



County of Los Angeles CHIEF EXECUTIVE OFFICE

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WILLIAM T FUJIOKA
Chief Executive Officer

December 11, 2007

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, CA 90012

Dear Supervisors:

**DEPARTMENT OF PUBLIC WORKS:
ACCEPTING FINANCIAL CONTRIBUTIONS FOR
THE OFFICE OF WATER RECYCLING WITHIN
THE DEPARTMENT OF PUBLIC WORKS
(ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)**

IT IS RECOMMENDED THAT YOUR BOARD:

Delegate authority to the Director of Public Works or his designee to accept financial contributions from stakeholders to the County for the purpose of funding the Office of Water Recycling within the Department of Public Works.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The purpose of the recommended action is to delegate authority to the Director of Public Works to accept financial contributions from stakeholders to fund the Office of Water Recycling established pursuant to recommendations submitted by the Recycled Water Task Force on January 30, 2007, and adopted by your Board on February 20, 2007.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs that we provide Fiscal Responsibility (Goal 4) by strengthening the County's fiscal capabilities.

Board of Supervisors
GLORIA MOLINA
First District

YVONNE B. BURKE
Second District

ZEV YAROSLAVSKY
Third District

DON KNABE
Fourth District

MICHAEL D. ANTONOVICH
Fifth District

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

On May 23, 2006, your Board approved a motion instructing the Director of Public Works to convene and chair a Task Force comprised of appropriate County departments, water recycling agencies, representatives from the County's local cities, and the building industry, to assess the complex nature and issues surrounding the development and use of recycled water. Your Board directed the Task Force to make recommendations for a broad, Countywide policy that would further expand the use of recycled water for nonpotable purposes.

Attached is the final report from the Recycled Water Task Force that Public Works submitted to the Board on January 30, 2007. The report contained a variety of recommended policies for your Board's consideration. One of the key recommendations was to establish the Office of Water Recycling within the Department of Public Works. The report also describes the duties and responsibilities for the Office of Water Recycling, which includes coordinating implementation of the water recycling policies adopted by your Board. The estimated initial annual budget for the operation of the Office is \$400,000, partially offset with stakeholders' committed funds, with the remainder funded by the County's special district funds.

On February 20, 2007, your Board adopted all of the recommendations of the Task Force, including establishing the Office of Water Recycling, which will be funded as much as possible by contributions from the various Task Force participants. The recommended action would authorize acceptance of funds from these stakeholders. The stakeholders that have committed funds to the Office of Water Recycling to date and the amounts committed are as follows:

Water Replenishment District of Southern California	\$75,000
City of Los Angeles Department of Water and Power	\$35,000
West Basin Municipal Water District	\$25,000
Castaic Lake Water Agency	\$15,000
Central Basin Municipal Water District	\$15,000

ENVIRONMENTAL DOCUMENTATION

In accordance with Section 15378(b)(4) of the California Environmental Quality Act (CEQA) Guidelines, approval of the recommended action does not constitute a project and, hence, it not subject to the requirements of CEQA.

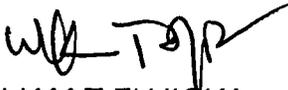
IMPACT ON CURRENT SERVICES (OR PROJECTS)

There will be a positive impact on current services. By delegating authority to the Director of Public Works to accept contributions, additional funds will become available to provide increased services.

CONCLUSION

Please return two adopted copies of this letter to the Department of Public Works, Office of Water Recycling.

Respectfully submitted,



WILLIAM T FUJIOKA
Chief Executive Officer

WTF:DLW
DJL:djm

Attachment

cc: County Counsel

RECYCLED WATER TASK FORCE

**Policy Recommendations for the
County of Los Angeles Board of Supervisors**

January 30, 2007

**RECYCLED WATER TASK FORCE
MEMBERSHIP**

Los Angeles County Department of Public Works

Dean D. Efstathiou, Chairman
Allen Gribnau, Advisor

Los Angeles County Departments

Los Angeles County Chief Administrative Office (David Dijkstra)
Los Angeles County Counsel (Fred Pfaeffle/Michael Moore)
Los Angeles County Internal Services Department (Howard Choy)
Los Angeles County Department of Parks and Recreation (Patrick Reynolds)
Los Angeles County Department of Public Health (Carlos Borja)
Los Angeles County Regional Planning Commission (Paul McCarthy)
County Sanitation Districts of Los Angeles County (Jim Stahl/Earl Hartling/Bob Horvath)

Outside Agencies

State of California Department of Health Services (Stefan Cajina)
City of Los Angeles Department of Water and Power (Thomas Erb/William Van Wagoner)
West Basin Municipal Water District (Richard Nagel)
Upper San Gabriel Valley Municipal Water District (Timothy C. Jochem)
Castaic Lake Water Agency (Dan Masnada)
Newhall Land and Farming/Building Industry Association, L.A. Region (Mark Subbotin)
City of Signal Hill (Charlie Honeycutt)
City of Downey (Desi Alvarez)
City of Lancaster (Randy Williams)
Water Replenishment District (Robb Whitaker)
Metropolitan Water District of Southern California (Tim Blair)
Mono Lake Committee (Frances Spivy-Weber)
Southern California Water Committee (James Noyes)

