95"/> | <input type="text" value="25,777.80"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Dedicated Irrigation"/> | <input type="text" value="139,873.80"/> | <input type="text" value="48,305.17"/> |
| <input type="text" value="Select a Rate Struc"/> | <input type="text" value="Other"/> | <input type="text"/> | <input type="text"/> |

Implementation Option (Conservation Pricing Option)

- Use Annual Revenue As Reported
 Use Canadian Water & Wastewater Association Rate Design Model

If CWWA is select, enter the file name and email the spreadsheet to natalie@cuwcc.org

Retail Waste Water (Sewer) Rate Structure by Customer Class

Agency Provide Sewer Service Yes No

Select the Retail Waste Water(Sewer) Rate Structure assigned to the majority of your customers within a specific customer class.

| Rate Structure | Customer Class | Total Revenue Commodity Charges | Total Revenue Customer Meter/Service (Fixed Charges) |
|--|--|---|--|
| <input type="text" value="Uniform"/> | <input type="text" value="Single-Family"/> | <input type="text" value="1,272,162.78"/> | <input type="text" value="1,272,162.78"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Multi-Family"/> | <input type="text" value="649,574.91"/> | <input type="text" value="649,574.91"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Commercial"/> | <input type="text" value="566,480.05"/> | <input type="text" value="566,480.05"/> |
| <input type="text" value="Uniform"/> | <input type="text" value="Institutional"/> | <input type="text" value="56,272.56"/> | <input type="text" value="56,272.56"/> |
| <input type="text" value="Select a Rate Struc"/> | <input type="text" value="Other"/> | <input type="text"/> | <input type="text"/> |
| <input type="text" value="Select a Rate Struc"/> | <input type="text" value="Other"/> | <input type="text"/> | <input type="text"/> |
| <input type="text" value="Select a Rate Struc"/> | <input type="text" value="Other"/> | <input type="text"/> | <input type="text"/> |

Comments:

The fields in red are required.

Primary contact:

Agency name:

First name:

Reporting unit name (District name):

Last name:

Reporting unit number:

Email:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.



[Link to FAQs](#)

2010

BMP 2.2 School Education Programs, Retail Agencies School Programs

[View MOU](#)

Is your agency implementing school programs which can be counted to help another agency comply with this BMP? Yes No

Enter Wholesaler Names, separated by commas:

Materials meet state education framework requirements?

Description of Materials

Materials distributed to K-6 Students?

Description of materials distributed to K-6 Students

Number of students reached

Materials distributed to 7-12 Students?

Description of materials distributed to 7-12 Students

Number of Distribution

Annual budget for school education program

Description of all other water supplier education programs

School Program Activities

Classroom presentations:

Number of presentations:

Number of attendees:

Large group assemblies:

Number of presentations:

Number of attendees:

Children's water festivals or other events:

Number of presentations:

Number of attendees:

Cooperative efforts with existing science/water education programs (various workshops, science fair awards or judging) and follow-up:

Number of presentations:

Number of attendees:

Other methods of disseminating information (i.e. themed age-appropriate classroom loaner kits):

| | | |
|---|------|------------------------|
| Description | | |
| Number distributed | | |
| Staffing children's booths at events & festivals: | | |
| Number of booths | None | Number of attendees |
| Water conservation contests such as poster and photo: | | |
| Description | | |
| Number distributed | | |
| Offer monetary awards/funding or scholarships to students: | | |
| Number Offered | None | Total Funding |
| Teacher training workshops: | | |
| Number of presentations | None | Number of attendees |
| Fund and/or staff student field trips to treatment facilities, recycling facilities, water conservation gardens, etc.: | | |
| Number of tours or field trips | None | Number of participants |
| College internships in water conservation offered: | | |
| Number of internships | None | Total funding |
| Career fairs/workshops: | | |
| Number of presentations | | Number of attendees |
| Additional program(s) supported by agency but not mentioned above: | | |
| Description | None | |
| Number of events (if applicable) | | Number of participants |
| Total reporting period budget expenditures for school education programs (include all agency costs): | | |

Comments

No presentations offered due to staff layoffs and budget cuts

Is a Wholesale Agency Performing Website Updates?

Did one or more CUWCC wholesale agencies agree to assume your agency's responsibility for meeting the requirements of and for CUWCC reporting of this BMP? Yes No

N/A

Enter the name(s) of the wholesale agency (comma delimited)

Is Your Agency Performing Website Updates?

Enter your agency's URL (website address):

www.cityofblythe.ca.gov

Describe a minimum of four water conservation related updates to your agency's website that took place during the year:

Currently under construction to include conservation information.

Did at least one Website Update take place during each quarter of the reporting year? Yes No

Public Outreach Annual Budget

Enter budget for public outreach programs. You may enter total budget in a single line or break the budget into discrete categories by entering many rows. Please indicate if personnel costs are included in the entry.

| Category | Amount | Personnel Costs Included? if yes, check the box. | Comments |
|----------|--------|--|----------|
| 0 | | <input type="checkbox"/> | |

Comments:

No budget for this year.

The fields in red are required.

Primary contact:

Agency name:

First name:

Click here to open a table that displays your agency name reporting unit name and reporting unit number. Please ensure that you enter the correct information.

Reporting unit name (District name):

Last name:

Reporting unit number:

Email:



[Link to FAQs](#)

2010

BMP 2.1 Public Outreach Cont'd

[View MOU](#)

Public Outreach Expenses

Enter expenses for public outreach programs. Please include the same kind of expenses you included in the question related to your budget (Section 2.1.7, above). For example, if you included personnel costs in the budget entered above, be sure to include them here as well.

| Expense Category | Expense Amount | Personnel Costs Included? |
|------------------|----------------|---|
| | | <input type="checkbox"/> If yes, check the check box. |
| | | <input type="checkbox"/> |
| | | <input type="checkbox"/> |
| | | <input type="checkbox"/> |

Additional Public Information Program

Please report additional public information contacts. List these additional contacts in order of how your agency views their importance / effectiveness with respect to conserving water, with the most important/ effective listed first (where 1 = most important).

Were there additional Public Outreach efforts?

Yes No

Public Outreach Additional Information

| Public Information Programs | Importance |
|-----------------------------|------------|
| | |
| | |
| | |

Social Marketing Programs

Branding

Does your agency have a water conservation "brand," "theme" or mascot? Yes No

Describe the brand, theme or mascot.

Market Research

Have you sponsored or participated in market research to refine your message? Yes No

Market Research Topic

Brand Message

Brand Mission Statement

Community Committees

Do you have a community conservation committee?

Yes No

Enter the names of the community committees:

Training

| Training Type | # of Trainings | # of Attendees | Description of Other |
|---------------|----------------|----------------|----------------------|
| | | | |
| | | | |
| | | | |
| | | | |

Social Marketing Expenditures

Public Outreach Social Marketing Expenses

| Expense Category | Expense Amount | Description |
|------------------|----------------|-------------|
| | | |
| | | |
| | | |

Partnering Programs - Partners

Name

Type of Program

CLCA?

Green Building Programs?

Master Gardeners?

Cooperative Extension?

Local Colleges?

Other

Retail and wholesale outlet; name(s) and type(s) of programs:

Partnering Programs - Newsletters

Number of newsletters per year

Number of customers per year

Partnering with Other Utilities

Describe other utilities your agency partners with, including electrical utilities

Conservation Gardens

Describe water conservation gardens at your agency or other high traffic areas or new

Rock landscape/ trees and shrubs native to area

Landscape contests or awards

Describe water wise landscape contest or awards program conducted by your agency

Comments: