

Water Conservation Leadership Guide:

Issues for Local Officials to Consider

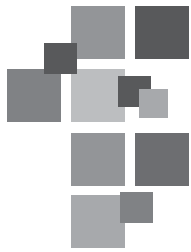
What's Inside:

Key water conservation options for local agency policies and programs

Water efficiency options for agency facilities

Water efficiency options in the community

Resources to help develop water efficiency policies and programs



Water Conservation Leadership Guide: Issues for Local Officials to Consider

Table of Contents

Introduction	1
Using the Water Conservation Leadership Guide	1
Water Efficiency in Agency Facilities.	2
• Using Water Efficiently in Agency Facilities and Operations.	2
• Replacing Existing Appliances and Fixtures with Water-Efficient Ones . . .	3
• Using Drought Tolerant Plants in Agency Parks, Medians and Landscaping	3
• Using Recycled Water for Agency Parks, Medians and Landscaping. . . .	4
• Procedure for Residents to Report Broken Sprinklers at Agency Facilities and Parks.	4
Water Conservation in the Community	5
• Updated Water Efficient Landscaping Ordinance for the Community. . . .	5
• Design Criteria to Reduce Runoff and Promote Groundwater Recharge . .	5
• Dual Plumbing for Recycled Water in New Commercial or Residential Projects	6
• Green Building Standards that Include Water Efficiency Requirements . .	6
• Water Audits for Commercial and Residential Property	7
• Installing Water Conservation Devices in Existing Residential and Commercial Buildings	7
Resources to Learn More	9

The Institute thanks the law firm of Hanson Bridgett for its generous financial and technical support in preparing the Water Conservation Leadership Guide.



Water Conservation Leadership Guide: Issues for Local Officials to Consider

Introduction

California’s serious water shortages, brought on in part by drought conditions, have persisted over time. Thus, water conservation has always been an important element of contemporary California life. California also faces uncertainties for the near and longer term water picture as a result of the impacts of climate change on water supplies.¹

In addition, California laws provide a framework for local agencies to use water wisely and promote water conservation in the broader community. State law requires California to achieve a twenty-percent reduction in per person urban water use by the end of 2020 (also known as “20 x 2020”).² Another law requires certain residential and commercial properties built before 1994 to install water efficient plumbing by 2017 or 2019, respectively.³

Many California cities and counties are already implementing measures to reduce water use in agency facilities and in the community. Cities, counties, special districts, public and private water suppliers and state agencies offer a wealth of information and resources about ways to conserve and use water more efficiently. They also use other methods to encourage water conservation, including public service messaging, tiered pricing and rebates to reduce the cost of installing water efficient devices.

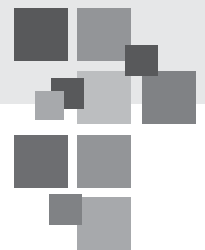
Using the Water Conservation Leadership Guide

The Water Conservation Leadership Guide identifies key issues local officials may consider to understand the options available to their agencies to use water resources more efficiently and ensure that their agencies are complying with the law. While all issue areas may not be relevant for all individual agencies, the guide offers a wide range of water conservation policies and programs to evaluate.

The guide is designed to assist local agencies, regardless whether they provide water services directly themselves to their residents or if they are served by another water agency or supplier. Most issue areas offer a “Resources to Learn More” link to policy, technical, or financing information.

Impacts of Climate Change

According to the California Department of Water Resources, climate change is already affecting the state’s water resources and could reduce California’s mountain snowpack – a key source of water – by at least 25 percent by the year 2050.





Water Efficiency in Agency Facilities

To understand options for using water efficiently in agency facilities, consider the following issues.

Using Water Efficiently in Agency Facilities and Operations

Local agencies can lead by example by embracing water efficient policies, programs and practices in their own facilities and operations.

Understanding the Issue

- Meeting the state mandate to reduce urban water use by twenty percent by the year 2020 will depend upon the efforts of all urban water users, including local agencies.
- Having policies and procedures in place to assess, maintain and repair existing plumbing fixtures, pipes and irrigation systems in all agency buildings and facilities is critical to efficient water use. This includes building and parking lot landscaping, public restrooms in parks, golf courses, community centers, and other recreational facilities.
- Examining the agency's outside irrigation practices may have water saving potential. For example, adjusting landscaping watering schedules each season can save water. Similarly, adjusting sprinklers so they do not spill onto driveways and sidewalks or shut off when broken can save water.