Los Angeles County Department of Public Works Task Force Staff Support

Daniel J. Lafferty, Project Manager
Hector J. Bordas
Steve Burger
Patty Garcia
Frank Kuo
David Rydman

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INTRODUCTION

Ten years ago, the County of Los Angeles Civil Grand Jury investigated water use within the County. One of its findings identified water recycling as an important component in the State's overall water supply solution, as it is the most reliable local resource that would lessen the region's dependency on imported sources, especially during drought periods. The County of Los Angeles Board of Supervisors (Board) has also adopted policies to encourage the use of recycled water within the County. Despite these policies, the Task Force determined there is much more that could be done. On May 23, 2006, the Board approved a motion directing the County of Los Angeles Department of Public Works (Public Works) to convene a Task Force to make recommendations to the Board for a broad, Countywide policy that would further expand the use of recycled water for nonpotable purposes. This motion reflected information provided by Public Works' 2003 report that dealt with water recycling issues.

The 2005-06 Civil Grand Jury decided to revisit the issue to measure the progress made in increasing the use of recycled water since its report ten years ago. The Grand Jury met with management staff from Public Works and numerous other agencies. They determined that while there had been significant increases in recycled water use, there were also opportunities to use more recycled water. The Grand Jury made two recommendations to the Board in its 2005-06 final report.

One recommendation was to convene a summit of experts in recycled water that would include representatives from the Metropolitan Water District, the City of Los Angeles Department of Water and Power, the Sanitation Districts of Los Angeles County, and Public Works, along with other regulatory agencies, to review current regulation of recycled water for nonpotable uses. The purpose of this summit corresponds with the Board's motion to create the Recycled Water Task Force and to provide policy recommendations. The other Grand Jury recommendation was to establish a comprehensive public outreach program that could be used to educate school children, community groups, and those at institutions of higher learning on recycled water.

In response to the Board's motion of May 23, 2006, Public Works convened the Recycled Water Task Force (Task Force). The Task Force focused on the role the Board could play in increasing the use of recycled water. This report addresses the issues raised by the Board's motion and recommends policy changes, including the creation of the Office of Water Recycling. The estimated initial annual budget for the Office is \$400,000 at no net cost to the County's General Fund. The report is consistent with the recently adopted Greater Los Angeles County Integrated Regional Water Management Plan (IRWMP). Implementing the recommendations contained in the report will assist the County in increasing the use of recycled water from 167,400 acre-feet to 333,600 acre-feet by 2030. The 166,200 acre-feet increase will be comprised of the 130,000 acre-feet IRWMP target, 17,400 acre-feet projected use per Castaic Lake Water Agency 2005 Urban Water Management Plan, 13,400 acre-feet projected demand in the Antelope Valley, and 5,400 acre-feet projected use per the Newhall

Ranch Specific Plan. The 166,200 acre-feet increase in the use of recycled water will enable an equivalent amount of potable water to be utilized to satisfy the demands for an additional 1.3 million people.

BACKGROUND

Two-thirds of the potable water supply for Los Angeles County comes from Northern California and the Colorado River via a series of aqueducts, canals, and pump stations. This makes the County reliant on supplies that vary with the climate fluctuations and places the County at risk should there be a prolonged drought or other natural disaster. Additionally, the quantity and quality of local supplies are threatened by degradation over time.

These issues place an increased demand on the imported supplies the County relies upon and leads to the conclusion that the County can no longer rely on increases in imported supplies to meet future local demands.

The remaining one-third of the County's water supply needs are met by local sources, such as groundwater, surface water, and recycled water. Increasing local supplies reduces the pressures on imported supplies and provides for greater reliability in meeting both our present and future water demands. However, a myriad of problems exist in attempting to substantially increase either groundwater production or diversion of additional surface water – issues that have been subject to substantial litigation.

Presently, recycled water production, the water produced as effluent from the regions' wastewater treatment plants, far exceeds the beneficial uses to which this water is applied creating an underutilized resource. The current single greatest beneficial use for recycled water in Los Angeles County is in groundwater replenishment. This use will remain the dominant volumetric use for the foreseeable future; however, there are significant opportunities to expand the uses of recycled water. Nearly all of the recycled water used for groundwater recharge in Los Angeles County occurs in the southwestern portion of the County. There is little recycled water utilized for groundwater recharge in the remainder of the Los Angeles, San Gabriel and Santa Clara Rivers' watersheds, or in the Antelope Valley. Some of these areas are the fastest growing within the County. Meeting the increased demands for potable water is essential for continuing growth within the County. Providing the facilities necessary to conduct groundwater recharge operations with recycled water will enhance our ability to meet both present and future demands and provides the largest single project use of this supply.

Groundwater recharge is just one use for recycled water. Replacing potable water with recycled water would make more potable water available for truly potable needs. Irrigation of parks, golf courses, median strips, and other expansive landscaped areas is an ideal use for recycled water. Dual plumbing for buildings with numerous toilets would allow recycled water to be used for flushing purposes and, likewise, increase the availability of potable supplies. Certain industrial processes may be candidates for recycled water as well. Focus on increasing the use of recycled water in all these areas is needed if Los Angeles County is going to continue to meet its anticipated regional water demands.

In all these areas, recycled water can be used while ensuring public health. Groundwater recharge with recycled water has been an ongoing practice for decades in

Los Angeles County with no adverse health effects. Similarly, irrigating with recycled water has been safely practiced here and elsewhere for decades. Dual-plumbed buildings are governed by Federal, State, and local regulations that safeguard public health. Plan checkers and inspectors in various agencies scrutinize these systems to eliminate the potential for cross connection to potable systems.

More can and should be done to increase the use of recycled water within the County. Implementing the recommendations described in this report will assist in this effort.

The Task Force met monthly since June 2006 to develop the recommendations described in this report. The Board could take these recommendations to promote the use of recycled water within Los Angeles County and to educate the people within Los Angeles County on the benefits of using recycled water. The Task Force identified four major categories for recommendations: Institutional, Infrastructure, Regulations, and Public Outreach. The Institutional section of the report describes the structure and staffing needed to implement the Task Force recommendations. The Infrastructure section contains recommendations for developing the facilities necessary to increase use of recycled water. The Regulations section identifies efforts needed to improve the regulatory framework governing recycled water use. The Public Outreach section describes the type of information and campaigns needed to garner public support for using recycled water. Task Force recommendations within each category are provided, and supporting information is contained within the body of the report.

INSTITUTIONAL

Having the latest recycled water information available in a centralized and accessible location is necessary to implement projects in an effective and efficient manner. Currently, there are efforts throughout Los Angeles County and the State of California that centralize information with some success. Some of these efforts are being conducted by recycled water producers and others by State and national recycled water organizations. However, to implement the recommendations proposed to the Board, a focused approach that would bring those efforts together under one management umbrella is necessary. To accomplish this objective, an Office of Water Recycling should be established.

The Office of Water Recycling would have many responsibilities, including advocating and promoting the use of recycled water and projects that help achieve quantifiable regional goals/targets. Quantifiable regional targets are being defined through the IRWMPs and Urban Water Management Plans. The Office of Water Recycling would be staffed by a high-level manager within Public Works. The Office would coordinate efforts between and among several County Departments, such as Health Services, Regional Planning, Parks and Recreation, Internal Services, Public Works, and external entities, such as the California Department of Health Services, the Regional Water Quality Control Boards, the Los Angeles County Sanitation Districts, other agencies producing recycled water, and cities. Coordination would include identifying opportunities to improve efficiencies in processing a recycled water project from conception to actual delivery to the end user.

To avoid duplicating efforts currently being undertaken by others, the Office will perform an analysis of industry efforts to increase use of recycled water. It will tailor its own efforts to supplement those already being performed by others. The following is a description of the issue affecting the centralization of information and coordination efforts related to recycled water.

Case Studies

The Alondra Park Golf Course (a County facility) is located immediately adjacent to a West Basin Municipal Water District recycled water line, yet the facility continues to use only potable or groundwater for irrigation. The golf course is operated and maintained by private management companies that have lease agreements with the Department of Parks and Recreation. For three reasons, the golf course management has chosen not to utilize recycled water for irrigation:

- The County of Los Angeles holds groundwater rights to pump water from the West Coast Basin. The cost to use this water is significantly less than the cost for recycled or potable water.
- The private management companies operate the golf course under a lease agreement for a specific time period. The payback period for converting the

distribution system at the golf course to use recycled water on the fairways is longer than the companies' lease agreement with the County.

- The golf course was at one time connected to West Basin's recycled water system while the wells at the facility were out of service. At that time, the greens on the golf course could not handle the higher salt concentrations that are present in recycled water and began to deteriorate. West Basin confirmed this is always a potential problem when the greens at any golf course are irrigated with recycled water and is usually the justification for modifying the distribution system at a golf course to a dual-plumb system with potable water used on the putting surfaces and recycled water for the fairways, tee boxes, and rough. Those who operate Alondra Park Golf Course are hesitant to again use recycled water for irrigation out of fear that it will negatively impact the entire golf course.

The case studies in the other sections of this report also provide the context for the recommendations within the Institutional section of the report. Reference can be made to those case studies to further understand the Institutional policy recommendations.

Issue

There is no single organization or system in place in Los Angeles County that:

- Acts as a repository of current information on legislation impacting recycled water.
- Acts as a repository of current information on regulations that impact recycled water providers and end users.
- Provides current technical information on the development and implementation of recycled water projects.
- Provides up-to-date information on the most state-of-the art, proven technologies available for recycled water treatment for various reuse applications.
- Provides up-to-date information on current and past research related to recycled water (treatment technology, public perception surveys, etc.).
- Acts as a repository of information for actual construction and operation cost information for recycled water projects throughout Los Angeles County.
- Provides current information from a public relations and public health perspective on the impact of recycled water on humans.
- Provides current information on completed, proposed, and suggested recycled water projects.
- Provides strategies and opportunities for funding projects and programs.