- Auditing the energy use of water pumps and motors is also important for energy efficiency. Replacing existing water pumps and motors with more energy efficient models may provide an additional benefit by reducing energy use and lowering energy bills.
- Agencies with water efficient policies and practices for their own buildings and operations in place are more effective in encouraging or requiring homeowners and businesses to adopt water saving practices.

Resources to Learn More

www.ca-ilg.org/WaterConservation#Efficiency



Replacing *Existing* Appliances and Fixtures with Water-Efficient Ones

Significant opportunities to reduce water use may exist in many agency facilities, especially in older buildings. Reducing water use through retrofitting existing facilities also saves money due to lower water (and energy) bills.

Understanding the Issue

- Important advances have been made in water-saving plumbing fixtures and appliances. These include low flow toilets, urinals and showerheads, water efficient dishwashers, clothes washers, and even cooling towers.
- Installing water saving plumbing and appliances in existing buildings and operations can also save money through reduced energy use.
- Rebates and other financial incentives available from water and energy utilities help reduce the cost of buying water efficient appliances and plumbing fixtures.

Resources to Learn More

www.ca-ilg.org/WaterConservation#EfficientFixtures

Using Drought Tolerant Plants in Agency Parks, Medians and Landscaping

Local agencies can lead by example to promote water efficiency by using drought tolerant plants for agency landscaping, and can save water as well.

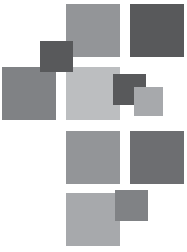
Understanding the Issue

- Using drought tolerant plants, along with water efficient irrigation practices, may reduce outside water use by as much as 25 to 50 percent.
- Using drought tolerant plants is an opportunity for local agencies to comply with the updated water efficient landscape ordinance the agency must adopt (see “Water Efficiency in the Community”).

Resources to Learn More

www.ca-ilg.org/WaterConservation#Plants





Using Recycled Water for Agency Parks, Medians and Landscaping

Using recycled water in agency parks and landscaping demonstrates the potential uses of recycled water.

Understanding the Issue

- Using recycled water reduces the demand for potable (drinking) water.
- State law declares that the use of potable (drinking) water for non-potable uses is a waste or unreasonable use of water if recycled water is available. Wasteful or unreasonable use of potable water is defined as water for cemeteries, golf course, parks, highways, landscaped areas, industrial, irrigation and indoor uses such as cooling towers, and toilets and urinals in commercial, retail, office buildings, theatres, schools, hotels, etc.⁴

Resources to Learn More

www.ca-ilg.org/WaterConservation#RecycledWater

Procedure for Residents to Report Broken Sprinklers at Agency Facilities and Parks

Enlisting the public's help to report broken sprinklers adds to the agency's monitoring and response capacity and saves water that otherwise might be wasted.

Understanding the Issue

- Agencies with a convenient (and after hours) system for residents to report broken sprinklers in public parks, landscaping or medians, including overflowing or ponding water in the street, can save water from being wasted.
- Systems to report broken sprinklers benefit from being actively publicized to the community.



It is helpful to have a process that promptly responds to a resident's complaint about broken sprinklers or ponding water. Also, getting back to the resident to let him or her know the problem has been fixed provides an opportunity to express appreciation and reinforces the agency's commitment to water conservation.

Water Conservation in the Community

To understand options for increasing water conservation in the community, consider the following issues.

Updated Water Efficient Landscaping Ordinance for the Community

State law requires local agencies with land use authority to adopt an updated water efficient landscaping ordinance for their community not later than January 1, 2010.⁵

Understanding the Issue

- If a city or county has not acted to adopt its own water efficient landscaping ordinance by January 1, 2010, the state’s model ordinance becomes the local ordinance.
- Implementation of a water efficient landscaping ordinance will help local agencies meet the required twenty percent reduction in urban water use targets by 2020.
- Using drought tolerant plants, along with water efficient irrigation practices, may reduce outside water use by as much as 25 to 50 percent.

Resources to Learn More

www.ca-ilg.org/WaterConservation#LandscapeOrdinance

Design Criteria to Reduce Runoff and Promote Groundwater Recharge

Design criteria for development projects that use natural systems are effective ways to minimize water waste in parking lots, playfields, parks, as well as in residential and commercial construction. This practice is sometimes referred to as “low-impact development.”