- Advocates for the implementation of quantifiable regional targets on the use of recycled water.
- Provides leadership to garner support for projects and programs.
- Provides direct answers to questions from the public, building industry, and developers.

Policy Recommendation

- Amend Los Angeles County Code Section 2.18.015 to appoint the Director of Public Works, or his designee, as lead County officer for water recycling issues and assign primary responsibility to the Director of Public Works to coordinate and implement all policies adopted by the Board of Supervisors in the area of water recycling.
- Instruct the Directors of the Department of Parks and Recreation and the Internal Services Department to work with the Director of Public Works to insure that all County parks, golf courses, and other County-maintained parkways and expansive greenbelts are connected to recycled water supplies where available by 2020.
- Instruct the Director of Public Works to propose rules and regulations by July 1, 2007, to require Waterworks Districts' customers to use recycled water for nonpotable outdoor purposes where available and feasible for adoption by the Board.
- Adopt as County policy that recycled water shall be used to irrigate golf courses, parks and other expansive areas in unincorporated County areas where feasible. Instruct the Director of Public Works to develop a County Ordinance that mandates such use.
- Instruct the Director of Public Works to convene the Task Force at least semi-annually over the next five years to follow up on recommendations approved by the Board and develop additional recommendations to the Board as necessary. The Task Force will report to the Board as significant events dictate.
- Establish an Office of Water Recycling within Public Works staffed by a high-level official from Public Works by July 1, 2007, with an initial estimated annual budget of \$400,000 at no net cost to the County's General Fund. Instruct the Office of Water Recycling to:
 - Implement recycled water policies previously adopted by the Board of Supervisors.
 - Work with cities, water recycling producers, and the Building Industry Association to implement, as appropriate, recommendations of the California

Water Plan Update 2006 (Bulletin 160) and recommendations of the California Recycled Water Task force (Water Recycling 2030).

- Prepare a five-signature letter from the Board to the Governor of California requesting that the California Department of Transportation (Caltrans) review its current use of recycled water for irrigation of its rights of way throughout the State, and request Caltrans to prepare a report identifying locations where Caltrans can increase the use of recycled water for this purpose.
- Train Public Works staff on the benefits and applicable uses of recycled water and the County's commitment to utilize it for nonpotable purposes.
- Advocate for local water retailers and wastewater agencies to establish agreements that designate which agencies will bear specific costs for using recycled water and how those costs will be passed on to customers.
- Become a member of the Los Angeles County Recycled Water Advisory Committee, the local chapter of the WaterReuse Association's California Section.
- Work with County departments to improve the efficiency of review and approval processes for projects and programs related to water recycling to increase the use of recycled water.
- Work with producers of recycled water to ensure that County policies are integrated and consistent with other regional water recycling efforts.
- Work with the newly established County Energy and Environmental Team to implement further use of recycled water in County facilities.

Working in cooperation with the WaterReuse Association to avoid duplication of effort, the Office of Water Recycling will also:

- Provide information on Federal, State, and local legislation, its potential impact on the County, and the proposed course of action if necessary.
- Provide information regarding regulations at the Federal, State, County, and local levels.
- Support or lead advocacy efforts at the Federal, State, and local levels related to issues on recycled water in the County.
- Identify funding opportunities for projects and programs. This would include opportunities to integrate a project with other projects or opportunities to develop multibenefit projects with partnering organizations for more efficient use of funding resources.

- Identify new and emerging recycled water technologies for potential use on projects.
- Develop flow charts for recycled water project development including possible permitting (including CEQA), inspections, approvals, and other critical milestones.
- Provide information on costs related to the construction and maintenance of recycled water projects in Southern California.
- Provide information on current and past research related to recycled water.
- Provide technical documents and case studies that openly discuss health issues related to recycled water.
- Identify locations of existing and proposed recycled water systems, preferably in GIS.
- Provide information on recycled water conferences and educational opportunities.

INFRASTRUCTURE

The use of recycled water requires infrastructure to transmit recycled water from a supplier to an end user capable of using the recycled water. The backbone of the recycled water delivery system must be built first to enable reliable delivery of this resource. New buildings and other facilities that are most likely to be sites for recycled water use in the near future also need to be built with the appropriate infrastructure to facilitate connecting to recycled water supply lines when available.

Case Studies

The cost to construct a recycled water backbone system in north Los Angeles County to serve the customers of Los Angeles County Waterworks District No. 40, Antelope Valley, has been estimated at \$145 million (based on the Facilities Planning Report for this project prepared by the Los Angeles County Waterworks District No. 40, Antelope Valley, in cooperation with other stakeholders in the Antelope Valley). The report identified 13,400 acre-feet (AF) of annual demand for recycled water in the project area. The cost to construct and operate the new recycled water system would be \$775 per AF of water delivered for the first 20 years that the system operates. This cost does not include the cost that must be negotiated with the County Sanitation Districts of Los Angeles County to purchase the treated wastewater for the distribution system, and it is still more than twice the cost the District pays for imported potable water. In addition, limited use of recycled water during the winter season may create a significant need for additional large reservoirs to store the water until it can be used during the summer months. In order for the distribution of recycled water to be a viable option for local water retailers to provide to their customers, retailers and wastewater agencies must work out a fair agreement defining which agencies will bear which costs and how those costs will be passed on to customers.

Issue

There are obstacles to overcome before the necessary infrastructure to fully utilize recycled water resources can be built. These obstacles include:

- Recycled water treatment and transmission infrastructure is expensive.
- Financial subsidies are necessary to make recycled water projects cost effective.
- The long payback period for retrofitting existing sites to use recycled water is frequently unacceptable to those who will own and operate these facilities.
- Some sites have been determined to be too isolated from an existing or proposed recycled water distribution system to consider retrofitting them for recycled water use.

- Developers and/or builders lack of knowledge and awareness of the availability of recycled water.
- Existing problems unrelated to recycled water at facilities immediately adjacent to recycled water lines are treated as more critical than converting the irrigation at these facilities to use recycled water.
- Existing regulations require that recycled water be blended with other water sources when used for groundwater recharge.

Policy Recommendations

- Develop a recycled water master plan focusing on County-owned facilities, unincorporated County areas, and the service areas of the Los Angeles County Waterworks Districts to be completed by June 2008. The master plan should be a joint effort between appropriate County departments and recycled water producers that is consistent and integrated with existing recycled water plans.
- Work with the Building Industry Association to develop a County Ordinance requiring dual plumbing for toilet and urinal flushing and other nonpotable uses in new development in the unincorporated areas where use of recycled water is feasible. Provide this Ordinance as a model for all cities in Los Angeles County to use in their jurisdictions.
- Prepare a guidance document for the preparation of engineering reports for dual-plumbed buildings as defined by Title 22 in coordination with State and County Departments of Health Services utilizing the Irvine Ranch Water District as a model.
- Advocate for Federal, State, and local funding that supports recycled water projects.
- Advocate that regulatory agencies permit recycled water projects.

REGULATIONS

State and local Codes provide inconsistencies, contradictions, and other hurdles to the widespread use of recycled water. The State Water Code encourages the use of recycled water and sets target goals for such use while at the same time it provides for penalties and injunctions for "improper" use of recycled water. In addition, State agencies, particularly the Regional Water Quality Control Board, have restrictive and inconsistent regulations that discourage the use of recycled water. Local governments' codes and Ordinances are also not consistent with one another, and while most encourage, they do not mandate use of recycled water. Other local Ordinances (Plumbing Codes, etc.) provide additional hurdles to the use of recycled water.

Case Studies

Discussions with various recycled water producers have highlighted misinterpretations and inconsistencies in the application of the waste discharge requirements by various staff of the Regional Water Quality Control Board. In certain cases, irrigation with recycled water is only permitted with the requirement that groundwater be monitored; yet in other cases, monitoring is not required. No analysis was made of the actual probability of properly applied irrigation water to percolate into the aquifer in quantities significant enough to degrade water quality. Some technical experts interviewed were of the opinion that there was actually higher risk for groundwater degradation to occur once a monitoring well is installed than by the irrigation itself as the monitoring well provides a potential pathway for contaminants.

In addition, the policy of "anti-degradation" is not clearly defined or applied and does not take into account the beneficial uses of the groundwater supplies, but only defines degradation as "one molecule added to the aquifer." This "zero tolerance" policy creates challenges and poses the potential to significantly increase the cost of supplying recycled water.

In another case, one producer was not allowed to utilize the recycled water for a use that had been approved on other discharge permits issued by the same regional board, to the same producer. The reason given was that the use was "not listed" specifically in the language of the permit, the board completely ignored the appropriateness of the usage, and followed form over substance to the detriment of the producer and the project.

Issue

The current regulatory framework surrounding recycled water is often contradictory and poses significant legal and practical challenges to those working to increase the use of recycled water. Regulatory agencies need to be encouraged to apply consistent application of regulations, while working to see that the regulations are based on common sense and solid science consistent with the value of each particular project.

Policy Recommendations

Instruct the Office of Water Recycling to:

- Work with agencies producing recycled water in identifying and rectifying regulations or permitting requirements that are inconsistent with utilization of recycled water as a resource.
- Work with agencies that principally see recycled water as a waste, to value it highly as a resource and encourage its use.
- Work with appropriate agencies to increase the use of recycled water at groundwater recharge facilities.

PUBLIC OUTREACH

In parts of the United States, public support for water recycling has been very strong, and many projects have been implemented without public objection. However, locally many recycled water projects have experienced sufficient public opposition to halt implementation. Educating the public on the many benefits to be derived from recycled water projects while also addressing some of the misperceptions of recycled water use must occur to ensure public acceptance before these projects can be implemented.

Successful public support and participation in the use of recycled water generally involve identifying key audiences and specific community issues at a very early stage of a project, and offering information and opportunities for input in a clear, understandable way. Effective public involvement begins at the earliest planning stage and lasts through implementation and beyond.