Understanding the Issue

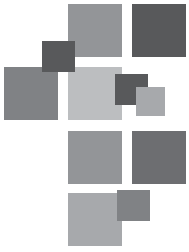
- Natural features can be included into the project design to increase the amount of water that is redirected from run-off to instead soak into the soil, thus promoting groundwater recharge.
- Permeable asphalt and drains (or swales) are examples of site design techniques that reduce run-off and save water.
- Natural design features can also help local agencies comply with storm water permit requirements.

Resources to Learn More

www.ca-ilg.org/WaterConservation#Groundwater

EXAMPLES OF LOCAL ORDINANCES

See the “Resources to Learn More” section for examples of local water efficient ordinances.



Dual Plumbing for Recycled Water in New Commercial or Residential Projects

Using recycled water (sometimes referred to as reclaimed water) to irrigate golf courses and decorative landscaping allows potable water to be used for drinking, cooking and for other purposes where recycled water is not appropriate.

Understanding the Issue

- Incorporating dual plumbing features when projects are constructed is generally more cost effective than retrofitting the projects later.
- State law declares that the use of potable (drinking) water for non-potable uses is a waste or unreasonable use of water if recycled water is available. Wasteful or unreasonable use of potable water is defined as using water for cemeteries, golf course, parks, highways, landscaped areas, industrial, irrigation and indoor uses such as cooling towers, and toilets and urinals in commercial, retail, office buildings, theatres, schools, hotels, etc.⁶
- State law requires local agencies to adopt ordinances compelling new subdivisions to install separate plumbing systems to deliver recycled water to serve non-potable uses if recycled water will be available from a producer within ten years.⁷

Resources to Learn More

www.ca-ilg.org/WaterConservation#DualPlumbing

Green Building Standards that Include Water Efficiency Requirements

While many local agencies have adopted green building codes that promote energy efficiency, green building programs can also include use of water efficient devices and appliances, such as water efficient toilets, shower heads and dishwashers. Many green building ordinances cover new and existing residential and commercial properties.

Understanding the Issue

- California's Green Building Standards Code is mandatory in 2011.⁸
- Adopting indoor and outdoor water conservation ordinances or local agency green building requirements as part of a local green building ordinance promotes compliance with the state's green building standards.
- Many green building features are eligible for financial incentives, such as rebates from water agencies and energy utilities.

Resources to Learn More

www.ca-ilg.org/WaterConservation#Standards



Water Audits for Commercial and Residential Property

Beginning in 2014, state law requires sellers of single-family, multi-family and commercial property to disclose to prospective buyers whether the building's plumbing fixtures comply with certain water efficiency standards.⁹

Understanding the Issue

- A water use audit identifies opportunities to save water, including what plumbing fixtures can be replaced with new, more water efficient fixtures.
- Prior to 2014, when disclosure of water efficiency information becomes mandatory, sellers and buyers may voluntarily request water audits themselves. Some local agencies have adopted ordinances that require water efficiency audits at the time of sale.
- Implementing an audit's recommendations to install low flow toilets, showerheads and other plumbing fixtures can sometimes be combined with other upgrades that may be necessary, potentially saving time and money.

Resources to Learn More

www.ca-ilg.org/WaterConservation#Audits



Installing Water Conservation Devices in Existing Residential and Commercial Buildings

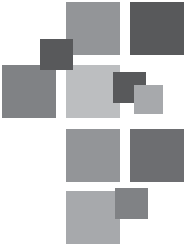
Because the number of existing residential and commercial buildings far exceeds the number of new buildings planned, the potential to conserve water from existing residential and commercial properties is significant.

Understanding the Issue

- State law requires, by 2017, the installation of water efficient plumbing in certain residential properties built before 1994.¹⁰ These include installation of showerheads, urinals and toilets that meet specified water efficiency standards.
- State law also requires, by 2019, the installation of specified water efficient plumbing in certain multi-family and commercial properties built before 1994.¹¹ These include installation of showerheads, urinals and toilets that meet specified water efficiency standards.
- State law permits local agencies to enact stronger local requirements.
- Some local agencies have adopted ordinances to require green building retrofits at the time of sale or renovation for both residential and commercial buildings.¹²
- Water efficiency retrofits often are eligible for financial incentives or rebates, thus reducing the initial cost to homeowners or businesses.

Resources to Learn More

www.ca-ilg.org/WaterConservation#ConservationDevices



PARTNERING WITH WATER PROVIDERS AND LOCAL RETAILERS TO PROMOTE WATER CONSERVATION IN THE COMMUNITY

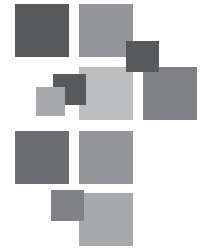
Water providers are interested in promoting water conservation and efficiency. Many offer rebates, audits, or other services to assist their customers use water more efficiently. Local agencies can also partner with the water provider to encourage residents and businesses take advantage of the rebates and other assistance.