Case Studies

The City of San Francisco surveyed the general public to measure public acceptance of a proposed recycled water project. The overall majority strongly felt that recycled water was beneficial. The findings show that the responders felt positively about all of the proposed uses of recycled water that included fire fighting, irrigation of golf courses and parks, street cleaning, toilet flushing, and drought protection (Filice 1996).

Clark County (Las Vegas, Nevada) conducted a series of surveys that included two face-to-face intercept surveys and two direct-mail surveys. A total of 883 persons participated in the surveys. The majority of the responses were very positive and indicated that recycled water usage are very beneficial. There was a small minority who had concerns with environmental safety, bacteria, and general health risks to children. The public's enthusiasm for recycled water may reflect the hypothetical conditions set up by the survey questions and interviews and not a genuine willingness to endorse local funding of real programs that involve distribution of recycled water. Survey results do indicate, however, that, at least intellectually, the public is receptive to use of recycled water in well-thought-out programs (Alpha Communication, Inc., 2001).

In Tampa, Florida, a survey that included direct mailing and public opinion assessment was conducted on a residential recycled water project. Information was sent to 15,500 potable water customers in the conceptual project area. Out of the pool of potential reuse customers, 84 percent of the residential users and 94 percent of the commercial users thought that recycled water was safe for residential and commercial landscape irrigation. Of the same group, 84 percent of the residential responders and 90 percent of the commercial responders replied that the project was appealing. The responses met the design criteria of 90 percent participation (Grosh, et al., 2002).

The above assessments showed that, in some areas, the general public is supportive of the use of recycled water. Further, support by the general public increases as the risk for direct contact with recycled water decreases. In Los Angeles County, however,

there have been two fairly high-profile recycled water projects that were not favorably received.

In the San Fernando Valley, the City of Los Angeles proposed a pipeline to deliver recycled water for groundwater recharge purposes from their Tillman Plant to spreading grounds located in the northeastern part of the Valley. Part of the project development and construction included efforts to educate the public and policymakers on the many benefits and safety of using recycled water for groundwater recharge. The efforts garnered broad support for the project from the environmental community but the project became entangled in the political electoral process and was never operated as envisioned. Rather than providing water for groundwater recharge purposes, the recycled water delivered by the project is now used solely for irrigation and industrial cooling.

Similarly, a project in the San Gabriel Valley would have delivered recycled water from the County Sanitation Districts' plant at San Jose Creek to the Santa Fe Spreading Grounds for groundwater recharge. This project also included efforts to educate the public and policymakers on the many benefits and safety of using recycled water for groundwater recharge. However, the project encountered stiff opposition from Miller Brewery, which perceived the project to negatively impact their operations. The project was ultimately suspended.

Issues

Public perceptions of recycled water projects often must be addressed before implementation. Concerns of the public include:

- Discomfort with any contact with recycled water. Often described as the "yuk factor," some people simply do not trust the water purification process and rather rely on a general impression that recycled water is unfit for any use.
- Perceptions that the additional cost for projects utilizing recycled water rather than potable supplies are not justified.
- Perceptions that increasing the use of recycled water will be growth inducing.
- Perceptions that recycled water projects will be utilized only in areas that are economically disadvantaged.

Policy Recommendations

Instruct the Office of Water Recycling to develop a public relations strategic plan that incorporates existing public relations efforts to educate stakeholders on recycled water issues, including the safety and benefits of recycled water. Elements of the plan should include the following:

- Defining target audience:

The Office of Water Recycling should identify the audience its outreach effort should be targeting. In the long term, the audience should be the general public, community and neighborhood groups, business organizations, and children in K-12. The focus of the public relation efforts should be to enhance general awareness of the benefit of using recycled water.

- Identifying supporting scientific information:

The Office of Water Recycling should work closely with the scientific community and recycled water providers to gather the latest studies and research findings related to the health and safety of the use of recycled water. This information should be made available to the public with the hope that it may ease the fear the public may have in the use of recycled water.

- Engaging stakeholders early in the planning process:

The Office of Water Recycling should be informed of all the recycled water projects and programs in the County. The Office should work closely with all recycled water project proponents to bring the public on board at the earliest time so that they can be informed of the project concept and participate in the project decision process.

- Utilizing all available forms of media communications:

The Office of Water Recycling should use a variety of communication tools to reach the targeted audience. Efforts should also be made to assess and utilize the most current and state-of-the-art communication tools to outreach to the targeted audience.

- Establishing performance measures:

The Office of Water Recycling should work with recycled water project proponents and citizens that may be impacted by the recycled water projects to identify milestones along the project schedule that will illustrate the progress of the project. This process may empower the citizen/neighbor groups to actively participate in the project progress oversight and generate a positive momentum in seeing the recycled water project moving towards completion.

- Identifying opponents' issues of concern:

The Office of Water Recycling should work to understand more completely the concerns of those opposed to increased use of recycled water. By doing so, the Office can tailor outreach materials to address the specific concerns of those opposed.

- Creating a school program in coordination with other entities:

Reaching children at an early age provides an opportunity to create a lifelong proponent for recycled water. Often children learn about issues at school that they then relate to other family members in their home. Creating an outreach program that caters to school-aged children is essential to educating the public on the benefits and safety of increased use of recycled water.

C:/MYFILES/RWTF REPORT TO BOS-1-30-07



**MINUTES OF THE BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES, STATE OF CALIFORNIA**

Sachi A. Hamai, Executive Officer
Clerk of the Board of Supervisors
383 Kenneth Hahn Hall of Administration
Los Angeles, California 90012

Director of Public Works

At its meeting held May 23, 2006, the Board took the following action:

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The following statement was entered into the record for Supervisor Knabe:

"Our region has a diverse and growing economy that needs a sustainable and reliable water supply. Southern California is heavily dependent upon imported water sources in meeting these needs. These imported water sources are becoming less dependable due to water quality issues, environmental concerns, drought cycles, and increased demand in other regions that share these resources.

"The recent events of New Orleans and the 100th anniversary of the devastating San Francisco earthquake remind us of the vulnerabilities of relying on imported water to meet our local needs. To ensure that our water supplies remain sustainable and reliable, our water managers have focused on developing a mix of complementary water resources, including efforts to maximize our local supplies.

"To help drought-proof our area from disruptions to our imported water supplies, we need to make more use of our locally available supplies. The use of recycled water is one area of water management available to do this. The State of California, in its Water Plan Update 2005, has identified water recycling as an important element of California's water supply policy. In September 2003, our Board received a report, prepared by Public Works, in cooperation with other County departments on water recycling. The report included recommendations on what the County could do to utilize recycled water for nonpotable purposes. Water from our local reclamation plants is readily available for such uses, but is not being fully utilized. Recycled water is highly treated, making it safe for nonpotable permitted uses. Recycled water is strictly regulated by State and local agencies, and its use must comply with a set of laws and regulations requiring a high level of quality and treatment to fully protect human health.

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"Our Board is on record in support of various principles and specific legislation that support recycled water use, but we do not have adopted ordinances or official policies mandating the use of recycled water – even at our own County facilities. Public Works uses recycled water for groundwater recharge and for use in seawater barriers. Some of our County golf courses and parks use recycled water for irrigation. Other current uses within the County include industrial processes, landscape irrigation, recreation, and wildlife habitat maintenance.

"We recognize water's importance to our economic prosperity and the quality of life enjoyed by our citizens."

Therefore, at the suggestion of Supervisor Knabe, and on motion of Supervisor Yaroslavsky, seconded by Supervisor Antonovich, unanimously carried (Supervisor Knabe being absent), the Board took the following actions:

- 1. Adopted as policy that recycled water be used for irrigation at County parks and golf courses, and on County-maintained parkways and other large County-maintained expansive greenbelts where the use of such recycled water is available at a reasonable cost and meets Health and Safety Codes; and**
- 2. Instructed the Director of Public Works to convene and Chair a Task Force, comprised of appropriate County departments, water recycling agencies, representatives from the County's local cities, and the building industry, to assess the complex nature of issues surrounding the development and use of recycled water;**
- 3. Directed the Task Force to make appropriate recommendations for a broader Countywide policy for the expanded use of recycled water for nonpotable purposes for Los Angeles County, with the Task Force to be guided by the appropriate recommendations of California's Recycled Water Task Force "Water Recycling 2030" report; and**
- 4. Directed the Task Force to provide a report back to the Board within 180 days.**

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**Copies distributed:
Each Supervisor
Chief Administrative Officer
County Counsel**

Appendix 2

Recycled Water Usage 2005

Quantities of Reuse in Los Angeles County

Water Recycling Agency	Effluent ¹ (AF/year)	Reclaimed ² (AF/year)	Reused (AF/year)
Los Angeles City ³	487,000	64,450	64,450
Sanitation Districts of LA County ⁴	579,957	216,095	68,568
Others ⁵ (City of Burbank, Glendale, Santa Monica, Central Basin MWD, Las Virgenes, and West Basin MWD)	25,157	49,370	34,452
Total	1,092,114	329,915	167,470

1. Treated wastewater discharged.
2. Effluent available for reuse.
3. City of LA Department of Water & Power 2005 UWMP
4. County Sanitation Districts, 16th Annual Status Report FY 2004-05
5. 2005 UWMPs

Quantity and Percentage of Reuse in Los Angeles County

Reuse Category	Usage (AF/year)		
	Los Angeles City ²	Sanitation Districts ³	Others ⁴
Direct, Non-Potable ¹	30,450 (47.0%)	38,087 (55.5%)	30,652 (89%)
Groundwater Recharge	0	30,329 (44.3%)	0
Seawater Intrusion Barrier	0	152 (00.2%)	3,800 (11%)
Total	30,450	68,568	34,452

1. Includes irrigation, industrial, agricultural and recreational uses.
2. City of Los Angeles Department of Water and Power 2005 UWMP
3. County Sanitation Districts, 16th Annual Status Report FY 2004-05
4. City of Glendale, Santa Monica, Burbank, Las Virgenes MWD, Central Basin MWD, and West Basin MWD 2005 UWMPs.