Working with the local water supplier can be a key strategy to help achieve the twenty percent reduction in urban water use required by law.

Collaborating with local businesses is also a good way to promote water efficiency in the community. In some communities, retailers, utilities, and local agencies coordinate water (and energy) efficiency messaging as a method to jointly promote efficiency and conservation.

Endnotes

- ¹ California Department of Water Resources website: <http://www.water.ca.gov/climatechange/>.
- ² See California Water Code Sections 10608, 10631.5 and 10800 and following for the provisions of state law requiring a twenty percent reduction in urban water use. A summary of the law also is available at www.ca-ilg.org/waterconservation#efficiency.
- ³ See Civil Code sections 1102.155 and following and 1101.1 and following for the provisions of state law related to replacing existing water devices with water-efficient ones.
- ⁴ See Water Code Section 13551 and Article X, Section 2 of the California Constitution.
- ⁵ Information about California law requiring local agencies to adopt an updated water efficient landscaping ordinance is available at <http://www.water.ca.gov/wateruseefficiency/landscapeordinance/>.
- ⁶ See Water Code Section 13551 and Article X, Section 2 of the California Constitution.
- ⁷ See Government Code section 65601 and following.
- ⁸ California's Green Building Standards Code was adopted in 2009 and becomes mandatory in 2011. It does not mandate the use of specific high-efficiency types of water fixtures. Instead, it specifies a 20 percent reduction in potable indoor water use by 2011 in all new construction. For outdoor water efficiency, the Green Building Standards Code requires the development of a water budget for landscape irrigation according to the methodology outlined in the water efficient landscaping model ordinance or in a locally adopted ordinance. See <http://www.ca-ilg.org/greenbuilding> for link to California's Green Building Standards Code.
- ⁹ See Civil Code sections 1101.4(c) and 1101.5(e).
- ¹⁰ See Civil Code sections 1101.1 and following.
- ¹¹ See Civil Code sections 1101.1 and following.
- ¹² Examples of local agencies with green building programs may be found at www.ca-ilg.org/GreenBuildingStories.



Resources to Learn More

- Institute for Local Government California Climate Action Network (CCAN)
www.ca-ilg.org/ClimateChange
- CCAN Best Practices Framework
www.ca-ilg.org/ClimatePractices
- CCAN Water and Waste Water Page
www.ca-ilg.org/water
- Using Water Efficiently in Agency Facilities and Operations
www.ca-ilg.org/WaterConservation#Efficiency
- Replacing Existing Appliances and Fixtures with Water-Efficient Ones
www.ca-ilg.org/WaterConservation#EfficientFixtures
- Using Drought Tolerant Plants in Agency Parks, Medians and Landscaping
www.ca-ilg.org/WaterConservation#Plants
- Using Recycled Water for Agency Parks, Medians and Landscaping
www.ca-ilg.org/WaterConservation#RecycledWater
- Updated Water Efficient Landscaping Ordinance for the Community
www.ca-ilg.org/WaterConservation#LandscapeOrdinance
- Design Criteria to Reduce Runoff and Promote Groundwater Recharge
www.ca-ilg.org/WaterConservation#Groundwater
- Dual Plumbing for Recycled Water in New Commercial or Residential Projects
www.ca-ilg.org/WaterConservation#DualPlumbing
- Green Building Standards that Include Water Efficiency Requirements
www.ca-ilg.org/WaterConservation#Standards
- Water Audits for Commercial and Residential Property
www.ca-ilg.org/WaterConservation#Audits
- Installing Water Conservation Devices in Existing Residential and Commercial Buildings
www.ca-ilg.org/WaterConservation#ConservationDevices

About the Institute for Local Government

The Institute for Local Government is the nonprofit research affiliate of the League of California Cities and the California State Association of Counties. Its mission is to promote good government at the local level.

The Institute's current program areas include:

- Climate Change
- Healthy Communities
- Intergovernmental Conflict Resolution
- Land Use and Environment
- Local Government 101
- Public Engagement and Collaborative Governance
- Public Service Ethics



© 2010 by Institute for Local Government
1400 K Street, Suite 205
Sacramento, Ca. 95814
(916) 658-8208
www.ca-ilg.org