Projects Using Recycled Water at Los Angeles County-Owned Recreation Facilities

Site	City	Source
Alondra Park	Lawndale	West Basin
Apollo Lakes Reg. Park	Lancaster	Lancaster WRP
Bonelli Reg. Park	San Dimas	Pomona WRP (Pomona)
Carolyn Rosas Park	Rowland Heights	Pomona WRP (Rowland WD)
Cerritos Park	Cerritos	Los Coyotes WRP (Cerritos)
Chester Washington Golf Course	Hawthorne	West Basin
Del Aire Park	Hawthorne	West Basin
Diamond Bar Golf Course	Diamond Bar	Pomona WRP (WVWD)
Lakewood Golf Course	Long Beach	Long Beach WRP (Long Beach)
Lennox Park	Lennox	West Basin
Mountain Meadows Golf Course	San Dimas	Pomona WRP (Pomona)
Rowland Heights Park	Rowland Heights	Pomona WRP (WVWD)
Schabarum Reg. Park	Rowland Heights	Pomona WRP (Rowland WD)
Sorenson Park	Whittier	San Jose Creek WRP (CBMWD)
Sunshine Park	La Puente	Pomona WRP (Rowland WD)
Victoria Golf Course	Carson	West Basin
Whittier Narrows Recreation Area	So. El Monte	WNWRP (USGVMWD)

Partial List of Major Projects in the County of Los Angeles

Los Angeles City¹		
Existing		
Project	Location	Source
Japanese Garden	San Fernando Valley	Tillman WRP
Wildlife Lake	San Fernando Valley	Tillman WRP
Balboa Lake	San Fernando Valley	Tillman WRP
Los Angeles Greenbelt Project	Central City	Los Angeles/Glendale WRP
Griffith Park	Central City	Los Angeles/Glendale WRP
Westside Project	West Los Angeles	West Basin WRP
Harbor Water Recycling Projects	Harbor City	Terminal Island TP
Sanitation Districts of Los Angeles County²		
Existing		
Distribution System/Project Name	Source	
La Cañada-Flintridge Country Club	La Cañada WRP	
Long Beach Water Department	Long Beach WRP	
City of Bellflower	Los Coyotes WRP	
City of Cerritos	Los Coyotes WRP	
City of Lakewood	Los Coyotes WRP	
Central Basin MWD (Century)	Los Coyotes WRP	
Pomona Water Department	Pomona WRP	
Walnut Valley Water District	Pomona WRP	
Water Replenishment District	San Jose Creek WRP & Whittier Narrows WRP	
City of Industry	San Jose Creek WRP	
California Country Club	San Jose Creek WRP	
Chuy's Nursery	San Jose Creek WRP	
Central Basin MWD (Rio Hondo)	San Jose Creek WRP	
Puente Hills/Rose Hills	San Jose Creek WRP	
Upper San Gabriel Valley MWD (phase I)	San Jose Creek WRP	
F.L. Norman's Nursery	Whittier Narrows WRP	
Upper San Gabriel Valley MWD (phase II)	Whittier Narrows WRP	
Piute Pond	Lancaster WRP	
Nebeker Ranch	Lancaster WRP	
Apollo Lakes County Regional Park	Lancaster WRP	
Antelope Valley Farms	Palmdale WRP	
Others		
Existing		
Project	Location	Source
Burbank Water and Power – Power Plant ³	Burbank	Burbank Dept of Water and
Santa Monica Urban Runoff Recycling	Santa Monica	City's urban runoff

1. Based on comments received from the City of Los Angeles.
2. Based on comments received from the Sanitation Districts.

List of Future Projects Using Recycled Water

Los Angeles City¹		
Future		
Project	Location	Source
Headworks Project	San Fernando Valley	Tillman WRP
Central City/Elysian Park Water Recycling Project	Central City	Los Angeles/Glendale WRP
Sepulveda Basin Project	San Fernando Valley	Tillman WRP
Hanson Area Water Recycling Project	San Fernando Valley	Tillman WRP
East Valley Water Recycling Project	San Fernando Valley	Tillman WRP

Sanitation Districts of Los Angeles County²		
Future		
Project	Location	Source
Main San Gabriel Basin Recharge Project (USGVMWD)	Irwindale	San Jose Creek WRP
Castaic Lake Water Agency	Santa Clarita	Valencia WRP
Southeast Water Reliability Project (Central Basin MWD)	Monterey Park, Montebello, Pico Rivera, Vernon	San Jose Creek WRP
East San Gabriel Valley Project (Industry)	Industry, West Covina, Walnut, Rowland Heights	San Jose Creek WRP
City of Long Beach expansion	Long Beach	Long Beach WRP
City of Arcadia	Arcadia	Lancaster WRP
Eastern Agricultural Site	Lancaster	Lancaster WRP
Division Street Corridor	Lancaster	Lancaster WRP

1. Based on comments received from the City of Los Angeles.
2. Based on comments received from the Sanitation Districts.